

MARCELLUS SHALE FAST FACTS JUNE 2011 EDITION*

Each of the following sections is a quick snapshot of labor market information for Pennsylvania's Marcellus Shale (MS) related industries and related economic activity.

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*Note: The data in this edition include additional ancillary Marcellus Shale related industries and include government employment in all Marcellus Shale related industries. Therefore, the employment and new hire totals and the average wages in this edition are not comparable to those found in the April edition.

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Release Date: 06-09-2011

CWIA-MS

BACKGROUND INFORMATION

The purpose of this Fast Facts publication is to provide the most current available data on Marcellus Shale related economic activity. While several data sources are utilized in this document, the primary focus is on the Quarterly Census of Employment and Wages (QCEW).

The QCEW program derives its data from quarterly tax reports submitted to the Pennsylvania Unemployment Compensation system from employers subject to the state's unemployment insurance laws. This includes 95 percent or more of all wage and salary civilian employment in Pennsylvania.

In 2009, CWIA used the North American Industry Classification System (NAICS) to define the Marcellus Shale related industries. Much of the information included in this document reflects data on a group of 6 industries identified as "core," and a group of 30 industries identified as "ancillary" for Marcellus Shale related activity (see notes section below).

As Marcellus Shale related activity develops further in Pennsylvania, additional industries may be added to the ancillary group, based on factors such as significant employment gains in an industry in a Marcellus Shale geographic region or identification of a group of companies in the same industry involved in Marcellus Shale related activity. Of the current 30 ancillary industries, 9 have been newly added since April's edition of this publication.

Also included in this publication are several additional data sources that capture employer demand and hiring activity. For an explanation of all data sources, please refer to the "definitions" section on page 15.

The data in this edition now include government (federal, state, and local) employment in all Marcellus Shale related industries because significant non-private employment is present in a number of these industries, most notably Highway, Street, & Bridge Construction; Engineering Services; Water Supply & Irrigation Systems; and Sewage Treatment Facilities.

Notes:

Marcellus Shale Core Industries (NAICS): Crude Petroleum & Natural Gas Extraction (211111); Natural Gas Liquid Extraction (211112); Drilling Oil & Gas Wells (213111); Support Activities for Oil & Gas Operations (213112); Oil & Gas Pipeline & Related Structures Construction (237120); and Pipeline Transportation of Natural Gas (486210).

Marcellus Shale Ancillary Industries (NAICS): Fossil Fuel Electric Power Generation (221112); Natural Gas Distribution (221210); Water Supply & Irrigation Systems (221310); Sewage Treatment Facilities (221320); Water & Sewer Line & Related Structures Construction (237110); Highway, Street, and Bridge Construction (237310)*; Nonresidential Site Preparation Contractors (238912); Petrochemical Manufacturing (325110)*; Industrial Gas Manufacturing (325120); Iron & Steel Mills (331111); Iron & Steel Pipe & Tube Manufacturing from Purchased Steel (331210); Mining Machinery & Equipment Manufacturing (333131); Oil & Gas Field Machinery & Equipment Manufacturing (333132); Construction and Mining (except Oil Well) Machinery and Equipment Merchant Wholesalers (423810)*; Industrial Machinery and Equipment Merchant Wholesalers (423830)*; Industrial Supplies Merchant Wholesalers (423840)*; General Freight Trucking, Local (484110)*; Specialized Freight Trucking, Local (484220); Specialized Freight Trucking, Long-Distance (484230); Lessors of Other Real Property (531190); Construction, Mining & Forestry Machinery & Equipment Rental & Leasing (532412); Engineering Services (541330); Geophysical Surveying & Mapping Services (541360); Testing Laboratories (541380); Environmental Consulting Services (541620); Remediation Services (562910); Commercial & Industrial Machinery & Equipment Repair & Maintenance (811310); Administration of Air and Water Resource and Solid Waste Management Programs (924110)*; Administration of Conservation Programs (924120)*; Regulation and Administration of Communications, Electric, Gas, and Other Utilities (926130)*.

While the vast majority of Marcellus Shale related employment can be found in these industries, not all establishments in these industries are involved in Marcellus Shale. Asterisks indicate industries that have been added to the group of ancillary industries since the previous edition of this publication.

PENNSYLVANIA

ECONOMIC BACKGROUND

- **Pennsylvania's unemployment rate for April 2011 was 7.5%**
 - This was 1.5 percentage point below the U.S. rate of 9.0%.
 - O-T-M change was -0.3 percentage point, O-T-Y change was -1.3 percentage point
- **Pennsylvania total nonfarm jobs for April 2011 at 5,692,700**
 - O-T-M change was +23,700
 - O-T-Y change was +80,000
 - PA was still down 116,900 jobs since the start of the recession (December 2007)
- **Pennsylvania new hire activity was increasing**
 - There were 439,300 new hires across all industries in the 1st quarter of 2011
 - This was an increase of 2,500 over 1st quarter 2010 (+1%)
- **Employer demand was increasing in PA**
 - 162,404 job ads were posted online in April 2011
 - This was an increase of 12,926 from April 2010
- **There were 2.9 unemployed persons for every online job posting (April 2011)**
 - This was better than the U.S. rate, which stood at 3.2
 - This was down from a peak 4.8 unemployed per online job posting in late 2009

O-T-M: Over the Month
O-T-Y: Over the Year

MARCELLUS SHALE RELATED

INDUSTRIES EMPLOYMENT:

SUMMARY STATISTICS

Employment (2007 Q4 to 2010 Q4):

- Core industries were up 9,300 (+97%)
- Ancillary industries were down 3,600 (-2%)
- All industries declined 117,000 (-3%)
- 2010 Q4 Marcellus Shale related industries total employment was 218,200

Establishments (2007 Q4 to 2010 Q4):

- More than 500 establishments were added (319 core, 206 ancillary)
- This represented 59% growth in the core industries and 2% growth in the ancillary industries; over the same time period, PA experienced 1% growth for all industries
- Marcellus Shale related industries had a total of 13,358 establishments

Wages (2010 Q1 to 2010 Q4):

- The average wage across all industries was \$45,747
- The average wage in the core industries was \$73,150, which was about \$27,400 greater than the average for all industries
- The average wage in the ancillary industries was \$61,871, which was more than \$16,100 greater than the average for all industries

New Hires (2009 Q4 to 2011 Q1):

- 72,000 new hires were reported within the Marcellus Shale core and ancillary industries (the increase from the 48,000 new hires reported in the last edition of the Marcellus Shale Fast Facts is entirely due to the addition of nine industries in the ancillary group and the inclusion of government employment)

Unemployment Rate:

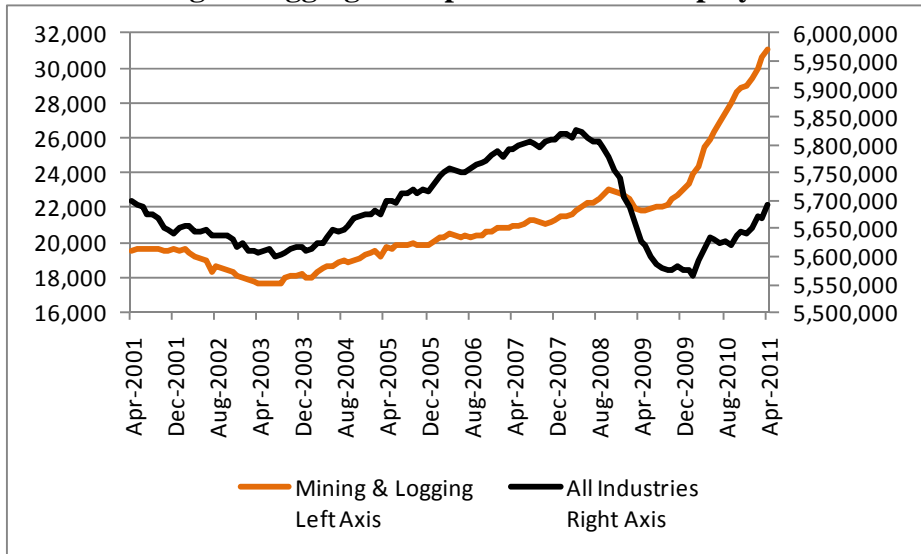
- Areas with significant Marcellus Shale drilling activity have seen notable decreases in unemployment rates
- From March 2009 to March 2011, the overall unemployment rate for counties with:
 - 10 or more wells drilled in 2010 dropped from 7.7 to 7.1 (-0.6 percentage points)
 - 1 to 9 wells drilled in 2010 increased slightly from 7.1 to 7.2 (+0.1 percentage point)
 - no wells drilled in 2010 remained the same at 7.6

Online Job Postings (April 2011):

- There were 2,700 online job postings statewide in core and ancillary industries

MINING JOBS VS. TOTAL JOBS IN PENNSYLVANIA

Mining & Logging¹ Compared to Total Employment



Current Employment Statistics (All data are seasonally adjusted)

- Total Pennsylvania Employment (April 2011)
 - O-T-M change was +23,700 (+0.4%)
 - O-T-Y change was +80,000 (+1.4%)
 - Change from 10 years ago was -7,800 (-0.1%)
- Mining & Logging Industries in Pennsylvania
 - O-T-M change was +400 (+1.3%)
 - O-T-Y change was +5,500 (+21.6%)
 - Change from 10 years ago was +11,500 (+59.0%)

O-T-M: Over the Month
O-T-Y: Over the Year

Points to Note

- Nearly half (47.8%) of the increase in mining & logging employment over the last decade occurred in the past 12 months.
- While employment totals across all industries have yet to reach either pre-recession totals or the totals from a decade ago, employment in mining & logging industries in Pennsylvania reached its highest level in the past two decades.

¹ Mining and Logging data are seasonally adjusted data. Mining data, which are included in Mining and Logging, are not seasonally adjusted.

PENNSYLVANIA MARCELLUS SHALE RELATED INDUSTRIES DATA¹

Establishments & Employment in CWIA's Identified Core & Ancillary Marcellus Shale Related Industries

Core Industries		2007Q4		2010Q4		Vol. Change	
NAICS	Title	Est.	Emp.	Est.	Emp.	Est.	Emp.
211111	Crude Petroleum & Natural Gas Extraction	172	2,292	222	3,781	50	1,489
211112	Natural Gas Liquid Extraction	14	81	23	366	9	285
213111	Drilling Oil & Gas Wells	64	1,620	118	3,620	54	2,000
213112	Support Activities for Oil & Gas Operations	105	2,127	274	6,483	169	4,356
237120	Oil & Gas Pipeline & Related Structures	60	2,142	97	3,288	37	1,146
486210	Pipeline Transportation of Natural Gas	130	1,287	130	1,299	0	11
Totals		545	9,549	864	18,837	319	9,288
Ancillary Industries ²		2007Q4		2010Q4		Vol. Change	
NAICS	Title	Est.	Emp.	Est.	Emp.	Est.	Emp.
221112	Fossil Fuel Electric Power Generation	65	4,268	69	4,145	4	-123
221210	Natural Gas Distribution	146	5,349	164	4,803	18	-546
221310	Water Supply & Irrigation Systems	376	6,711	379	6,686	3	-25
221320	Sewage Treatment Facilities	477	4,212	481	4,371	4	160
237110	Water, Sewer, & Related Structure Const.	388	7,304	379	6,580	-9	-725
237310	Highway, Street, & Bridge Construction	532	21,319	541	21,755	9	437
238912	Nonresidential Site Preparation Contractors	607	10,552	631	9,395	24	-1,157
325110	Petrochemical Manufacturing	5	922	4	530	-1	-392
325120	Industrial Gas Manufacturing	32	1,821	36	1,462	4	-359
331111	Iron & Steel Mills	70	13,096	52	11,854	-18	-1,242
331210	Iron, Pipe, & Tube Mfg. from Prchsd. Steel	42	3,977	36	3,278	-6	-699
333131	Mining Machinery & Equipment Mfg.	24	3,187	24	3,220	0	33
333132	Oil & Gas Field Machinery & Equip. Mfg.	7	330	9	327	2	-3
423810	Const. & Mining Mach. Equip. Wholesalers	220	3,977	202	3,462	-18	-515
423830	Industrial Machinery & Equip. Wholesalers	1,053	12,520	966	11,523	-87	-997
423840	Industrial Supplies Merchant Wholesalers	313	3,218	358	3,691	45	473
484110	General Freight Trucking, Local	1,251	9,514	1,212	9,480	-39	-33
484220	Specialized Freight Trucking, Local	1,050	10,213	1,113	11,302	63	1,088
484230	Specialized Freight Trucking, Long-Distance	278	3,629	272	3,499	-6	-130
531190	Lessors of Other Real Estate Property	240	870	237	788	-3	-82
532412	Const., Mining, & Forestry Equip. Rental	102	2,167	136	2,664	34	496
541330	Engineering Services	2,415	41,864	2,516	42,486	101	622
541360	Geophysical Surveying & Mapping Services	60	311	59	232	-1	-78
541380	Testing Laboratories	391	7,070	399	7,399	8	329
541620	Environmental Consulting Services	466	3,161	476	3,233	10	71
562910	Remediation Services	214	2,585	236	2,700	22	114
811310	Comm. & Industrial Mach. & Equip. Repair	997	8,275	1,034	7,973	37	-302
924110	Admin. of Air & Water Res. & Waste Mgmt.	106	4,829	105	4,586	-1	-243
924120	Admin. of Conservation Programs	316	4,625	317	4,441	1	-184
926130	Reg. & Admin. of Comm., Elec., Gas, & Util.	45	1,120	51	1,512	6	392
Totals		12,288	202,996	12,494	199,377	206	-3,619

- From 2007 Q4 to 2010 Q4, employment in core industries increased by 97.3%.
- Over the same period, employment in the ancillary industries decreased by 1.8%.
- Employment across all industries decreased 3.0% (>170,000) over the same time period.

¹ Industry Data are based on Pennsylvania's Quarterly Census of Employment & Wages.

² The nine industries added to the ancillary group in this edition are highlighted in yellow.

Notes: These data are not seasonally adjusted. While most change was due to actual growth or decline, some movement may be due to seasonal patterns or administrative changes to data.

WORKFORCE INVESTMENT AREA MARCELLUS SHALE RELATED INDUSTRIES DATA¹

The tables below depict employment growth in the core and ancillary industries for Workforce Investment Areas (WIA) with substantial Marcellus Shale drilling activity (number of Marcellus Shale wells drilled in 2010 in parentheses).

Northern Tier (762)	2007Q4	2010Q4	Vol. Change	Pct. Change
Core	87	1,422	1,335	1534.5%
Ancillary	1,728	2,668	940	54.4%

Southwest Corner (220)	2007Q4	2010Q4	Vol. Change	Pct. Change
Core	627	1,425	798	127.3%
Ancillary	10,372	10,633	261	2.5%

Central (162)	2007Q4	2010Q4	Vol. Change	Pct. Change
Core	117	1,283	1166	996.6%
Ancillary	9,602	10,476	874	9.1%

North Central (108)	2007Q4	2010Q4	Vol. Change	Pct. Change
Core	1,988	2,321	333	16.8%
Ancillary	4,039	4,198	159	3.9%

Tri County (76)	2007Q4	2010Q4	Vol. Change	Pct. Change
Core	2,190	2,835	645	29.5%
Ancillary	8,530	8,761	231	2.7%

Westmoreland & Fayette (65)	2007Q4	2010Q4	Vol. Change	Pct. Change
Core	415	1,059	644	155.2%
Ancillary	10,262	10,352	90	0.9%

- The Northern Tier WIA experienced the most rapid growth in Marcellus Shale core industries of all WIAs in terms of both volume and percentage; Northern Tier saw an increase of 1,335 employees from 2007Q4 to 2010Q4, for an increase of over 1,500%.
- The Central WIA was second in terms of employment growth by volume and by percentage with an employment increase of almost 1,000%.
- Significant employment gains were seen in each WIA that had substantial Marcellus Shale drilling activity.

¹ Industry Data are based on Pennsylvania's Quarterly Census of Employment & Wages.

Notes: These data are not seasonally adjusted. While most change was due to actual growth or decline, some movement may be due to seasonal patterns or administrative changes to data.

WAGES FOR MARCELLUS SHALE CORE & ANCILLARY INDUSTRIES¹

Core Industry Title	Average Wage²
Crude Petroleum & Natural Gas Extraction	\$87,292
Natural Gas Liquid Extraction	\$96,137
Drilling Oil & Gas Wells	\$73,546
Support Activities for Oil & Gas Operations	\$64,158
Oil & Gas Pipeline & Related Structures Construction	\$66,273
Pipeline Transportation of Natural Gas	\$80,358
Average	\$73,150
Ancillary Industries Title	Average Wage²
Fossil Fuel Electric Power Generation	\$106,176
Natural Gas Distribution	\$74,941
Water Supply & Irrigation Systems	\$53,646
Sewage Treatment Facilities	\$43,172
Water & Sewer Line & Related Structures Construction	\$64,410
Highway, Street, & Bridge Construction	\$54,412
Nonresidential Site Preparation Contractors	\$51,343
Petrochemical Manufacturing	\$73,991
Industrial Gas Manufacturing	\$84,128
Iron & Steel Mills	\$70,547
Iron & Steel Pipe & Tube Manufacturing from Purchased Steel	\$55,753
Mining Machinery & Equipment Manufacturing	\$68,165
Oil & Gas Field Machinery & Equipment Manufacturing	\$57,954
Construction & Mining Machinery Equipment Wholesalers	\$56,829
Industrial Machinery & Equipment Merchant Wholesalers	\$63,662
Industrial Supplies Merchant Wholesalers	\$60,327
General Freight Trucking, Local	\$40,094
Specialized Freight Trucking, Local	\$44,283
Specialized Freight Trucking, Long-Distance	\$47,759
Lessors of Other Real Estate Property	\$39,907
Construction, Mining, & Forestry Machinery & Equip. Rental	\$72,240
Engineering Services	\$74,748
Geophysical Surveying & Mapping Services	\$50,877
Testing Laboratories	\$62,468
Environmental Consulting Services	\$66,074
Remediation Services	\$54,364
Commercial & Industrial Mach. & Equip. Repair & Maintenance	\$50,720
Admin. of Air & Water Res. & Solid Waste Mgmt. Programs	\$61,055
Admin. of Conservation Programs	\$48,742
Reg. & Admin. Of Communications, Electric, Gas, & Other Utils.	\$79,803
Average	\$61,871

- The average wage across all industries for 2010Q1 to 2010Q4 was \$45,747.
- The average wage in the core industries was about \$27,400 greater than the average for all industries; the average wage in the ancillary industries was more than \$16,100 higher.

¹ Annual Average (AA) Wage Data is based on Pennsylvania's Quarterly Census of Employment & Wages.

² Average Wages for these industries were calculated by averaging the most recent four quarters of available wage data; in this case 2010Q1 through 2010Q4.

OCCUPATIONAL DATA FOR MARCELLUS

SHALE CORE INDUSTRIES¹

(based on industry staffing patterns)

Within the core industry group, occupations comprising at least one percent of all employment within those industries are listed. Statewide cross-industry annual average wages and the educational level achieved by the majority of people working in the occupation are provided.

SOC Code	SOC Title	Average Annual Wage	Education Level
47-5071	Roustabouts, Oil & Gas	\$27,997	Moderate OJT
47-5012	Rotary Drill Operators, Oil & Gas	\$46,280	Moderate OJT
47-5013	Service Unit Operators, Oil, Gas, & Mining	\$28,018	Moderate OJT
53-7073	Wellhead Pumpers	\$33,634	Moderate OJT
47-2061	Construction Laborers	\$30,618	Moderate OJT
47-2073	Operating Engineers & Other Construction Equipment Operators	\$39,478	Moderate OJT
47-1011	Supervisors of Construction Trades & Extraction Workers	\$58,802	Work Experience
51-8092	Gas Plant Operators	\$53,643	Long-term OJT
51-8093	Petroleum Pump System Operator, Refinery Operators & Gaugers	\$52,187	Long-term OJT
47-5081	Helpers, Extraction Workers	\$32,344	Short-term OJT
53-3032	Truck Drivers, Heavy & Tractor-Trailer	\$38,938	Moderate OJT
53-7072	Pump Operators	\$32,947	Moderate OJT
47-5011	Derrick Operators, Oil & Gas	\$27,726	Moderate OJT
43-9061	Office Clerks	\$26,770	Short-term OJT
53-7071	Gas Compressor & Gas Pumping Station Operators	\$49,400	Moderate OJT
49-9041	Industrial Machinery Mechanics	\$43,742	Long-term OJT
43-6014	Secretaries	\$29,162	Moderate OJT
43-2011	Accountants & Auditors	\$59,675	Bachelor's Degree
11-1021	General & Operations Managers	\$88,005	Degree Plus Work Exp
43-3031	Bookkeeping, Accounting, & Auditing Clerks	\$33,363	Moderate OJT
49-9042	Maintenance & Repair Workers	\$34,819	Moderate OJT
47-5012	Earth Drillers	\$39,582	Moderate OJT
47-2152	Plumbers, Pipefitters, & Steamfitters	\$54,018	Long-term OJT
51-4121	Welders, Cutters, Solderers, & Brazers	\$34,882	Long-term OJT
53-7062	Laborers and Freight, Stock, & Material Movers, Hand	\$25,293	Short-term OJT
51-1011	Supervisors of Production & Operating Workers	\$52,624	Work Experience
47-2151	Pipelayers	\$37,898	Moderate OJT
19-2042	Geoscientists	\$74,422	Master's Degree
41-9022	Real Estate Sales Agents	\$44,242	PS Vocational Award
49-3042	Mobile Heavy Equipment Mechanics	\$44,720	PS Vocational Award
43-6011	Executive Secretaries & Administrative Assistants	\$41,309	Moderate OJT
53-7032	Excavating & Loading Machine & Dragline Operators	\$38,667	Moderate OJT
17-2151	Mining & Geological Engineers	\$59,218	Bachelor's Degree
47-2031	Carpenters	\$40,206	Long-term OJT
47-2111	Electricians	\$56,347	Long-term OJT
17-2171	Petroleum Engineers	\$95,659	Bachelor's Degree

¹ The occupations are ranked by the percentage of industry employment they comprise.

OCCUPATIONAL DATA FOR MARCELLUS

SHALE ANCILLARY INDUSTRIES¹

(based on industry staffing patterns)

Within the ancillary industry group, occupations comprising at least one percent of all employment within those industries are listed. Statewide cross-industry annual average wages and the educational level achieved by the majority of people working in the occupation are provided.

SOC Code	SOC Title	Average Annual Wage	Education Level
53-3032	Truck Drivers, Heavy & Tractor Trailer	\$38,938	Moderate OJT
17-2051	Civil Engineers	\$71,053	Bachelor's degree
47-2061	Construction Laborers	\$30,618	Moderate OJT
47-2073	Operating Engineers & Construction Equipment Operators	\$39,478	Moderate OJT
43-9061	Office Clerks	\$26,770	Short-term OJT
53-7062	Laborers and Freight, Stock, & Material Movers, Hand	\$25,293	Short-term OJT
49-9041	Industrial Machinery Mechanics	\$43,742	Long-term OJT
49-9042	Maintenance & Repair Workers	\$34,819	Moderate OJT
17-3011	Architectural & Civil Drafters	\$41,350	PS Vocational Award
43-6014	Secretaries	\$29,162	Moderate OJT
17-2141	Mechanical Engineers	\$74,485	Bachelor's degree
51-4121	Welders, Cutters, Solderers, & Brazers	\$34,882	Long-term OJT
43-3031	Bookkeeping, Accounting, & Auditing Clerks	\$33,363	Moderate OJT
47-4011	Construction & Building Inspectors	\$45,053	Work Experience
51-9061	Inspectors, Testers, Sorters, Samplers, & Weighers	\$34,299	Moderate OJT
17-2071	Electrical Engineers	\$80,933	Bachelor's degree
17-3022	Civil Engineering Technicians	\$41,018	Associate's degree
11-1021	General & Operations Managers	\$88,005	Degree plus work Exp
17-1022	Surveyors	\$49,358	Bachelor's degree
43-4051	Customer Service Representatives	\$31,179	Moderate OJT
53-3033	Truck Drivers, Light or Delivery Service	\$29,037	Short-term OJT
51-1011	Supervisors of Production & Operating Workers	\$52,624	Work Experience
47-1011	Supervisors of Construction Trades & Extraction Workers	\$58,802	Work Experience
51-9198	Helpers, Production Workers	\$23,525	Short-term OJT
17-3013	Mechanical Drafters	\$47,403	PS Vocational Award
43-6011	Executive Secretaries & Administrative Assistants	\$41,309	Moderate OJT
11-9041	Engineering Managers	\$108,014	Degree plus work Exp

¹ The occupations are ranked by the percentage of industry employment they comprise. These data do not include the staffing patterns of the additional ancillary industries added this month. These data will be updated to include the additional ancillary industries next month.

OCCUPATIONAL DATA FOR MARCELLUS SHALE ANCILLARY INDUSTRIES¹ (CONT.)

(based on industry staffing patterns)

Within the ancillary industry group, occupations comprising at least one percent of all employment within those industries are listed. Statewide cross-industry annual average wages and the educational level achieved by the majority of people working in the occupation are provided.

SOC Code	SOC Title	Average Annual Wage	Education Level
41-4012	Sales Representatives, Wholesale & Manufacturing	\$53,061	Moderate OJT
51-4041	Machinists	\$37,752	Long-term OJT
17-2112	Industrial Engineers	\$74,256	Bachelor's degree
13-2011	Accountants & Auditors	\$59,675	Bachelor's degree
17-2081	Environmental Engineers	\$79,373	Bachelor's degree
49-3042	Mobile Heavy Equipment Mechanics	\$44,720	PS Vocational Award
53-7051	Industrial Truck & Tractor Operators	\$31,429	Short-term OJT
17-3031	Surveying & Mapping Technicians	\$33,197	Moderate OJT
51-8031	Water & Liquid Waste Treatment Plant & System Operators	\$42,474	Long-term OJT
13-1111	Management Analysts	\$78,894	Degree plus work Exp
43-1011	Supervisors of Office & Administrative Support Workers	\$47,362	Work Experience
49-3031	Bus & Truck Mechanics & Diesel Engine Specialists	\$38,854	PS Vocational Award
51-4051	Metal-refining Furnace Operators & Tenders	\$36,442	Moderate OJT
17-3023	Electrical & Electronic Engineering Technicians	\$51,730	Associate's degree
19-4031	Chemical Technicians	\$42,203	Associate's degree
47-2152	Plumbers, Pipefitters, & Steamfitters	\$54,018	Long-term OJT
49-1011	Supervisors or Mechanics, Installers, & Repairers	\$61,131	Work Experience
13-1051	Cost Estimators	\$55,890	Work Experience
51-4023	Rolling Machine Setters, Operators, & Tenders, Metal & Plastic	\$36,358	Moderate OJT
49-9051	Electrical Power-line Installers & Repairers	\$60,590	Long-term OJT
51-2092	Team Assemblers	\$28,829	Moderate OJT
53-7021	Crane & Tower Operators	\$41,558	Long-term OJT
51-4031	Cutting, Punching, & Press Machine Setters, Operators & Tenders	\$30,971	Moderate OJT
17-3025	Environmental Engineering Technicians	\$37,565	Associate's degree
51-8013	Power Plant Operators	\$56,680	Long-term OJT
15-1051	Computer Systems Analysts	\$74,568	Bachelor's degree
47-2111	Electricians	\$56,347	Long-term OJT

PENNSYLVANIA MARCELLUS SHALE RELATED INDUSTRIES - NEW HIRES

Core Industries	2009		2010			2011
	Q4	Q1	Q2	Q3	Q4	Q1
Crude Petroleum & Natural Gas Extraction	103	254	423	235	223	216
Natural Gas Liquid Extraction	20	36	58	18	32	44
Drilling Oil & Gas Wells	263	308	351	390	382	309
Support Activities for Oil & Gas Operations	223	545	670	891	990	900
Oil & Gas Pipeline & Related Structures	64	115	202	131	126	176
Pipeline Transportation of Natural Gas	14	20	16	7	2	2
Total	687	1,278	1,720	1,672	1,755	1,647
Ancillary Industries ¹	2009		2010			2011
Title	Q4	Q1	Q2	Q3	Q4	Q1
Fossil Fuel Electric Power Generation	8	32	32	16	6	25
Natural Gas Distribution	72	66	172	98	106	122
Water Supply & Irrigation Systems	27	42	65	33	47	89
Sewage Treatment Facilities	36	46	111	33	33	57
Water, Sewer Line & Related Structures Const.	231	253	457	393	279	234
Highway, Street, & Bridge Construction	1,194	2,446	3,345	2,025	1,076	2,402
Nonresidential Site Preparation Contractors	373	443	760	591	440	408
Petrochemical Manufacturing	17	24	9	26	16	14
Industrial Gas Manufacturing	17	8	11	21	18	31
Iron & Steel Mills	437	200	414	296	319	453
Iron, Steel Pipe, Tube Mfg. from Prchsd. Steel	117	217	178	136	197	204
Mining Machinery & Equipment Mfg.	68	134	198	183	163	199
Oil & Gas Field Machinery & Equipment Mfg.	5	1	6	12	9	4
Const. & Mining Mach. Equip. Wholesalers	138	161	238	128	106	142
Industrial Mach. & Equip. Wholesalers	265	396	459	429	474	510
Industrial Supplies Merchant Wholesalers	160	197	256	273	231	271
General Freight Trucking, Local	373	409	515	589	454	431
Specialized Freight Trucking, Local	308	351	585	618	673	557
Specialized Freight Trucking, Long-Distance	69	123	223	157	136	180
Lessors of Other Real Estate Property	13	25	57	22	25	15
Const., Mining, & Forestry Mach. & Equip. Rental	112	227	189	164	238	241
Engineering Services	2,602	3,038	4,333	3,278	2,707	3,030
Geophysical Surveying & Mapping Services	6	3	11	6	3	9
Testing Laboratories	204	306	759	541	481	490
Environmental Consulting Services	143	180	206	228	201	222
Remediation Services	326	234	478	347	326	318
Commercial & Industrial Mach. & Equip. Repair	278	410	552	330	382	419
Admin. Of Air & Water Res. & Waste Mgmt.	2	4	11	2	2	8
Admin. of Conservation Programs	2	4	11	4	10	7
Reg. & Admin. of Comm., Elec., Gas, & Utils.	0	0	0	0	0	0
Totals	7,603	9,980	14,641	10,979	9,158	11,092

- Pennsylvania had about 72,000 new hires within the Marcellus Shale core and ancillary industries from 2009Q4 to 2011Q1. (The increase from the 48,000 new hires reported in the last edition of the Marcellus Shale Fast Facts is entirely due to the addition of nine industries in the ancillary group and the inclusion of government employment.)
- There were 12,700 new hires in these two groups in the first quarter of 2011 alone.

¹The nine industries added to the ancillary group in this edition are highlighted in yellow.

Note: In every economy there is job creation and job destruction every month and the result is employment change. New hires are linked to job creation, however, an increase in new hires does not directly equate to an increase in the total employment count. The new hires count is simply an indication of hiring activity in an industry. Separations, in the form of initial claims (layoffs) or quits, are linked to job destruction and account for the other half of the employment change equation. The balance of hires and separations result in the employment change.

¹ The occupations are ranked by the percentage of industry employment they comprise. These data do not include the staffing patterns of the additional ancillary industries added this month. These data will be updated to include the additional ancillary industries next month.

WORKFORCE INVESTMENT AREA MARCELLUS SHALE RELATED INDUSTRIES - NEW HIRES

The tables below depict the number of new hires in the core and ancillary industries for Workforce Investment Areas with substantial Marcellus Shale drilling activity (number of Marcellus Shale wells drilled in 2010 in parentheses).

Northern Tier (762)	2009Q4	2010Q1	2010Q2	2010Q3	2010Q4	2011Q1
Core	16	36	64	90	108	86
Ancillary	78	67	119	85	132	77

Southwest Corner (220)	2009Q4	2010Q1	2010Q2	2010Q3	2010Q4	2011Q1
Core	28	81	196	163	240	336
Ancillary	273	242	391	314	173	200

Central (162)	2009Q4	2010Q1	2010Q2	2010Q3	2010Q4	2011Q1
Core	6	10	16	248	175	168
Ancillary	196	172	211	252	228	263

North Central (108)	2009Q4	2010Q1	2010Q2	2010Q3	2010Q4	2011Q1
Core	188	198	285	394	497	372
Ancillary	35	53	116	120	108	79

Tri County (76)	2009Q4	2010Q1	2010Q2	2010Q3	2010Q4	2011Q1
Core	65	103	214	140	111	124
Ancillary	312	362	507	338	296	440

Westmoreland & Fayette (65)	2009Q4	2010Q1	2010Q2	2010Q3	2010Q4	2011Q1
Core	8	28	50	36	32	43
Ancillary	192	381	633	521	293	406

- The number of new hires across these six WIAs in 2011Q1 (2,594) was nearly 50% greater than it was in 2010Q1 (1,733).
- From 2009Q4 to 2011Q1, North Central WIA had the highest volume of new hires in the Marcellus Shale core industries with over 1,900.
- Over the same time period, Westmoreland & Fayette WIA had the highest volume of new hires in the Marcellus Shale ancillary industries with more than 2,400.

PENNSYLVANIA & WORKFORCE INVESTMENT AREA MARCELLUS SHALE RELATED INDUSTRIES ONLINE JOB POSTING ACTIVITY¹

Pennsylvania Statewide Online Job Postings

	Apr-2010	Apr-2011	Pct. Increase
Core Industries	157	173	10.2%
Ancillary Industries	1,903	2,543	33.6%
Total All Industries	150,226	167,177	11.7%

Select WIA Online Job Postings (core & ancillary combined)

WIA	Apr-2010	Apr-2011	Pct. Increase
Northern Tier	63	79	25.4%
Southwest Corner	87	97	11.5%
Central	65	92	41.5%
North Central	25	10	-60.0%
Tri-County	36	65	80.6%
Westmoreland & Fayette	64	65	1.6%
Total	408	340	20.0%

- **Pennsylvania Online Job Postings**
 - Total job postings (across all industries) for Pennsylvania were 11.7% higher in April 2011 than in April 2010.
 - The increase seen in Marcellus Shale related industries (31.8%) outpaced the overall trend in PA.
- **Workforce Investment Area Online Job Postings**
 - The largest increase for job postings in the core and ancillary industries occurred in the Tri-County WIA (both in terms of volume and percentage) with a rise of 80.6% from April 2010 to April 2011.
 - The Central WIA also experienced high levels of job posting growth related to Marcellus Shale related industries in April 2011, rising 41.5% over the year.
 - The six WIAs with a substantial amount of Marcellus Shale drilling activity saw online job postings for these industries increase by an average of 20.0% in April 2011 compared to April 2010.

¹ Job Postings are counted using the Wanted Analytics Job Spidering tool from Help Wanted Online. Job posting increases should be viewed as an indication of **trend only**. For a complete explanation of this data set, please refer to the definitions section of this document.

DEFINITIONS:

Labor Force Statistics - Source: U.S. Bureau of Labor Statistics, Current Population Survey

The Current Population Survey (CPS) is a monthly survey of households conducted by the United States Census Bureau for the Bureau of Labor Statistics. It provides a comprehensive body of data on the labor force, employment, unemployment and persons not in the labor force by geographic area. The CPS is a count of people by residence.

Unemployment Rate: the number unemployed as a percent of the labor force.

Unemployment: Unemployed persons are persons aged 16 years and older who had no employment during the reference week (contains the 12th day of the month), were available for work (except for temporary illness), and had made specific efforts to find employment sometime during the 4-week period ending with the reference week. Persons who were waiting to be recalled to jobs from which they had been laid off need not to have been looking for work to be classified as unemployed.

Employment: Employed persons are all persons who, during the week which includes the 12th day of the month, (a) did any work as paid employees, worked in their own businesses or professions or on their own farm, or worked 15 hours or more as unpaid workers in enterprises operated by members of their families, or (b) were not working but who had jobs from which they were temporarily absent. Each employed person is counted only once, even if the person holds more than one job. Included are the self-employed, unpaid family workers, agricultural workers, and private household workers, who are excluded by the Current Employment Statistics survey.

Labor Force: All persons either working or looking for work are classified as employed or unemployed.

Jobs - Source: Pennsylvania Department of Labor & Industry, Current Employment Statistics (CES)

Each month the Current Employment Statistics program surveys about 200,000 national businesses and government agencies in order to provide detailed industry data on employment, hours, and earnings of workers on non-farm payrolls. This is a collaborative effort between BLS and the states. CES provides a count of jobs by place of business/establishment, not of people.

DEFINITIONS:

Quarterly Census of Employment and Wages - Source: The Pennsylvania Department of Labor & Industry, Quarterly Census of Employment and Wages

Employment: Employment data include all employment covered under the Pennsylvania Unemployment Compensation program for each of the three months in the quarter. The employment count represents the number of full-time and part-time employees who worked during or received pay for the payroll period including the 12th of the month. Included are persons on paid vacations or on paid sick leave. Workers temporarily earning no wages due to labor-management disputes, layoffs or other reasons are not reported as employed. Persons on the payroll of more than one employer during the same reference week are reported more than once.

Establishment: The location of a certain economic activity, such as a factory, store, office, or mine, that produces goods or services. It is typically at a single physical location and engaged in one, or predominantly one, type of economic activity. An employer may have one or more establishments.

Wages: Total wages include total compensation paid during a calendar quarter (including bonuses). Average wages are calculated by dividing total wages for a quarter by average employment in that quarter.

Staffing Patterns – Source: Economic Modeling Specialists Inc. (EMSI)

Economic Modeling Specialists Inc. provides economic and employment data analysis via web tools and custom reports for a variety of clients.

Staffing Pattern: A staffing pattern for an industry includes the proportion of individuals working in each occupation within that industry.

New Hires - Source: The Pennsylvania Department of Labor & Industry

New Hire Reporting is a process by which employers report information on all employees hired on or after January 1, 1998 to locate non-custodial parents, to establish child support orders, or to enforce existing orders. Company and individual data are confidential and cannot be released. However, the data can be aggregated to show where and in what industries hiring is taking place as an indication of what sectors of the economy are experiencing growth or decline. Approximately sixty percent of all new hires are captured. New hire counts by industry are an indication of trend only.

DEFINITIONS:

Help Wanted Online Ads - Source: *The Conference Board Help Wanted OnLine™ data set*

The Conference Board Help Wanted OnLine data set provides real-time insight into the employment marketplace through the world's largest database of online job ads. Jobs ads can be classified by industry, occupation, employer, and geographic area. Data are analyzed for employment trends and to forecast economic conditions. The underlying data for The Conference Board HWOL are provided by Wanted Technologies Corporation.

Map of Unemployment Rates by County - Source: *Pennsylvania Local Area Employment Statistics (LAUS)*.

Map of Well Activity vs. Unemployment Change - Source: *Pennsylvania Local Area Employment Statistics (LAUS) and Department of Environmental Protection.*

Map of Marcellus Shale Formation - Source: *Department of Environmental Protection.*

Workforce Investment Area (WIA)

A labor market area that is usually a group of contiguous counties, where employment, training and educational services are provided. Established through the Workforce Investment Act to provide services for dislocated workers and other eligible individuals, Pennsylvania's 22 WIAs are based on common geographic and economic factors.

MARCELLUS SHALE PERMITS ISSUED AND WELLS DRILLED

