



Pennsylvania defines industry clusters to serve as the basis for data-driven workforce development policies. An industry cluster includes industries closely linked by common products, labor pools, technologies, supplier chains and training needs. They take on strategic importance for long-term economic planning as changes that benefit one group member will generally impact other members of the cluster.

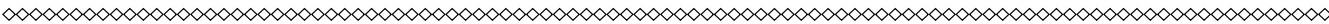
Industry clusters are comprised of specific six-digit North American Industry Classification System, or NAICS, codes. They are mutually exclusive, so that no two clusters contain the same NAICS code. Currently, there are 12 clusters identified, along with several critical sub-clusters. Combined, these 12 industry clusters account for nearly 83 percent of all employment in the commonwealth.

## Cluster Summary

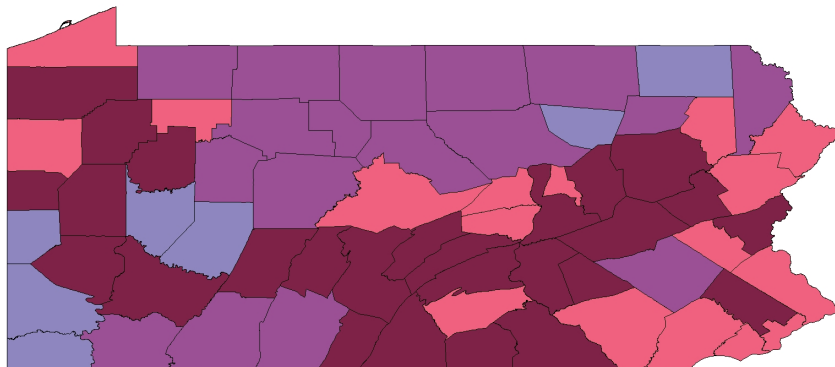
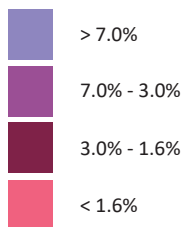
The Energy (ENGY) cluster includes industries associated with the production and distribution of energy, as well as the waste disposal industries associated with the remediation and environmental cleanup related to energy production. In the cluster you will find a wide variety of industries, from petroleum refineries to battery manufacturing to generator manufacturing.

	2016	2019	2021
Employer Units	5,854	5,802	5,855
Number of Jobs	127,369	138,462	124,596
Percent of Total Pennsylvania Jobs	2.2%	2.3%	2.2%
Average Annual Wages	\$76,648	\$84,975	\$89,793
Location Quotient (LQ)	1.12	1.14	1.14
LQs greater than one suggest a competitive advantage.			

Energy cluster employment decreased by two percent over the last five years. However, Pennsylvania’s competitiveness in this sector can be seen in comparison with the nation, as the Location Quotient (LQ) has increased. This competitiveness is further evident in specific local areas (as seen on page 3) like the Southwest Corner and Northern Tier Workforce Development Areas (WDAs), who have LQs of 5.61 and 3.28, respectively. The cluster pays an average wage much greater than the statewide average for all jobs (\$64,700) and the cluster's average wage has increased 17.2% in the time period.

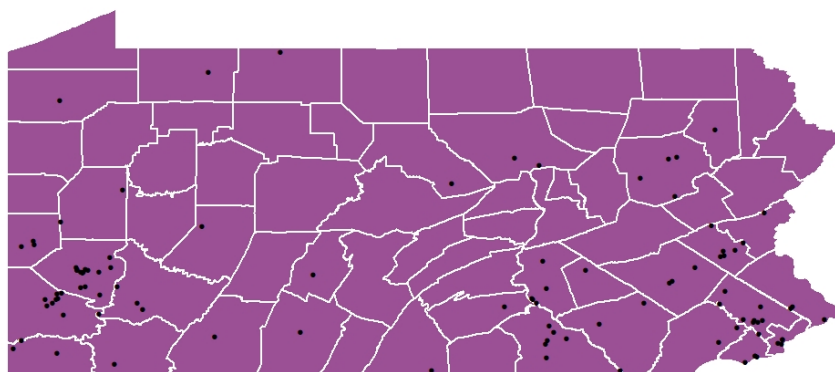


## Percent Employment by County



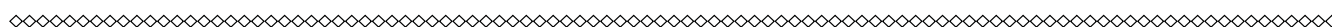
## Major Employers

- East Penn Manufacturing Company
- City of Philadelphia
- TE Connectivity Corporation
- United States Steel Corporation
- Exelon Generation Company LLC
- PECO Energy Power Company



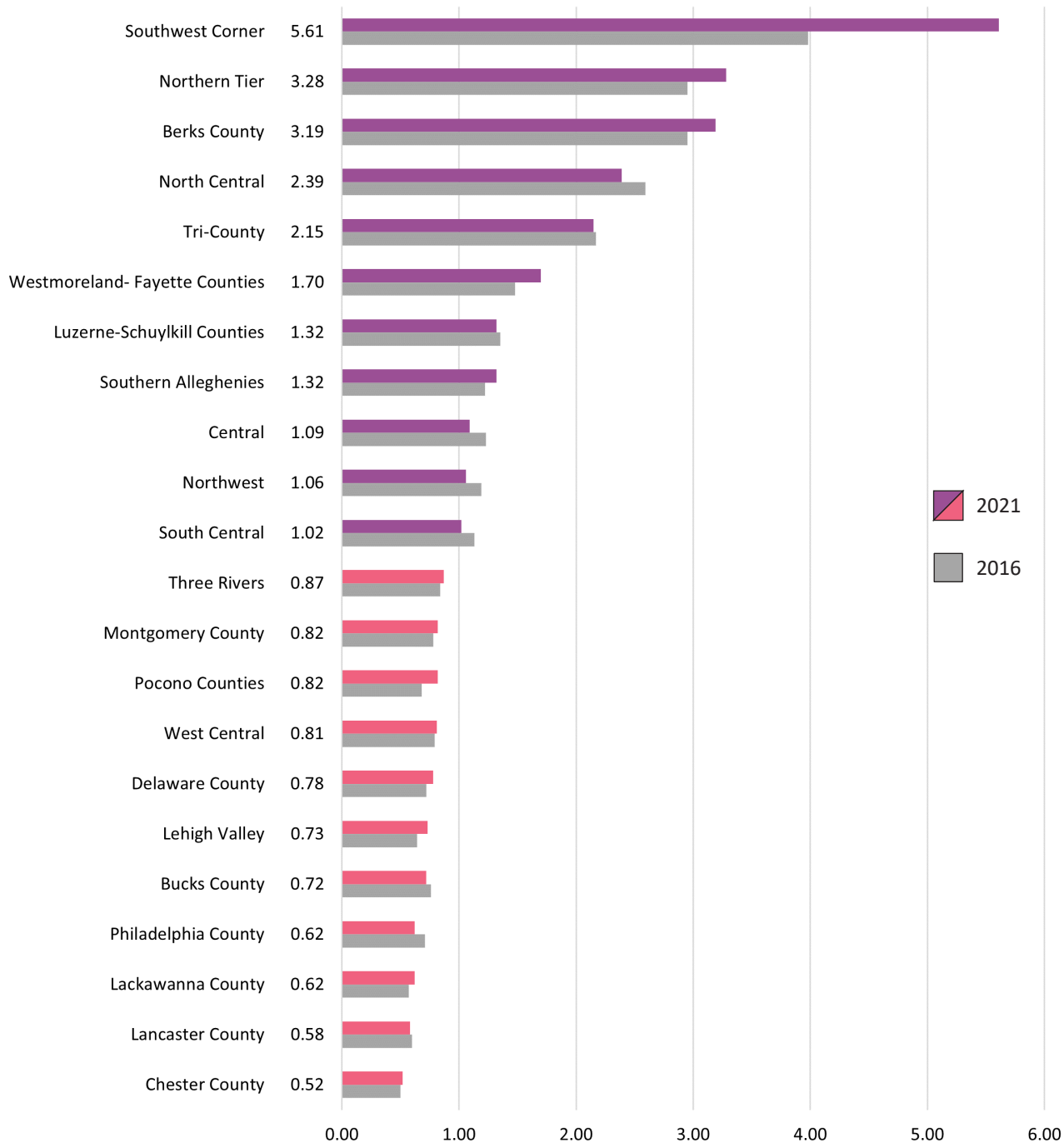
## Top Industries Based on Employment

- |   |   |
|---|---|
| • Oil & Gas Pipeline Construction             | • Air, Water & Waste Program Administration         |
| • Electric Power Distribution                 | • Current-Carrying Wiring Device Manufacturing      |
| • Solid Waste Collection                      | • Recyclable Material Merchant Wholesalers          |
| • Battery Manufacturing                       | • Natural Gas Extraction                            |
| • Water Supply & Irrigation Systems           | • Environment & Conservation Organizations          |
| • Support Activities for Oil & Gas Operations | • Bituminous Coal Underground Mining                |
| • Natural Gas Distribution                    | • Nuclear Electric Power Generation                 |
| • Fuel Dealers                                | • Fossil Fuel Electric Power Generation             |
| • Power & Communication System Construction   | • Other Petroleum Merchant Wholesalers              |
| • Sewage Treatment Facilities                 | • All Other Petroleum & Coal Products Manufacturing |



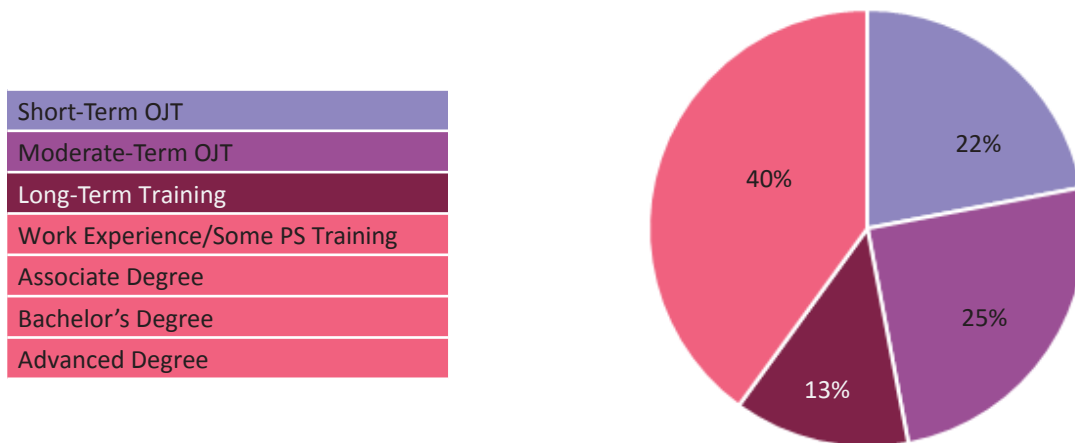
## Employment Concentration

A location quotient, or LQ, compares a cluster's share of local employment to its share of national employment. This value can be used when evaluating the strength of an industry cluster within an area. An LQ greater than one indicates that the cluster has, on average, more employees locally than typically expected implying a possible competitive advantage. The Southwest Corner, Northern Tier, Berks County, Westmoreland-Fayette Counties and Southern Alleghenies Workforce Development Areas (WDAs) all have LQs greater than one and have also increased their competitiveness since 2016.



## Educational Requirements

This graph illustrates the minimum educational attainment levels for jobs found in this cluster's various industries. Only 40 percent of ENGY jobs require formal postsecondary training of any kind. Partnered with high average wages, this is an industry cluster that offers high rewards to those willing to work hard and learn on the job.



## Occupations with Significant Employment

The following table lists occupations that employ at least 1,100 people in the ENGY cluster.

			Annual Demand	
SOC Code	Occupation	Average Wage	All Industries	Industry Cluster
53-3032	Heavy & Tractor-Trailer Truck Drivers	\$53,670	10,434	672
47-2061	Construction Laborers	\$50,150	5,274	480
53-7081	Refuse & Recyclable Material Collectors	\$39,300	728	436
53-7062	Laborers & Freight/Stock/Material Movers	\$38,900	20,297	352
47-2073	Operating Engineers	\$58,310	2,359	341
47-1011	Supervisors - Construction Trades & Extraction Workers	\$79,300	2,374	297
43-9061	Office Clerks, General	\$41,880	16,622	288
49-9051	Electrical Power-Line Installers & Repairers	\$86,280	371	277
11-1021	General & Operations Managers	\$121,750	7,891	240
43-4051	Customer Service Representatives	\$41,810	15,067	233
47-5071	Roustabouts, Oil & Gas	\$41,970	210	204
53-7065	Stockers & Order Fillers	\$34,900	17,163	195
47-5013	Service Unit Operators, Oil, Gas & Mining	\$47,890	191	183
51-2028	Elec. & Electromechanical Assemblers	\$40,210	1,366	171
49-9041	Industrial Machinery Mechanics	\$58,710	2,287	168

\*The 2022 average annual wage reflects wages across all industries and is not specific to the cluster.



Center for Workforce Information & Analysis  
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