

**SB 155 Proponent Testimony**  
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**American Electric Power Service Corporation**  
**June 15, 2017**

Chairman Beagle, Vice Chair LaRose, Ranking Member Williams, and members of the Senate Public Utilities Committee, thank you for the opportunity to present testimony in support of Senate Bill 155.

I have represented AEP Ohio on regulatory issues in Ohio for more than a decade and worked with the Ohio Attorney General's office and the Public Utilities Commission of Ohio (Commission) for more than 15 years prior to that.

AEP Ohio controls approximately 20% of the Ohio Valley Electric Corporation (OVEC) output, through a purchase power agreement known as the Inter-Company Power Agreement (ICPA). AEP Ohio currently recovers OVEC costs in retail rates under its current Electric Security Plan (ESP) based on the Commission's own findings that it would have rigorous oversight of the costs through full information sharing and a robust audit process.

In AEP Ohio's prior ESPs, the Company recovered OVEC-related costs through SSO rates without challenge. Historically, no prudence issues have been raised or supported by the Public Utilities Commission. SB 155 would continue to ensure that the Public Utilities Commission would review and ensure that only prudently-incurred costs are recovered in retail rates. Contrary to the assertions made by some opponents of SB 155, recovery of OVEC costs cannot be considered as additional stranded costs under SB 3's transition to deregulation. OVEC was never in utility rate base and the subject power purchase agreement (*i.e.*, the ICPA) was re-executed in 2011 – well after SB 3's transition period. Both the current recovery mechanism approved by the Commission for AEP Ohio and the ongoing proposed mechanism under SB 155 convey value to Ohio utility customers by providing a stabilizing hedge against volatile market prices and over time provide the potential for sustaining a financial benefit to customers during future periods where market prices exceed the ICPA purchase price.

The OVEC plants were originally built to serve vital national security interests and OVEC continues to serve the ongoing decommissioning operations at the Piketon plant in order to meet rigorous service reliability standards needed to avoid a power interruption that could present serious safety concerns. Operation of OVEC has provided substantial benefits to Ohio retail customers in the past and adopting this legislation will enable future benefits. Annually, OVEC provides over \$39 million of economic benefit in its six county region and over \$62 million of economic benefit in Ohio (see attached study). The State of Ohio should continue to do its part to fulfill the unique regulatory compact associated with OVEC by passing SB 155.

I am happy to respond to any questions you may have.

# **Economic Benefits of OVEC**

## **Executive Summary**

Ohio Valley Electric Corporation (OVEC) served its mission of supplying the electricity needs of the uranium enrichment plant in Piketon, Ohio. With the enrichment plant's electric requirements greatly reduced, the generation output reverts to sponsoring investor owned utilities. The presence of OVEC provides economic benefits to a region in southern Ohio and the state as whole. OVEC has 384 employees in Ohio. These jobs have a total impact of 553 jobs and 1,002 jobs in the study region and Ohio, respectively. OVEC employment creates \$33 million of direct income. The total income effect on the region and the State is \$39 million and \$63 million, respectively. In addition, coal purchases by OVEC create approximately 270 coal mining jobs, which have a total impact of 705 jobs for the state. The direct coal mining jobs associated with OVEC purchases create \$18 million income and total income impact on the state of \$39 million. Through its operations and purchases of Ohio coal, OVEC has an impact to Ohio of over 1,700 jobs and over \$100 million income. The output of electricity generated in Ohio is valued at approximately \$329 million. Coal purchases by OVEC are estimated to be valued at approximately \$97 million. With coal production in Ohio sharply declining in recent years, OVEC purchases of that output reflects a significantly greater share of the total production. OVEC had payments to Ohio interests of approximately \$227,000,000 in 2016. Not only does OVEC provide many benefits to the state, it directly or indirectly has a positive economic impact on regions of the state that have higher unemployment and lower average income than the Ohio in aggregate, i.e., the region of southern Ohio where OVEC facilities are located and the coalfields.

## **Background**

Ohio Valley Electric Corporation (OVEC) was organized in 1952. In addition to OVEC, its wholly owned subsidiary Indiana-Kentucky Electric Corporation (IKEC) was also established in 1952. OVEC and IKEC were formed by regional investor owned utilities and their parent holding companies. This consortium was established to provide power to the Atomic Energy Commission's (AEC) uranium enrichment facility that was being built in Piketon, Ohio.

OVEC provided the bulk of its generation to AEC until the power agreement between OVEC and DOE was terminated on April 20, 2003. Since the termination of the agreement, the OVEC generating capacity has been available to the sponsoring companies. Also, energy requirements for the Piketon uranium enrichment facility have been greatly reduced and it was the primary reason for AEC terminating the purchase agreement.

OVEC owns Kyger Creek Plant in Cheshire, Ohio, which has a name plate capacity of 1,086 MW. OVEC's subsidiary IKEC owns the Clifty Creek Plant in Madison, Indiana and it has a nameplate capacity of 1,304 MW.

### **OVEC's Ohio Operations**

OVEC had 384 of its 708 employees working at facilities in Ohio. There were 82 employees at the Company's headquarters in Piketon, Ohio. OVEC employed 302 workers at the Kyger Creek Plant. The average payroll for OVEC's employees in 2016 was approximately \$85,500. OVEC paid approximately \$2,800,000 in personal property and use taxes, along with an additional \$1,000,000 in commercial activity and use taxes. OVEC payments to Ohio companies in 2016 were approximately \$227,000,000.

### **Kyger Creek Plant**

OVEC had net generation of 9,946,877 MWh in 2016. The Kyger Creek Plant's share of the net generation was 4,934,166 MWh in 2016. It is estimated that Kyger Creek generation resulted in power costs to the sponsoring companies of approximately \$329,000,000 with OVEC having additional \$8,500,000 revenues from third party sales to DOE. Kyger Creek Plant purchased 2.2 million tons of Ohio coal, which reflects approximately 17% of the state's coal production in 2016. The value of this coal is approximately \$97,000,000. It is estimated that approximately 270 miners are employed in the production of the Ohio coal used at the Kyger Plant.

### **OVEC Economic Region**

In Ohio, OVEC has a physical presence in two counties. The corporate offices are in Pike County and the Kyger Creek plant is in Gallia County. For purposes of this study, surrounding counties of Jackson, Meigs, Scioto, and Vinton will be included. See Exhibit 1 for a map of the study area. These counties are close in proximity and have similar economic underpinnings.

The region had a population of approximately 204,000 in 2015. Population in the region declined at an average annual rate of -0.1% from the 2000 Census of the Population. Meanwhile, State of Ohio's population grew at an average annual rate 0.1%. The unemployment rate for the region was approximately 7.5% in 2016. By comparison, the unemployment rate for the State of Ohio was 4.9%. Exhibit 2 provides a comparison of unemployment rates for 2000 through 2016.

In 2015, the personal income for the region was \$6.7 billion. The annual income per capita for the region was \$32,810. In comparison, the State of Ohio and the United States had incomes per capita of \$43,566 and \$48,112, respectively. Exhibits 3 and 4 provide population and income data for the study area counties, Ohio and the U.S.

Wage and salary employment for 2015 in the region was 64,216 workers. Total wage and salaries for these workers were \$2.4 billion, which yields an average annual wage and salary of \$38,112. In comparison, the average wage and salary for the State of Ohio and the United States

were \$48,007 and \$53,162, respectively. Employment in the region remains 6.6% below 2007 pre-recession levels, meanwhile the State of Ohio is only 1.3% below pre-recession and the U.S. is 2.9% above pre-recession levels. Exhibits 5 and 6 present employment and earnings for workers in the study area, Ohio and the U.S.

### **Economic Impact Methodology**

Economic base theory was used to develop impact multipliers in this study. This theory divides the local economy into two sectors. The basic sector drives growth in the local economy and is dependent upon external factors and exports goods and services from the region. The non-basic sector is driven by local business activity and primarily serves customers in the region. Location quotients are one method to determine basic and non-basic sectors. The location quotient measures the relative intensity of a sector in a region or a state versus the nation. Those sectors with location quotients greater than one were included in the basic sector. See Exhibit 7 for a discussion and citations related to economic base multipliers and location quotients. The direct impact of the converted plant is measured as the employment or output of the facility. The total impact is the direct impact multiplied by the economic base multiplier. The economic impacts have been estimated for both short and long term impacts to the region and state.

### **Economic Impacts of OVEC**

In 2016, OVEC had 384 employees in Ohio. This level of employment has a total impact on the region and state of 553 and 1,002 workers, respectively. It is estimated that OVEC employees had an aggregate income of \$32,832,000. The total effect on income is estimated to be \$39,273,000 and \$62,512,000 for the region and the State of Ohio, respectively. The impact analysis is provided on Exhibit 8. The income generated by OVEC's presence in the region, has positive influence for local businesses.

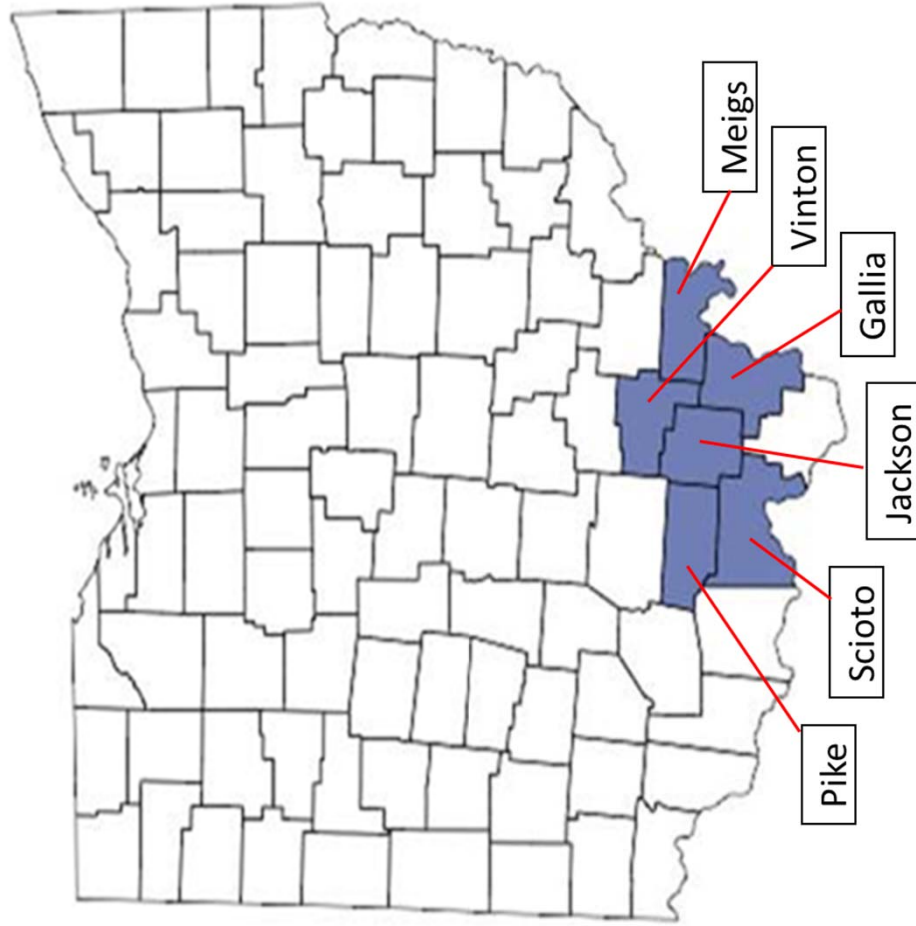
The region most directly affected by OVEC lags the state in many economic categories. Without the presence of OVEC, the region would lag state even further.

### **OVEC and the Ohio Coal Industry**

OVEC consumes 2.2 million tons of Ohio coal annually. This reflects approximately 17% of the state's 2016 output. While OVEC purchases of Ohio coal declined slightly since 2011, the production for Ohio declined by more than 50% during the 2011 through 2016 period. Thus, OVEC's purchases have garnered a growing importance to the Ohio coal industry with OVEC's share of coal purchases nearly doubling during that period. It is estimated that this coal is valued at \$97 million. It is estimated that 270 workers are employed in the mining of the coal used by OVEC. This number of coal related workers has a total impact on the state of 705 employees. The coal miners are estimated to have a total income of \$18.4 million and total income effect on

the state is estimated to be \$39.3million. The impact analysis is provided on Exhibit 9. Coal mining is concentrated in Belmont, Carroll, Harrison, Jackson, Jefferson, Noble, Perry, Tuscarawas, and Vinton counties. Nearly 99% of the Ohio coal production occurs in those counties. Exhibit 10 provides Ohio coal production by county through 2015. The presence of the coal industry in those counties is important. In 2016, these counties had a combined unemployment rate of 7.0%, which lags the State's 4.9%. Area unemployment rates are provided on Exhibit 11. As with the OVEC area, the coal producing region's income per capita of \$36,197 lags the state as a whole. Income and population for the coal producing region are provided on Exhibit 12. Without the coal purchases by OVEC, the unemployment rate for these counties would be higher and economic well-being for these counties would be diminished.

# OVEC Economic Region



**OVEC Economic Area and Ohio  
Unemployment Rates**

| Year | Economic Area Counties |         |       |       |        |        | Area  | Ohio  |
|------|------------------------|---------|-------|-------|--------|--------|-------|-------|
|      | Gallia                 | Jackson | Meigs | Pike  | Scioto | Vinton |       |       |
| 2000 | 7.3%                   | 6.1%    | 7.6%  | 7.2%  | 7.6%   | 7.2%   | 7.2%  | 4.0%  |
| 2001 | 6.3%                   | 6.6%    | 6.9%  | 7.5%  | 6.8%   | 7.5%   | 6.8%  | 4.3%  |
| 2002 | 7.3%                   | 7.9%    | 9.1%  | 9.5%  | 8.2%   | 8.7%   | 8.3%  | 5.7%  |
| 2003 | 8.6%                   | 8.6%    | 11.5% | 10.5% | 9.0%   | 9.5%   | 9.3%  | 6.2%  |
| 2004 | 8.4%                   | 8.8%    | 11.2% | 10.7% | 9.3%   | 9.0%   | 9.4%  | 6.3%  |
| 2005 | 7.4%                   | 7.5%    | 10.1% | 10.3% | 8.8%   | 8.4%   | 8.7%  | 5.9%  |
| 2006 | 6.1%                   | 7.5%    | 8.4%  | 8.9%  | 7.6%   | 7.9%   | 7.6%  | 5.4%  |
| 2007 | 6.2%                   | 7.9%    | 8.9%  | 9.5%  | 7.4%   | 7.9%   | 7.8%  | 5.6%  |
| 2008 | 6.6%                   | 8.5%    | 10.0% | 10.2% | 8.3%   | 9.2%   | 8.5%  | 6.4%  |
| 2009 | 9.5%                   | 11.3%   | 14.9% | 15.3% | 12.5%  | 13.2%  | 12.5% | 10.3% |
| 2010 | 11.8%                  | 12.5%   | 14.6% | 14.8% | 13.3%  | 13.5%  | 13.3% | 10.3% |
| 2011 | 11.2%                  | 11.8%   | 13.1% | 15.2% | 12.5%  | 11.9%  | 12.6% | 8.8%  |
| 2012 | 9.7%                   | 10.3%   | 11.6% | 13.0% | 11.3%  | 10.8%  | 11.1% | 7.4%  |
| 2013 | 9.7%                   | 10.5%   | 11.9% | 12.2% | 11.9%  | 10.7%  | 11.3% | 7.5%  |
| 2014 | 7.7%                   | 8.8%    | 9.0%  | 9.1%  | 8.8%   | 8.0%   | 8.6%  | 5.8%  |
| 2015 | 6.5%                   | 7.5%    | 8.2%  | 7.3%  | 7.6%   | 6.5%   | 7.4%  | 4.9%  |
| 2016 | 6.7%                   | 7.8%    | 8.3%  | 7.4%  | 7.6%   | 7.0%   | 7.5%  | 4.9%  |

Source: Bureau of Labor Statistics

**Personal Income (Thousands of \$), Population (Persons) and Per Capita Personal Income (\$)  
Counties in Affected Region**

| Year                           | Gallia    |            | Jackson   |            | Meigs    |            | Pike     |            | Scioto    |            | Vinton   |            | Region Total |            |            |
|--------------------------------|-----------|------------|-----------|------------|----------|------------|----------|------------|-----------|------------|----------|------------|--------------|------------|------------|
|                                | Personal  |            | Personal  |            | Personal |            | Personal |            | Personal  |            | Personal |            | Personal     |            | Per Capita |
|                                | Income    | Population | Income    | Population | Income   | Population | Income   | Population | Income    | Population | Income   | Population | Income       | Population | Personal   |
| 2000                           | 707,277   | 31,072     | 652,136   | 32,633     | 463,373  | 23,028     | 556,459  | 27,688     | 1,595,172 | 79,168     | 222,379  | 12,825     | 4,196,796    | 206,414    | 20,332     |
| 2001                           | 764,886   | 31,017     | 687,875   | 32,670     | 479,143  | 23,119     | 576,973  | 27,807     | 1,672,917 | 78,784     | 244,929  | 12,966     | 4,426,723    | 206,363    | 21,451     |
| 2002                           | 775,384   | 31,083     | 713,523   | 32,846     | 431,072  | 23,305     | 564,778  | 28,072     | 1,717,837 | 78,652     | 273,859  | 13,076     | 4,476,453    | 207,034    | 21,622     |
| 2003                           | 798,721   | 31,095     | 747,519   | 32,880     | 430,437  | 23,441     | 582,430  | 28,258     | 1,783,129 | 78,278     | 269,417  | 13,260     | 4,611,653    | 207,212    | 22,256     |
| 2004                           | 844,058   | 31,029     | 786,340   | 33,025     | 454,918  | 23,506     | 604,238  | 28,427     | 1,844,278 | 77,788     | 268,023  | 13,308     | 4,801,855    | 207,083    | 23,188     |
| 2005                           | 844,171   | 30,993     | 822,341   | 33,242     | 490,498  | 23,588     | 614,489  | 28,299     | 1,852,733 | 77,926     | 282,178  | 13,370     | 4,906,410    | 207,418    | 23,655     |
| 2006                           | 904,799   | 30,927     | 842,249   | 33,135     | 525,226  | 23,586     | 631,579  | 28,590     | 1,907,059 | 78,285     | 287,095  | 13,516     | 5,098,007    | 208,039    | 24,505     |
| 2007                           | 932,571   | 30,977     | 886,617   | 33,144     | 551,909  | 23,612     | 679,019  | 28,645     | 2,043,356 | 78,775     | 324,082  | 13,566     | 5,417,554    | 208,719    | 25,956     |
| 2008                           | 975,128   | 30,997     | 928,124   | 33,164     | 605,293  | 23,534     | 720,306  | 28,763     | 2,162,988 | 79,133     | 328,479  | 13,452     | 5,720,318    | 209,043    | 27,364     |
| 2009                           | 966,283   | 30,857     | 938,346   | 33,115     | 627,422  | 23,770     | 738,788  | 28,679     | 2,210,631 | 79,241     | 334,351  | 13,474     | 5,815,821    | 209,136    | 27,809     |
| 2010                           | 956,885   | 31,085     | 963,158   | 33,273     | 638,325  | 23,733     | 759,448  | 28,738     | 2,258,482 | 79,528     | 342,254  | 13,421     | 5,918,552    | 209,778    | 28,213     |
| 2011                           | 1,006,071 | 30,984     | 1,007,774 | 33,149     | 652,243  | 23,704     | 813,299  | 28,628     | 2,337,581 | 79,233     | 362,282  | 13,401     | 6,179,250    | 209,099    | 29,552     |
| 2012                           | 1,039,909 | 30,823     | 1,025,836 | 32,905     | 663,293  | 23,605     | 836,623  | 28,490     | 2,377,370 | 78,605     | 374,213  | 13,235     | 6,317,244    | 207,663    | 30,421     |
| 2013                           | 1,023,783 | 30,548     | 1,030,030 | 32,834     | 661,876  | 23,475     | 890,038  | 28,368     | 2,384,226 | 78,094     | 367,052  | 13,288     | 6,357,005    | 206,607    | 30,769     |
| 2014                           | 1,038,691 | 30,326     | 1,059,201 | 32,784     | 681,517  | 23,326     | 906,817  | 28,276     | 2,467,012 | 77,326     | 388,438  | 13,197     | 6,541,676    | 205,235    | 31,874     |
| 2015                           | 1,058,852 | 30,142     | 1,083,053 | 32,596     | 698,377  | 23,257     | 936,116  | 28,217     | 2,521,884 | 76,825     | 397,675  | 13,048     | 6,695,957    | 204,085    | 32,810     |
| Average Annual Growth Rate (%) |           |            |           |            |          |            |          |            |           |            |          |            |              |            |            |
|                                | 2.7       | -0.2       | 3.4       | 0.0        | 2.8      | 0.1        | 3.5      | 0.1        | 3.1       | -0.2       | 4.0      | 0.1        | 3.2          | -0.1       | 3.2        |

Source: U.S. Bureau of Economic Analysis (CA 1 Personal Income Summary)



**Personal Income (Thousands of \$), Population (Persons) and Per Capita Personal Income (\$)  
United States and State of Ohio**

| Year                           | United States      |             |                                  | State of Ohio      |            |                                  |
|--------------------------------|--------------------|-------------|----------------------------------|--------------------|------------|----------------------------------|
|                                | Personal<br>Income | Population  | Per Capita<br>Personal<br>Income | Personal<br>Income | Population | Per Capita<br>Personal<br>Income |
| 2000                           | 8,634,847,000      | 282,162,411 | 30,602                           | 323,964,530        | 11,363,543 | 28,509                           |
| 2001                           | 8,987,890,000      | 284,968,955 | 31,540                           | 332,936,158        | 11,387,404 | 29,237                           |
| 2002                           | 9,150,761,000      | 287,625,193 | 31,815                           | 337,415,971        | 11,407,889 | 29,577                           |
| 2003                           | 9,484,225,000      | 290,107,933 | 32,692                           | 347,533,465        | 11,434,788 | 30,393                           |
| 2004                           | 10,047,876,000     | 292,805,298 | 34,316                           | 362,702,364        | 11,452,251 | 31,671                           |
| 2005                           | 10,610,320,000     | 295,516,599 | 35,904                           | 372,826,780        | 11,463,320 | 32,523                           |
| 2006                           | 11,381,350,000     | 298,379,912 | 38,144                           | 392,059,624        | 11,481,213 | 34,148                           |
| 2007                           | 11,995,419,000     | 301,231,207 | 39,821                           | 408,126,658        | 11,500,468 | 35,488                           |
| 2008                           | 12,492,705,000     | 304,093,966 | 41,082                           | 422,401,501        | 11,515,391 | 36,681                           |
| 2009                           | 12,079,444,000     | 306,771,529 | 39,376                           | 410,538,372        | 11,528,896 | 35,610                           |
| 2010                           | 12,459,613,000     | 309,346,863 | 40,277                           | 419,569,872        | 11,540,766 | 36,355                           |
| 2011                           | 13,233,436,000     | 311,718,857 | 42,453                           | 448,119,917        | 11,545,442 | 38,814                           |
| 2012                           | 13,904,485,000     | 314,102,623 | 44,267                           | 465,139,834        | 11,551,783 | 40,266                           |
| 2013                           | 14,068,960,000     | 316,427,395 | 44,462                           | 470,745,086        | 11,572,232 | 40,679                           |
| 2014                           | 14,801,624,000     | 318,907,401 | 46,414                           | 488,867,951        | 11,596,998 | 42,155                           |
| 2015                           | 15,463,981,000     | 321,418,820 | 48,112                           | 505,950,314        | 11,613,423 | 43,566                           |
| Average Annual Growth Rate (%) | 4.0                | 0.9         | 3.1                              | 3.0                | 0.1        | 2.9                              |

Source: U.S. Bureau of Economic Analysis (CA 1 Personal Income Summary)

**Wage and Salary Disbursements (\$ Thousand), Wage and Salary Employment (Jobs) and Average Wage per Job (\$)  
Counties in Affected Region**

| Year                           | Gallia                      |                          | Jackson                     |                          | Meigs                       |                          | Pike                        |                          | Scioto                      |                          | Vinton                      |                          | Region Total                |                          |                      |
|--------------------------------|-----------------------------|--------------------------|-----------------------------|--------------------------|-----------------------------|--------------------------|-----------------------------|--------------------------|-----------------------------|--------------------------|-----------------------------|--------------------------|-----------------------------|--------------------------|----------------------|
|                                | Wage & Salary Disbursements | Wage & Salary Employment | Wage & Salary Disbursements | Wage & Salary Employment | Wage & Salary Disbursements | Wage & Salary Employment | Wage & Salary Disbursements | Wage & Salary Employment | Wage & Salary Disbursements | Wage & Salary Employment | Wage & Salary Disbursements | Wage & Salary Employment | Wage & Salary Disbursements | Wage & Salary Employment | Average Wage Per Job |
| 2000                           | 348,048                     | 12,821                   | 277,294                     | 11,686                   | 143,852                     | 5,473                    | 338,491                     | 12,037                   | 650,724                     | 27,200                   | 58,115                      | 2,572                    | 1,816,524                   | 71,789                   | 25,304               |
| 2001                           | 367,517                     | 12,739                   | 281,018                     | 11,518                   | 149,666                     | 5,326                    | 360,419                     | 12,069                   | 677,292                     | 27,394                   | 60,687                      | 2,569                    | 1,896,599                   | 71,615                   | 26,483               |
| 2002                           | 382,938                     | 13,153                   | 294,798                     | 11,821                   | 108,870                     | 4,767                    | 340,378                     | 11,457                   | 702,520                     | 27,770                   | 74,431                      | 2,780                    | 1,903,935                   | 71,748                   | 26,536               |
| 2003                           | 391,832                     | 13,055                   | 312,679                     | 11,895                   | 95,814                      | 4,274                    | 346,532                     | 11,190                   | 726,678                     | 27,290                   | 70,894                      | 2,574                    | 1,944,429                   | 70,278                   | 27,668               |
| 2004                           | 417,899                     | 13,248                   | 329,010                     | 12,059                   | 92,290                      | 4,087                    | 357,341                     | 10,670                   | 748,274                     | 27,229                   | 66,930                      | 2,421                    | 2,011,744                   | 69,714                   | 28,857               |
| 2005                           | 426,779                     | 13,073                   | 345,818                     | 12,688                   | 94,713                      | 4,049                    | 351,332                     | 10,199                   | 744,555                     | 26,362                   | 70,517                      | 2,536                    | 2,033,714                   | 68,907                   | 29,514               |
| 2006                           | 467,210                     | 13,077                   | 343,455                     | 12,544                   | 99,602                      | 4,127                    | 362,433                     | 10,181                   | 766,784                     | 25,946                   | 73,667                      | 2,599                    | 2,113,151                   | 68,474                   | 30,861               |
| 2007                           | 460,704                     | 12,852                   | 357,074                     | 12,293                   | 101,843                     | 4,046                    | 383,935                     | 10,228                   | 833,152                     | 26,644                   | 85,574                      | 2,689                    | 2,222,282                   | 68,752                   | 32,323               |
| 2008                           | 466,338                     | 12,723                   | 359,282                     | 11,741                   | 104,129                     | 3,913                    | 401,268                     | 10,247                   | 875,282                     | 26,706                   | 78,442                      | 2,535                    | 2,284,741                   | 67,865                   | 33,666               |
| 2009                           | 453,726                     | 12,415                   | 345,328                     | 11,430                   | 109,715                     | 3,872                    | 400,615                     | 9,842                    | 843,532                     | 25,631                   | 74,509                      | 2,386                    | 2,227,425                   | 65,576                   | 33,967               |
| 2010                           | 433,030                     | 11,972                   | 353,891                     | 11,104                   | 115,003                     | 3,871                    | 417,628                     | 9,798                    | 864,843                     | 25,478                   | 76,901                      | 2,381                    | 2,261,296                   | 64,604                   | 35,002               |
| 2011                           | 424,959                     | 11,633                   | 356,334                     | 10,927                   | 118,195                     | 3,939                    | 404,971                     | 9,164                    | 879,410                     | 25,521                   | 84,244                      | 2,433                    | 2,268,113                   | 63,617                   | 35,653               |
| 2012                           | 460,513                     | 11,634                   | 369,168                     | 11,079                   | 118,723                     | 3,946                    | 403,579                     | 9,047                    | 903,681                     | 25,760                   | 92,528                      | 2,328                    | 2,348,192                   | 63,794                   | 36,809               |
| 2013                           | 437,260                     | 11,446                   | 374,235                     | 11,070                   | 116,379                     | 3,947                    | 453,198                     | 9,365                    | 891,398                     | 25,164                   | 77,924                      | 2,416                    | 2,350,394                   | 63,408                   | 37,068               |
| 2014                           | 422,263                     | 11,482                   | 390,530                     | 10,868                   | 123,036                     | 3,951                    | 461,139                     | 9,406                    | 915,939                     | 25,377                   | 82,565                      | 2,485                    | 2,395,472                   | 63,569                   | 37,683               |
| 2015                           | 428,449                     | 11,621                   | 388,574                     | 10,867                   | 123,935                     | 3,955                    | 473,863                     | 9,780                    | 947,629                     | 25,512                   | 85,564                      | 2,481                    | 2,448,014                   | 64,216                   | 38,122               |
| Average Annual Growth Rate (%) |                             |                          |                             |                          |                             |                          |                             |                          |                             |                          |                             |                          |                             |                          |                      |
|                                | 1.4                         | -0.7                     | 2.3                         | -0.5                     | -1.0                        | -2.1                     | 2.3                         | -1.4                     | 2.5                         | -0.4                     | 2.6                         | -0.2                     | 2.0                         | -0.7                     | 2.8                  |

Source: U.S. Bureau of Economic Analysis (CA 4 Personal Income and Employment by Major Component)

**Wage and Salary Disbursements (\$ Thousand), Wage and Salary Employment (Jobs) and Average Wage per Job (\$)  
United States and State of Ohio**

| Year                           | United States               |                          |                      | State of Ohio               |                          |                      |
|--------------------------------|-----------------------------|--------------------------|----------------------|-----------------------------|--------------------------|----------------------|
|                                | Wage & Salary Disbursements | Wage & Salary Employment | Average Wage Per Job | Wage & Salary Disbursements | Wage & Salary Employment | Average Wage Per Job |
| 2000                           | 4,823,765,000               | 137,610,000              | 35,054               | 187,374,685                 | 5,781,879                | 32,407               |
| 2001                           | 4,950,126,000               | 137,331,000              | 36,045               | 190,021,284                 | 5,709,491                | 33,282               |
| 2002                           | 4,992,932,000               | 136,365,000              | 36,614               | 192,247,457                 | 5,621,521                | 34,198               |
| 2003                           | 5,133,958,000               | 136,072,000              | 37,730               | 197,097,617                 | 5,573,517                | 35,363               |
| 2004                           | 5,417,439,000               | 137,601,000              | 39,371               | 205,029,425                 | 5,583,386                | 36,721               |
| 2005                           | 5,688,826,000               | 139,560,000              | 40,763               | 210,428,781                 | 5,588,308                | 37,655               |
| 2006                           | 6,051,676,000               | 141,915,000              | 42,643               | 218,062,958                 | 5,599,652                | 38,942               |
| 2007                           | 6,391,231,000               | 143,512,000              | 44,534               | 224,980,743                 | 5,597,110                | 40,196               |
| 2008                           | 6,528,825,000               | 143,010,000              | 45,653               | 226,708,681                 | 5,524,882                | 41,034               |
| 2009                           | 6,244,497,000               | 136,839,000              | 45,634               | 215,444,735                 | 5,232,886                | 41,171               |
| 2010                           | 6,368,897,000               | 135,526,000              | 46,994               | 218,721,328                 | 5,168,965                | 42,314               |
| 2011                           | 6,623,278,000               | 137,105,000              | 48,308               | 228,418,124                 | 5,228,768                | 43,685               |
| 2012                           | 6,921,522,000               | 139,721,000              | 49,538               | 239,295,918                 | 5,319,551                | 44,984               |
| 2013                           | 7,108,581,000               | 142,015,000              | 50,055               | 244,494,111                 | 5,371,183                | 45,520               |
| 2014                           | 7,468,770,000               | 144,811,000              | 51,576               | 255,021,943                 | 5,444,825                | 46,837               |
| 2015                           | 7,848,555,000               | 147,634,000              | 53,162               | 265,272,944                 | 5,525,739                | 48,007               |
| Average Annual Growth Rate (%) | 3.3                         | 0.5                      | 2.8                  | 2.3                         | -0.3                     | 2.7                  |

Source: U.S. Bureau of Economic Analysis (CA 4 Personal Income and Employment by Major Component)

### Economic Base Multiplier

T=Total Employment

B=Base Employment

N=Non-Base Employment

The simplified economic base multiplier is T divided by B

Sectors considered in base employment are those with a location quotient of greater than 1.

All other sectors are in non-base employment.

See <http://faculty.washington.edu/krumme/systems/multiplier.html> for a description of multiplier derivation. See <http://www.rrj.wvu.edu/WebBook/Schaffer/index.html> for a discussion regional economic base theory.

### Location Quotient

$e(i)$  = regional employment in sector i

$e$  = total regional employment

$E(i)$  = national employment in sector i

$E$  = total national employment

$LQ(i)$  = regional location quotient for sector i

$LQ(i) = (e(i)/e)/(E(i)/E)$

See <http://www.rrj.wvu.edu/WebBook/Schaffer/chap02.html#Heading14> for discussion of location quotients.

**Employment and Earnings Impact  
of OVEC on the Region and Ohio**

|   |            |
|---|------------|
| <b>(1) Direct Employment</b>                      | 384        |
| <b>(2) Area Employment Multiplier</b>             | 1.44       |
| <b>(3) Total Area Employment Impact (1)*(2)</b>   | 553        |
| <b>(4) State Employment Multiplier</b>            | 2.61       |
| <b>(5) Total State Employment (1)*(4)</b>         | 1,002      |
| <b>(6) OVEC Average Wages</b>                     | 85,500     |
| <b>(7) Region Average Wages</b>                   | 38,122     |
| <b>(8) OVEC Earnings (1)*(6)</b>                  | 32,832,000 |
| <b>(9) Other Earnings ((3)-(1))*(7)</b>           | 6,441,093  |
| <b>(10) Total Area Earning Impact (8)+(9)</b>     | 39,273,093 |
| <b>(11) State Average Earnings</b>                | 48,007     |
| <b>(12) OVEC Earnings (1)*(6)</b>                 | 32,832,000 |
| <b>(13) Other Earnings ((5)-(1))*(11)</b>         | 29,679,848 |
| <b>(14) Total State Earnings Impact (12)+(13)</b> | 62,511,848 |

**Employment and Earnings Impact  
on Ohio of OVEC Coal Purchases**

|   |            |
|---|------------|
| <b>(1) Ohio Coal Miners Supported by OVEC Purchases</b> | 270        |
| <b>(2) State Employment Multiplier</b>                  | 2.61       |
| <b>(3) Total Employment Impact (1)*(2)</b>              | 705        |
| <br>  |            |
| <b>(4) State Average Mining Wages</b>                   | 68,220     |
| <b>(5) State Average Wages</b>                          | 48,007     |
| <b>(6) Coal Mining Earnings (1)*(4)</b>                 | 18,419,400 |
| <b>(7) Other Earnings ((3)-(1))*(5)</b>                 | 20,868,643 |
| <b>(8) Total Earnings Impact</b>                        | 39,288,043 |

**Ohio Coal Production by County (Tons)**

| County            | 2000       | 2001       | 2002       | 2003       | 2004       | 2005       | 2006       | 2007       | 2008       | 2009       | 2010       | 2011       | 2012       | 2013       | 2014       | 2015       |
|-------------------|------------|------------|------------|------------|------------|------------|------------|------------|------------|------------|------------|------------|------------|------------|------------|------------|
| <b>Athens</b>     | 543,824    | 1,248,192  | 1,157,778  | 1,162,172  | 1,215,027  | 1,148,579  | 799,687    | 287,558    | 92,173     | 0          | 0          | 0          | 0          | 0          | 0          | 0          |
| <b>Belmont</b>    | 5,880,307  | 7,629,057  | 9,059,426  | 10,930,069 | 11,967,388 | 13,770,265 | 7,615,853  | 5,619,776  | 6,760,123  | 8,977,674  | 13,197,000 | 12,252,148 | 15,155,856 | 14,427,283 | 11,716,274 | 10,640,895 |
| <b>Carroll</b>    | 46,670     | 114,263    | 145,935    | 247,751    | 438,545    | 520,341    | 505,864    | 392,877    | 148,396    | 85,333     | 136,000    | 202,040    | 152,609    | 242,336    | 252,331    | 181,098    |
| <b>Columbiana</b> | 521,622    | 215,778    | 160,358    | 362,557    | 382,965    | 277,922    | 416,406    | 281,266    | 348,358    | 125,213    | 100,000    | 138,494    | 49,230     | 40,025     | 1,562      | 175        |
| <b>Coshocton</b>  | 54,530     | 63,816     | 262,191    | 433,591    | 468,051    | 473,539    | 154,439    | 169,624    | 252,204    | 386,438    | 265,000    | 154,862    | 0          | 0          | 0          | 0          |
| <b>Gallia</b>     | 202,761    | 221,057    | 271,232    | 166,980    | 0          | 0          | 0          | 0          | 0          | 0          | 0          | 0          | 0          | 589        | 0          | 0          |
| <b>Guernsey</b>   | 21,148     | 8,327      | 35,029     | 0          | 0          | 0          | 0          | 0          | 0          | 20,079     | 221,000    | 235,283    | 354,802    | 156,334    | 239,106    | 16,345     |
| <b>Harrison</b>   | 3,021,273  | 3,544,834  | 2,935,670  | 3,651,481  | 3,828,637  | 3,577,368  | 3,172,507  | 2,391,539  | 3,219,794  | 3,327,188  | 3,371,000  | 3,370,001  | 3,020,758  | 3,442,250  | 3,303,922  | 2,716,757  |
| <b>Holmes</b>     | 153,074    | 141,190    | 0          | 0          | 0          | 0          | 0          | 0          | 0          | 0          | 0          | 0          | 0          | 0          | 0          | 0          |
| <b>Jackson</b>    | 1,196,190  | 1,305,575  | 702,921    | 363,883    | 162,820    | 323,896    | 461,449    | 354,801    | 355,265    | 475,561    | 528,000    | 669,768    | 481,467    | 152,993    | 90,151     | 131,968    |
| <b>Jefferson</b>  | 669,865    | 912,273    | 1,225,657  | 1,107,400  | 923,716    | 951,178    | 952,800    | 936,608    | 2,298,189  | 2,989,376  | 1,744,000  | 1,602,298  | 923,186    | 1,629,372  | 1,669,917  | 465,342    |
| <b>Mahoning</b>   | 12,380     | 16,875     | 19,213     | 15,348     | 17,884     | 12,585     | 8,359      | 13,350     | 12,835     | 8,143      | 13,000     | 21,541     | 3,969      | 3,616      | 538        | 7,107      |
| <b>Meigs</b>      | 3,819,766  | 4,291,350  | 416,932    | 0          | 0          | 0          | 0          | 0          | 0          | 296,049    | 1,553,000  | 444,551    | 0          | 0          | 0          | 0          |
| <b>Monroe</b>     | 0          | 0          | 0          | 0          | 0          | 0          | 4,554,330  | 7,019,807  | 6,685,769  | 5,111,400  | 978,000    | 2,577,158  | 0          | 0          | 0          | 0          |
| <b>Morgan</b>     | 826,283    | 537,469    | 0          | 0          | 0          | 0          | 0          | 0          | 0          | 0          | 0          | 0          | 0          | 0          | 0          | 0          |
| <b>Muskingum</b>  | 704,784    | 701,248    | 477,642    | 132,482    | 105,204    | 31,432     | 233,038    | 216,824    | 199,693    | 137,370    | 9,000      | 0          | 0          | 0          | 0          | 0          |
| <b>Noble</b>      | 567,065    | 578,262    | 336,485    | 246,491    | 335,410    | 500,902    | 575,471    | 622,674    | 777,694    | 741,894    | 756,000    | 720,582    | 704,995    | 356,534    | 315,840    | 326,334    |
| <b>Perry</b>      | 918,775    | 1,052,138  | 827,203    | 779,525    | 717,107    | 816,434    | 885,962    | 1,558,968  | 2,099,063  | 1,978,726  | 2,946,000  | 3,225,884  | 3,547,749  | 2,365,053  | 2,363,582  | 1,278,666  |
| <b>Stark</b>      | 674,518    | 696,906    | 496,579    | 407,650    | 474,573    | 407,936    | 197,324    | 283,349    | 444,748    | 415,596    | 338,000    | 323,230    | 431,117    | 408,424    | 397,453    | 57,591     |
| <b>Tuscarawas</b> | 659,978    | 784,425    | 957,460    | 1,067,200  | 1,237,405  | 1,514,341  | 1,652,748  | 1,618,224  | 1,663,496  | 1,654,921  | 1,782,000  | 1,529,821  | 941,173    | 1,146,421  | 1,279,433  | 867,259    |
| <b>Vinton</b>     | 1,926,446  | 1,628,756  | 1,382,075  | 1,103,690  | 1,033,268  | 844,682    | 532,705    | 515,827    | 677,793    | 593,560    | 427,000    | 461,428    | 577,135    | 350,114    | 241,946    | 134,263    |
| <b>Washington</b> | 57,289     | 98,752     | 116,709    | 114,934    | 152,615    | 0          | 0          | 0          | 0          | 0          | 0          | 0          | 0          | 123,240    | 103,781    | 98,816     |
| <b>Total</b>      | 22,478,548 | 25,790,543 | 20,986,495 | 22,293,204 | 23,460,615 | 25,171,400 | 22,718,942 | 22,283,072 | 26,035,593 | 27,324,521 | 28,364,000 | 27,929,089 | 26,344,046 | 24,844,584 | 21,975,836 | 16,922,616 |

Source: Ohio Department of Natural Resources "Report on Ohio Mineral Industries: An Annual Summary of the State's Economic Geology" Various Issues

**Ohio Primary Coal Producing Area and Ohio  
Unemployment Rates**

| Year | Counties |         |          |         |           |       |       |               |        | Area  | Ohio  |
|------|----------|---------|----------|---------|-----------|-------|-------|---------------|--------|-------|-------|
|      | Belmont  | Carroll | Harrison | Jackson | Jefferson | Noble | Perry | Tusacarasawas | Vinton |       |       |
| 2000 | 6.4%     | 4.6%    | 5.4%     | 6.1%    | 6.0%      | 6.7%  | 5.6%  | 4.4%          | 7.2%   | 5.5%  | 4.0%  |
| 2001 | 5.6%     | 4.8%    | 4.9%     | 6.6%    | 5.9%      | 5.7%  | 5.7%  | 4.5%          | 7.5%   | 5.4%  | 4.3%  |
| 2002 | 7.0%     | 6.8%    | 6.9%     | 7.9%    | 6.9%      | 7.4%  | 7.0%  | 5.8%          | 8.7%   | 6.8%  | 5.7%  |
| 2003 | 7.0%     | 8.0%    | 7.8%     | 8.6%    | 7.5%      | 8.9%  | 8.2%  | 6.4%          | 9.5%   | 7.4%  | 6.2%  |
| 2004 | 7.1%     | 7.7%    | 7.4%     | 8.8%    | 8.4%      | 8.9%  | 9.2%  | 6.3%          | 9.0%   | 7.6%  | 6.3%  |
| 2005 | 6.6%     | 6.9%    | 6.7%     | 7.5%    | 7.7%      | 8.4%  | 8.4%  | 5.8%          | 8.4%   | 7.0%  | 5.9%  |
| 2006 | 5.8%     | 6.1%    | 6.0%     | 7.5%    | 6.9%      | 7.2%  | 7.4%  | 5.1%          | 7.9%   | 6.3%  | 5.4%  |
| 2007 | 5.6%     | 6.2%    | 6.2%     | 7.9%    | 6.4%      | 7.4%  | 7.3%  | 5.4%          | 7.9%   | 6.2%  | 5.6%  |
| 2008 | 6.1%     | 7.6%    | 7.2%     | 8.5%    | 7.0%      | 8.6%  | 8.5%  | 6.3%          | 9.2%   | 7.1%  | 6.4%  |
| 2009 | 9.2%     | 13.7%   | 11.7%    | 11.3%   | 12.3%     | 14.5% | 13.5% | 11.3%         | 13.2%  | 11.7% | 10.3% |
| 2010 | 11.3%    | 13.0%   | 12.5%    | 12.5%   | 14.5%     | 16.0% | 13.4% | 11.2%         | 13.5%  | 12.6% | 10.3% |
| 2011 | 9.5%     | 10.2%   | 10.7%    | 11.8%   | 12.0%     | 13.3% | 11.6% | 9.3%          | 11.9%  | 10.6% | 8.8%  |
| 2012 | 8.2%     | 7.9%    | 8.5%     | 10.3%   | 10.9%     | 11.0% | 9.8%  | 7.4%          | 10.8%  | 9.0%  | 7.4%  |
| 2013 | 8.3%     | 7.9%    | 7.9%     | 10.5%   | 10.9%     | 9.7%  | 9.6%  | 7.3%          | 10.7%  | 8.9%  | 7.5%  |
| 2014 | 6.7%     | 6.1%    | 6.0%     | 8.8%    | 8.1%      | 7.6%  | 7.4%  | 5.5%          | 8.0%   | 6.9%  | 5.8%  |
| 2015 | 6.3%     | 6.0%    | 6.3%     | 7.5%    | 7.4%      | 7.3%  | 6.5%  | 5.4%          | 6.5%   | 6.4%  | 4.9%  |
| 2016 | 7.4%     | 6.8%    | 7.5%     | 7.8%    | 8.3%      | 8.6%  | 6.2%  | 5.7%          | 7.0%   | 7.0%  | 4.9%  |

Source: Bureau of Labor Statistics



**Ohio Primary Coal Producing Counties**  
**Personal Income (Thousand \$), Population and Area Per Capita Personal Income (\$)**

| Year | Belmont County |            | Carroll County |            | Harrison County   |            | Jackson County |            | Jefferson County |            | Per Capita |
|------|----------------|------------|----------------|------------|-------------------|------------|----------------|------------|------------------|------------|------------|
|      | Income         | Population | Income         | Population | Income            | Population | Income         | Population | Income           | Population |            |
| 2000 | 1,535,239      | 70,172     | 641,533        | 28,851     | 344,481           | 15,854     | 652,136        | 32,633     | 1,654,654        | 73,663     |            |
| 2001 | 1,638,032      | 69,901     | 642,135        | 28,961     | 370,202           | 15,796     | 687,875        | 32,670     | 1,747,783        | 73,043     |            |
| 2002 | 1,705,552      | 70,293     | 639,769        | 29,172     | 370,043           | 15,902     | 713,523        | 32,846     | 1,781,459        | 72,416     |            |
| 2003 | 1,762,644      | 70,219     | 653,694        | 29,325     | 375,506           | 16,002     | 747,519        | 32,880     | 1,805,635        | 72,122     |            |
| 2004 | 1,794,135      | 70,241     | 688,230        | 29,297     | 381,760           | 15,856     | 786,340        | 33,025     | 1,833,103        | 71,774     |            |
| 2005 | 1,840,411      | 70,203     | 735,367        | 29,118     | 390,472           | 15,907     | 822,341        | 33,242     | 1,790,218        | 71,251     |            |
| 2006 | 1,910,999      | 70,469     | 765,914        | 29,163     | 396,679           | 15,868     | 842,249        | 33,135     | 1,847,606        | 70,656     |            |
| 2007 | 1,991,481      | 70,430     | 798,284        | 29,062     | 399,920           | 15,901     | 886,617        | 33,144     | 1,944,188        | 70,114     |            |
| 2008 | 2,102,081      | 70,356     | 818,302        | 28,999     | 422,923           | 15,856     | 928,124        | 33,164     | 2,073,661        | 69,989     |            |
| 2009 | 2,101,923      | 70,439     | 808,282        | 28,917     | 425,233           | 15,860     | 938,346        | 33,115     | 2,076,529        | 69,833     |            |
| 2010 | 2,150,728      | 70,318     | 845,786        | 28,825     | 439,994           | 15,849     | 963,158        | 33,273     | 2,080,394        | 69,612     |            |
| 2011 | 2,282,259      | 70,065     | 903,491        | 28,894     | 460,811           | 15,803     | 1,007,774      | 33,149     | 2,194,568        | 68,882     |            |
| 2012 | 2,371,189      | 69,638     | 923,082        | 28,583     | 475,373           | 15,710     | 1,025,836      | 32,905     | 2,230,713        | 68,338     |            |
| 2013 | 2,424,788      | 69,527     | 949,247        | 28,307     | 513,541           | 15,634     | 1,030,030      | 32,834     | 2,242,901        | 67,993     |            |
| 2014 | 2,551,488      | 69,414     | 980,790        | 28,209     | 542,402           | 15,567     | 1,059,201      | 32,784     | 2,308,909        | 67,703     |            |
| 2015 | 2,585,843      | 69,154     | 999,157        | 27,811     | 556,318           | 15,450     | 1,083,053      | 32,596     | 2,390,563        | 67,347     |            |
| Year | Noble County   |            | Perry County   |            | Tuscarawas County |            | Vinton County  |            | Coal Area Total  |            |            |
|      | Income         | Population | Income         | Population | Income            | Population | Income         | Population | Income           | Population | Per Capita |
| 2000 | 226,422        | 14,108     | 632,008        | 34,099     | 2,087,217         | 91,043     | 222,379        | 12,825     | 7,996,069        | 373,248    | 21,423     |
| 2001 | 253,573        | 13,857     | 682,104        | 34,375     | 2,240,549         | 91,319     | 244,929        | 12,966     | 8,507,182        | 372,888    | 22,814     |
| 2002 | 266,399        | 13,931     | 734,528        | 34,629     | 2,281,323         | 91,735     | 273,859        | 13,076     | 8,766,455        | 374,000    | 23,440     |
| 2003 | 269,520        | 14,221     | 762,188        | 34,944     | 2,385,069         | 92,015     | 269,417        | 13,260     | 9,031,192        | 374,988    | 24,084     |
| 2004 | 277,816        | 14,352     | 798,430        | 35,117     | 2,486,279         | 92,348     | 268,023        | 13,308     | 9,314,116        | 375,318    | 24,817     |
| 2005 | 284,577        | 14,210     | 826,816        | 35,254     | 2,567,856         | 92,286     | 282,178        | 13,370     | 9,540,236        | 374,841    | 25,451     |
| 2006 | 295,401        | 14,616     | 866,864        | 35,430     | 2,709,622         | 92,271     | 287,095        | 13,516     | 9,922,429        | 375,124    | 26,451     |
| 2007 | 313,496        | 14,614     | 894,507        | 35,582     | 2,830,116         | 92,511     | 324,082        | 13,566     | 10,382,691       | 374,924    | 27,693     |
| 2008 | 328,583        | 14,653     | 953,876        | 36,150     | 2,949,765         | 92,634     | 328,479        | 13,452     | 10,905,794       | 375,253    | 29,063     |
| 2009 | 332,663        | 14,649     | 964,634        | 35,996     | 2,867,889         | 92,584     | 334,351        | 13,474     | 10,849,850       | 374,867    | 28,943     |
| 2010 | 342,261        | 14,634     | 989,849        | 36,048     | 2,951,856         | 92,555     | 342,254        | 13,421     | 11,106,280       | 374,535    | 29,654     |
| 2011 | 366,715        | 14,700     | 1,062,392      | 36,233     | 3,199,057         | 92,518     | 362,282        | 13,401     | 11,839,349       | 373,645    | 31,686     |
| 2012 | 381,602        | 14,578     | 1,088,575      | 36,009     | 3,277,618         | 92,501     | 374,213        | 13,235     | 12,148,201       | 371,497    | 32,701     |
| 2013 | 392,940        | 14,561     | 1,121,259      | 35,987     | 3,365,769         | 92,778     | 367,052        | 13,288     | 12,407,527       | 370,909    | 33,452     |
| 2014 | 405,114        | 14,377     | 1,154,019      | 35,910     | 3,562,491         | 92,774     | 388,438        | 13,197     | 12,952,852       | 369,935    | 35,014     |
| 2015 | 419,747        | 14,326     | 1,204,384      | 35,985     | 3,706,724         | 92,916     | 397,675        | 13,048     | 13,343,464       | 368,633    | 36,197     |

Source: U.S. Bureau of Economic Analysis (CA 1 Personal Income Summary)