

**BEFORE THE
PENNSYLVANIA PUBLIC UTILITY COMMISSION**

Application Of NextEra Energy : Docket No. A-2026-_____
Transmission MidAtlantic, Inc., for All of :
the Necessary Authority, Approvals, and :
Certificates of Public Convenience (1) to :
Begin to Furnish and Supply Electric :
Transmission Service in Greene County :
and Fayette County, Pennsylvania; (2) for :
Certain Affiliated Interest Agreements; :
and (3) for any Other Approvals :
Necessary to Complete the Contemplated :
Transactions

and

Application of NextEra Energy : Docket No. A-2026-_____
Transmission MidAtlantic, Inc., Filed :
Pursuant to 52 Pa. Code Chapter 57 :
Subchapter G, for Approval to Site and :
Construct a 500 kV Transmission Line :
Associated with the MidAtlantic :
Resiliency Link Project Located in :
Portions Of Greene County and Fayette :
County, Pennsylvania

**NextEra Energy Transmission MidAtlantic, Inc.
Statement No. 9**

**Direct Testimony of
Fletcher Mangum
Founder and CEO, Mangum Economics, LLC**

**Topics Addressed: Economic and Fiscal Contribution During
Construction and Operation**

Dated: March 3, 2026

1 **I. INTRODUCTION AND BACKGROUND OF WITNESS**

2 **Q1. Please state your name and business address.**

3 A1. My name is A. Fletcher Mangum, Ph.D. I am the Founder and CEO of Mangum
4 Economics, LLC (“Mangum Economics”). My business address is 4510 Cox Road, Suite
5 202, Glen Allen, Virginia 23060.

6
7 **Q2. Please summarize your professional and educational experience.**

8 A2. I hold a Ph.D. and a M.A. in Economics from George Mason University. I have more than
9 30 years of experience in economic analysis and 18 years of experience in the application
10 of economic analysis to the energy sector. I founded Mangum Economics in May of 2003.
11 Since that time, Mangum Economics has produced hundreds of published reports
12 pertaining to economic and fiscal impact, economic development, industry analysis, policy
13 analysis, and workforce analysis. In addition to my position as CEO of Mangum
14 Economics, I was appointed by four Virginia Governors to serve on the Governor’s and the
15 General Assembly’s Joint Advisory Board of Economists over the period from 2010
16 through 2025. Since 2016, I have also served on the Board of the Virginia Council on
17 Economic Education, and served as President of the Virginia Association of Economists
18 from 2010 to 2011.

19
20 **Q3. Please describe Mangum Economics.**

21 A3. In its 22-year history, Mangum Economics has become a leader in economic impact
22 assessment, industry analysis, and workforce analysis, and public policy analysis. Over
23 that time, Mangum Economics has completed hundreds of economic and fiscal impact

1 analyses for electrical power, natural gas, nuclear, renewable energy, and other industries
2 for projects in 37 U.S. states and in Mexico.

3
4 **Q4. On whose behalf are you testifying in this proceeding?**

5 A4. I am testifying on behalf of NextEra Energy Transmission MidAtlantic, Inc. (the
6 “Company” or “NEET MA”) in support of its Application to the Pennsylvania Public
7 Utility Commission (“PAPUC” or the “Commission”) for a Certificate of Public
8 Convenience (“CPC”) in order to construct the MidAtlantic Resiliency Link Project (the
9 “MARL Project” or “Project”).

10
11 **Q5. Have you testified previously before this Commission?**

12 A5. No.

13
14 **Q6. What is the purpose of your direct testimony?**

15 A6. The purpose of my Direct Testimony is to summarize the analysis of economic and fiscal
16 impacts anticipated during the construction and operational phases of the MARL Project
17 within Fayette County and Greene County, and the Commonwealth of Pennsylvania.
18 Mangum Economics performed the analysis presented in the report, *Economic & Fiscal*
19 *Contribution to the Counties Fayette and Greene and to the State of Pennsylvania* (the
20 “MARL Economic & Fiscal Contribution Report” or the “Report”), appended to this Direct
21 Testimony as **Exhibit AFM-1**.

22
23 **Q7. Are you sponsoring any exhibits along with your direct testimony?**

24 A7. Yes. I am sponsoring the following exhibits:

- 1 • **Exhibit AFM-1** contains the MARL Economic & Fiscal Contribution Report; and
2 • **Exhibit AFM-2** contains a copy of my curriculum vitae.

3
4 **Q8. Briefly describe the MARL Project.**

5 A8. As described in the Application and in the direct testimony of NEET MA Witness Kaitlin
6 McCormick and other NEET MA witnesses, the MARL Project consists of an
7 approximately 107.5 mile 500-kilovolt (kV) transmission line that will traverse portions of
8 Pennsylvania, West Virginia, Maryland, and Virginia and will include the new 500/138 kV
9 Woodside Substation to be located in Frederick County, Virginia. (NEET MA St. No. 1, p.
10 17.) The Pennsylvania portion of the Project consists of approximately 10.7 miles —
11 approximately 6.6 miles located in Fayette County, Pennsylvania and approximately 4.1
12 miles located in Greene County, Pennsylvania.

13
14 **Q9. What is the purpose of the MARL Economic & Fiscal Contribution Report?**

15 A9. The MARL Economic & Fiscal Contribution Report provides an assessment of the
16 economic impact that the construction and ongoing operation of the MARL Project would
17 have on the Commonwealth of Pennsylvania in terms of jobs, wages, and total economic
18 output, and the fiscal impact that the project would have on the Commonwealth of
19 Pennsylvania in terms of state sales and use tax revenue during construction. The results
20 of those assessments are detailed more fully in the Report itself and summarized below.

21
22 **Q10. Please describe the economic impact assessment performed by Mangum Economics.**

23 A10. To empirically evaluate the likely state economic impact attributable to the MARL, I
24 employed a model called IMPLAN. The IMPLAN model is one of the most used economic

1 impact simulation models in the United States. One of the primary advantages of the
2 IMPLAN model is that it uses regional and national production and trade flow data to
3 construct region-specific and industry-specific economic multipliers, which are then
4 further adjusted to reflect anticipated actual spending patterns within the specific
5 geographic study area that is being evaluated. As a result, the economic impact estimates
6 produced by IMPLAN reflect as precisely as possible the economic realities of the specific
7 industry, and the specific study area, being evaluated.

8
9 **Q11. What are economic multipliers?**

10 A11. Economic multipliers measure the ripple effects that an expenditure generates as it makes
11 its way through the economy. Put differently, economic multipliers capture how one dollar
12 in expenditures generates multiple dollars of income. For example, as when Project
13 purchases goods and services – or when contractors hired by the facility use their salaries
14 and wages to make household purchases – thereby generating income for someone else,
15 which is in turn spent, thereby becoming income for yet someone else, and so on, and so
16 on. The economic multiplier is mathematical relationship between the initial expenditure
17 and the total income generated.

18
19 **Q12. Please describe the assumptions used in the economic impact assessment.**

20 A12. My economic impact assessment for the construction phase of the MARL Project was
21 based on the assumption that the total capitalized investment sourced within Pennsylvania
22 would be approximately \$5.6 million dollars (subject to increases or decreases based on
23 final vendor contracts). For ease of explication, I also assumed that all construction
24 expenditures would take place during a representative 12-month period.

1 My economic impact assessment for the ongoing operations phase of the MARL
2 Project assumed that the Project would source locally available materials and services for
3 maintenance of the lines.

4
5 **Q13. Please describe the economic impact that the MARL Project would have on the**
6 **Commonwealth of Pennsylvania.**

7 A13. My analysis determined that construction of the MARL Project would directly provide a
8 one-time pulse of economic activity directly supporting approximately: 1) 19 jobs, 2) \$2.2
9 million in wages and benefits, and 3) \$8.6 million in economic output to the
10 Commonwealth of Pennsylvania as a whole (in 2025 dollars). Taking into account the
11 economic ripple effects that direct investment would generate, along with per diem
12 spending from out of state construction workers, the total estimated impact on the
13 Commonwealth of Pennsylvania would support approximately: 1) 149 jobs, 2) \$10.5
14 million in wages and benefits, and 3) \$33.0 million in economic output (in 2025 dollars).

15 My analysis also determined that the ongoing annual operation of the MARL
16 Project would directly support approximately: 1) less than one full-time job, 2) \$12,600 in
17 wages and benefits, and 3) \$115,100 in economic output to the Commonwealth of
18 Pennsylvania (in 2025 dollars). Taking into account the economic ripple effects that direct
19 impact would generate, the total estimated annually supported impact on the
20 Commonwealth of Pennsylvania would be approximately: 1) less than one full-time job,
21 2) \$71,300 in wages and benefits, and 3) \$355,800 in economic output (in 2025 dollars).

22
23 **Q14. Did Mangum Economics conduct a fiscal impact analysis of the MARL Project?**

1 A14. Yes. To calculate the fiscal impact that the MARL Project would make to the
2 Commonwealth of Pennsylvania, Mangum Economics quantified the sales and use tax
3 revenue during the construction phase of the Project. Note, however, that this analysis only
4 accounts for direct fiscal impact of the MARL Project, *i.e.*, it does not take into account
5 any additional tax revenue that would be generated as a result of indirect economic activity
6 attributable to the MARL Project.

7
8 **Q15. Please describe any assumptions used in the fiscal impact assessment.**

9 A15. My fiscal impact assessment for the MARL Project was based on the assumption that total
10 investment in equipment and materials in the Commonwealth of Pennsylvania during the
11 construction phase associated with the MARL project that would be subject to sales and
12 use tax is approximately \$11.0 million.

13
14 **Q16. Please summarize the fiscal impact that the MARL Project would have on the**
15 **Commonwealth of Pennsylvania.**

16 A16. My analysis determined that construction of the MARL Project would generate
17 approximately \$658,700 in state sales and use tax revenue (in 2025 dollars).

18
19 **Q18. Please summarize the primary findings from your analysis.**

- 20 A18. My analysis determined that the MARL Project would:
- 21 • Provide a one-time economic and fiscal impact to the Commonwealth of Pennsylvania
22 during its construction phase of approximately:
 - 23 ○ 19 direct construction jobs and 130 indirect and induced jobs.

- 1 ○ \$10.5 million in associated wages and benefits.
- 2 ○ \$33.0 million in economic output (in 2025 dollars).
- 3 ○ \$658,700 in state sales and use tax revenue (in 2025 dollars).
- 4 ● Provide an annual economic impact to the Commonwealth of Pennsylvania during its
- 5 ongoing operational phase of approximately:
- 6 ○ Less than one full-time direct, indirect, and induced job.
- 7 ○ \$71,300 in associated wages and benefits.
- 8 ○ \$355,800 in economic output (in 2025 dollars).

9

10 **Q17. Does this conclude your direct testimony?**

11 A17. Yes, it does.

MIDATLANTIC RESILIENCY LINK (MARL)

ECONOMIC & FISCAL CONTRIBUTION TO THE COUNTIES OF FAYETTE AND GREENE AND TO THE STATE OF PENNSYLVANIA



Prepared for



OCTOBER 2025



804-322-7777

MANGUMECONOMICS.COM



About Mangum Economics, LLC

Mangum Economics was founded in 2003 and since then, we have become known as a leader in industry analysis, economic impact assessment, policy and program evaluation, and economic and workforce strategy development. The Mangum Team specializes in producing objective and actionable quantitative economic research that our clients use for strategic decision making in a variety of industries and environments. We know that our clients are unique, and that one size does not fit all. As a result, we have a well-earned reputation for tailoring our analyses to meet the specific needs of specific clients, with a specific audience.

Most of our research falls into four general categories:

- **Economic Development and Special Projects:** The Mangum Team has performed hundreds of analyses of proposed economic development projects and existing entities including museums and tourist attractions, hospital systems, industrial development and mixed-use projects, and economic development regions. The Mangum Team has also authored multiple economic development plans and assessed the impacts of international trade and an overseas trade office.
- **Energy:** The Mangum Team has produced analyses of the economic and fiscal impact of over 50 GW of proposed solar, wind, battery energy storage, and hydro projects spanning more than thirty states ranging from 1 MW to over 800 MW in capacity, including small-scale distributed facilities. Among those projects was Dominion's 2.6 GW Coastal Virginia Offshore Wind project off of Virginia Beach. In addition, the Mangum Team has also performed economic and fiscal impact analyses for the natural gas, nuclear, oil, and pipeline industries.
- **Advanced Applied Technology:** The Mangum Team specializes in analyzing how advanced technology developments (like data centers, fiber networks, and advanced manufacturing plants) contribute to the state and local economies. We have worked with local governments, trade associations, developers, and operating firms across the country to show how investments in advanced critical infrastructure transform local economies across the country.
- **Policy Analysis:** The Mangum Team also has extensive experience in identifying and quantifying the intended and unintended economic consequences of proposed legislative and regulatory initiatives.

The Project Team

Martina Arel, M.B.A.

Director – Economic Development & Energy Research

Rebecca Kyle

Senior Research Analyst

Kai Amado

Research Analyst

A. Fletcher Mangum, Ph.D.

Founder and CEO



Table of Contents

Executive Summary.....	1
Introduction	3
The Project.....	3
Economic Profile	3
Total Employment.....	3
Employment and Wages by Industry Supersector.....	5
Unemployment	7
Economic Impact.....	8
Method	8
Construction Phase	9
Economic Impact Assumptions.....	9
Economic Impact.....	9
Ongoing Operational Phase	10
Economic Impact Assumptions.....	10
Economic Impact.....	10
Fiscal Impact.....	11
Fiscal Impact Assumptions.....	11
Fiscal Impact.....	11
Sales and Use Tax.....	11



Executive Summary

This report assesses the economic and fiscal contribution that the construction and ongoing operation of NextEra Energy Transmission MidAtlantic's (NEET MA) proposed MidAtlantic Resiliency Link (MARL) project would make to the counties of Fayette and Greene and to the state of Pennsylvania.

The proposed MARL project consists of an approximately 107.5-mile 500-kilovolt (kV) transmission line from a connection point near Gore, Virginia, to existing substations in Allegany County, Maryland, and Greene County, Pennsylvania. The transmission line will pass through Maryland, Pennsylvania, Virginia, and West Virginia with approximately 6.6 miles located in Fayette County, Pennsylvania and approximately 4.1 miles located in Greene County, Pennsylvania.

The primary findings from the assessment are as follows:

Economic Contribution – Construction Phase^{1,2}

- The MARL project would provide an estimated pulse of economic activity to the state of Pennsylvania during its construction phase supporting approximately:
 - 19 direct construction jobs and 130 indirect and induced jobs.
 - \$10.5 million in associated wages and benefits.
 - \$33.0 million in economic output (in 2025 dollars).

Economic Contribution – Ongoing Operational Phase

- The MARL project would provide an estimated annual economic impact to the state of Pennsylvania during its ongoing operational phase supporting approximately:³
 - Less than 1 direct operational job and less than 1 indirect and induced job.
 - \$71,300 in associated wages and benefits.
 - \$0.4 million in economic output (in 2025 dollars).

Fiscal Contribution – Construction Phase

- The MARL project would provide an estimated one-time fiscal contribution to the state of Pennsylvania during its construction phase of approximately:
 - \$0.7 million in state sales and use tax revenue (in 2025 dollars).

¹ Construction sector jobs are not necessarily new jobs, but the investments made can also support a job during the construction of the project. Please note it is not possible to know with certainty what proportion of jobs would go to state construction contractors or be filled by state residents.

² One construction job equals one person working full-time for one year. Since construction schedules and daily on-site employment vary, the analysis converts these variations into a consistent, full-time job.

³ Please note it is not possible to know with certainty what proportion of jobs would be filled by state residents.



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The estimates provided in this report are based on the best information available and all reasonable care has been taken in assessing the quality of that information. However, because these estimates attempt to foresee the consequences of circumstances that have not yet occurred, it is not possible to be certain that they will be representative of actual events. These estimates are intended to provide a good indication of likely future outcomes and should not be construed to represent a precise measure of those outcomes.



Introduction

This report assesses the economic and fiscal contribution that the construction and ongoing operation of NextEra Energy Transmission MidAtlantic's (NEET MA) proposed MidAtlantic Resiliency Link (MARL) project would make to the counties of Fayette and Greene and to the state of Pennsylvania. This report was commissioned by NEET MA and produced by Mangum Economics.

The Project

The proposed MARL project consists of an approximately 107.5-mile 500-kilovolt (kV) transmission line from a connection point near Gore, Virginia, to existing substations in Allegany County, Maryland, and Greene County, Pennsylvania. The transmission line will pass through Maryland, Pennsylvania, Virginia, and West Virginia with approximately 6.6 miles located in Fayette County, Pennsylvania and approximately 4.1 miles located in Greene County, Pennsylvania.

Economic Profile

This section provides context for the economic and fiscal impact assessments to follow by profiling the economy of Pennsylvania.

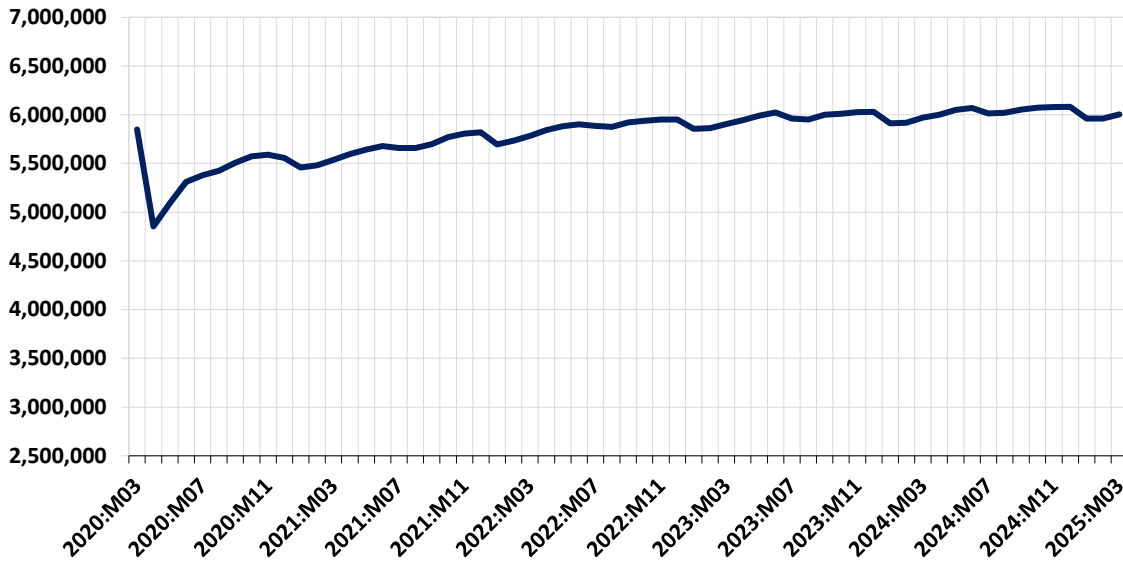
Total Employment

Figure 1 depicts the trend in total employment in Pennsylvania during the five-year period from March 2020 through March 2025. As these data show, employment in Pennsylvania experienced a sharp decline in April 2020 due to labor dislocations associated with the COVID-19 pandemic. Employment has since rebounded and continued to increase throughout the remainder of the period. As of March 2025, total employment in the state stood at 6.0 million jobs, which represents an overall increase in employment of 2.7 percent (or 155,235 jobs) over the five-year period. To put this number in perspective, over this same period, total nationwide employment in the United States increased by 5.1 percent.⁴

⁴ Data Source: U.S. Bureau of Labor Statistics.

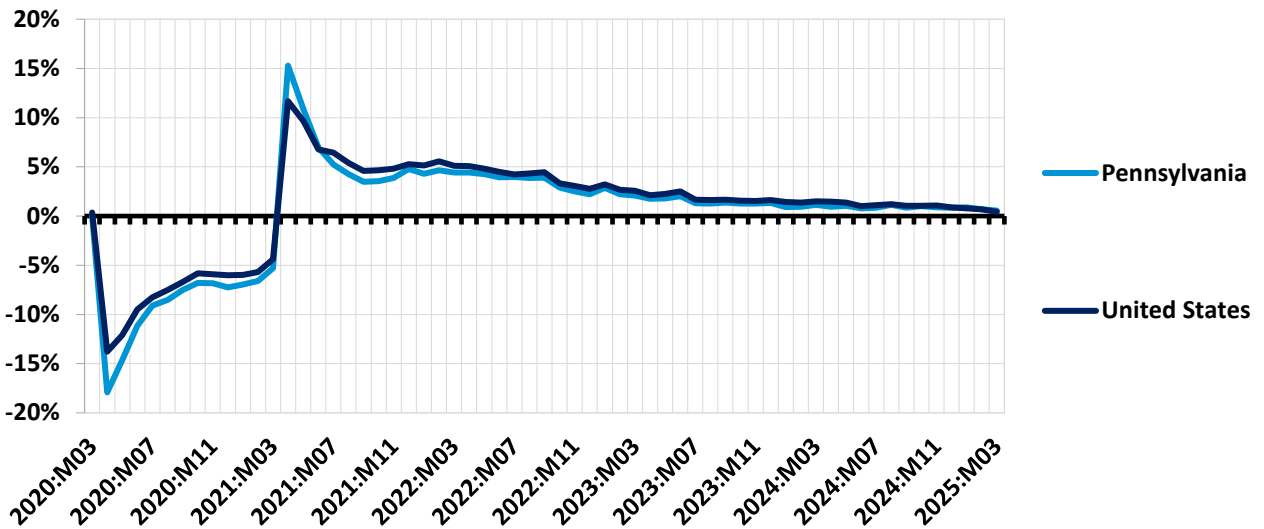


Figure 1: Total Employment in Pennsylvania – March 2020 through March 2025⁵



To control for seasonality and provide a point of reference, Figure 2 compares the year-over-year change in total employment in Pennsylvania to that of the United States over the same five-year period. Any point above the zero line in this graph indicates an increase in employment, while any point below the zero line indicates a decline in employment. As these data show, the year-over-year change in total employment in Pennsylvania tracked closely with the nationwide average throughout the period. As of March 2025, the year-over-year change in total employment in Pennsylvania was 0.6 percent as compared to 0.4 percent nationwide in United States.

Figure 2: Year-Over-Year Change in Total Employment – March 2020 to March 2025⁶



⁵ Data Source: U.S. Bureau of Labor Statistics.

⁶ Data Source: U.S. Bureau of Labor Statistics.



Employment and Wages by Industry Supersector

To provide a better understanding of the underlying factors motivating the total employment trends depicted in Figures 1 and 2, Figures 3 through 5 provide data on private employment and wages in Pennsylvania by industry supersector.⁷

Figure 3 provides an indication of the distribution of private sector employment across industry supersectors in Pennsylvania in 2024. As these data indicate, the state’s largest industry sectors that year were Education and Health Services (1.3 million jobs), followed by Trade, Transportation and Utilities (1.1 million jobs), and Professional and Business Services (834,869 jobs).

Figure 3: Private Employment by Industry Supersector in Pennsylvania – 2024⁸

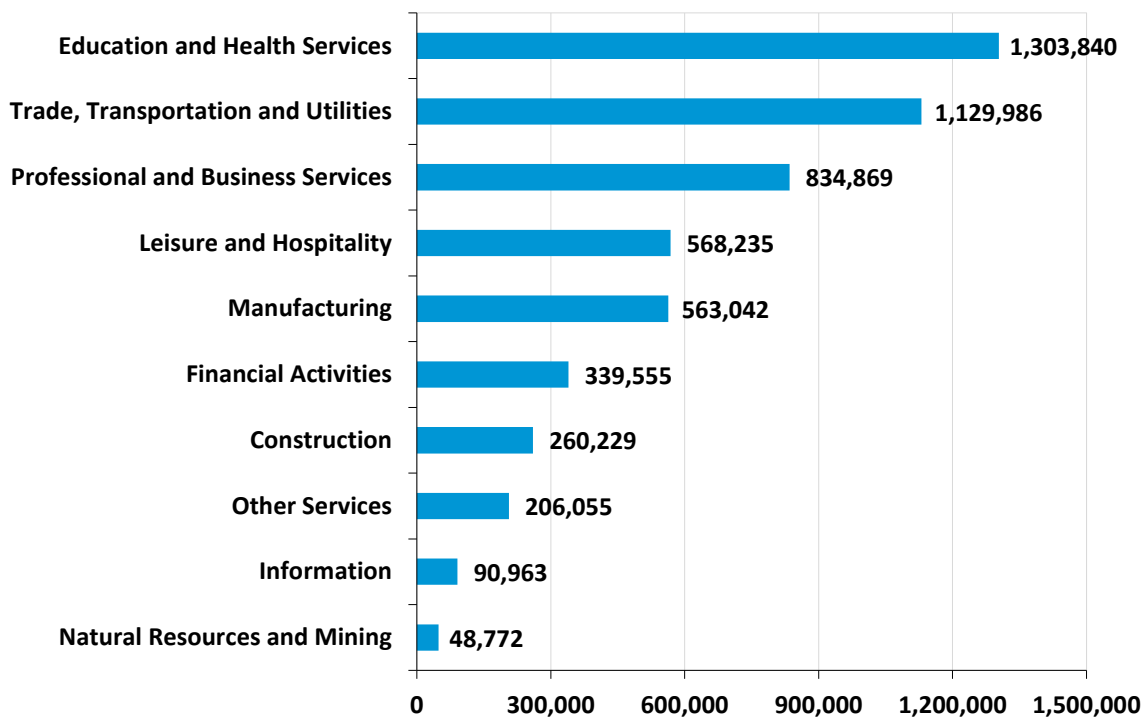


Figure 4 provides a similar ranking for average private sector weekly wages by industry supersector in Pennsylvania in 2024. As these data show, the highest paying industry sectors that year were Information (\$2,504 per week), Financial Activities (\$2,219 per week), and Professional and Business Services (\$2,010 per week). To provide a point of reference, the average private sector weekly wage across all industry sectors in Pennsylvania that year was \$1,380 per week.

⁷ A “supersector” is the highest level of aggregation in the coding system that the Bureau of Labor Statistics uses to classify industries.

⁸ Data Source: U.S. Bureau of Labor Statistics.



Figure 4: Average Private Weekly Wages by Industry Supersector in Pennsylvania – 2024⁹

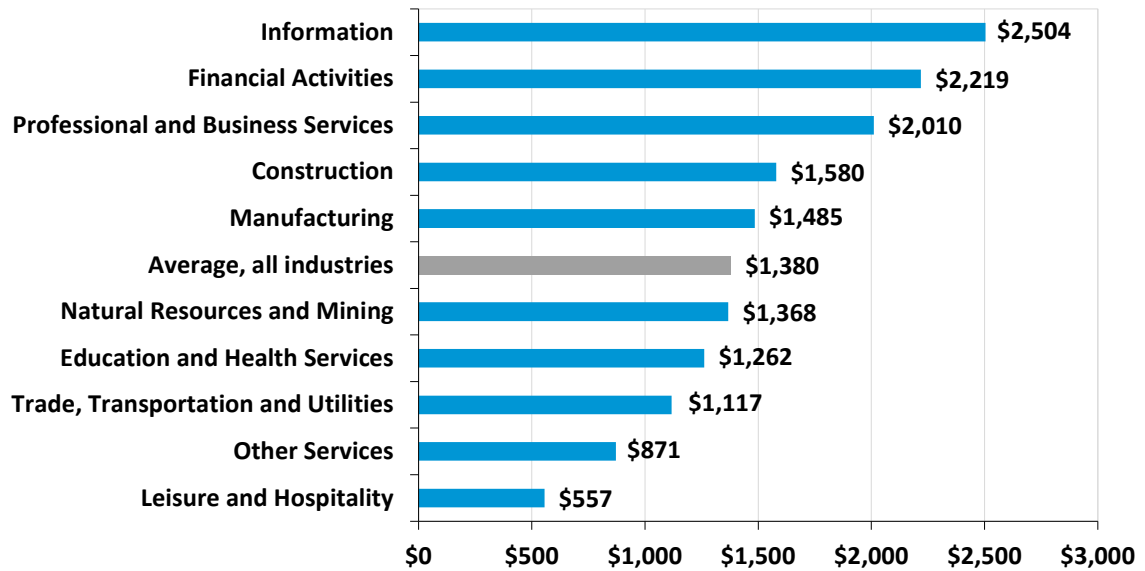
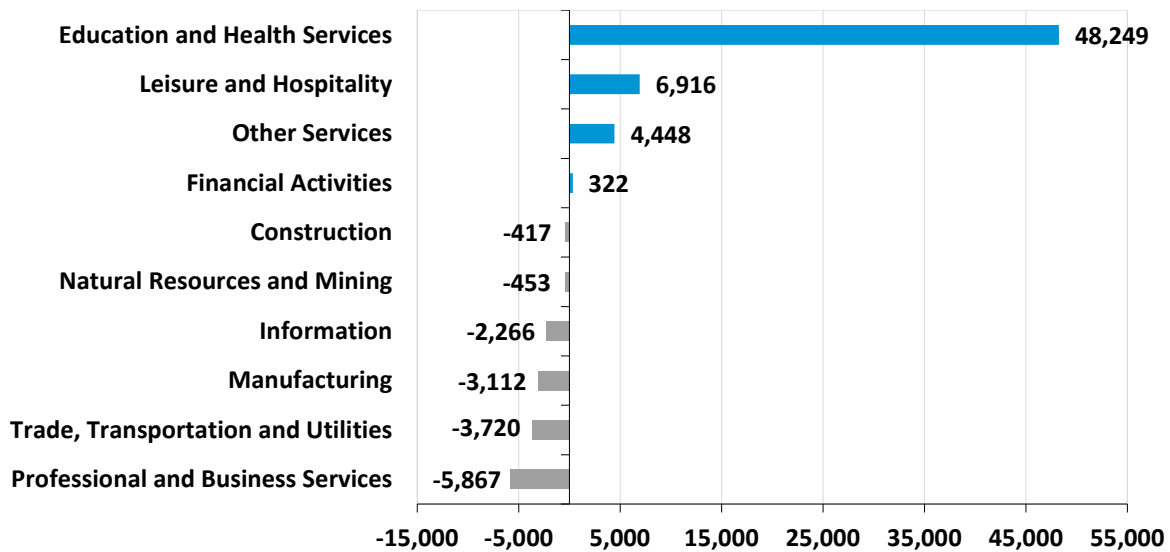


Figure 5 details the year-over-year change in private sector employment from 2023 to 2024 in Pennsylvania by industry supersector. Over this period, the largest employment gains occurred in the Education and Health Services (up 48,249 jobs), Leisure and Hospitality (up 6,916 jobs), and Other Services (up 4,448 jobs) sectors. The largest employment losses occurred in the Professional and Business Services (down 5,867 jobs), Trade, Transportation and Utilities (down 3,720 jobs), and Manufacturing (down 3,112 jobs).

Figure 5: Change in Private Employment by Industry Supersector in Pennsylvania from 2023 to 2024¹⁰



⁹ Data Source: U.S. Bureau of Labor Statistics.

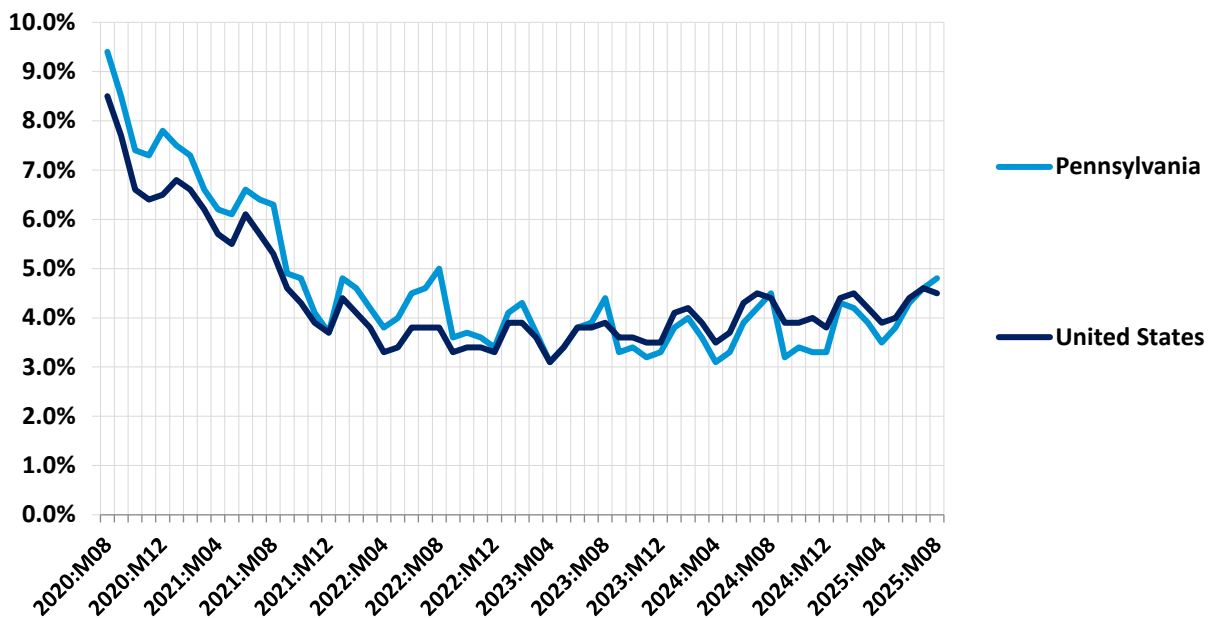
¹⁰ Data Source: U.S. Bureau of Labor Statistics.



Unemployment

Figure 6 illustrates the trend in Pennsylvania’s unemployment rate over the five-year period from August 2020 through August 2025 and benchmarks those data against the nationwide trend for the United States. As these data show, the state and the nation experienced high unemployment rates during the beginning of the period as a result of the labor dislocations caused by the COVID-19 pandemic. Unemployment rates in Pennsylvania tracked higher than the nationwide trend through the first half of the period and remained below the nation for the second half of the period. As of August 2025, unemployment stood at 4.8 percent in Pennsylvania compared to 4.5 percent in the United States as a whole.

Figure 6: Unemployment Rate – August 2020 to August 2025¹¹



¹¹ Data Source: U.S. Bureau of Labor Statistics.



Economic Impact

The analysis provided in this section quantifies the economic contribution that the proposed MidAtlantic Resiliency Link (MARL) project would make to the state of Pennsylvania. The analysis separately evaluates the pulse of economic activity that would occur during the construction phase of the project, as well as the annual economic activity that the project would generate during its ongoing operational phase.

Method

To empirically evaluate the likely local economic impact attributable to the proposed MARL project, the analysis employs a regional economic impact model called IMPLAN.¹² The IMPLAN model is one of the most commonly used economic impact simulation models in the U.S., and it is used by many state agencies and research institutes. Like all economic impact models, the IMPLAN model uses economic multipliers to quantify economic impact.

Economic multipliers measure the ripple effects that an expenditure generates as it makes its way through the economy. For example, when the MARL project purchases goods and services – or when contractors and employees hired by the facility use their salaries and wages to make household purchases – thereby generating income for someone else, which is in turn spent, thereby becoming income for yet someone else, and so on, and so on. Through this process, one dollar in expenditures generates multiple dollars of income. The mathematical relationship between the initial expenditure and the total income generated is the economic multiplier.

One of the primary advantages of the IMPLAN model is that it uses regional and national production and trade flow data to construct region-specific and industry-specific economic multipliers, which are then further adjusted to reflect anticipated actual spending patterns within the specific geographic study area that is being evaluated. As a result, the economic impact estimates produced by IMPLAN are not generic. They reflect as precisely as possible the economic realities of the specific industry, and the specific study area, being evaluated.

In the analysis that follows, these impact estimates are divided into three categories. The first-round direct impact measures the direct economic contribution of the entity being evaluated (e.g., own employment, wages paid, goods and services purchased by the MARL project). The second-round indirect and induced impact measures the economic ripple effects of this direct impact in terms of business to business, and household (employee) to business, transactions. The total impact is simply the sum of the preceding two. These categories of impact are then further defined in terms of employment (the jobs that are created), labor income (the wages and benefits associated with those jobs), and economic output (the total amount of economic activity that is created in the economy).

¹² IMPLAN is produced by IMPLAN Group, LLC.



Construction Phase

This portion of the section assesses the economic impact that the pulse of activity associated with the construction of the MARL project would have on the state of Pennsylvania.

Economic Impact Assumptions

The analysis is based on the following assumptions:

- Total capitalized investment in the MARL project is estimated to be approximately \$1.2 billion. Of that total, approximately \$5.6 million would be sourced in the state of Pennsylvania.¹³
- For ease of explanation, all construction expenditures are assumed to take place during a representative 12-month period.

Economic Impact

Applying the above stated assumptions in the IMPLAN model results in the following estimates of economic impact on the state of Pennsylvania. As shown in Table 1, construction of the MARL project would directly provide a pulse of economic activity supporting approximately: 1) 19 jobs, 2) \$2.2 million in wages and benefits, and 3) \$8.6 million in economic output to the state of Pennsylvania as a whole (in 2025 dollars).

Taking into account the economic ripple effects that direct investment and per diem spending from out of state construction workers would generate, the total estimated impact on the state of Pennsylvania would support approximately: 1) 149 jobs, 2) \$10.5 million in wages and benefits, and 3) \$33.0 million in economic output (in 2025 dollars).

Table 1: Estimated Economic Impact on the State of Pennsylvania from Construction of the MARL Project (2025 Dollars)^{14,15,16}

Economic Impact	Employment	Wages and Benefits	Economic Output
1st Round Direct Economic Activity	19	\$2,224,400	\$8,581,900
2nd Round Indirect and Induced Economic Activity	130	\$8,238,100	\$24,450,700
Total Economic Activity	149	\$10,462,500	\$33,032,600

**Totals may not sum due to rounding.*

¹³ Data Source: NEET MA. Please note that the estimated total investment and estimated portion sourced from within Pennsylvania are preliminary and could ultimately increase or decrease based on final vendor contracts.

¹⁴ Construction sector jobs are not necessarily new jobs, but the investments made can also support a job during the construction of the project. Please note that it is not possible to know with certainty what proportion of these jobs would go to state construction contractors or be filled by state residents.

¹⁵ One construction job equals one person working full-time for one year. Since construction schedules and daily on-site employment vary, the analysis converts these variations into a consistent, full-time job.

¹⁶ Wages and Benefits are included in the Economic Output associated with the project.



Ongoing Operational Phase

This portion of the section assesses the annual economic impact that the ongoing operation of the MARL project would have on the state of Pennsylvania.

Economic Impact Assumptions

The analysis is based on the following information and assumptions:

- The MARL project would source locally available materials and services for the maintenance of the lines.¹⁷

Economic Impact

Applying these assumptions in the IMPLAN model results in the following estimates of annual economic impact on the state of Pennsylvania. As shown in Table 2, annual operation of the proposed MARL project would directly support approximately: 1) less than 1 job, 2) \$12,600 in wages and benefits, and 3) \$0.1 million in economic output to the state of Pennsylvania (in 2025 dollars).

Taking into account the economic ripple effects that direct impact would generate, the total estimated annually supported impact on the state of Pennsylvania would be approximately: 1) less than 1 job, 2) \$71,300 in wages and benefits, and 3) \$0.4 million in economic output (in 2025 dollars).

Table 2: Estimated Annual Economic Impact on the State of Pennsylvania from the Ongoing Operation of the MARL Project (2025 Dollars)¹⁸

Economic Impact	Employment	Wages and Benefits	Economic Output
1st Round Direct Economic Activity	< 1	\$12,600	\$115,100
2nd Round Indirect and Induced Economic Activity	< 1	\$58,600	\$240,800
Total Economic Activity	< 1	\$71,300	\$355,800

**Totals may not sum due to rounding.*

¹⁷ Data Source: NEET MA.

¹⁸ Please note it is not possible to know with certainty what proportion of these jobs would be filled by state residents.



Fiscal Impact

The analysis on the following pages quantifies the direct fiscal contribution that the MARL project would make to the state of Pennsylvania from sales and use tax revenue during the construction phase of the project. The analysis does not model any additional direct fiscal impact during the ongoing operational phase of the project because the MARL project would not purchase the land, but it would make easement payments to local landowners, resulting in the land not being subject to Public Utility Realty Tax (PURTA).¹⁹

It should be noted, however, that the analysis likely understates the actual fiscal impact that the MARL project would have, as it only accounts for the direct fiscal impact that the MARL project would have on the state. It does not take into account any additional tax revenue that would be generated as a result of the indirect economic activity attributable to the construction and ongoing operation of the MARL project.

Fiscal Impact Assumptions

The analysis is based on the following assumptions:

- Total investment in equipment and materials in the state of Pennsylvania associated with the MARL project that would be subject to sales and use tax is approximately \$11.0 million.²⁰

Fiscal Impact

Sales and Use Tax

Table 3 shows the estimated sales tax revenue generated during the construction phase of the project in the state of Pennsylvania. As indicated in Table 3, the state sales tax revenue is estimated to be approximately \$0.7 million (in 2025 dollars).

Table 3: Estimated One-Time Sales Tax Revenue from Construction of the MARL Project (2025 Dollars)

Fiscal Impact	State of Pennsylvania
Sales Tax Rate ²¹	6.0%
Taxable Base	\$10,978,200
Total Sales Tax Revenue	<u>\$658,700</u>

**Totals may not sum due to rounding.*

¹⁹ Data Source: Pennsylvania Department of Revenue.

²⁰ Data Source: NEET MA. Preliminary investment estimates are subject to change based on final vendor contracts.

²¹ Data Source: Pennsylvania Department of Revenue.



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The estimates provided in this report are based on the best information available and all reasonable care has been taken in assessing the quality of that information. However, because these estimates attempt to foresee the consequences of circumstances that have not yet occurred, it is not possible to be certain that they will be representative of actual events. These estimates are intended to provide a good indication of likely future outcomes and should not be construed to represent a precise measure of those outcomes.

A. FLETCHER MANGUM

Founder & CEO

Mangum Economics

EDUCATION

Ph.D., Economics

George Mason University. 1995

M.A., Economics

George Mason University, 1990

B.A., Economics

College of William and Mary, 1978

PROFESSIONAL EXPERIENCE

Founder & CEO

Mangum Economics

Adjunct Professor

Virginia Commonwealth University

Associate Director for Governance and Accountability & Chief Economist

State Council of Higher Education for Virginia

Senior Economic Analyst

Department of Planning and Budget, Commonwealth of Virginia

Senior Economist

Federal Judicial Center, U.S. Courts

Director

Billcast

BOARD MEMBERSHIPS & APPOINTMENTS

- Chair & Board Member, Virginia Council on Economic Education (2016–present)
- Board Member, VA Joint Advisory Board of Economists (2010–present)
- President, Virginia Association of Economists (2010–2011)
- Member, Governor-Elect McDonnell's Transition Team (2009–2010)
- Member, Governor-Elect Gilmore's Transition Team (1997–1998)

PUBLICATIONS

Authored or contributed to over 300 reports, including:

- Henrico Affordable Housing Trust Fund (January 2025)
- Starfire Solar (December 2024)
- The Economic Impact of Virginia Exports (November 2024)
- Frontier Solar (March 2024)
- National Civil War Museum (April 2023)
- Blue Moon Solar (October 2021)
- Mandatory Unitary Combined Reporting (June 2021)
- Potential Impact of Development of the Offshore Wind Energy Industry on Hampton Roads and Virginia (Sept 2020)
- The Economic and Fiscal Contribution that Data Centers Make to Virginia (Dec 2015, Jan 2018, Jan 2020)
- Potential Impact of Large Data Center Development in Maryland (March 2020)
- Morgnec Road Solar (July 2019)
- Potential Impact of a Data Center Incentive in Illinois (Nov 2018)
- Impact of Offshore Oil and Gas Drilling on Virginia (April 2018)
- Economic and Fiscal Contribution of Volvo Group North America to Multiple States (April 2018)
- Economic Development Potential of the Virginia Beach Cable Landings (Jan 2017)

EXPERT TESTIMONY HIGHLIGHTS

Provided testimony before state boards and commissions in multiple U.S. states, including:

- Potential Effect of Electric Rate Increase on Data Center Development in Florida – Florida Public Service Commission (October 2025)
- Economic Impact of Starfire Solar – Kentucky Electric Generation and Transmission Siting Board (June 2025)
- Economic Impact of Frontier Solar – Kentucky Electric Generation and Transmission Siting Board (April 2024)
- Economic Impact of Blue Moon Solar – Kentucky Electric Generation and Transmission Siting Board (June 2022)
- Economic Impact of Data Centers in Georgia – GA House Appropriations Committee (Feb 2022)
- Economic Impact of Morgnec Road Solar – Maryland Public Service Commission (Nov 2021)
- Economic Impact of Black Rock Wind – West Virginia Public Service Commission (Sept 2019)
- Economic Impact of Dan’s Mountain Wind Project – Maryland Public Service Commission (Sept 2016)
- Economic Impact of Mills Branch Solar – Maryland Public Service Commission (June 2016)
- Economic Contribution of Data Centers in Virginia – Senate Finance Committee, VA (Jan 2016)
- Telecom Service Quality Regulations – Virginia State Corporation Commission (April 2009)
- Mandated Coverage for Prosthetic Devices – VA Senate Commerce & Labor Committee (Jan 2009)
- Single Sales Factor Apportionment in Virginia – VA General Assembly (Oct 2008)