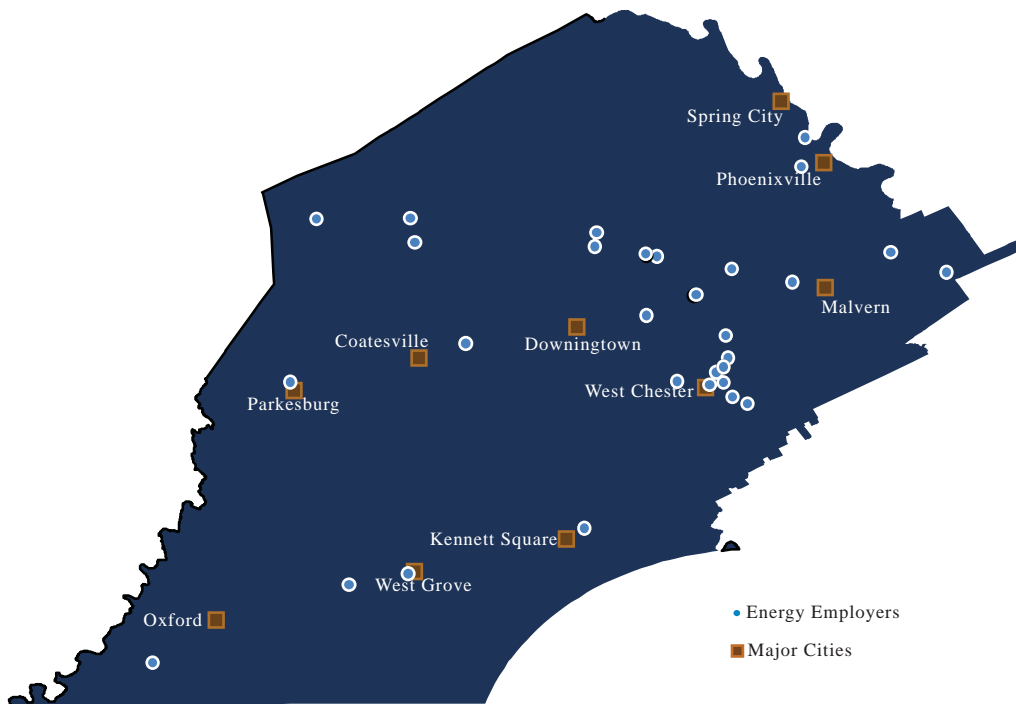




Chester County Workforce Investment Area

QUARTERLY SNAPSHOT



CHESTER COUNTY
WORKFORCE INVESTMENT BOARD

Advancing Chester County's Workforce

March 2011



Chester County Workforce Investment Area

INDUSTRY CLUSTERS OVERVIEW

As shown in **Table 1**, the Chester County WIA experienced over-the-year employment growth in the Education (ED), Health Care (HC) and Information & Communication Services (ICS) industry clusters. These clusters all pay an average wage greater than the state. Business & Financial Services (BFS), along with ED and HC account for nearly four out of every 10 people employed within the WIA. Agriculture & Food Production (AFP), Bio-Medical (BM), BFS and ICS all have a national location quotient (LQ) greater than 1.0, and are the real backbone of the WIA's economy.

Table 1: Industry Cluster Statistics for Chester County WIA (4th Quarter 2009)

	AFP	AMDM	BC	BFS	BM	ED	ENGY	HC	ICS	LT	LWP
Area Employment	10,247	10,170	11,392	39,914	7,213	24,297	1,571	26,718	17,637	4,273	1,460
Percent Area Employment	4.33	4.29	4.81	16.85	3.05	10.26	0.66	11.28	7.45	1.80	0.62
Employment Growth (Q4 2008 - Q4 2009)	-91	-1,627	-1,675	-1,941	-60	336	-246	454	12	-356	-222
2009 Annual Average Wage (\$)	36,515	66,197	57,102	88,029	118,203	43,616	79,669	51,594	100,959	45,141	48,021
National Location Quotient (Q4 2009)	1.30	0.97	0.88	1.41	2.59	0.94	0.40	0.89	1.71	0.76	0.74

Glossary for Tables 1 - 4

AFP	Agriculture & Food Production
AMDM	Advanced Materials & Diversified Manufacturing
BC	Building & Construction
BFS	Business & Financial Services
BM	Bio-Medical
ED	Education
ENGY	Energy
HC	Health Care
ICS	Information & Communication Services
LT	Logistics & Transportation
LWP	Lumber, Wood & Paper

LQ – Location Quotient: A measure of an industry's concentration in an area relative to the rest of the nation. It compares an industry's share of local employment with its share of national employment and assesses an industry's competitiveness. If the location quotient is greater than 1.00, that industry exports the majority of its goods and services to another area and is considered competitive. If the location quotient is less than 1.00, it is considered a local cluster and the majority of goods and services are used in the local market.



INDUSTRY CLUSTERS OVERVIEW

Table 2: Industry Cluster Statistics for SEPA (4th Quarter 2009)

	AFP	AMDM	BC	BFS	BM	ED	ENGY	HC	ICS	LT	LWP
Employment	37,417	65,179	75,296	265,383	45,751	216,581	16,217	282,308	82,858	32,823	9,605
Percent WIA Employment	2.09	3.65	4.21	14.85	2.56	12.12	0.91	15.80	4.64	1.84	0.54
Employment Growth (Q4 2008 - Q4 2009)	-396	-7,992	-13,026	-11,242	-1,659	2,333	-478	-757	-3,269	-2,588	-1,122
2009 Annual Average Wage (\$)	44,369	62,189	61,286	78,323	107,765	48,520	83,946	53,484	85,910	45,456	58,468
National Location Quotient (Q4 2009)	0.63	0.83	0.77	1.24	2.18	1.11	0.55	1.24	1.06	0.77	0.65

To provide some perspective, these same cluster statistics can be found in **Table 2** for the Southeast Pennsylvania (SEPA) region, which consists of Bucks, Chester, Delaware, Montgomery and Philadelphia counties. Over the year, this region has experienced some significant decreases in employment within many of the clusters, however, much of this is consistent with statewide employment activity during the same time period (Table 3.) With the exception of Energy (ENGY), ED and HC, the Chester County WIA has an equal or greater national LQ than the SEPA region. This is rather significant to mention considering the SEPA region also includes Chester County employment. An interesting thing to note is that while the WIA employs more than one-quarter of the AFP workforce for the region, the average wage in the WIA is significantly lower than the SEPA average. It is the lowest paying cluster within the WIA.

Table 3: Industry Cluster Statistics for the State (4th Quarter 2009)

	AFP	AMDM	BC	BFS	BM	ED	ENGY	HC	ICS	LT	LWP
Statewide Employment (in thousands)	149	271	289	646	81	621	89	824	205	153	55
2009 Annual Average Wage (\$)	41,304	52,267	50,757	64,822	88,599	42,649	70,244	48,573	72,487	41,988	43,977
National Location Quotient (Q4 2009)	0.82	1.12	0.96	0.99	1.26	1.03	0.98	1.18	0.86	1.18	1.20



Chester County Workforce Investment Area

ENERGY CLUSTER

The ENGY cluster includes industries associated with the production and distribution of energy, as well as waste disposal industries associated with the remediation and environmental cleanup related to energy production. Many of the industries within this cluster relate to utilities, which until recently, didn't offer much competition. This led to few employers paying high wages. With the removal of the rate caps, and the implementation of electricity choice, more competition should be seen. Also, the push for green jobs and energy efficiency should cause this cluster to grow and become increasingly important. During the 4th quarter 2009, Chester County had fewer than half the expected employment within this cluster (LQ of 0.40.)

Table 4: Statistics for ENGY Cluster in Chester County WIA

Employer Units (Q4 2009)	85
Number of Jobs (Q4 2009)	1,571
Percent of Total Jobs (Q4 2009)	0.66%
Average Annual Wage (2009)	\$79,669
Net Change in Job Volume (Q4 2008 - Q4 2009)	-246
Net Percent Change in Job Volume (Q4 2008 - Q4 2009)	-13.50%
Q4 2009 National Location Quotient (LQ)	0.40
Percent Change from Q4 2008 National LQ	-6.55%

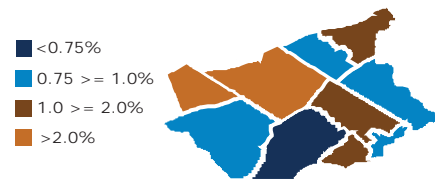
Figure 1

Total ENGY Employment by County



Figure 2

ENGY Percent Employment by County





Chester County Workforce Investment Area

ENERGY CLUSTER

Table 5: ENGY's Top 5 Industries in 4th Quarter 2009

By Employment		By Most Competitive LQ	
1	Electric power distribution	1	Other nonhazardous waste disposal
2	Oil and gas field machinery and equipment mfg.	2	Refined petroleum product pipeline transportation
3	Other nonhazardous waste disposal	3	Pipeline transportation of natural gas
4	Power and communication system construction	4	Pump and pumping equipment manufacturing
5	Motor and generator manufacturing	5	Oil and gas field machinery and equipment mfg.

In addition to looking at the change in employment, shift/share analysis helps evaluate the significance of that change by removing predictable factors. Shift/Share looks at the National Industry Share (NS), Local Industry Mix (IM) and Net Change (NC) to derive the area's Competitive Component (CC) in employment. **Figure 3** depicts the shift/share analysis of the ENGY industry cluster. The formula to derive the Competitive Component is:

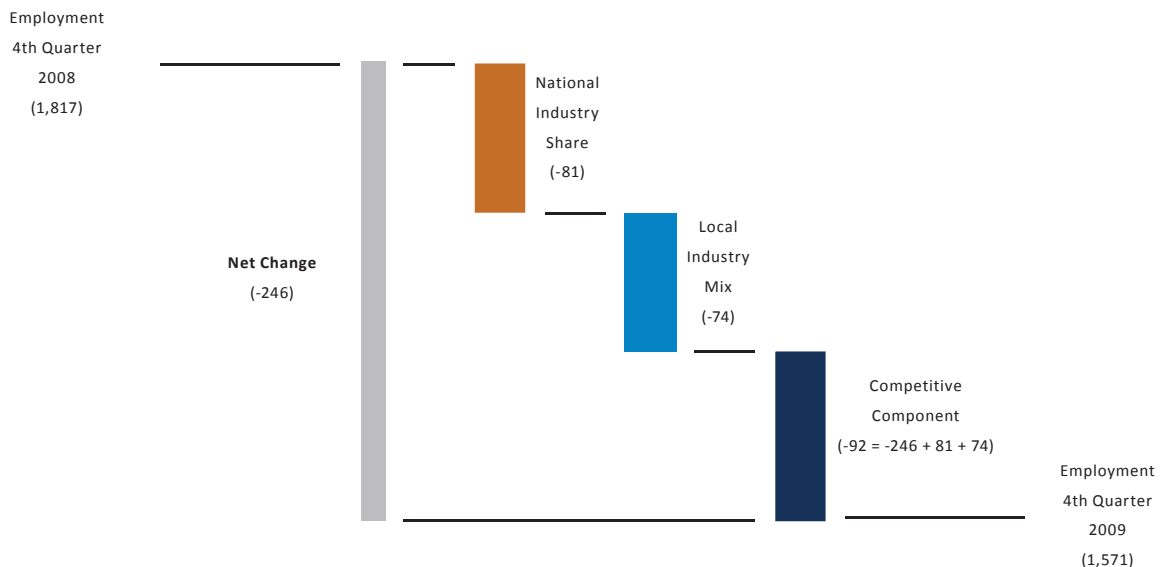
$$CC = NC - NS - IM$$

NC is the change in employment. In this case, 4th Quarter 2008 to 4th Quarter 2009.

NS is the predicted change in employment over the time period based on the national employment for **all industries**.

IM is the predicted change in employment over the time period based on the national employment in the **cluster**.

Figure 3: National Shift/Share Analysis of ENGY in Chester County





Chester County Workforce Investment Area

ENERGY CLUSTER

In this example, we can see that the overall national economy did not do well during this time period, and all other things being equal, the cluster would have lost 81 jobs if it followed the national average. At the same time ENGY in the nation also struggled, and would have accounted for a decrease of 74 jobs by itself. So, while the area lost 246 jobs, the region had a CC that actually accounted for a decrease of 92. This analysis cannot, however, explain why the area is less competitive, as numerous factors could be the causation of the regional disadvantage; geography, infrastructure, individual employers, tax policies, educational institutions, etc. This is also only a snapshot between two time periods and not a trend analysis, so the CC may fluctuate greatly when evaluating it over different time periods.

Table 6: WIA Employment of Statewide High Priority Occupations in ENGY

Statewide ENGY High Priority Occupations		Chester County WIA Employment			
SOC Code	SOC Title	Estimated 2008	Projected 2018	Percent Change	Annual Openings
13-1051	Cost Estimator	480	520	8.33	14
17-2161	Nuclear Engineers	N/A	N/A	N/A	N/A
17-2199	Energy Engineers	120	130	8.33	3
41-4012	Sales Representatives	4,420	4,280	-3.17	98
43-4051	Customer Service Representatives	5,130	5,700	11.11	200
47-1011	Supervisors - Construction Trade & Extraction	990	1,030	4.04	19
47-2073	Operating Engineers	480	500	4.17	12
47-2152	Plumbers, Pipefitters & Steamfitters	620	660	6.45	17
49-1011	Supervisors - Mechanics, Installers & Repairers	580	580	0.00	14
49-2095	Electrical Repairers, Powerhouse & Substation	40	30	-25.00	1
49-9021	HVAC Mechanics and Installers	620	620	0.00	11
49-9041	Industrial Machinery Mechanics	460	490	6.52	11
49-9051	Electrical Power-Line Installers & Repairers	40	40	0.00	1
49-9052	Telecommunications Line Installers & Repairers	500	470	-6.00	13
49-9099	Renewable Energy Technicians	270	280	3.70	4
51-1011	Supervisors - Production & Operating Workers	1,070	1,010	-5.61	18
51-2092	Team Assemblers	1,190	1,130	-5.04	25
51-4121	Welders, Cutters, Solderers & Brazers	490	450	-8.16	10
51-8031	Water & Liquid Waste Treatment Plant & System Operators	430	460	6.98	12
53-3032	Truck Drivers, Heavy & Tractor-Trailer	3,350	3,580	6.87	83
53-7062	Laborers & Freight, Stock & Material Movers	3,520	3,310	-5397	113
53-7081	Refuse & Recyclable Material Collectors	140	140	0.00	5



Chester County Workforce Investment Area

ENERGY CLUSTER

The 2010 statewide High Priority Occupations (HPOs) within the ENGY cluster are shown on the previous page in **Table 6**. These 22 occupations are considered to be in demand by employers, have higher skill needs and likely provide family-sustaining wages throughout the state of Pennsylvania. The employment data listed for the occupations are for all industries, including ENGY, in Chester County WIA. In this area, a vast majority of these statewide ENGY HPOs are expected to experience above-average employment growth by 2018 and combined they will account for 684 annual openings.

Table 7 lists the top ENGY occupations by employment in Pennsylvania. Seven of these occupations listed appear in HPO list in Table 6. The 10 occupations listed make up approximately 30 percent of all employment in the ENGY cluster statewide. With a statewide 2009 annual average wage of \$70,244, the ENGY cluster occupational wages are typically higher than occupations in other clusters. All 10 of the occupations listed below pay above the family-sustaining wage in PA (\$29,680).

Table 7: Top Ten ENGY Occupations by Employment in PA

SOC Code	SOC Title	2008 Cluster Employment	2009 Occupational Wage
51-2092	Team Assemblers	3,791	\$33,247
53-3032	Truck Drivers, Heavy & Tractor-Trailer	3,443	\$36,841
49-9051	Electrical Power-Line Installers & Repairers	3,426	\$59,321
53-7081	Refuse & Recyclable Material Collectors	2,927	\$32,050
47-2073	Operating Engineers	2,628	\$47,931
43-9061	Office Clerks	2,454	\$30,548
53-7062	Laborers & Freight, Stock & Material Movers	1,986	\$30,892
51-8013	Power Plant Operators	1,948	\$58,640
47-2061	Construction Laborers	1,859	\$38,646
49-9041	Industrial Machinery Mechanics	1,572	\$46,786

Center for Workforce Information & Analysis

www.paworkstats.state.pa.us