

May 2009 - November 2013

The Pennsylvania Sunshine Program



pennsylvania
DEPARTMENT OF ENVIRONMENTAL
PROTECTION

Tom Corbett, Governor
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Introduction

The Sunshine Solar Rebate Program was established to help fund solar energy projects in Pennsylvania. The program ran from May 18, 2009 until funds were exhausted Nov. 25, 2013. The program was successful in furthering Pennsylvania's use of alternative energy and in turn helped stimulated Pennsylvania's economy. Nearly 7,000 residents and 1,054 small business owners contracted with local installers to complete their solar projects. These projects then allowed households and companies to reduce electric costs, freeing up funds for other items, employee salaries, or expansion of their business.

Michael Lebo, an installer at Edwin L. Heim Company of Harrisburg recalled "the Pennsylvania Sunshine program was a main factor in our company's decision to expand our electrical services in the renewable energy market" and the program "was an important part of the financial side of the installations to help our customers decide to have solar systems installed at their residences. Without the Sunshine funds, these systems would have not been installed."

Lebo added that his customers reduced their average monthly electric bill from \$169 in 2009 to an average of \$59 in 2014. Some have reduced their electric bills down to a minimal connection charge during the summer months. To date, his customers have saved more than \$12,000 in avoided electrical costs. Another Pennsylvania resident shared, "my family and I have been so very pleased with our solar system, which included complimentary geothermal." "The solar system we have has been incredibly valuable to our home energy needs and budget. The system has performed exactly as promised in terms of amount of power created and monies saved on our energy bill."

Economically, the \$113 million deployed as rebates, resulted in more than \$564.6 million in renewable energy investment

Economically, the \$113 million deployed as rebates, resulted in more than \$564.6 million in renewable energy investment. The Sunshine program even created jobs during the economic downturn beginning in 2008. The program provided jobs for displaced home builders, plumbers, electricians and carpenters in the form of installers. Nearly 700 installers entered the program, for employment opportunities in marketing, sales, and distribution, consulting, and administration across Pennsylvania.

The Sunshine Solar Rebate Program also supplemented the electric grid with renewable energy. Pennsylvania ended 2013 with approximately 200 MW of solar installed -- 98.038 MW of that was a direct result of the small residential and small commercial systems installed utilizing the Sunshine Solar Rebate Program. All of these systems benefit the environment by providing emissions-free power while consuming no water for electricity generation. Significantly, Photovoltaic (PV) systems help with grid reliability because PV electricity generation is at its peak during the long days of summer, when demand for electricity is highest.

The Sunshine Program resulted in an investment of more than \$500 million for PV installation in Pennsylvania, with an investment of less than \$104 million from the program.

Background Summary

In 2008, the Pennsylvania Department of Environmental Protection (DEP) was allocated \$100 million to provide loans, grants, reimbursement or rebates to individuals or small businesses to help fund solar energy projects in Pennsylvania. This program was authorized by section 306 of the Alternative Energy Investment Act, Act of July 9, 2008. (Special Session), P.L. 1873. No. 1 (73 P.S. §§1649.101 et seq.) DEP created the Sunshine Solar Program to provide rebates for the installation of solar electric (photovoltaic or PV), solar hot water (SHW) projects, and PV tied battery back-up systems. The program opened in May 2009.

Over the life of the program, an additional \$13.1 million was added from other funding sources creating a total of more than \$113 million to be used for rebates. The additional funds included: \$8,988,652 of American Resource Recovery Act, (ARRA) funding; \$2,998,985 in Clean Air funds; \$1,000,720 provided through a Pennsylvania Public Utility Commission, et al. v. Duquesne Light Company settlement and \$116,321.25 in United States Department of Energy, State Energy Program (SEP) funds. All funds were used to provide rebates to eligible applicants who submitted complete applications. Administrative costs of the program, inspections of installed systems and database management were funded by application fees and some SEP dollars. The total administrative needs of the program resulted in an average of five full-time employees per year which ensured the success of the program.

Incentive Steps

The Sunshine Program offered rebates up to a maximum of 35 percent of the cost of project design, installation and equipment. Limitations were placed on the size of the system installed, utilizing a decreasing step program based on the program achieving set capacity levels. PV rebate incentives were offered in decreasing incentive steps starting out at Step 1 or \$2.25 per watt. The final PV rebate incentive step available to homeowners was Step 4 or \$0.75 per watt. Residential PV customers were eligible for up to \$7,500 for solar electric projects. Small businesses of 100 or fewer employees were eligible to receive up to \$52,500. Homeowners were eligible for rebates of up to \$5,000 for solar hot water projects, while small businesses were eligible to receive up to \$50,000. The incentive steps are shown in tables 2.1, 2.2 and 2.3 on page 8.

Photovoltaic (PV)

3.1 Capacity:

Of all systems provided rebates, 91.8 percent were solar PV systems, resulting in a distributed renewable energy generation capacity of 98.045 MW. In 2008, Pennsylvania had less than 3 MW of PV installed. Pennsylvania ended 2013 with approximately 200 MW of PV installed with 98.045 MW of that total a direct result of the small residential and small commercial systems installed by utilizing the PA Sunshine Solar incentive program. Table 3.2 on page 9 illustrates installed capacity of installations per year. Through information provided by installers on total system costs, DEP estimates the systems deployed resulted in nearly \$565.8 million in economic activity in Pennsylvania.

3.2 Costs Declined Over Time:

The Sunshine Program resulted in an investment of more than \$500 million for PV installation in Pennsylvania, with an investment of less than \$104 million from the program. Tables 3.3 and 3.4 on page 9 shows that nearly 100 MW of PV were installed at an average cost of approximately \$5 per watt for commercial and \$6 per watt for residential systems. At the beginning of the program, total installed costs exceeded \$7 per watt for both residential and commercial systems. By the end of the program, commercial and residential systems were being installed for less than \$4 per watt, resulting in customers paying less for their systems, even with the declining incentive.

At the beginning of the program, total installed costs exceeded \$7.00 per watt for both residential and commercial systems. By the end of the program, commercial and residential systems were being installed for less than \$4.00 per watt

Table 3.1: Number of PV Installations per Year

| Installation Year | 2009 | 2010 | 2011 | 2012 | 2013 | Total |
|-------------------|-----------|--------------|--------------|--------------|------------|--------------|
| Residential | 40 | 1,833 | 2,674 | 815 | 809 | 6,172 |
| Commercial | 2 | 165 | 375 | 207 | 114 | 863 |
| Total | 42 | 1,998 | 3,049 | 1,022 | 923 | 7,035 |

3.3 PV Distribution in Pennsylvania:

As a result of the program from 2009 -2013 a total of 7,035 PV systems were installed in Pennsylvania. Of all PV systems installed, 51 percent were in eight counties in Southeastern Pennsylvania. Lancaster County had the largest overall number of PV installations in the state (803), resulting in nearly \$100 million in economic development in the county. Montgomery County had the second largest PV installations with 669. Residents and businesses in nearly every county took advantage of the program. This information is represented in figure 3.1 on page 10 and table 3.5 on page 11.

Solar Hot Water (SHW)

8.2 percent of all systems funded were solar hot water systems. Through information provided by installers on total system costs, we estimate over \$27.6 million in economic activity is credited though the solar hot water systems installed. The average system cost for a commercial solar water heat was \$101,242 and for a residential solar water heater it was \$10,370. Pennsylvania ended the program with 991 solar hot water systems installed using Sunshine Program incentive monies.

Table 4.1: Solar hot water funding results

| 4.1 Capacity: | Total system Cost | Total incentive | Number of systems |
|---------------|----------------------|---------------------|-------------------|
| Commercial | \$ 19,337,377 | \$ 101,242 | 191 |
| Residential | \$ 8,296,158 | \$ 10,370 | 800 |
| TOTAL | \$ 27,633,535 | \$ 9,067,964 | 991 |

Solar Thermal Distribution in Pennsylvania:

A total of 991 SHW systems were installed in Pennsylvania. Nearly 41 percent of all SHW systems were installed in eight counties in Southeastern Pennsylvania. Berks County had the largest overall number of SHW systems installed (78), followed by Lancaster County with 73. This information is illustrated in figure 4.1 on page 12 and table 4.2 on page 13.

Environmental Benefits

The installation of 98.038 MW of installed solar PV capacity provides significant environmental benefits.

First, this amount of solar PV capacity generates an estimated 142 million Kwh per year. This would be enough energy to power approximately 14,000 Pennsylvania homes.

Second, the installation of PV solar provides significant air quality benefits. The sum of greenhouse gas emissions displaced is equivalent to approximately 84,000 tons of carbon dioxide. This is equivalent to the annual greenhouse gas emissions from nearly 16,000 passenger vehicles, or 8.5 million gallons of gasoline consumed, or 407 rail cars worth of coal burned.

In addition to CO₂ reduction, other pollutants are reduced as well. Approximately 525,400 pounds of sulfur oxides and 167,418 pounds of nitrogen oxides were displaced and or reduced.

For additional information on environmental benefits use EPA's Greenhouse Gas Equivalencies calculator at: <http://www.epa.gov/cleanenergy/energy-resources/calculator.html#results>.

Participating Installers

As required under the Alternative Energy Investment Act, eligible applicants were required to work with a DEP-approved installer. The installer applied for the rebate on behalf of the homeowner or business once the project was completed.

Installers were required to complete and submit a Sunshine Program qualified installer application. Along with the completed application, the installer provided a certificate of approved PV and or SHW training from one of the following: National Board Certified Energy Practitioners (NABCEP), Interstate Renewable Energy Council (IREC) or International Brotherhood of Electrical Workers (IBEW). Installers with no installation experience were placed in a probationary status. All installers were inspected at a minimum three times by a third party contractor during the life of the Sunshine Program.

A total of 678 installers completed the application process and were approved. The top five PV installers with the most installations in Pennsylvania based on the number of rebates issued were: Greenspring Energy, Astrum Solar, I Need Solar, Standard Solar and Advanced Solar Industries. The top five solar thermal installers were Greenspring Energy, Earthnet Energy, Lenape Solar, Exact Solar and SECCO Home Services.

Inspection Program

Clean Power Markets was the inspection contractor tasked to inspect the first three systems installed by each participating installer. In addition, the contractor was required to inspect an additional 10 percent of all systems installed under the Sunshine Program. Upon completion of each inspection a detailed written inspection report with the results were submitted to DEP. When necessary, the contractor would complete follow-up system performance inspections.

On Jan. 26, 2013, the inspection program was revised requiring participating installers to complete their own inspections at their cost.

Clean Power Markets completed 1,414 inspections. Of the 1,414 inspections conducted, 1,361 passed inspection, which resulted in a 96.25 percent passing inspections. Projects which did not pass an inspection were required to address the identified issue and to pass a re-inspection prior to payment of the rebate. The total cost for all of these services was \$459,550. This funding was provided in large part from the U.S. Department of Energy's State Energy Program and application fees. Table 7.1 shows the number of inspections by year and total costs.

Table 7.1: Inspections per Year

| | # inspections | Cost /inspection | Total |
|----------|---------------|------------------|-----------|
| FY 09-10 | 324 | \$325 | \$105,300 |
| FY 10-11 | 615 | \$325 | \$199,875 |
| FY 11-12 | 344 | \$325 | \$111,800 |
| FY 12-13 | 131 | \$325 | \$42,575 |
| Total | 1414 | | \$459,550 |

Program Administration and Staffing

DEP contracted with Clean Power Research to provide a software product, PowerClerk®. Clean Power Research focuses on research, consulting and software for solar prediction, energy valuation and program optimization.

PowerClerk® is an online tool that administers alternative energy incentive programs and supported the large number of online incentive applications for the Pennsylvania Sunshine Program. The tool has the capability to allow multiple users to enter varying levels of information, generate automatic notifications, and provide reporting capabilities that generate real time solar output data for all systems that have completed the installation process.

The cost of these services varied by year and depended on use. The heaviest volume was 2010. All years combined, 2009 through 2013, the total cost was \$906,436. This funding was provided in large part from the U.S Department of Energy's State Energy Program and application fees. Table 8.1 shows the Clean Power research costs by year.

Table 8.1: Clean Power Research cost per Year

| | |
|---------------|---------------------|
| FY 09-10 | \$251,022.50 |
| FY 10-11 | \$260,164.00 |
| FY 11-12 | \$252,375.00 |
| FY 13-14 | \$58,500.00 |
| Less refund | \$12,000.00 |
| Total: | \$906,436.50 |

DEP programs collaborating to make the Sunshine Program a success included the Office of Pollution Prevention and Energy Assistance, Pennsylvania Energy Development Authority, Small Business Ombudsman, Legislative Liaisons, Office of Chief Counsel, Comptroller’s Office and the Grants Center. Other agencies involved included the Pennsylvania Treasury, Commonwealth Financing Authority, the Department of Labor and Industry, the Attorney General’s Office and the U.S. Internal Revenue Service.

DEP employees processed more than 11,000 applications, inspection reports, and installer applications combined. Staff in the Grants Center collected and tracked application fees, conducted compliance reviews, and processed rebate payments. The Comptroller’s office and Fiscal Office managed the PA Sunshine account and cross checked and verified that money was readily available for rebates. Managers, supervisors, program specialists and clerical staff were all necessary to administer contract negotiations with contractors, to oversee the administration of the inspection program, collect and track annual meter reading reports to verify the 80 percent performance required by the program, to provide technical review of applications and respond to those applicants that were incomplete and missing information.

The volume of business and hence the workload varied over time. Staff-hours over the five years from January 2009 to December 2013, totaled approximately 43,125 full time employee (FTE) hours. This figure translates to approximately five FTEs needed per year to administer the program. Salaries were provided in large part from the U.S. Department of Energy’s State Energy Program and application fees.

Application Fees

The Sunshine Program collected \$981,200 in application fees to offset administration expenses. Commercial PV and SHW applications fees were \$150, with residential PV and SHW application fees at \$100. A total of 863 commercial PV applications were installed, along with 6,172 residential PV systems. In addition, 800 residential SHW applications were installed, with a total of 191 commercial SHW applications installed.

Conclusion

The Sunshine Program helped boost Pennsylvania’s economy at a critical time during late 2008 and early 2009. The program allowed nearly 7,000 residents and 1,054 small business owners to reduce their electric costs, while providing new work for nearly 700 installers.

At the beginning of the program, total installed costs exceeded \$7 per watt for both residential and commercial systems. By the end of the program, commercial and residential

systems were being installed for less than \$4.00 per watt, resulting in customers paying less for their systems.

The program provided significant environmental benefits by supplementing the electric grid with renewable energy for Pennsylvania, with 98.038 MW of solar installed as a direct result of this incentive program. The amount of solar PV capacity generated an estimated 142 million kwh/year.

PV solar provides significant air quality benefits. The sum of greenhouse gas emissions displaced is equivalent to approximately 84,000 tons of carbon dioxide. This is equivalent to the annual greenhouse gas emissions from nearly 16,000 passenger vehicles, equal to 8.5 million gallons of gasoline or 407 rail cars worth of coal.

The Sunshine Program succeeded in its goal of providing loans, grants, reimbursement and rebates to individuals and small businesses to help fund solar energy projects in Pennsylvania.

Supporting Tables and Figures

Table 2.1: Residential PV Rebates

| Step # | Megawatt (MW) in step | Rebate Amount (\$/Watt) | Step opened | Step Closed |
|--------|-----------------------|-------------------------|-------------|-------------|
| 1 | 10 | 2.25 | 5/18/2009 | 4/8/2010 |
| 2 | 10 | 1.75 | 4/9/2010 | 7/9/2010 |
| 3 | 10 | 1.25 | 7/10/2010 | 11/18/2010 |
| 4 | 10 | 0.75 | 11/18/2010 | 11/25/2013 |

Table 2.2: Small Business PV Rebates*

| Step # | Megawatt in Step | 3-10 KW Rebate Amount (\$/Watt) | 10-100 KW Rebate amount (\$/Watt) | 100=200 KW Rebate Amount (\$/Watt) | Step Opened | Step Closed |
|--------|------------------|---------------------------------|-----------------------------------|------------------------------------|-------------|-------------|
| 1 | 10 | 2.25 | 2.00 | 1.75 | 5/18/2009 | 11/14/2009 |
| 2 | 10 | 1.75 | 1.50 | - | 11/15/2009 | 1/13/2010 |
| 3 | 10 | 1.25 | 1.00 | - | 1/14/2010 | 3/8/2010 |
| 4 | 10 | 0.75 | 0.05 | - | 3/8/2010 | 11/25/2013 |

**The commercial system size rebates were reduced to 100kw rebates after step 1 was exhausted*

**As can be seen in Table 2.2 the first three steps of the PV commercial rebate incentive program were exhausted within the first year.*

Table 2.3: Residential and Small Business Solar Thermal Rebates

| Step # | Number of Systems in Step | Rebate Amount | Step Opened | Step Closed |
|--------|---------------------------|---------------|-------------|-------------|
| 1 | 1500 | 35% | 5/18/2009 | 11/25/13 |

Table 3.2: Installed Capacity per Year (KW)

| Year | 2009 | 2010 | 2011 | 2012 | 2013 | Total |
|---------------------------|--------|-----------|-----------|-----------|-----------|-----------|
| Residential Capacity (KW) | 280.74 | 12,606.84 | 21,077.51 | 6,694.91 | 6,791.40 | 47,451.4 |
| Commercial Capacity (KW) | 31.95 | 10,157.75 | 26,118.94 | 9,547.77 | 4,730.53 | 50,586.94 |
| Total | 312.69 | 22,764.58 | 47,196.45 | 16,242.66 | 11,522.18 | 98,038.34 |

Table 3.3: PV Commercial Funding Results

**863 commercial PV installations were installed from May 2009 thru November 2013.*

| | |
|-------------------------------|---------------|
| The total dollar incentive: | \$43,370,883 |
| The total cost of all systems | \$255,515,468 |
| Average system cost | \$296,078 |
| Total capacity (kW) | 50,586.95 |
| \$ Per watt average | \$5.05 |
| \$/Watt Average Incentive | \$.86 |
| Average system size (kW) | 58.55 |

Table 3.4: PV Residential Funding Results

**6172 residential PV systems were installed from May 2009 thru November 2013.*

| | |
|-------------------------------|---------------|
| The total dollar incentive | \$60,424,374 |
| The total cost of all systems | \$281,483,638 |
| Average system cost | \$45,606 |
| Total Capacity (kW) | 47,458.5 |
| \$ Per watt average | \$5.93 |
| \$/Watt Average Incentive | \$1.27 |
| Average system size (kW) | 7.68 |

Figure 3.1 Illustrates Statewide Distribution of Photovoltaic Systems by County.

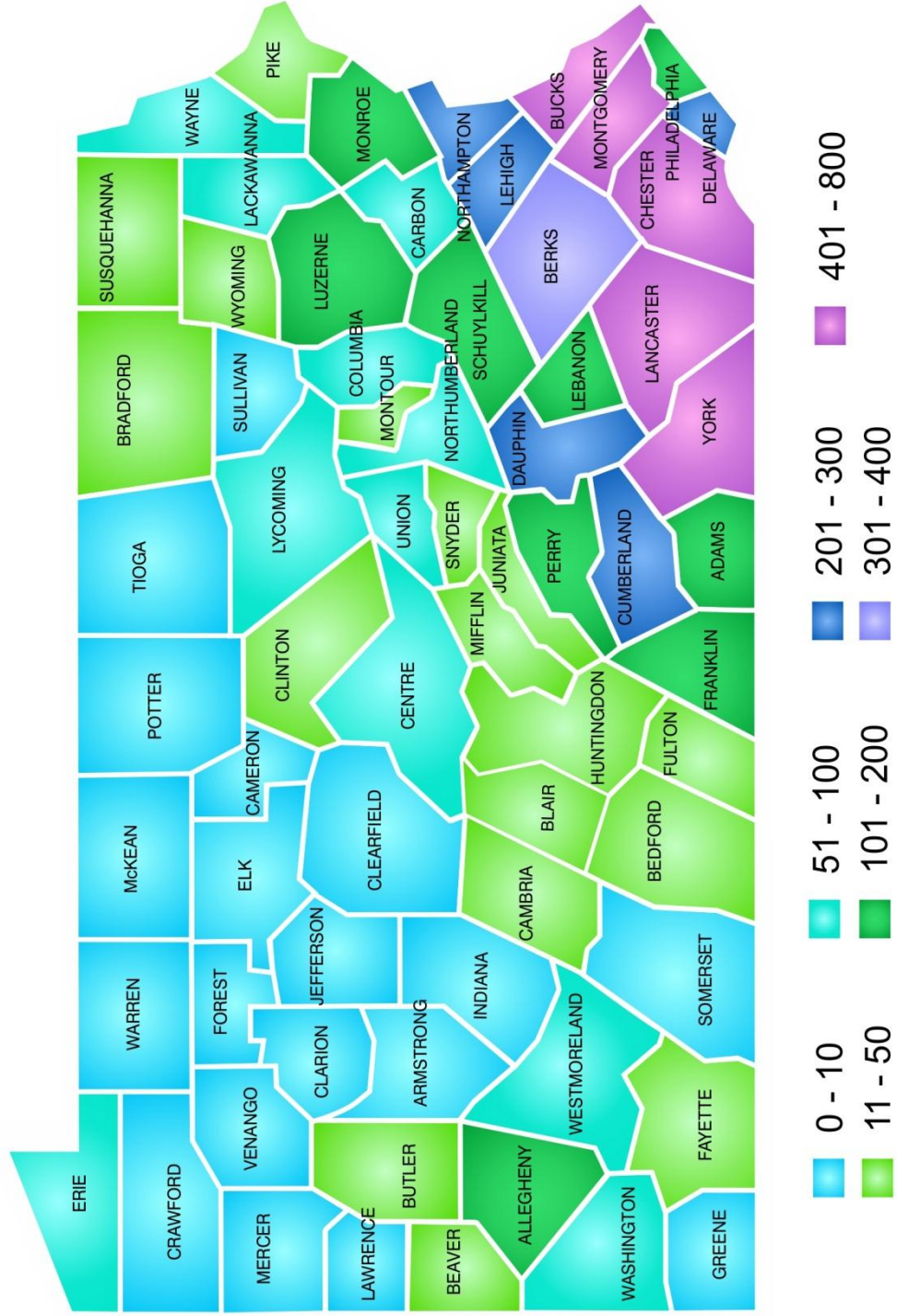


Table 3.5: Illustrates PV total incentive and total system cost per county

| County | Total Incentive \$ | Total System Cost \$ |
|------------|--------------------|----------------------|
| Adams | \$ 1,432,708.00 | \$ 8,362,469.00 |
| Allegheny | \$ 1,115,578.00 | \$ 6,683,503.00 |
| Armstrong | \$ 78,187.00 | \$ 374,157.00 |
| Beaver | \$ 366,470.00 | \$ 2,226,735.00 |
| Bedford | \$ 88,930.00 | \$ 671,853.00 |
| Berks | \$ 8,660,603.00 | \$ 41,182,842.00 |
| Blair | \$ 198,461.00 | \$ 1,108,836.00 |
| Bradford | \$ 346,079.00 | \$ 1,580,862.00 |
| Bucks | \$ 7,684,382.00 | \$ 41,269,801.00 |
| Butler | \$ 210,326.00 | \$ 1,369,965.00 |
| Cambria | \$ 186,756.00 | \$ 1,026,006.00 |
| Cameron | \$ 10,175.00 | \$ 45,991.00 |
| Carbon | \$ 1,019,892.00 | \$ 4,656,581.00 |
| Centre | \$ 831,213.00 | \$ 3,945,259.00 |
| Chester | \$ 9,276,612.00 | \$ 48,455,741.00 |
| Clarion | \$ 30,775.00 | \$ 154,575.00 |
| Clearfield | \$ 16,200.00 | \$ 128,838.00 |
| Clinton | \$ 264,172.00 | \$ 1,125,138.00 |
| Columbia | \$ 796,247.00 | \$ 4,174,151.00 |
| Crawford | \$ 117,155.00 | \$ 441,872.00 |
| Cumberland | \$ 4,332,095.00 | \$ 18,118,777.00 |
| Dauphin | \$ 2,566,391.00 | \$ 11,790,035.00 |
| Delaware | \$ 3,344,798.00 | \$ 16,126,934.00 |
| Elk | \$ 72,390.00 | \$ 655,925.00 |
| Erie | \$ 372,434.00 | \$ 1,811,692.00 |
| Fayette | \$ 163,962.00 | \$ 1,032,703.00 |
| Franklin | \$ 1,171,579.00 | \$ 7,144,737.00 |
| Fulton | \$ 68,273.00 | \$ 423,829.00 |
| Green | \$ 31,990.00 | \$ 184,557.00 |
| Huntingdon | \$ 194,073.00 | \$ 954,498.00 |
| Indiana | \$ 72,461.00 | \$ 320,204.00 |
| Jefferson | \$ 53,542.00 | \$ 243,025.00 |
| Juniata | \$ 756,393.00 | \$ 5,703,638.00 |

| County | Total Incentive \$ | Total System Cost \$ |
|----------------|--------------------|----------------------|
| Lackawanna | \$ 708,138.00 | \$ 3,978,239.00 |
| Lancaster | \$ 17,511,782.00 | \$ 99,386,156.00 |
| Lawrence | \$ 52,398.00 | \$ 329,356.00 |
| Lebanon | \$ 2,670,818.00 | \$ 14,253,041.00 |
| Lehigh | \$ 3,255,258.00 | \$ 15,039,297.00 |
| Luzerne | \$ 1,671,180.00 | \$ 9,748,961.00 |
| Lycoming | \$ 593,207.00 | \$ 2,693,952.00 |
| Mercer | \$ 52,545.00 | \$ 288,182.00 |
| Mifflin | \$ 566,322.00 | \$ 3,599,770.00 |
| Monroe | \$ 1,374,833.00 | \$ 8,255,819.00 |
| Montgomery | \$ 8,759,890.00 | \$ 43,044,647.00 |
| Montour | \$ 376,257.00 | \$ 1,842,661.00 |
| Nothampton | \$ 3,637,477.00 | \$ 17,149,547.00 |
| Northumberland | \$ 1,122,355.00 | \$ 5,383,434.00 |
| Perry | \$ 1,423,496.00 | \$ 6,385,145.00 |
| Philadelphia | \$ 2,043,010.00 | \$ 11,947,674.00 |
| Pike | \$ 351,676.00 | \$ 1,663,271.00 |
| Potter | \$ 10,837.00 | \$ 59,654.00 |
| Schuylkill | \$ 2,608,979.00 | \$ 12,214,184.00 |
| Snyder | \$ 356,271.00 | \$ 2,123,934.00 |
| Somerset | \$ 97,360.00 | \$ 384,290.00 |
| Sullivan | \$ 4,250.00 | \$ 31,880.00 |
| Susquehanna | \$ 367,169.00 | \$ 1,726,356.00 |
| Tioga | \$ 83,773.00 | \$ 371,351.00 |
| Union | \$ 798,012.00 | \$ 6,147,190.00 |
| Venango | \$ 23,771.00 | \$ 221,905.00 |
| Washington | \$ 510,436.00 | \$ 3,687,168.00 |
| Wayne | \$ 898,259.00 | \$ 3,997,805.00 |
| Westmoreland | \$ 469,174.00 | \$ 2,290,271.00 |
| Wyoming | \$ 192,863.00 | \$ 1,000,683.00 |
| York | \$ 5,199,501.00 | \$ 24,095,721.00 |

Table 4.2: Illustrates SHW total incentive and total system cost per county

| County | Total Incentive \$ | Total System Cost \$ |
|------------|--------------------|----------------------|
| Adams | \$ 301,631.82 | \$ 887,924.72 |
| Allegheny | \$ 27,217.40 | \$ 96,311.98 |
| Beaver | \$ 13,300.00 | \$ 38,000.00 |
| Bedford | \$ 197,414.00 | \$ 564,043.00 |
| Berks | \$ 516,037.38 | \$ 1,602,633.57 |
| Blair | \$ 417,459.56 | \$ 1,203,741.60 |
| Bradford | \$ 32,977.74 | \$ 113,914.98 |
| Bucks | \$ 271,266.70 | \$ 865,454.96 |
| Butler | \$ 2,263.40 | \$ 6,466.85 |
| Carbon | \$ 16,514.61 | \$ 60,586.44 |
| Centre | \$ 52,793.48 | \$ 175,459.51 |
| Chester | \$ 257,349.50 | \$ 815,249.60 |
| Clearfield | \$ 3,675.00 | \$ 10,500.00 |
| Clinton | \$ 6,975.00 | \$ 42,393.71 |
| Columbia | \$ 55,220.90 | \$ 186,018.40 |
| Cumberland | \$ 560,854.19 | \$ 1,730,887.82 |
| Dauphin | \$ 394,733.37 | \$ 1,334,738.11 |
| Delaware | \$ 148,933.72 | \$ 490,355.30 |
| Elk | \$ 28,665.00 | \$ 81,900.00 |
| Fayette | \$ 5,000.00 | \$ 15,000.00 |
| Franklin | \$ 2,010,456.17 | \$ 5,891,214.36 |
| Fulton | \$ 333,925.55 | \$ 973,255.98 |
| Huntingdon | \$ 6,100.00 | \$ 30,401.00 |
| Jefferson | \$ 7,500.00 | \$ 30,000.00 |
| Juniata | \$ 421,639.10 | \$ 1,221,021.44 |
| Lackawanna | \$ 42,288.11 | \$ 122,684.83 |
| Lancaster | \$ 1,120,081.98 | \$ 3,275,737.57 |
| Lawrence | \$ 2,000.00 | \$ 8,800.00 |

| County | Total Incentive \$ | Total System Cost \$ |
|----------------|--------------------|----------------------|
| Lebanon | \$ 445,914.12 | \$ 1,362,223.00 |
| Lehigh | \$ 162,544.31 | \$ 552,596.39 |
| Luzerne | \$ 38,880.00 | \$ 117,700.00 |
| Lycoming | \$ 46,506.84 | \$ 148,657.21 |
| Mercer | \$ 5,845.00 | \$ 16,700.00 |
| Mifflin | \$ 115,228.11 | \$ 350,358.99 |
| Monroe | \$ 52,587.81 | \$ 188,265.72 |
| Montgomery | \$ 275,018.78 | \$ 902,757.67 |
| Montour | \$ 73,123.94 | \$ 208,925.54 |
| Nothampton | \$ 189,142.84 | \$ 604,852.41 |
| Northumberland | \$ 293,515.06 | \$ 890,278.04 |
| Perry | \$ 181,772.02 | \$ 571,745.95 |
| Philadelphia | \$ 602,720.88 | \$ 1,912,262.54 |
| Pike | \$ 12,710.53 | \$ 43,101.52 |
| Schuylkill | \$ 55,603.80 | \$ 169,616.29 |
| Snyder | \$ 238,794.58 | \$ 746,904.50 |
| Somerset | 49043.4 | 140124 |
| Sullivan | \$ 2,855.30 | \$ 8,158.00 |
| Susquehanna | \$ 2,275.00 | \$ 6,500.00 |
| Union | \$ 162,244.48 | \$ 606,455.86 |
| Venango | \$ 2,800.00 | \$ 8,000.00 |
| Washington | \$ 5,005.00 | \$ 14,300.00 |
| Wayne | \$ 21,580.07 | \$ 63,835.92 |
| Westmoreland | \$ 14,017.46 | \$ 52,987.84 |
| Wyoming | \$ 2,000.00 | \$ 8,796.97 |
| York | \$ 275,137.29 | \$ 911,824.97 |

Commonwealth of Pennsylvania

Office of Policy

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