Q2 2026 Issue

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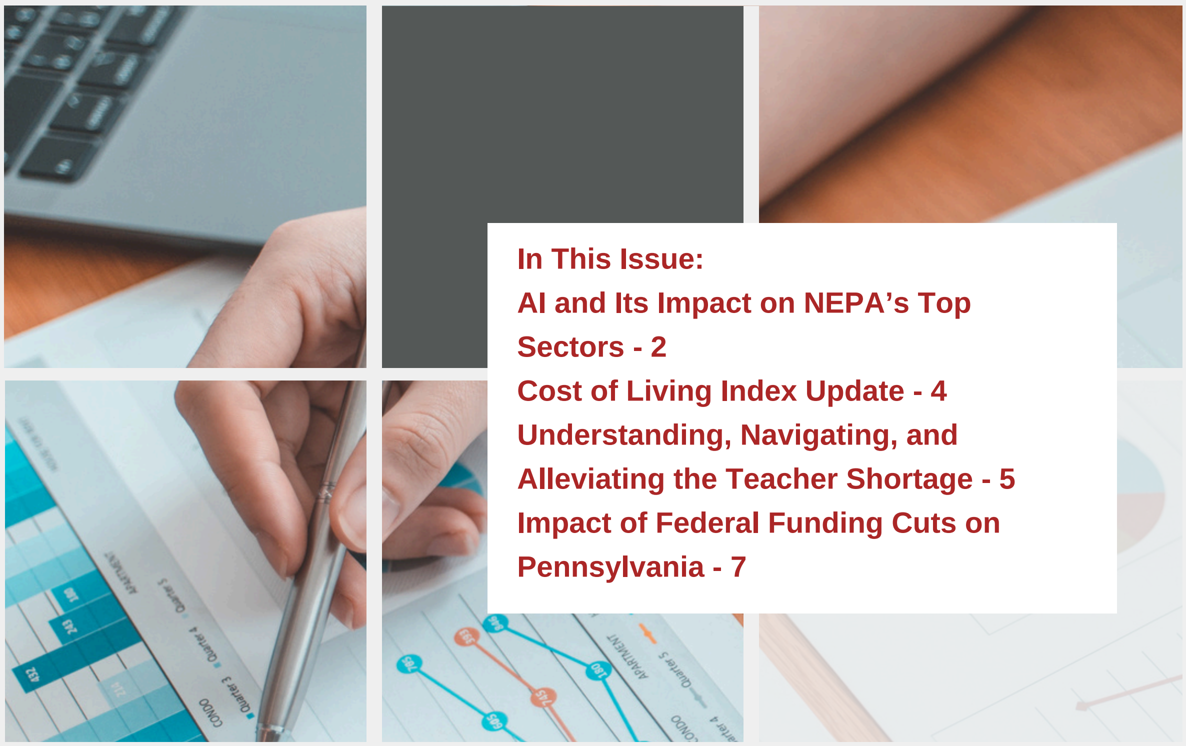
Economy Tracker



In This Issue:

About The Quarterly Economy Tracker:

The Economy Tracker explores economic data, trends, and issues related to our region's economy. Subscribe for free at www.institutepa.org. In all its publications, The Institute uses the most current data available at the time of release.

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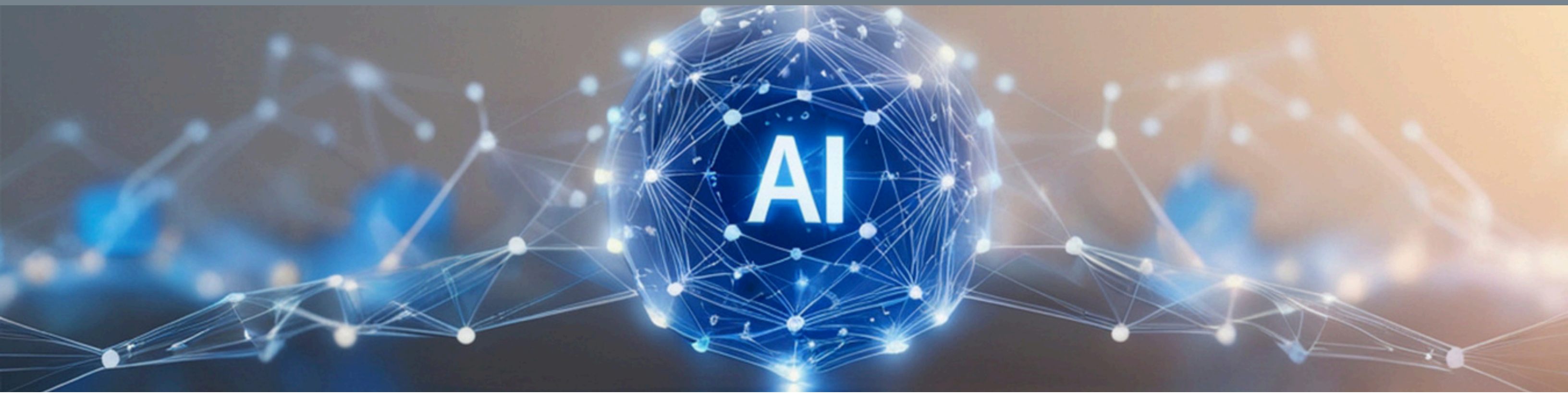
AI and It's Impact on NEPA's Top Sectors

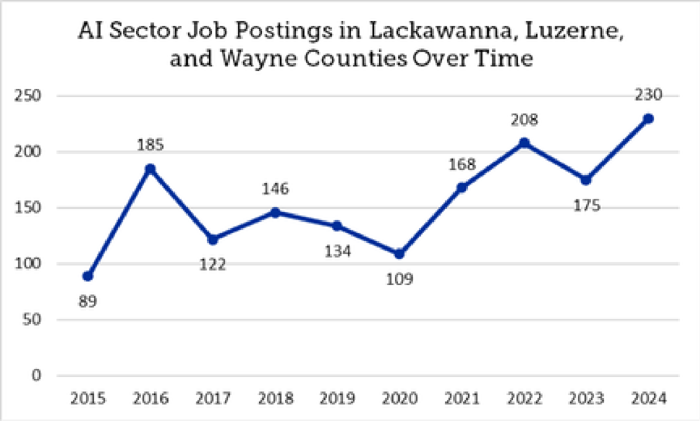
By: Ethan Van Gorden, Research Analyst



This article acts as a summary of The Institute's Jobs, Economy, and Economic Development (JEED) 2026 Task Force paper, Artificial Intelligence and Its Impact on Northeastern Pennsylvania's Top Sectors. Visit The Institute's website and You Tube for past papers and short videos on jobs and economic development research.

Artificial intelligence (AI) is rapidly reshaping the economic and workforce landscape of Northeastern Pennsylvania. The region's top industries are integrating AI at varied levels to improve efficiency, decision-making, and productivity. As AI adoption increases in Northeastern Pennsylvania, AI readiness remains comparatively low. Furthermore, as AI adoption increases, the potential for job losses and the need for new skill sets also grows. This growing disconnect between how deeply AI is affecting the regional labor market and how prepared the region is to engage with it emerges as a key issue to be addressed through the development of protective policies and reskilling pathways.

AI adoption is rising across regional occupations. Between 2015 and 2024, the share of regional jobs requiring AI-related skills more than doubled, with 1,566 unique AI-sector job postings recorded. Demand is highest in manufacturing and health care. Additionally, region's exposure to AI continues to grow, with 44,741 jobs in the Scranton–Wilkes-Barre MSA identified as AI-exposed as of 2024. This expanding exposure underscores the importance of upskilling initiatives and regional preparation. Without targeted workforce development, however, the region risks deepening skill gaps and economic disparities. Targeted reskilling or upskilling will be essential to protect workers and promote economic resilience.

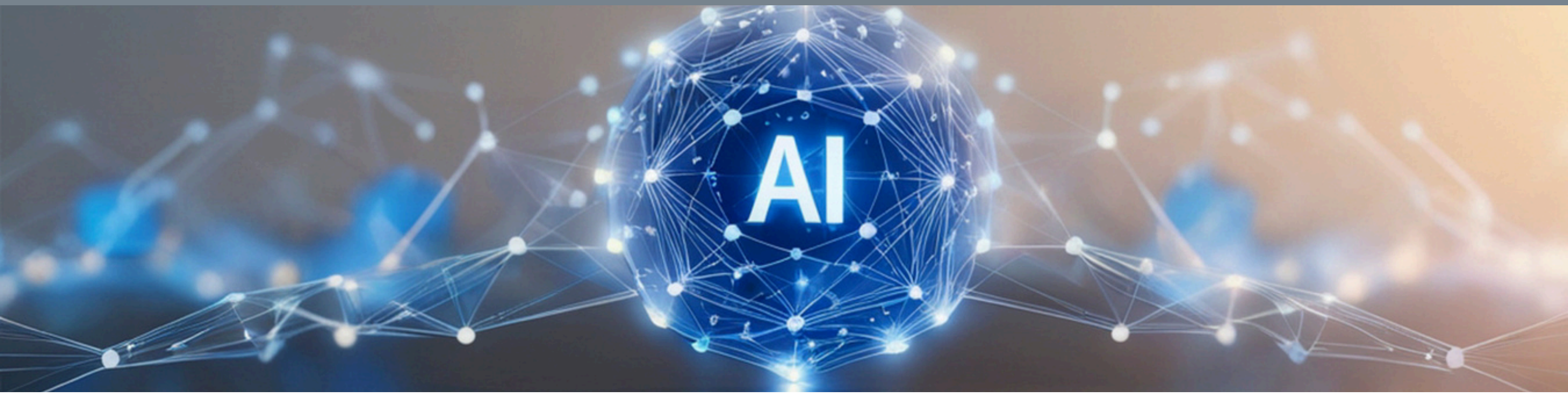


At the industry level, analysis shows that the demand for professionals with AI-related skills in Northeastern Pennsylvania is highest in the manufacturing sector, closely followed by demand in the health care and social assistance industry. In manufacturing, roles requiring AI-related skills include maintenance technicians and electrical control technicians. In health care and social assistance, roles requiring AI-related skills mostly include licensed practical and vocational nurses and registered nurses.

AI Sector Job Postings by Industry		
Total AI Job Postings	230	
Manufacturing	53	23.0%
Health Care and Social Assistance	52	22.6%
Administrative and Support and Waste Management and Remediation Services	23	10.0%
Finance and Insurance	20	8.7%
Educational Services	13	5.7%
Retail Trade	11	4.8%
Professional, Scientific, and Technical Services	11	4.8%
Wholesale Trade	10	4.3%
Real Estate and Rental and Leasing	7	3.0%
Information	3	1.3%
All Others	27	11.7%
Source: Lightcast		

The average share of U.S. businesses using AI to produce goods or services varies by industry at the national level. Compared to the region's leading employment sectors, educational services demonstrate the highest level of adoption. About 10.0 percent of U.S. employer businesses classified under educational services indicated that AI was used to produce goods or services, showing relatively strong adoption of AI. Regionally, educational services includes 11,328 jobs, making the industry the tenth largest in terms of employment. Conversely, sectors like accommodation and food services (1.5 percent), construction (1.6 percent), transportation and warehousing (1.6 percent), and manufacturing (2.6 percent) exhibit lower levels of AI use. The highest regional industries in terms of employment – health care and social assistance (5.5 percent) and retail trade (3.4 percent) - fall in the middle. These shares suggests that AI adoption is currently concentrated in sectors where digital processes, data analysis, and professional services are central, while traditional service and production industries remain in the early stages of adoption.

AI and It's Impact on NEPA's Top Sectors (cont)



Note that although the government or public administration sector is the second largest industry in the region with 31,855 jobs, the Business Trends and Outlook Survey (BOTS) is limited to private, non-farm employer businesses. As a result, public administration-related data is omitted.

Average Share of U S Businesses Using AI to Produce Goods or Services		
Sector	Regional Employment	Average Share
Health Care and Social Assistance	48,364	5.5%
Retail Trade	30,412	3.4%
Manufacturing	29,297	2.6%
Transportation and Warehousing	28,114	1.6%
Accommodation and Food Services	21,800	1.5%
Administrative and Support and Waste Management and Remediation Services	15,641	4.8%
Construction	13,174	1.6%
Other Services (except Public Administration)	11,825	2.5%
Educational Services	11,328	10.2%

Sources: U.S. Census Bureau — Business Trends and Outlook Survey (BTOS) & Lightcast

Although AI exposure is accelerating – reflected in the 44,741 local jobs already identified as AI-exposed as of 2024 and a 158.4 percent increase in AI-related job postings since 2015 – the region's overall AI readiness continues to rank among the lowest tiers nationally in terms of its AI-related readiness, innovation, and adoption.i Consequently, the region is at risk of falling behind economically without deliberate investment in AI capacity. The issue is exacerbated by slow population growth, as job growth outpaces population gains and remains viable only if the working-age population can meet employer demand. General AI readiness of the region is critical, as the opportunities created by AI and its associated benefits position it as a key driver of future economic development.

Northeastern Pennsylvania is at an inflection point. To fully leverage the benefits of AI while mitigating its risks, regional stakeholders must strengthen their workforce training systems, promote organizational experimentation, and develop supportive legislative and policy frameworks. With coordinated action and a focus on building broad AI fluency across all sectors, the region can close the readiness gap, enhance economic resilience, and position itself for success in an increasingly AI-driven economy.

View the full paper here, or scan the QR code:

What's New at The Institute

The Institute's 2025 Annual Report is now live on our website. Take a moment to read about last year's highlights, including:

- Research in Action client testimonials
- Task Force research
- Anchors for Equity
- The Indicators Forum
- and more!

The 2026 Indicators Dashboard is Live

The 2026 data dashboard features 16 categories, each with their own subcategories. This year also features the addition of Wyoming County data to all Indicators, as well as an updated ATLAS mapping tool. Take an in-depth look into the data behind our region now.

Cost of Living Index Update

By: Emily Bauer, Administrative Coordinator

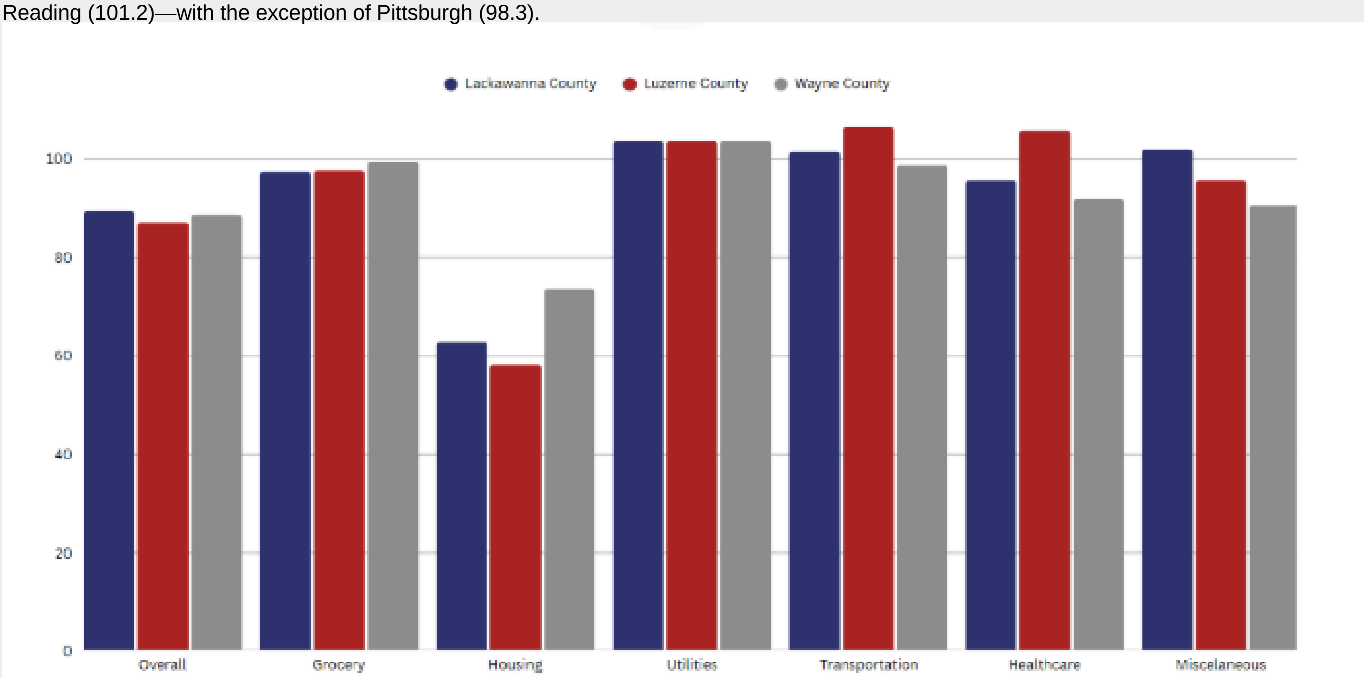
The Cost of Living Index (COLI) is a nationwide project that benchmarks the cost of living across specific regions. Prices are collected and calculated for various goods and services within six categories. The national average, based on 252 participating regions, is set at 100.

The 2025 COLI annual report has been released by the Council for Community & Economic Research. In 2025, the overall cost-of-living scores were 89.6 in Lackawanna County, 87.1 in Luzerne County, and 88.8 in Wayne County. In 2024, Lackawanna County recorded a score of 90.1, Luzerne County recorded a score of 87.6, and Wayne County recorded a score of 88.9. All three counties posted lower scores in 2025 than in 2024.

Among the three counties, Luzerne County has the lowest overall cost of living, while Lackawanna County has the highest. All three counties have overall scores below the national average. Compared with other participating metro areas in Pennsylvania, these three counties have the lowest scores by a significant margin. All other participating regions in Pennsylvania have scores above the national average—Allentown (101.7), Harrisburg (102.6), Philadelphia (107.2), and Reading (101.2)—with the exception of Pittsburgh (98.3).

A major component of affordability in the three-county region remains housing, with housing scores of 62.9 in Lackawanna County, 58.2 in Luzerne County, and 73.6 in Wayne County. However, transportation costs remain relatively high, with both Lackawanna and Luzerne Counties scoring above the national average (101.5 and 106.6, respectively), while Wayne County recorded a score of 98.8.

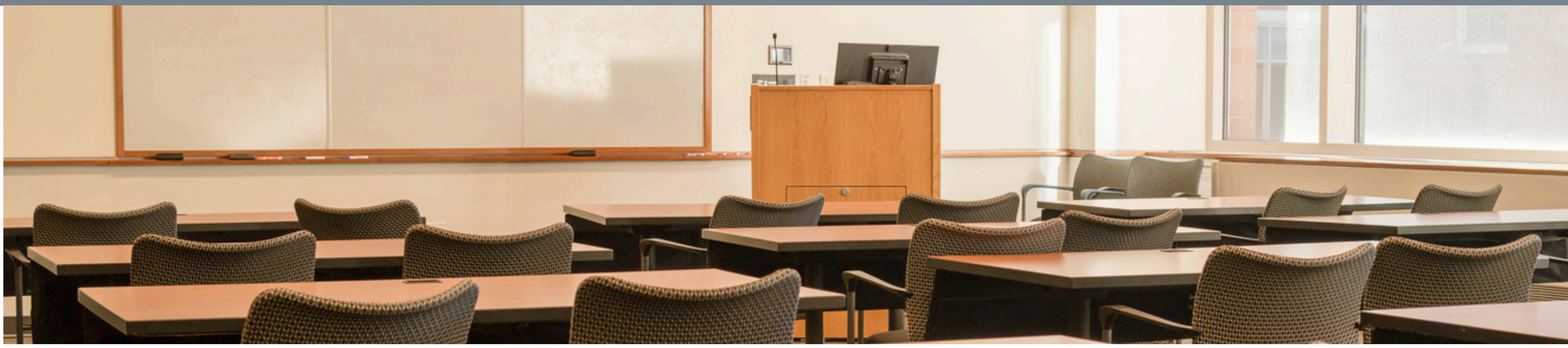
Utilities were also a significant expense in 2025, with all three counties reporting a score of 103.8. Grocery costs remained steady at just below the national average, with scores of 97.6 in Lackawanna County, 97.8 in Luzerne County, and 99.5 in Wayne County. Miscellaneous expenses in Lackawanna County scored above the national average, while they remained below the national average in Luzerne and Wayne Counties, with scores of 98.5 and 90.7, respectively.



2025 Cost of Living Index by Component

Understanding, Navigating, and Alleviating the Teacher Shortage

By: Brigitte Guariglia, Research Analyst



This article acts as a summary of The Institute's Education and Workforce Development 2026 Task Force paper, Understanding, Navigating, and Alleviating the Teacher Shortage. Visit The Institute's website and You Tube for past papers and short videos on education and workforce development research.

Teacher shortages signify a growing issue throughout the United States. Educators are exiting the field, and their positions are left vacant, leaving schools understaffed. Low-income and low-performing schools disproportionately face staffing shortages – even in subject areas that have a surplus of candidates in other districts. For instance, shortages have been particularly consistent in special education, science, and foreign languages in both Pennsylvania and the United States. While staffing issues persist in teaching, the need for educators is projected to increase. Fewer individuals are enrolling and graduating from teacher preparation programs, and the volume of graduates is insufficient to satisfy the number of teachers leaving the occupation. Additionally, research shows that preparedness levels among new teachers are contributing to turnover, with many educators exiting the field within their first five years.

Pennsylvania is experiencing a persistent teacher shortage due to high turnover rates, lower occupation entry rates, and an aging population retiring from the field. The following table displays the number of full-time and part-time vacancies reported by school districts throughout Pennsylvania during the 2024-2025 school year. The majority of vacancies are classroom teacher roles, with just over 2,400 full-time vacancies reported.

Pennsylvania School District Staff Vacancies SY 2024-2025

Role Type	Full-time	Part-time
Chief School Administrator	5	0
Administrators	62	0
Classroom Teachers	2,409	68
Coordinate Services	411	26
Other Supervisory Coordinator	43	0
Other	327	2

Source: PA Department of Education

Regional workforce data displays shifts in employment by teaching levels and disciplines across Lackawanna, Luzerne, and Wayne Counties, including projected decline and growth in certain roles. As displayed in the following table, the region has seen declines in numbers of kindergarten, middle school, and postsecondary teachers (excluding special education and career and technical education teachers). While there has been growth in the numbers of preschool and secondary teaching jobs, which are projected to continue to grow through 2036. However, shortages continue to exist in disciplines such as ESL and special education at most levels.

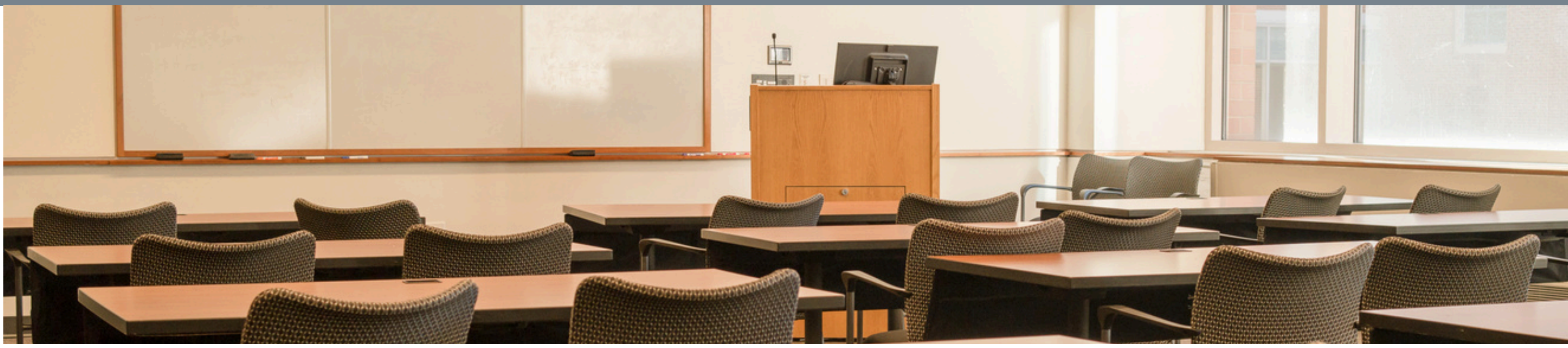
Job Distribution and Projected Growth by Instruction Level: Lackawanna, Luzerne, and Wayne Counties

Instruction level	2016 Jobs	2026 Jobs	2036 Jobs	2016 - 2036 % Change	Median Annual Earnings
Preschool Teachers	710	894	940	32%	$29,577
Kindergarten Teachers	185	115	112	-39%	$78,791
Elementary School Teachers	2,360	2,383	2,342	-1%	$73,177
Middle School Teachers	1,243	1,004	986	-21%	$73,445
Secondary School Teachers	1,770	2,087	2,046	16%	$76,776
Postsecondary Teachers	4,294	3,303	2,888	-33%	$81,115

Source: Lightcast

The figure on the following page shows the number and percentage of teachers leaving their positions by reason from the 2015–2016 through 2022–2023 school years in Pennsylvania. Over all years, the primary reason for teachers leaving their positions was 'Resigned/terminated, remained in education,' indicating teachers who resigned or were terminated from their positions, but continued working in the education field at other schools. Retirement was the second most common reason for leaving. Notably, the percentage of individuals retiring from teaching remains high throughout the years due to the large aging population in Pennsylvania. Additionally, there was an uptick in individuals retiring during the 2020-2021 school year due to the COVID-19 pandemic.

Understanding, Navigating, and Alleviating the Teacher Shortage (cont)



Teachers Leaving Their Positions by Reason and School Year: Pennsylvania								
Reason for Leaving	2015-16	2016-17	2017-18	2018-19	2019-20	2020-21	2021-22	2022-23
Death/Illness	1.3% (107)	0.9% (70)	1.0% (71)	1.2% (93)	0.9% (74)	1.0% (66)	0.9% (74)	0.7% (84)
Disciplinary action	2.7% (216)	2.5% (197)	3.0% (213)	2.0% (153)	3.2% (251)	2.2% (154)	2.0% (169)	2.6% (305)
Furloughed/laid off	1.5% (122)	2.0% (159)	1.1% (82)	1.5% (109)	0.6% (51)	1.3% (90)	0.2% (19)	0.2% (28)
Other	4.5% (364)	4.8% (373)	5.0% (362)	4.6% (348)	4.7% (369)	5.0% (340)	6.9% (585)	5.6% (651)
Resigned/terminated, left education	13.8% (1,112)	14.1% (1,097)	15.7% (1,133)	13.2% (992)	13.6% (1,069)	12.6% (864)	12.6% (1,071)	14.6% (1,683)
Resigned/terminated, remained in education	40.8% (3,288)	43.3% (3,370)	41.9% (3,015)	46.6% (3,497)	46.4% (3,732)	39.5% (2,702)	45.6% (3,862)	52.8% (6,104)
Retired	35.4% (2,857)	32.3% (2,516)	32.3% (2,326)	30.9% (2,317)	29.5% (2,320)	38.4% (2,633)	31.8% (2,693)	23.4% (2,705)
Total	**8,066**	**7,782**	**7,202**	**7,509**	**7,866**	**6,849**	**8,473**	**11,560**

Source: PA Department of Education

Data shows that there are multiple vacancies in each county that remain unfilled from one school year to the next. As the teacher shortage continues, more areas are relying on substitute teachers and emergency teaching permits raising concerns about the recruitment and retention of qualified teachers. In comparison to other professions throughout the state, public school teachers are undercompensated relative to workers with similar educational backgrounds and skills. Inadequate compensation remains a major reason people are leaving or choosing not to enter the field of education, but staffing and retention challenges extend beyond low pay. Teachers report issues such as a lack of support, particularly during their first years in the classroom, as well as problems with student behavior and discipline, competitive school environments, and limited professional autonomy.

There are innovative solutions to address these shortages, such as “Grow Your Own” programs, apprenticeships, and financial incentives to complete teaching degrees, as exemplified in states such as New York, California, Colorado and others. Addressing the shortage will require coordinated efforts across policymakers, school districts, and higher education institutions. Strategic investments in compensation, preparation pathways, workforce diversity, and early-career support are essential to building a stable educator workforce.

View the full paper here, or scan the QR code:

Impact of Federal Funding Changes on Pennsylvania

Executive Summary

Federal budget changes enacted in 2025 are expected to reduce or restructure several major funding streams that Pennsylvania relies on for health care, nutrition assistance, transportation, education, and related public services. State and independent fiscal sources indicate that Medicaid and SNAP changes are the most immediate risks: Pennsylvania officials estimate that more than 300,000 residents could lose Medicaid coverage and 144,000 could lose SNAP benefits as new eligibility, reporting, and cost-sharing rules phase in.[1]. [2] The fiscal exposure is significant because Medicaid alone covers roughly three million Pennsylvanians and accounts for one of the largest areas of state and federal spending in the Commonwealth.[3]

Overview of Federal Funding in Pennsylvania

Federal funds are central to Pennsylvania's operating budget and support Medicaid, SNAP administration, transportation, education, housing, workforce programs, and public health functions. The Independent Fiscal Office projects that Pennsylvania already faces a structural operating deficit, with the gap estimated at $3.4 billion in FY 2024–25 and growing to $6.7 billion by FY 2029–30 under current laws and policies.[4] That forecast did not assume major additional federal reductions, meaning federal cutbacks could intensify existing budget pressure rather than create a stand-alone challenge.

Health Care and Medicaid Impacts

Coverage and Eligibility

Medicaid, known in Pennsylvania as Medical Assistance, covers approximately 3 million people—about 23% of the state's population—including children, older adults, people with disabilities, low-income working adults, and many residents in rural counties.[3] Beginning in 2027, certain Medicaid expansion adults will be required to document work, school, volunteering, or other qualifying community engagement for at least 20 hours per week and will need to renew coverage every six months instead of annually.[2] State officials project that these changes could cause more than 300,000 Pennsylvanians to lose Medicaid coverage.[1]

Hospitals and Rural Communities

Hospitals are exposed to these changes because coverage losses tend to increase uncompensated care while reducing reimbursement for services already delivered. Pennsylvania officials have warned that as many as 25 rural hospitals could be at risk if Medicaid reductions increase the number of uninsured patients and reduce provider revenue.[5] Independent reporting and health-sector analyses similarly note that rural hospitals are especially vulnerable because many operate on thin margins and rely heavily on public insurance reimbursement.[6]

Food Assistance and Social Services

SNAP changes are expected to affect both households and the state budget. Pennsylvania's Department of Human Services states that certain SNAP recipients must meet and report work requirements or may be limited to three months of benefits in a three-year period.[2] The Independent Fiscal Office reports that federal changes also increase the state share of SNAP administrative costs from 50 percent to 75percent beginning in federal fiscal year 2027, adding roughly $130 million per year once fully phased in. Additional state costs may arise if Pennsylvania must contribute to SNAP benefit costs based on payment error rates.[7]

Education, Research, and Workforce Development

K–12 and Higher Education

Federal education dollars support Title I services, special education, student aid, workforce development, and other programs that are especially important to high-poverty districts and rural communities. While the scale of future reductions depends on federal appropriations and agency implementation, any disruption in federal education funding would compound Pennsylvania's existing school-finance pressures and could force districts to reduce services, shift costs to local taxpayers, or delay investments in academic support and workforce pathways.

Research Universities and Public Health

Federal grants also support Pennsylvania's research universities, medical schools, and public health infrastructure. Reported federal grant and contract reductions in the Philadelphia region have affected biomedical research, climate-related work, and university employment pipelines. These reductions may not have the same immediate household effect as Medicaid or SNAP changes, but they can weaken long-term innovation capacity, reduce research employment, and limit partnerships between universities, hospitals, and local employers.[8]

Transportation and Infrastructure

Transportation agencies depend on a mix of federal, state, and local funding for transit operations, capital projects, bridge repair, and road maintenance. Federal uncertainty makes it harder for the Commonwealth and local transit agencies to plan multi-year investments. If federal support declines or becomes delayed, likely responses include deferred maintenance, slower project delivery, service reductions, fare increases, or greater demand for state funding at the same time Medicaid and SNAP costs are rising.

State Budget and Economic Implications

The combined effect of federal reductions is likely to be felt through three channels: direct coverage or benefit losses for residents, higher state costs to administer or sustain programs, and financial stress for

Impact of Federal Funding Changes on Pennsylvania (cont)

local service providers. Because Pennsylvania's structural deficit is already projected to widen over the next several years, the Commonwealth may need to choose among several difficult budget responses:

- Reduce eligibility or benefits in Medicaid and human services;
- Delay or scale back education and infrastructure investments; or
- Raise new revenue through taxes or fees.

Each option carries tradeoffs. Reducing eligibility or reimbursement can increase uninsured care and household hardship; delaying education or infrastructure spending can weaken long-term growth; and raising revenue can face political resistance and affordability concerns. The timing of implementation is therefore important: SNAP changes began phasing in during 2025, while major Medicaid requirements are expected in 2027, giving state and local leaders a limited window to plan mitigation strategies.[2]

Key Takeaways for Decision-Makers

- **Medicaid and SNAP are the highest-risk programs.** Coverage losses, benefit reductions, and new state cost obligations could affect hundreds of thousands of residents and add pressure to the General Fund.
- **Rural communities face disproportionate exposure.** Rural hospitals and residents who rely on public insurance are especially vulnerable to coverage losses and uncompensated care growth.
- **The state cannot assume it can backfill all federal losses.** Existing deficit projections suggest that replacing lost federal funds would require spending cuts, new revenue, reserve drawdowns, or a combination of all three.
- **Planning should begin before full implementation.** Agencies, hospitals, schools, local governments, and nonprofits should prepare for eligibility changes, administrative burdens, and increased demand for safety-net services.

Sources

1. Commonwealth of Pennsylvania. (2025). Federal budget impacts: Impacts of the federal budget bill on Pennsylvanians. PA.gov. https://www.pa.gov/governor/topics/federal-budget
2. Pennsylvania Department of Human Services. (2026). Federal changes to benefits programs. Commonwealth of Pennsylvania. https://www.pa.gov/agencies/dhs/resources/federal-cuts
3. Independent Fiscal Office. (2025). Pennsylvania Medicaid update. Commonwealth of Pennsylvania. https://www.ifo.state.pa.us/getfile.cfm?file=Resources/Documents/RB_2025_06_Medicaid.pdf&view=true
4. Independent Fiscal Office. (2024). Pennsylvania economic and budget outlook: Fiscal years 2024–25 to 2029–30. Commonwealth of Pennsylvania. https://www.ifo.state.pa.us/getfile.cfm?file=Resources/Documents/Five_Year_Outlook_2024.pdf&view=true
5. Pennsylvania Department of Human Services. (2025, June 27). Shapiro Administration highlights devastating impacts of proposed federal Medicaid cuts on rural communities and coverage for hundreds of thousands of Pennsylvanians. Commonwealth of Pennsylvania. https://www.pa.gov/agencies/dhs/newsroom/shapiro-admin-highlights-devastating-impacts-of-proposed-federal
6. Pennsylvania Health Access Network. (2025). Medicaid and vulnerable Pennsylvania hospitals. https://www.pahealthaccess.org/wp-content/uploads/2025/06/Report-47-Pennsylvania-Hospitals-Rely-on-Medicaid-to-Stay-Open-6.25.pdf
7. Independent Fiscal Office. (2025). Impact of SNAP changes on state budget. Commonwealth of Pennsylvania. https://www.ifo.state.pa.us/getfile.cfm?file=Resources/Documents/BB_2025_07_SNAP.pdf&view=true
8. McCrystal, L. (2025, May 15). Trump's grant and contract cuts in Philadelphia approach $280 million. Billy Penn at WHYY. https://billypenn.com

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