

**Report to the Pennsylvania General Assembly
on the Research and Development (R&D)
Tax Credit**



The Pennsylvania Department of Revenue
Bureau of Research

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The Pennsylvania R&D Tax Credit Statute

On May 7, 1997, Act 7 of 1997 created the Pennsylvania research and development (R&D) tax credit. The R&D tax credit provision became Article XVII-B of the Tax Reform Code of 1971 (TRC). The intent of the R&D tax credit was to encourage taxpayers to increase R&D expenditures within the Commonwealth in order to enhance economic growth. The terms and concepts used in the calculation of the Commonwealth's R&D tax credit are based on the federal government's R&D tax credit definitions for qualified research expense.¹

For R&D tax credits awarded between December 1997 and December 2003, Act 7 of 1997 authorized the Department of Revenue (Department) to approve up to \$15 million in total tax credits per fiscal year. Additionally, \$3 million of the \$15 million was set aside for "small" businesses, where a "small business" is defined as a "for-profit corporation, limited liability company, partnership or proprietorship with net book value of assets totaling...less than five million dollars (\$5,000,000)."

Over the years, several changes have been made to the R&D tax credit statute. Table 1 lists all of the acts that have changed the R&D tax credit statute, along with the applicable award years, the overall tax credit cap and the "small" business set aside.

**Table 1. Pennsylvania Research & Development Tax Credit Program
History of R&D Tax Credit Legislation**

Legislation	Award Years	Total Tax Credit Cap	Small Business Set Aside
Act 7 of 1997	1997 - 2003	\$15.0 million	\$3.0 million
Act 46 of 2003	2004 - 2005	\$30.0 million	\$6.0 million
Act 116 of 2006	2006 - 2008	\$40.0 million	\$8.0 million
Act 48 of 2009	2009	\$20.0 million	\$4.0 million
Act 48 of 2009	2010	\$18.0 million	\$3.6 million
Act 26 of 2011 ²	2011 - 2016	\$55.0 million	\$11.0 million

One of the more noteworthy features of the R&D tax credit program is the ability for R&D tax credit recipients to sell unused tax credits to other taxpayers. Act 46 of 2003 allowed R&D tax credit recipients to apply to the Department of Community and Economic Development (DCED) to sell or assign an R&D tax credit if there has been no claim for allowance filed within one year from the date that the Department approved the credit. According to Act 48 of 2009, for R&D tax credits awarded in December 2009 and forward, the one

¹ Public Law 99-514, 26 U.S.C. § 41.

² The current sunset date was established by Act 116 of 2006.

year holding period is no longer in effect; credits awarded in 2009 and forward can be sold immediately. The purchaser or assignee must still use the newly obtained R&D tax credit in the taxable year in which the purchase or assignment of the credit is made. The purchased or assigned R&D credit cannot be used to offset more than 75 percent of a tax liability for a taxable year. The purchased or assigned credit cannot be carried over, carried back, resold or refunded. The provision to sell or assign unused R&D tax credits applies to credits awarded in December 2003 and forward, but the initial sale or assignment could not take place until at least December 2004.

The R&D tax credit may be claimed against the following taxes: the capital stock and franchise tax (CSFT), the corporate net income tax (CNIT) and the personal income tax (PIT). Taxpayers claiming the credit against any of these taxes may not reduce their tax liability for taxable years 2004 and earlier by more than 50 percent. Act 46 of 2003 eliminated this provision starting with tax year 2005; a taxpayer is able to use the awarded R&D tax credit to reduce a given tax liability by up to 100 percent. Taxpayers awarded R&D tax credits by the Department may carry over and apply any unused tax credit for up to fifteen (15) succeeding taxable years.

The Pennsylvania R&D tax credit, which is calculated using the increase over the taxpayer's base year research expenses for qualified R&D conducted within Pennsylvania, originally generated a tentative credit at the rate of 10 percent. However, Act 116 of 2006 increased the rate at which the tentative R&D tax credit is calculated to 20 percent for small businesses only beginning with the credit awarded in December 2006 and forward.

Taxpayers must submit an application to the Department by September 15th to apply for the R&D tax credit. The credit is for qualified Pennsylvania research expenditures made in the taxable year ending in the prior calendar year. The Department has until December 15th to notify taxpayers of their approved tax credit amount.

Under Act 7 of 1997, the R&D tax credit provisions were to sunset for taxable years ending after December 31, 2004. Act 89 of 2002 extended the sunset date for the program until December 31, 2006. Act 116 of 2006 further extended the sunset date for R&D tax credit program for taxable years ending before January 1, 2016. The Department cannot approve any R&D tax credits for any period beyond this date.

Major R&D Tax Credit Provisions in Act 46 of 2003

Act 46 of 2003 mandated that the Department report to the General Assembly the names of all taxpayers awarded R&D tax credits in each year starting in 2004 and for each year thereafter. Appendix A at the end of this report lists the name of each taxpayer receiving the R&D tax credit from the Department in December 2009, 2010 and 2011, along with the amount of credit received and utilized. In an effort to control the size of the document, this report will only list the names of taxpayers who have received the R&D tax credit in the current year and the two preceding years. Reports from earlier years will still be available that retain information on earlier years.

The other major change in the R&D tax credit program made by Act 46 of 2003 was the creation of the R&D Tax Credit Assignment Program. The program, which is primarily administered by DCED, permits taxpayers with unused R&D tax credits to sell them for cash to other taxpayers who can use them. The goal of the program is to "assist the growth and development of technology-oriented businesses, particularly small start-up technology businesses."³ These small start-up firms, which often do not have significant tax liabilities

³ "Research and Development Tax Credit Assignment Program Guidelines," DCED, September 2004.

in their early years, receive cash for their unused R&D tax credits.⁴ The purchasers of the unused R&D tax credits are then able to partially offset their own tax liabilities with the unused credits.

The earliest that unused R&D tax credits could be sold was December 2004, for credits awarded by the Department in December 2003. Taxpayers can only sell unused amounts of tax credits that exceed any collectible tax liability against which the credit may be offset. S Corporations may not apply to sell or assign any credit that has been passed-through to its shareholders. In order to sell an unused credit, the taxpayer must file an application with DCED. The application identifies the seller and the R&D tax credit that it intends to sell, along with the buyer and the amount for which the credit is being sold or assigned.

The buyer of the unused R&D tax credit can use it to offset up to 75 percent of a qualified tax liability in a tax year. The buyer cannot carry forward, carry back, get a refund for or reassign the purchased credit. Further, the buyer must use the purchased tax credit against a qualified tax liability in the taxable year in which it was transferred. Lastly, the buyer must identify to the Department the taxpayer from which they bought the unused R&D tax credit.

An R&D tax credit will be considered to be unused and, therefore, available for sale as long as it is not applied against a specific tax year liability and the taxpayer does not have a collectible tax liability. As of February 2012, about \$21.4 million of the \$233 million awarded between December 2003 and December 2010 has not been utilized and, therefore, could be available for sale.

Tax credit sales are often arranged by a broker, who provides a service by bringing together sellers and buyers of credits, and in return takes a portion of the tax credit as their fee. The Department does not have complete data about these arrangements. However, DCED staff has stated that the level of broker fees can vary widely, but the average broker fee is in the range of 5% to 6% of the value of the credit.

The complete statistics on sold or assigned unused tax credits are shown in Table 2.

**Table 2. Pennsylvania Research & Development Tax Credit Program
Complete Statistics on the Sale or Assignment of Unused R&D Tax Credits**

(\$millions)

Year	R&D Credit Awarded	Unused Tax Credits Sold/Assigned	Number of Taxpayers Sold/Assigned Unused Credit	Unused Tax Credits Sold For	Percent of Value Unused Tax Credits Sold For
2003	\$ 15.0	\$ 1.3	18	\$ 1.1	91.4%
2004	\$ 30.0	\$ 3.6	43	\$ 3.2	89.8%
2005	\$ 30.0	\$ 9.0	48	\$ 8.4	93.3%
2006	\$ 40.0	\$ 8.2	69	\$ 7.7	93.9%
2007	\$ 40.0	\$ 8.2	79	\$ 7.9	95.7%
2008	\$ 40.0	\$ 7.8	105	\$ 7.4	94.0%
2009	\$ 20.0	\$ 4.4	82	\$ 4.1	93.5%
2010	\$ 18.0	\$ 1.8	53	\$ 1.7	93.9%
TOTAL	\$ 233.0	\$ 44.3		\$ 41.5	93.7%

⁴ “Unused R&D tax credits” means that the taxpayer has not applied the tax credits against a specific tax year liability. Further, the taxpayer cannot sell the tax credit if it has any unpaid liabilities against which the tax credit could be used.

R&D Tax Credit Claimed and Awarded in Pennsylvania for December 2011

Table 3 shows the amount of R&D tax credit approved by the Department in 2011 for qualified research expenditures made by taxpayers in Pennsylvania in taxable year 2010. Without the \$55 million cap, almost \$130.6 million in credit would have been awarded to 537 taxpayers. 76 percent of approved taxpayers received an R&D tax credit of less than \$50,000, receiving 9.6 percent of the total amount of approved credit. Taxpayers with an approved R&D tax credit of \$50,000 or more claimed 90.4 percent of the approved credit amount. The 129 taxpayers receiving \$50,000 or more in credit represented 24 percent of the total number of applicants.

**Table 3. Pennsylvania Research & Development Tax Credit Program
Tentative and Actual Credit for Tax Year 2011⁵**

Actual Credit Range	Number of Applicants	Percent of Applicants	Tentative Credit Amount	Actual Credit Amount	Percent of Actual Credit
\$0 - \$4,999	147	27.4%	\$696,872	\$341,559	0.6%
\$5,000 - \$19,999	161	30.0%	\$3,260,013	\$1,737,362	3.2%
\$20,000 - \$49,999	100	18.6%	\$5,694,781	\$3,217,803	5.9%
\$50,000 - \$99,999	65	12.1%	\$8,461,717	\$4,538,995	8.3%
\$100,000 - \$499,999	53	9.9%	\$22,127,503	\$10,008,026	18.2%
\$500,000 - \$999,999	6	1.1%	\$11,043,947	\$4,610,520	8.4%
\$1,000,000 & greater	5	0.9%	\$79,266,524	\$30,545,735	55.5%
TOTAL	537	100%	\$130,551,357	\$55,000,000	100%

Table 4 details the tentative amount of R&D tax credit approved by the Department in the preceding 14 years, beginning with the inception of the program in December 1997.

⁵ Detail may not add up due to rounding; 131 other applicants were rejected and did not receive any credit.

**Table 4. Pennsylvania Research and Development Tax Credit Program
Tentative Credit Awarded for 1997-2010**

Credit Awarded In	Number of Applicants	Tentative Credit Amount
December 1997	292	\$66,371,038
December 1998	270	\$56,572,339
December 1999	275	\$53,456,489
December 2000	284	\$59,207,493
December 2001	293	\$71,407,604
December 2002	254	\$74,255,800
December 2003	242	\$70,191,922
December 2004	274	\$70,932,913
December 2005	291	\$65,806,128
December 2006	379	\$78,640,025
December 2007	439	\$94,732,918
December 2008	466	\$90,712,865
December 2009	507	\$80,208,000
December 2010	488	\$94,419,561

Table 5 presents the R&D tax credit approved in December 2011 by business type.

**Table 5. Pennsylvania Research and Development Tax Credit Program
Actual Credits by Business Type in 2011**

Business Type	Number of Taxpayers	Percent of Taxpayers	Amount of Actual Credit	Percent of Actual Credit
Manufacturing	294	54.7%	\$ 43,367,862	78.9%
Services	182	33.9%	\$ 9,746,171	17.7%
Misc. ⁶	61	11.4%	\$ 1,885,967	3.4%
TOTAL	537	100%	\$ 55,000,000	100%

Manufacturers represented almost 55 percent of the taxpayers receiving the tax credit in 2011, claiming just about 79 percent of the total amount of approved credit. Pharmaceutical manufacturers claimed the largest single share; the 19 pharmaceutical manufacturers requesting credit were awarded \$32.7 million in credit. Another large group of credit recipients included 41 computer-related companies in the service sector. They claimed just over \$1.5 million in credit in 2011.

Table 6 provides a breakdown of the R&D tax credit claimed by “small” and “not small” businesses in December 2011. As noted earlier, “small” businesses are those with net book assets of less than \$5 million.

⁶ Misc. business type includes business activities associated with individuals or corporations with North American Industry Classification System (NAICS) codes for the agriculture, construction, mining, utilities, wholesale trade, retail trade, financial, insurance and real estate sectors.

**Table 6. Pennsylvania Research and Development Tax Credit Program
Small and Not Small Businesses in 2011**

Business Size	Number of Applicants	Percent of Applicants	Tentative Credit Amount	Approved Credit Amount	Percent of Approved Credit
Small	217	40.4%	\$ 7,632,711	\$ 7,632,711	13.9%
Not Small	320	59.6%	\$122,918,646	\$47,367,289	86.1%
TOTAL	537	100%	\$130,551,357	\$55,000,000	100%

In December 2011, “small” businesses claimed slightly over \$7.6 million of the \$11.0 million in R&D tax credit set aside for them, i.e., “small” businesses received 100 percent of the credit for which they applied. Last year, “small” businesses received the entire \$3.6 million in R&D tax credit set aside for them; they received 42.4 percent of the credit amount for which they applied. The \$55 million program cap reduced the amount of credit approved for the “not small” businesses to 38.5 percent of the requested amount. Last year, “not small” businesses received 16.8 percent of the amount of credit they requested. The increase in the cap from \$18 million to \$55 million, along with an increase of almost \$37 million in the tentative amount of credit requested in 2011 over 2010, is responsible for increasing these percentages for December 2011 versus December 2010 awards.

Table 7 shows the history of the R&D tax credit for the “small” business set aside.

**Table 7. Pennsylvania Research and Development Tax Credit Program
History of the Small Business Set Aside, 1997-2010**

Credit Awarded In	Number of Applicants	Tentative Credit Amount	Approved Credit Amount
December 1997	67	\$ 889,054	\$ 889,054
December 1998	85	\$1,821,354	\$1,821,354
December 1999	82	\$3,001,986	\$3,000,000
December 2000	83	\$1,545,359	\$1,545,359
December 2001	75	\$1,373,382	\$1,373,382
December 2002	79	\$1,615,602	\$1,615,602
December 2003	81	\$1,082,263	\$1,082,263
December 2004	94	\$1,419,845	\$1,419,845
December 2005	108	\$2,268,046	\$2,268,046
December 2006	173	\$7,081,079	\$7,081,079
December 2007	193	\$6,845,879	\$6,845,879
December 2008	205	\$8,052,975	\$8,000,000
December 2009	211	\$8,688,383	\$4,000,000
December 2010	213	\$8,487,767	\$3,600,000

Four times in the history of the R&D tax credit program the “small” business set aside has been awarded in total: 1999, 2008, 2009 and 2010. When “small” businesses claim less than the R&D credit set aside for

them, the “not small” businesses receive a pro-rated amount of the excess R&D tax credit not claimed by the “small” businesses.

Table 8 shows the amount of R&D tax credit that has been applied against the CNIT, CSFT and PIT for taxable years 1997 through 2009. The data in Table 8 are for taxpayers that have directly received the tax credit from the Department, as well as those taxpayers that have purchased unused R&D tax credits.

The first taxable year against which the credit could be used was 1997. For PIT, individuals who received the credit directly are included, as are any individual owners of S corporations or limited liability companies (LLCs) who received the pass-through benefit. All credit amounts are as of February 2012.

Table 8 shows the distribution of the R&D tax credits that have been applied to specific tax years. As of February 2012, slightly over 83 percent of the \$305 million in R&D tax credit that has been awarded for 1997 through 2009 has been applied to specific tax periods. About 47.5 percent of the credit awarded has been applied to the CSFT; 47.5 percent has been applied to the CNIT. Approximately 5.0 percent of the credit awarded that has been applied has been applied to the PIT. Also, it is important to note that the amount of tax credit applied to a particular taxable year can vary over time as a taxpayer’s taxable year liability may change due to settlement, resettlement or the application of other credits.

**Table 8. Pennsylvania Research and Development Tax Credit Program
Application by Tax Type and Taxable Year, 1997-2009**

Taxable Year	Corporate Net Income Tax	Number of Taxpayers	Capital Stock & Franchise Tax	Number of Taxpayers	Personal Income Tax	Number of Taxpayers
1997	\$ 4,808,403	93	\$ 3,654,425	192	\$ 187,863	91
1998	\$ 2,669,951	84	\$ 5,262,915	199	\$ 791,636	195
1999	\$ 3,129,320	91	\$ 6,317,818	233	\$ 439,671	162
2000	\$ 4,495,931	77	\$ 6,465,943	213	\$ 523,087	201
2001	\$ 6,364,344	82	\$ 7,141,332	217	\$ 534,126	173
2002	\$ 7,925,753	49	\$ 5,373,226	225	\$ 487,586	169
2003	\$ 8,733,454	62	\$ 8,167,989	222	\$ 337,985	154
2004	\$ 14,874,207	67	\$ 8,429,248	377	\$ 713,456	169
2005	\$ 12,535,715	63	\$ 13,242,876	289	\$ 1,389,912	179
2006	\$ 14,154,262	86	\$ 18,330,281	331	\$ 2,679,623	235
2007	\$ 13,922,527	98	\$ 13,947,980	355	\$ 1,799,924	236
2008	\$ 18,610,874	95	\$ 11,551,914	406	\$ 1,325,923	305
2009	\$ 8,222,476	90	\$ 12,550,033	492	\$ 1,423,545	210
TOTAL	\$ 120,447,214		\$ 120,435,975		\$ 12,634,337	

It should be noted that it is possible that some portion of the R&D tax credit awarded by the Department might never be used against a tax year liability, particularly those credits not affected by the provisions of Act 46 of 2003. One possible reason for non-use is a reorganization in which a taxpayer claiming the credit goes out of existence or merges with another business before applying the credit against a tax liability. Another observation about usage of the tax credit is that, for taxable years prior to 2005, the amount of credit a taxpayer could claim against a tax type in one tax year was limited to 50 percent of the tax liability. This provision had

ensured that a taxpayer could not totally eliminate a tax liability using only the R&D tax credit. However, Act 46 of 2003 eliminated the 50 percent limit. This fact, combined with the 15-year carryover, should allow taxpayers to receive most, if not all, of the tax benefit of the credit. Further, the provision in Act 46 of 2003 allowing the sale or assignment of any unused R&D tax credit awarded in December 2003 and after should minimize how much R&D tax credit is not utilized.

Current law reduces the CSFT rate each year until the tax is completely eliminated for taxable years beginning on or after January 1, 2014. Once the CSFT is eliminated, the R&D tax credit can no longer be claimed against it. This is important for S corporations and LLCs that are primarily subject to the CSFT, not the CNIT. S corporations and LLCs may pass the tax credit through to shareholders who can claim it against their PIT. The final year that the R&D tax credit will be awarded is 2016. Therefore, S corporations and LLCs, in order to use the R&D tax credit after 2014, will have to either apply it against PIT or sell their unused tax credits. They will be able to carry it forward for up to 15 taxable years.

Taxes Paid by R&D Tax Credit Recipients

Table 9 shows the CNIT and CSFT liabilities for taxable year 2009 (the latest year for which reports are available for all taxpayers) for taxpayers receiving the R&D tax credit in 2011. Table 9 and Table 5 have a similar structure in order to provide comparability. Please note that taxpayers claiming the credit against the personal income tax are not included in these data. Also, taxpayers who purchased unused R&D tax credit are not included in these data.

**Table 9. Pennsylvania Research and Development Tax Credit Program
Taxable Year 2009 Tax Liabilities by Business Type**

Business Type	2009 CSFT Liability	2009 CNIT Liability
Manufacturing	\$ 10,746,453	\$ 47,148,325
Services	\$ 10,414,532	\$ 43,384,505
Misc.	\$ 3,746,338	\$ 5,857,798
TOTAL	\$ 24,907,323	\$ 96,390,628

In order to provide an idea of the relative value of the R&D tax credit to recipients, an analysis was conducted comparing the R&D tax credit awarded in 2011 to the total tax year 2009 self-assessed CNIT and CSFT liabilities⁷. Of the 530 taxpayers receiving the R&D tax credit in 2011 that are subject to the CNIT or CSFT, their total self-assessed 2009 tax year CNIT and CSFT liabilities totaled \$121.3 million. Though there are obviously varied ratios per individual taxpayer, overall the amount of tax credit awarded represents 45.3 percent of the self-assessed tax amount and 107.6 percent of the amount of the R&D tax credit requested.

The total 2009 CSFT liability for S corporations and LLCs receiving the R&D tax credit in 2011 was \$1.0 million. Out of the 142 Pennsylvania S corporations or LLCs, 39 had a CSFT liability of zero for 2009. The total 2009 CSFT liability for C corporations receiving the R&D tax credit in 2011 was \$23.9 million. Out of the 388 C corporations, 106 had a CSFT liability of zero for 2009.

The 388 C corporations receiving the tax credit in 2011 had a total taxable year 2009 CNIT liability of \$95.1 million. Of these companies, 258 were C corporations with a taxable year 2009 CNIT liability equal to zero, due to either zero or negative net income in taxable year 2009. In most cases, the income of Pennsylvania S corporations and LLCs is passed through to the individual owners and subject to the personal income tax.

⁷ In some cases, the tax liability may have been self-assessed and settled.

Federal R&D Tax Credit Program

The federal government first adopted the R&D tax credit in 1981. The federal government does not cap the total credit amount that can be claimed in a taxable year. Despite the effort of some members of Congress, the R&D tax credit has never been a permanent part of the Internal Revenue Code (IRC). It has been extended fourteen times (most recently in December 2010). The current federal law expired on December 31, 2011.

As long as the federal R&D tax credit is not repealed and removed from the IRC, the definition and terms remain in effect for state level calculations. However, when the federal R&D tax credit is lapsed, it is possible that the Commonwealth could lose applicants that, since they would not be able to file the federal forms, would not go through the trouble of filing the state forms. This would be especially true for companies that qualify for relatively small amounts of state R&D tax credits or for companies that face sizable fees from tax preparers for filing the state R&D tax forms.

The public policy goal of the R&D tax credit is to encourage the private sector to increase R&D spending, which in turn serves as a catalyst to economic growth by increasing productivity through the utilization of new technology. The credit is justified in economic theory on the basis of market failure, which occurs because firms may under-invest in R&D when they tend to not recoup all associated costs of investing in R&D. Hence, less R&D occurs than would be economically optimal for the economy as a whole. The R&D tax credit is a method for lowering the cost of R&D to private firms and increasing the return on investment. By increasing the rate of return on investment, the R&D tax credit encourages more R&D than would occur if the credit did not exist.

R&D Expenditures in Pennsylvania and the United States

In 1995, according to the National Science Foundation, private industry in Pennsylvania spent \$4,955 million on R&D expenditures. This was about 4.6 percent of the total R&D expenditures by private industry in 1995 in the United States (\$108,652 million).

By 2007⁸, the total amount of R&D expenditures in Pennsylvania by private industry had risen to \$10,387 million. This was an increase over the 12 year period of 109.6 percent. Over the same period, total R&D expenditures by private industry in the United States had risen by 144.7 percent to a level of \$265,919 million. For 2007, R&D expenditures in Pennsylvania by private industry were about 3.9 percent of total R&D expenditures by private industry in the United States. Pennsylvania ranked 9th in the entire US in R&D spending by private industry in 2007.

For comparison sake, the 537 R&D tax credit applicants in 2011 had total R&D expenditures in 2010 of \$4,173.9 million. Not all R&D done by industry in Pennsylvania is performed by R&D tax credit applicants. The R&D expenditures reported on the 2008 tax credit applications, which were based on research expenditures in 2007, represented about 34% of the total R&D performed in Pennsylvania by industry as estimated by the NSF.

A study released in April 2008⁹ by the R&D Credit Coalition, an organization of trade associations and companies dedicated to the permanent establishment of the federal R&D tax credit, examined the broad impact of the R&D tax credit in 2005. The study found that R&D spending by the private sector in 2005 in Pennsylvania amounted to 1.97 percent of the private sector Gross State Product (GSP). For comparison sake,

⁸The most recent year for which state-level R&D spending is available from the National Science Foundation is 2007.
<http://www.nsf.gov/statistics/states/show.cfm?stateID=53,39&year=0>

⁹ "Supporting innovation and economic growth: The broad impact of the R&D credit in 2005," Prepared by Ernst and Young LLP for the R&D Credit Coalition, April 2008.

the study also found that R&D spending by the private sector in 2005 in the United States amounted to 1.88 percent of the private sector GSP.

According to a November 2009 study released by the Government Accountability Office (GAO), large corporations in 2005 dominated the use of the federal R&D tax credit, similarly mirroring usage of the R&D tax credit here in Pennsylvania. Further, the GAO found that the federal R&D tax credit in 2005 provided an average marginal incentive of between 6.4 to 7.3 percent. In other words, the federal R&D tax credit stimulated an additional amount of research spending in the United States of between 6.4 percent to 7.3 percent at the business level.¹⁰

R&D Tax Credit Programs in Other States

A majority of states that have a corporate net income tax have sought to capture the potential benefits of encouraging R&D within their state by enacting an R&D tax credit. There are 32 other states besides Pennsylvania that provide for R&D tax credits. Most incorporate provisions of current or former R&D credits under the Internal Revenue Code.¹¹

New Jersey's R&D tax credit is like Pennsylvania's in that it mirrors the federal R&D tax credit. However, New Jersey's R&D tax credit statute does not cap the total amount of credit that can be awarded in a year. Like the Pennsylvania R&D tax credit prior to Act 46 of 2003, there is a 50 percent cap on the amount of credit that a taxpayer can apply against its tax year liability. In fiscal year 2011, \$65.6 million in R&D tax credit was claimed in New Jersey. Additionally, the New Jersey R&D tax credit statute allows certain biotech and emerging technology companies to sell unused R&D tax credits to any company paying the corporate net income tax.¹² After Act 46 of 2003, all companies receiving the Pennsylvania R&D tax credit, regardless of their business sector, can sell or assign any unused R&D tax credits awarded beginning in December 2003.

Effectiveness of the Pennsylvania R&D Tax Credit Program

The time frame for R&D projects in the private sector can be lengthy. It is not uncommon for businesses to have R&D projects extend for 10 to 15 years or more. The Pennsylvania R&D tax credit has thus far had a potential impact on increasing research expenses in fourteen years, 1997 through 2010. Although 1996 Pennsylvania research expenses were used to calculate the credit in 1997, the taxpayer's R&D decisions could not have been affected by the credit prior to enactment of Act 7 in May 1997. Also, the changes made by Act 46 of 2003 altered several parameters of the program that could impact the effectiveness of the R&D tax credit. Lastly, it remains to be seen what effect the recent economic downturn has had on R&D spending by private industry. However, some observations can be made about the effectiveness of the Pennsylvania R&D tax credit in its relatively short existence.

Over the lifetime of the R&D tax credit program, 1,761 different taxpayers have been awarded some amount of credit. The number of taxpayers qualifying for the tax credit due to increased Pennsylvania research expenditures is still expanding, though there is some volatility from taxable year to taxable year regarding Pennsylvania research expenditure amounts.

Of the 537 taxpayers receiving the R&D tax credit in 2011, 149 were either Pennsylvania S corporations, LLCs or LLPs (limited liability partnerships) and 388 were C corporations. The S corporations, LLCs, or LLPs received \$6.7 million in R&D tax credit, while the C corporations received \$48.3 million.

¹⁰ "The Research Tax Credit's Design and Administration Can Be Improved", Prepared by the Government Accountability Office (GAO), GAO-10-136, November 2009.

¹¹ CCH Incorporated, Multistate Charts, ¶680-200 Credits for Investment/Research Activities.

¹² Companies with 225 employees or less may sell unused R&D tax credits in New Jersey.

The 537 taxpayers claiming the R&D tax credit in 2011 had total Pennsylvania research expenditures in taxable year 2010 of \$4,173.9 million. This was a 17.6 percent increase compared to their total Pennsylvania research expenditures in taxable year 2009 of \$3,550.0 million.

Impact on Not Small Businesses

Out of the 537 taxpayers receiving the tax credit in 2011, 320 did not qualify as “small” businesses. Their total Pennsylvania research expenditures in taxable year 2010 were \$4,057.6 million, a 17.4 percent increase over their taxable year 2009 Pennsylvania research expenditures of \$3,457.0 million. They received \$47.4 million in R&D tax credit in December 2011.

Of the 320 “not small” businesses, 240 increased their Pennsylvania research expenditures in taxable year 2010 over taxable year 2009 by 36.3 percent in the aggregate. Their Pennsylvania research expenditures in taxable year 2010 rose to \$3,095.6 million from \$2,270.6 million in taxable year 2009. Only 80 of these businesses reduced their Pennsylvania research expenditures over the same period. Their Pennsylvania research expenditures in taxable year 2010 declined by 18.9 percent to \$962.1 million from \$1,186.4 million in taxable year 2009.

Impact on Small Businesses

Out of the 537 taxpayers receiving the tax credit in 2011, 217 were “small” businesses. Their total Pennsylvania research expenditures in taxable year 2010 were \$116.3 million, a 25.2 percent increase over their taxable year 2009 Pennsylvania research expenditures of \$92.9 million.

The 217 “small” businesses received \$7.6 million in R&D tax credit of the \$11.0 million set aside for them in 2011.

Of the 217 “small” businesses, 171 increased their Pennsylvania research expenditures in taxable year 2010 over taxable year 2009 by 47.5 percent in the aggregate. Their Pennsylvania research expenditures in taxable year 2010 rose to \$88.0 million from \$59.7 million in taxable year 2009. Only 48 “small” businesses reduced their Pennsylvania research expenditures over the same period. Their Pennsylvania research expenditures in taxable year 2010 declined by 14.9 percent to \$28.3 million from \$33.2 million in taxable year 2009.

Impact on First Time Claimants and New Companies

In 2011, 151 taxpayers were awarded the tax credit for the first time, claiming \$6.3 million in credit. Their Pennsylvania research expenditures totaled \$283.3 million for taxable year 2010. Conversely, 177 taxpayers that claimed the tax credit in 2010 did not receive any credit in 2011. These 177 taxpayers had Pennsylvania research expenditures in taxable year 2009 of about \$1,175.9 million and claimed about \$4.4 million in tax credit in 2010.

Of all the taxpayers claiming the R&D tax credit in 2011, 254 were companies incorporated in Pennsylvania after the passage of Act 7 of 1997. It is possible that not all of these newly incorporated companies are start-ups, but may be newly formed subsidiaries of a parent corporation. These companies claimed \$15.1 million in tax credit in 2011 and had total Pennsylvania research expenditures in taxable year 2010 of about \$807.6 million, a 37.7 percent increase from their Pennsylvania research expenditures in taxable year 2009 of about \$586.6 million.

The 254 recently incorporated companies had a total taxable year 2009 CSFT liability of \$6.9 million; 51 taxpayers had zero tax liability. The 254 new companies had a total taxable year 2009 CNIT liability of \$29.8 million; 179 taxpayers had zero tax liability.

Impact on Established Companies

In order to provide more insight into the companies that regularly claim the R&D tax credit, this report will examine 98 taxpayers for which the Department has tracked Pennsylvania research expenditures for the last ten taxable years, from 2001 through 2010. This group of credit recipients has received \$165.8 million in total tax credit from 1997 through 2011, or almost 44 percent of the total \$378 million awarded over the fifteen years. These 98 companies represent 33.6 percent of the number of companies that received the R&D tax credit in its first year, 1997. As a group, these taxpayers are a representative cross-section of the type of companies that have come to consistently claim the R&D tax credit.

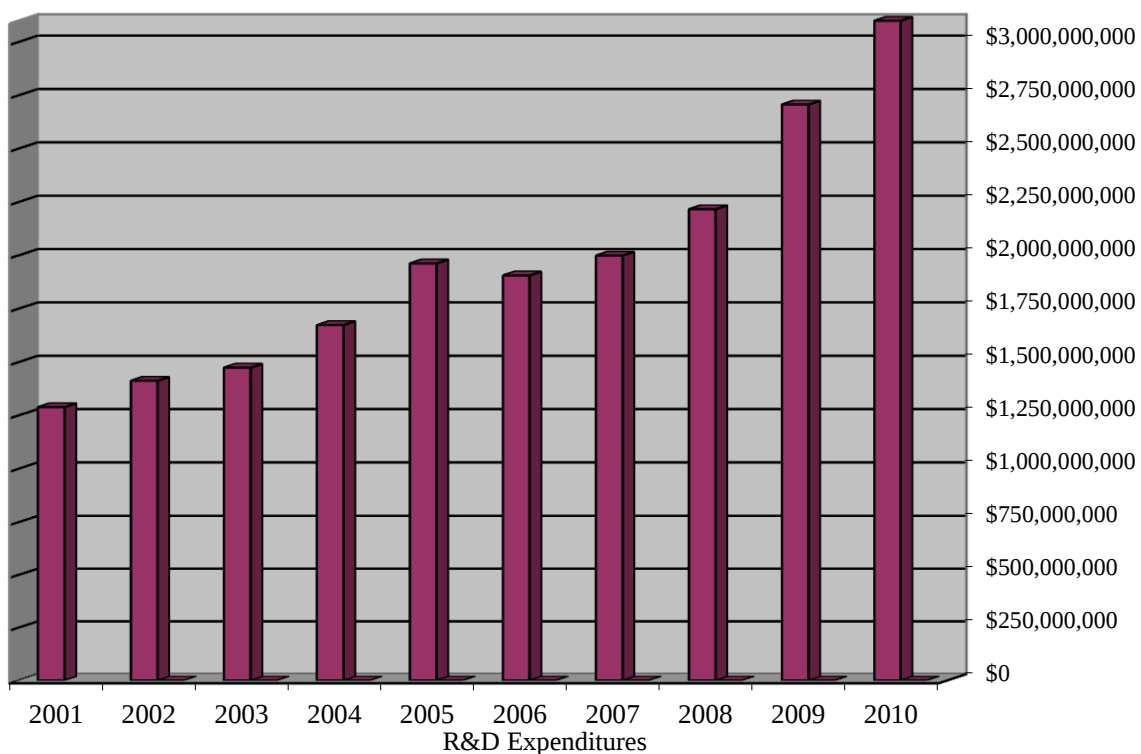
For these 98 taxpayers, their 2010 Pennsylvania R&D expenditures totaled just over \$3,149.3 million. This is an aggregate growth rate of 144.2 percent over their 2001 Pennsylvania R&D expenditures of about \$1,289.7 million; between 2001 and 2010, the Pennsylvania R&D expenditures for these 98 taxpayers grew at a compound annual growth rate of 10.4 percent.

These 98 taxpayers were awarded about \$36.9 million in R&D tax credit in 2011, two-thirds of the total amount of R&D tax credit awarded in December 2011. This credit amount was about 1.2 percent of their total amount of Pennsylvania research expenditures for the taxpayers in taxable year 2010. Overall, it is important to note that the R&D tax credit awarded was relatively small when compared to the amount of money spent by the taxpayers to conduct their research activities in the Commonwealth.

The 98 established taxpayers had a total CSFT liability for taxable year 2009 of \$6.7 million and a total CNIT liability for taxable year 2009 of \$26.6 million.

Chart 1 graphically shows the Pennsylvania R&D expenditures for the 98 established taxpayers for the last ten taxable years, 2001 through 2010.

**Chart 1. Pennsylvania R&D Expenditures by Year for 98 Established Companies
With PA Expenditure Data Between 2001 and 2010**



Small versus Not “Small”

Of the 98 taxpayers, 68 did not qualify as “small” businesses. They received about \$160.1 million in tax credit over the fifteen years of the program. Their 2010 Pennsylvania R&D expenditures totaled about \$3,122.8 million. This is an aggregate growth rate of 143.6 percent over their 2001 Pennsylvania R&D expenditures of about \$1,281.7 million; between 2001 and 2010, the Pennsylvania R&D expenditures for these 68 taxpayers grew at a compound annual growth rate of 10.4 percent.

Of the 98 taxpayers, there were 30 “small” businesses that received about \$5.7 million in tax credit over the fifteen years of the program. Their 2010 Pennsylvania R&D expenditures totaled about \$26.5 million. This is an aggregate growth rate of 230 percent over their 2001 Pennsylvania R&D expenditures of about \$8.0 million; between 2001 and 2010, the Pennsylvania R&D expenditures for these 30 taxpayers grew at a compound annual growth rate of 14.2 percent.

By Industry Type

Of the 98 taxpayers, 66 were classified as manufacturers. They received about \$151.6 million in tax credit over the fifteen years of the program. Their 2010 Pennsylvania R&D expenditures totaled about \$2,953.6 million. This is an aggregate growth rate of 131.5 percent over their 2001 Pennsylvania R&D expenditures of \$1,275.9 million; between 2001 and 2010, the Pennsylvania R&D expenditures for these 66 taxpayers grew at a compound annual growth rate of 9.8 percent.

Of the 98 taxpayers, there were 32 non-manufacturing businesses that received about \$14.2 million in tax credit over the fifteen years of the program. Their 2010 Pennsylvania R&D expenditures totaled about \$195.7 million. This is an aggregate growth rate of 1,311 percent over their 2001 Pennsylvania R&D expenditures of about \$13.9 million; between 2001 and 2010, the Pennsylvania R&D expenditures for these 32 taxpayers grew at a compound annual growth rate of 34.2 percent.

Conclusions on the Impact of the R&D Tax Credit in Pennsylvania

When all 537 taxpayers receiving the R&D tax credit in 2011 were examined, “small” businesses increased their Pennsylvania research expenditures in taxable year 2010 more than “not small” businesses. However, the Pennsylvania research expenditures for “small” businesses were only 2.8 percent of the total Pennsylvania research expenditures in taxable year 2010. The overwhelming majority of Pennsylvania research expenditures continue to be made by taxpayers not classified as “small” businesses.

Of the 98 taxpayers examined for whom the Department has tracked Pennsylvania research expenditures for the last ten taxable years, for 2001 through 2010, manufacturers were the primary beneficiaries. Across all of the business types, the R&D tax credit remains a small percentage of Pennsylvania research expenditures. Hence, many other factors are likely to affect a company’s R&D spending decisions. It remains to be seen what impact the most recent recession and the legislated reduction in available tax credits will have on future R&D expenditures by private industry.

Conclusion

The R&D tax credit has existed in Pennsylvania for fifteen years. Literature evaluating the effectiveness of the federal R&D tax credit and state R&D tax credits has shown mixed results regarding the effectiveness of the programs. Many factors other than the R&D tax credit influence a company’s R&D investment decisions. This report’s other observations can be summarized as:

- Due to the changes made by Act 26 of 2011, \$55.0 million in R&D tax credit were awarded by the Department in December 2011. The “small” business set aside was \$11.0 million for December 2011.
- In 2011, 537 companies were awarded credits, receiving the capped amount of \$55 million, or just over 42 percent of the amount requested.
- In the absence of a cap, \$130.6 million in tax credits would have been awarded. This was the highest amount of tentative credit ever filed for in one year in the history of the program.
- In tax year 2010, the 537 companies awarded the R&D tax credit in 2011 had total Pennsylvania research expenditures of \$4,173.9 million, a 17.6 percent increase over their tax year 2009 Pennsylvania research expenditures.
- Manufacturing firms, particularly pharmaceutical manufacturers, continue to be the primary beneficiaries of the R&D tax credit.
- “Small” businesses claimed \$7.6 million of the \$11.0 million in R&D tax credit set aside for them in 2011.
- As of February 2011, a total of \$44.3 million in unused R&D tax credit have been sold from 2003 through 2010; approximately \$41.5 million was paid for the unused credit, or about 93.7 percent of their value.

APPENDIX A

**Table 1. Pennsylvania Research & Development Tax Credit Program
Taxpayers Receiving Credit in December 2009, 2010 and 2011 in Dollars
Sorted by 2011 Credit Awarded (Largest to Smallest)**

<i>Taxpayer Name</i>	<i>2011 Credit Awarded</i>	<i>2011 Credit Utilized¹</i>	<i>2009 & 2010 Credit Awarded</i>	<i>2009 & 2010 Credit Utilized¹</i>
Merck, Sharp & Dohme Corp.	\$19,590,893	\$0	\$2,999,214	\$2,999,214
Pfizer, Inc.	\$5,195,497	\$0	\$6,806,579	\$6,806,579
J&J Pharmaceutical Research & Development LLC	\$2,195,145	\$0	\$0	\$0
Eli Lilly and Company	\$2,114,575	\$0	\$1,128,200	\$1,128,200
LSI Corporation	\$1,449,624	\$0	\$634,631	\$634,631
Lockheed Martin Corporation	\$971,205	\$0	\$1,550,386	\$1,550,386
SmithKline Beecham Corporation DBA GlaxoSmithKline	\$951,581	\$0	\$435,635	\$435,635
Comcast Corporation	\$803,503	\$0	\$1,446,795	\$1,181,604
Cephalon, Inc.	\$740,231	\$0	\$0	\$0
Woodward McCoach, Inc.	\$577,052	\$0	\$0	\$0
Teva Branded Pharmaceutical Products R&D, Inc.	\$566,948	\$0	\$0	\$0
Forest Research Institute, Inc.	\$481,489	\$0	\$0	\$0
Immunex Corporation	\$437,312	\$0	\$0	\$0
Lutron Electronics Co., Inc.	\$434,907	\$0	\$163,324	\$8,577
Google, Inc.	\$409,206	\$0	\$93,602	\$93,602
Holtec International Power Division, Inc.	\$355,030	\$0	\$0	\$0
The Vanguard Group, Inc.	\$344,104	\$0	\$0	\$0
SAP America, Inc.	\$318,346	\$0	\$0	\$0
CE Citycom	\$301,407	\$0	\$0	\$0
Sanofi Pasteur, Inc.	\$277,248	\$0	\$232,685	\$232,685
Medecision, Inc.	\$257,834	\$0	\$76,473	\$10,548
Honeywell International, Inc.	\$244,510	\$0	\$166,758	\$166,758
Alung Technologies, Inc.	\$242,082	\$0	\$54,719	\$0
Endo Pharmaceuticals, Inc.	\$225,955	\$0	\$16,834	\$16,834
Agentase	\$213,294	\$0	\$446,396	\$446,396
United Defense LP	\$211,028	\$0	\$0	\$0
ServiceLink Valuation Solutions, LLC	\$209,949	\$0	\$0	\$0
Cordis Corporation	\$192,075	\$0	\$50,584	\$0
BioNanomatrix, Inc.	\$188,376	\$0	\$62,175	\$62,175
Heinz Management, LLC	\$182,039	\$0	\$284,281	\$112,444
Axion Power Battery Mfg, Inc.	\$173,334	\$0	\$167,287	\$0
Bridge Semiconductor Corporation	\$171,959	\$0	\$112,358	\$47,120
Grove US, LLC	\$171,439	\$0	\$0	\$0
NuPathe, Inc.	\$161,044	\$0	\$260,351	\$260,351
United States Steel Corporation	\$159,533	\$0	\$0	\$0
Avid Radiopharmaceuticals, Inc.	\$159,381	\$0	\$171,537	\$123,555

<i>Taxpayer Name</i>	<i>2011 Credit Awarded</i>	<i>2011 Credit Utilized¹</i>	<i>2009 & 2010 Credit Awarded</i>	<i>2009 & 2010 Credit Utilized¹</i>
Dynavox System, LLC	\$155,530	\$0	\$19,607	\$6,953
Iron Mountains, LLC	\$144,272	\$0	\$0	\$0
ChemImage Corporation	\$143,735	\$0	\$0	\$0
Minitab, Inc.	\$142,461	\$0	\$0	\$0
Globus Medical, Inc.	\$142,271	\$0	\$166,817	\$166,817
Boehringer Ingelheim Pharmaceuticals, Inc.	\$141,093	\$0	\$237,739	\$237,739
Schott North America, Inc.	\$137,496	\$0	\$32,598	\$0
CNH America, LLC	\$136,018	\$0	\$57,627	\$0
Fidelity Information Services, Inc.	\$134,365	\$0	\$68,621	\$68,621
Clearcount Medical Solutions, Inc.	\$131,348	\$0	\$17,660	\$17,314
Victaulic Company	\$130,963	\$0	\$44,261	\$44,261
Inmedius, Inc.	\$130,539	\$0	\$20,649	\$20,112
NextGen Healthcare Information Systems, Inc.	\$128,894	\$0	\$112,102	\$51,280
Gemini Plastics, Inc.	\$127,871	\$0	\$50,273	\$50,273
Caterpillar, Inc.	\$125,066	\$0	\$49,523	\$49,523
Net Health Systems, Inc.	\$123,297	\$0	\$45,695	\$45,695
Trevena, Inc.	\$118,136	\$0	\$59,757	\$15,112
Respironics, Inc.	\$115,097	\$0	\$38,898	\$0
Allison Custom Fabrication	\$113,738	\$0	\$0	\$0
Thermo Fisher Scientific, Inc.	\$111,198	\$0	\$0	\$0
Knopp Neurosciences, Inc.	\$110,044	\$0	\$383,774	\$128,313
Campus Door Holdings, Inc.	\$109,680	\$0	\$0	\$0
Interstate Management Resources, Inc.	\$106,433	\$0	\$36,504	\$0
Garnet BioTherapeutics, Inc.	\$106,414	\$0	\$24,001	\$0
Intel Americas Inc.	\$106,359	\$0	\$0	\$0
The Valspar Corporation	\$105,730	\$0	\$19,866	\$19,866
Texas Instruments Incorporated	\$105,046	\$0	\$0	\$0
Lightwire, Inc.	\$102,054	\$0	\$243,021	\$243,021
Komax Solar, Inc.	\$99,865	\$0	\$0	\$0
Accu Measurement & Testing, Inc.	\$98,953	\$0	\$45,372	\$45,372
The Hershey Company	\$98,934	\$0	\$82,981	\$82,981
KD Industries, Inc.	\$95,790	\$0	\$13,812	\$0
Chant Engineering Co., Inc.	\$95,271	\$0	\$33,081	\$0
Polymedix Pharmaceuticals, Inc.	\$93,957	\$0	\$47,494	\$47,494
Novo Nordisk, Inc.	\$93,540	\$0	\$94,786	\$94,786
Eaton Corporation	\$93,251	\$0	\$186,839	\$186,839
Adbase Group, Inc.	\$90,881	\$0	\$0	\$0
Silverstorm Technologies, Inc.	\$89,225	\$0	\$138,475	\$0
Beyer Productions, LLC	\$87,416	\$0	\$44,532	\$44,532
N.A. Water Systems, LLC	\$87,344	\$0	\$112,289	\$59,887

<i>Taxpayer Name</i>	<i>2011 Credit Awarded</i>	<i>2011 Credit Utilized¹</i>	<i>2009 & 2010 Credit Awarded</i>	<i>2009 & 2010 Credit Utilized¹</i>
Blue Belt Technologies, Inc.	\$85,490	\$0	\$24,366	\$24,366
EMS Charts, Inc.	\$85,435	\$0	\$0	\$0
Washington Penn Plastics Co., Inc.	\$82,657	\$0	\$10,067	\$0
Vitae Pharmaceuticals, Inc.	\$81,973	\$0	\$0	\$0
Cutting Edge Solutions, Inc.	\$81,035	\$0	\$17,986	\$17,986
Cognition Therapeutics, Inc.	\$80,331	\$0	\$47,741	\$18,808
Accipiter Systems, Inc.	\$79,108	\$0	\$51,681	\$21,768
Greene, Tweed & Co., Inc.	\$76,546	\$0	\$13,413	\$0
AMETEK, Inc.	\$75,372	\$0	\$12,794	\$12,794
Qortek, Inc.	\$72,422	\$0	\$24,986	\$116
Tetralogic Pharmaceuticals Corporation	\$71,502	\$0	\$25,869	\$8,079
Maloney Tool & Mold, Inc.	\$70,731	\$0	\$0	\$0
Tiger Optics, Inc.	\$70,731	\$0	\$0	\$0
CSL Behring, LLC.	\$70,263	\$0	\$0	\$0
F&P Holding Co., Inc.	\$68,985	\$0	\$0	\$0
Gateway Ticketing Systems, Inc.	\$68,820	\$0	\$85,112	\$37,526
Aquatech International Corporation	\$68,570	\$0	\$59,236	\$59,236
Control Concepts Corporation	\$68,520	\$0	\$33,037	\$33,037
West Pharmaceutical Services, Inc. (PA)	\$67,859	\$0	\$34,553	\$19,573
Process Combustion Corporation	\$67,505	\$0	\$47,144	\$47,144
Precision Therapeutics, Inc.	\$67,086	\$0	\$68,475	\$26,672
Avery Dennison Corporation	\$66,814	\$0	\$52,078	\$4,248
Classic Industries, Inc.	\$66,308	\$0	\$37,384	\$11,624
Tait Towers, Inc.	\$66,216	\$0	\$0	\$0
Industrial Scientific Corporation	\$66,109	\$0	\$52,178	\$52,178
Kennametal, Inc.	\$65,897	\$0	\$130,349	\$65,254
Numoda Technologies, Inc.	\$65,799	\$0	\$46,350	\$46,350
Communication Automation Corp.	\$65,469	\$0	\$9,462	\$9,462
Colorcon, Inc. and Division	\$64,456	\$0	\$90,695	\$90,695
MapQuest PA, Inc.	\$61,926	\$0	\$53,754	\$0
Lord Corporation	\$61,527	\$0	\$56,901	\$38,941
Fairchild Semiconductor Corporation	\$59,400	\$0	\$16,659	\$1,569
NewCare Solutions, LLC	\$58,893	\$0	\$0	\$0
Plextronics, Inc.	\$58,570	\$0	\$191,856	\$191,856
Advanced Carbon Technologies, Inc.	\$58,499	\$0	\$10,493	\$10,493
Recro Pharma, Inc.	\$57,321	\$0	\$29,452	\$0
Super Abrasive Machine Innovations, LLC	\$57,299	\$0	\$0	\$0
Electro-Science Laboratories, Inc.	\$55,686	\$0	\$12,464	\$11,108
Ventana USA, LLP	\$55,480	\$0	\$16,124	\$16,124
Immunotope, Inc.	\$55,410	\$0	\$84,388	\$84,388

<i>Taxpayer Name</i>	<i>2011 Credit Awarded</i>	<i>2011 Credit Utilized¹</i>	<i>2009 & 2010 Credit Awarded</i>	<i>2009 & 2010 Credit Utilized¹</i>
Finisar Corporation	\$54,714	\$0	\$0	\$0
EthosGen, LLC	\$54,229	\$0	\$5,029	\$0
Multimodal Technologies, Inc.	\$54,228	\$0	\$23,512	\$23,512
Castle Mold and Tool, Inc.	\$53,925	\$0	\$0	\$0
GES Automation Technology, Inc.	\$53,698	\$0	\$7,290	\$0
Portico Systems of Delaware, Inc.	\$53,658	\$0	\$139,781	\$139,781
InfoMC, Inc.	\$53,378	\$0	\$49,349	\$15,675
Y-Carbon, Inc.	\$53,342	\$0	\$10,046	\$10,046
Emotion Kayaks, Inc.	\$52,808	\$0	\$12,734	\$11,228
Piezo Resonance Innovations, Inc.	\$51,105	\$0	\$37,923	\$37,923
OraSure Technologies, Inc.	\$51,067	\$0	\$72,192	\$1,500
Galleon Pharmaceuticals, Inc.	\$50,363	\$0	\$65,412	\$0
Avero Systems, Inc.	\$50,035	\$0	\$15,946	\$0
Graybill Machines, Inc.	\$49,768	\$0	\$18,855	\$8,812
Steven B. Golden Associates, Inc.	\$49,150	\$0	\$0	\$0
Coskata, Inc.	\$47,883	\$0	\$0	\$0
Etcetera Edutainment, Inc.	\$47,514	\$0	\$33,508	\$33,508
Convertteam, Inc.	\$47,326	\$0	\$37,165	\$37,165
Tarsa Therapeutics, Inc.	\$46,544	\$0	\$0	\$0
Cook Mysosite, Inc.	\$46,264	\$0	\$80,575	\$5,965
Titan International, Inc.	\$45,966	\$0	\$0	\$0
Holtec Manufacturing Division, Inc.	\$45,681	\$0	\$0	\$0
Gelest, Inc.	\$45,027	\$0	\$33,971	\$33,971
eDigital Data Center, Inc.	\$44,516	\$0	\$7,075	\$7,075
Equipois, Inc.	\$44,098	\$0	\$62,535	\$1,563
Controlled Molding, Inc.	\$43,968	\$0	\$0	\$0
Ratex Business Solutions, Inc.	\$43,798	\$0	\$10,775	\$8,147
FHM Holding Companies, Inc.	\$43,576	\$0	\$14,643	\$14,643
AcademyOne, Inc.	\$43,478	\$0	\$21,035	\$0
Maya Design, Inc.	\$43,030	\$0	\$28,849	\$0
QR Pharma, Inc.	\$42,511	\$0	\$13,887	\$13,887
Document Solutions Group, Inc.	\$42,456	\$0	\$35,417	\$35,417
Cellco Partnership	\$41,741	\$0	\$0	\$0
Gentex Corporation	\$41,591	\$0	\$56,953	\$56,953
NMS Labs, Inc.	\$41,336	\$0	\$0	\$0
OmniWind Energy Systems, LLC	\$41,192	\$0	\$39,150	\$39,150
Elliott Company	\$40,587	\$0	\$0	\$0
Innovative Sintered Metals, Inc.	\$40,477	\$0	\$0	\$0
Ecotech Marine, LLC	\$40,410	\$0	\$20,566	\$20,566
Channellock, Inc.	\$39,830	\$0	\$0	\$0

Taxpayer Name	2011 Credit Awarded	2011 Credit Utilized¹	2009 & 2010 Credit Awarded	2009 & 2010 Credit Utilized¹
S&S Processing, Inc.	\$39,468	\$0	\$20,866	\$9,429
Ross Mould Incorporated	\$39,330	\$0	\$0	\$0
Vertex, Inc.	\$38,173	\$0	\$9,143	\$9,143
Nitric Biotherapeutics, Inc.	\$38,160	\$0	\$118,053	\$118,053
Penn Manufacturing Industries, Inc.	\$38,147	\$0	\$3,710	\$3,710
Lazarus Therapeutics, Inc.	\$38,111	\$0	\$0	\$0
Valtech Corporation	\$37,041	\$0	\$31,595	\$18,190
Phoenix Contact Development & Manufacturing, Inc.	\$35,347	\$0	\$29,496	\$29,496
Assistive Technology Products, Inc.	\$35,169	\$0	\$2,795	\$0
Certes Networks, Inc. (f/k/a Cipheroptics, Inc.)	\$34,401	\$0	\$0	\$0
PhaseBio Pharmaceuticals, Inc.	\$34,254	\$0	\$0	\$0
Illuminex Corporation	\$33,986	\$0	\$0	\$0
IsoSciences, LLC	\$33,424	\$0	\$44,534	\$44,534
Yaupon Therapeutics, Inc.	\$32,954	\$0	\$24,225	\$9,684
Oxford Bio-Imaging Research, Inc.	\$32,835	\$0	\$6,958	\$6,958
Milnes Engineering, Inc.	\$32,421	\$0	\$17,162	\$17,162
Naval Systems, Inc.	\$32,297	\$0	\$7,819	\$7,819
Neurointerventional Therapeutics, Inc. (dba Neurointerventions, Inc.)	\$32,057	\$0	\$0	\$0
Stein Seal Company	\$31,875	\$0	\$12,894	\$12,894
General Dynamics Satcom Technologies, Inc.	\$31,216	\$0	\$5,204	\$5,204
Gamry Instruments, Inc.	\$30,973	\$0	\$72,372	\$72,372
Just Between Friends, Inc.	\$30,955	\$0	\$9,157	\$9,157
Coldlight Solutions, LLC	\$30,752	\$0	\$29,849	\$0
Nutrisystem, Inc.	\$29,917	\$0	\$0	\$0
Zulama, LLC	\$29,673	\$0	\$0	\$0
Aprecia Pharmaceuticals Company, Inc.	\$29,640	\$0	\$136,892	\$61,290
Industrial Learning Systems	\$29,349	\$0	\$22,343	\$22,343
Analytical Graphics, Inc.	\$29,043	\$0	\$12,628	\$0
Sweet Street Desserts, Inc.	\$28,583	\$0	\$48,642	\$30,065
Bentley Systems Incorporated	\$28,484	\$0	\$61,610	\$38,755
Cohera Medical, Inc.	\$28,252	\$0	\$82,008	\$82,008
FS-Elliott Co., LLC	\$28,243	\$0	\$15,818	\$15,818
R&D Coatings, Inc.	\$27,993	\$0	\$10,081	\$10,081
Third Eye Diagnostics, Inc.	\$27,933	\$0	\$5,884	\$5,884
Fabri-Kal Corporation	\$27,375	\$0	\$0	\$0
Pioneer Hi-Bred International, Inc.	\$27,072	\$0	\$13,821	\$13,821
Silberline Manufacturing Co., Inc.	\$26,995	\$0	\$9,199	\$9,199
Amuneal Manufacturing Corp.	\$26,843	\$0	\$32,040	\$32,040
IGD Systems, LLC	\$26,681	\$0	\$0	\$0
Ross Technology Corporation	\$26,637	\$0	\$9,238	\$9,238

Taxpayer Name	2011 Credit Awarded	2011 Credit Utilized¹	2009 & 2010 Credit Awarded	2009 & 2010 Credit Utilized¹
Flexible Compensators, Inc.	\$25,641	\$0	\$11,447	\$11,447
Cardiokine Biopharma, LLC	\$25,511	\$0	\$21,419	\$21,419
Rebco, Inc.	\$25,438	\$0	\$0	\$0
Lone Oak Medical Technologies, LLC	\$25,287	\$0	\$9,618	\$5,242
Advanced Research Systems, Inc.	\$25,024	\$0	\$0	\$0
Heraeus Materials Technology, LLC.	\$24,853	\$0	\$0	\$0
Penn Metal Stamping, Inc.	\$24,797	\$0	\$0	\$0
Pharmaceutical Manufacturing Research	\$24,732	\$0	\$19,452	\$12,332
Insinger Machine Company	\$24,468	\$0	\$0	\$0
Carlisle Construction Materials Incorporated	\$24,253	\$0	\$0	\$0
Avery Dennison Retail Info Services, LLC	\$24,253	\$0	\$0	\$0
Evaheart Medical USA, Inc.	\$24,247	\$0	\$1,086	\$1,086
Team Ten, LLC (American Eagle Paper Mills)	\$23,459	\$0	\$10,245	\$1,198
Reading Pretzel Machining Corp.	\$23,408	\$0	\$13,169	\$4,388
Caliber Therapeutics, Inc.	\$23,317	\$0	\$0	\$0
Psychology Software Tools, Inc.	\$23,205	\$0	\$24,742	\$4,885
Dataforma Incorporated	\$23,107	\$0	\$0	\$0
Voci Technologies Incorporated	\$22,836	\$0	\$0	\$0
Kroff Chemical Company	\$22,275	\$0	\$19,488	\$19,488
Walsh Construction Company	\$22,217	\$0	\$6,530	\$6,530
Crown Cork & Seal USA, Inc.	\$22,148	\$0	\$0	\$0
Brookville Equipment Corporation	\$22,111	\$0	\$0	\$0
White Engineering Surfaces Corporation	\$21,922	\$0	\$0	\$0
PMC-Sierra US, Inc.	\$21,426	\$0	\$726	\$726
Reclamere, Inc.	\$21,372	\$0	\$4,512	\$4,512
MESH, Inc.	\$21,057	\$0	\$9,949	\$7,848
American Enterprises MPT Corp.	\$20,922	\$0	\$2,924	\$0
Allomet Corporation	\$20,617	\$0	\$0	\$0
Acutronic USA, Inc.	\$20,590	\$0	\$5,469	\$2,337
Chester Engineers, Inc.	\$20,469	\$0	\$0	\$0
Chemcut Holdings, LLC	\$20,433	\$0	\$10,233	\$10,026
FedEx Corporate Services, Inc.	\$20,417	\$0	\$0	\$0
Reynolds & Reynolds Electronics, Inc.	\$20,215	\$0	\$16,016	\$16,016
Applied Geology and Environmental Science, Inc.	\$19,926	\$0	\$0	\$0
Johnson Matthey, Inc.	\$19,891	\$0	\$40,834	\$0
Pennoni Associates, Inc.	\$19,857	\$0	\$27,485	\$27,485
Qmac - Quality Machining, Inc.	\$19,646	\$0	\$10,321	\$10,321
AT&T Services, Inc.	\$19,497	\$0	\$0	\$0
Innovative Pressure Technologies, LLC	\$19,164	\$0	\$26,067	\$0
Supelco, Inc.	\$18,828	\$0	\$20,883	\$20,883

Taxpayer Name	2011 Credit Awarded	2011 Credit Utilized¹	2009 & 2010 Credit Awarded	2009 & 2010 Credit Utilized¹
Manley Holdings, Inc.	\$18,826	\$0	\$26,562	\$26,562
LCR Electronics	\$18,746	\$0	\$13,088	\$906
Hydro-Pac, Inc.	\$18,660	\$0	\$15,061	\$15,061
PTR Group, LP	\$18,474	\$0	\$0	\$0
Knoll, Inc.	\$18,186	\$0	\$3,288	\$3,288
Loridian, LLC	\$18,077	\$0	\$2,719	\$1,086
STC Consulting, LLC	\$18,040	\$0	\$0	\$0
Draeger Medical Systems, Inc.	\$17,960	\$0	\$25,280	\$25,280
Sicom Systems, Inc.	\$17,838	\$0	\$0	\$0
General Dynamics C4 Systems, Inc.	\$17,731	\$0	\$1,806	\$1,806
Bodymedia, Inc.	\$17,434	\$0	\$9,409	\$0
Huston, Inc.	\$17,174	\$0	\$9,321	\$8,233
Whitford Corporation	\$16,900	\$0	\$532	\$532
Red Valve Company, Inc.	\$16,793	\$0	\$18,412	\$2,189
Gichner Systems Group, Inc.	\$16,550	\$0	\$0	\$0
Ingmar Medical, Ltd.	\$16,451	\$0	\$5,559	\$5,559
Golden Brothers, Inc.	\$16,263	\$0	\$5,513	\$5,513
KW, Inc.	\$16,232	\$0	\$2,783	\$2,783
Soft Genetics, LLC	\$16,054	\$0	\$18,484	\$18,484
Spinworks, LLC	\$15,626	\$0	\$0	\$0
Keystone Foods, LLC	\$15,198	\$0	\$11,743	\$11,743
Fraser Volpe, LLC	\$15,182	\$0	\$0	\$0
Suntex International, Inc.	\$15,117	\$0	\$0	\$0
Z-Band, Inc.	\$15,113	\$0	\$17,610	\$5,279
Pelletron Corporation	\$15,000	\$0	\$15,344	\$11,566
MBF Therapeutics, Inc.	\$14,967	\$0	\$0	\$0
Touchtown, Inc.	\$14,746	\$0	\$15,690	\$13,002
SPX Corporation	\$14,711	\$0	\$15,244	\$15,244
Community Light and Sound, Inc.	\$14,676	\$0	\$0	\$0
Matrix Operations Company, LLC	\$14,650	\$0	\$59,885	\$59,885
ABEC, Inc.	\$14,507	\$0	\$0	\$0
Griffith, Inc. (TA Alpha Systems)	\$14,503	\$0	\$1,189	\$1,189
Centroid Corporation	\$14,427	\$0	\$0	\$0
Samtec, Inc.	\$14,371	\$0	\$12,224	\$3,943
Quality Engineering Solutions, Inc.	\$14,108	\$0	\$0	\$0
Vesuvius USA	\$13,862	\$0	\$0	\$0
CWE, Inc.	\$13,814	\$0	\$13,066	\$8,329
ASI Technologies, Inc.	\$13,793	\$0	\$1,618	\$0
Parker White Metal Company	\$13,733	\$0	\$0	\$0
Datagrove, Inc.	\$13,500	\$0	\$9,518	\$9,518

<i>Taxpayer Name</i>	<i>2011 Credit Awarded</i>	<i>2011 Credit Utilized¹</i>	<i>2009 & 2010 Credit Awarded</i>	<i>2009 & 2010 Credit Utilized¹</i>
Kalas Mfg, Inc.	\$13,414	\$0	\$10,308	\$313
Herbert, Rowland & Grubic, Inc.	\$13,380	\$0	\$11,885	\$0
Beaumaris Networks, Inc.	\$13,333	\$0	\$0	\$0
Streamlight, Inc.	\$13,306	\$0	\$7,285	\$7,285
Cavanaugh Marketing Network, Inc. (dba Cavanaugh)	\$13,300	\$0	\$0	\$0
TOXCO, Inc.	\$13,258	\$0	\$2,235	\$2,235
Cook Vascular Corporation	\$13,133	\$0	\$7,121	\$7,121
Watson Standard Adhesives Company	\$13,112	\$0	\$0	\$0
Laminar Flow, Inc.	\$13,021	\$0	\$0	\$0
Sungard Public Sector, Inc.	\$12,940	\$0	\$0	\$0
C-P Converters, Inc.	\$12,822	\$0	\$14,103	\$14,103
ExecutivePulse, Inc.	\$12,750	\$0	\$8,534	\$8,534
Genco 1, Inc.	\$12,492	\$0	\$6,321	\$6,321
Landslide Technologies, Inc.	\$12,169	\$0	\$66,717	\$32,446
Proxicast, LLC	\$12,059	\$0	\$2,024	\$2,024
Astrorobotic Technology, Inc.	\$12,009	\$0	\$0	\$0
Innovative Control Systems, Inc.	\$11,996	\$0	\$5,234	\$5,234
Diamondback Automotive Accessories	\$11,962	\$0	\$0	\$0
Griffith Brothers Whitetail Ridge, Inc.	\$11,517	\$0	\$3,667	\$3,667
Rockland Immunochemicals, Inc.	\$11,475	\$0	\$3,230	\$3,230
Vascular Strategies, LLC	\$11,232	\$0	\$2,543	\$0
Grant Street Group, Inc.	\$11,176	\$0	\$12,332	\$12,332
Metronome Labs, LLC	\$11,161	\$0	\$13,058	\$13,058
InvestEdge, Inc.	\$11,095	\$0	\$8,231	\$0
Nazareth Industrial Corporation	\$11,095	\$0	\$2,536	\$595
PuriCore, Inc.	\$11,091	\$0	\$20,419	\$20,419
Power Conversion Technologies, Inc.	\$10,980	\$0	\$5,660	\$5,660
NCA Technologies, Inc.	\$10,846	\$0	\$11,411	\$11,411
Four Rivers Software Systems, Inc.	\$10,768	\$0	\$4,457	\$3,195
Teva Pharmaceuticals USA, Inc.	\$10,746	\$0	\$386,384	\$386,384
VMware, Inc.	\$10,683	\$0	\$0	\$0
Jarex Enterprises, LLC	\$10,351	\$0	\$3,670	\$3,670
Specialty Tires of America - PA	\$10,274	\$0	\$30,490	\$28,912
Aviana Molecular Technologies, LLC	\$10,168	\$0	\$0	\$0
Instrumentation Industries, Inc.	\$9,873	\$0	\$6,595	\$6,595
Lunchtime Software, LLC	\$9,767	\$0	\$5,949	\$5,847
Aptagen, LLC	\$9,734	\$0	\$0	\$0
Videon Central, Inc.	\$9,732	\$0	\$56,803	\$6,182
MCI Communications Services, Inc.	\$9,681	\$0	\$0	\$0
Latrobe Specialty Steel Company	\$9,569	\$0	\$30,386	\$0

<i>Taxpayer Name</i>	<i>2011 Credit Awarded</i>	<i>2011 Credit Utilized¹</i>	<i>2009 & 2010 Credit Awarded</i>	<i>2009 & 2010 Credit Utilized¹</i>
Synchronoss Technologies, Inc.	\$9,497	\$0	\$10,617	\$10,617
Tipton Medical & Diagnostic Center	\$9,465	\$0	\$3,359	\$719
Seegrid Corporation	\$9,447	\$0	\$2,869	\$2,869
J2 Medical, LP	\$8,891	\$0	\$0	\$0
Effort Foundry, Inc.	\$8,859	\$0	\$0	\$0
York Container Company	\$8,810	\$0	\$20,012	\$3,462
Lucas Systems, Inc.	\$8,703	\$0	\$8,556	\$8,556
Die-Tech, Inc.	\$8,675	\$0	\$0	\$0
Pitney Bowes Software, Inc.	\$8,664	\$0	\$3,152	\$3,152
Philadelphia Tramrail Enterprises, Inc.	\$8,659	\$0	\$6,918	\$0
Quintech Electronics & Communications, Inc.	\$8,506	\$0	\$14,462	\$14,462
NanoHorizons, Inc.	\$8,487	\$0	\$14,762	\$14,762
Verizon Data Services, LLC	\$8,461	\$0	\$136,982	\$7,533
Amphenol Intercom Systems, Inc.	\$8,344	\$0	\$7,120	\$7,120
TCI Ceramics, Inc.	\$8,336	\$0	\$13,780	\$0
Michael & Associates, Inc.	\$8,267	\$0	\$4,812	\$1,740
Power & Industrial Srv Corp.	\$7,977	\$0	\$22,405	\$22,405
Advanced Technology Solutions	\$7,841	\$0	\$0	\$0
Diversified Machine, Inc.	\$7,785	\$0	\$18,659	\$16,100
Z-Band Video, Inc.	\$7,642	\$0	\$2,245	\$2,245
Effort Enterprises, Inc.	\$7,632	\$0	\$0	\$0
Oberon, Inc.	\$7,591	\$0	\$4,525	\$4,525
American Reading Company, Inc.	\$7,443	\$0	\$2,770	\$0
SofterWare, Inc.	\$7,440	\$0	\$12,436	\$12,436
Mainstream Swimsuits, Inc.	\$7,413	\$0	\$8,131	\$4,212
Impact Applications, Inc.	\$7,413	\$0	\$0	\$0
Bostik, Inc.	\$7,389	\$0	\$1,920	\$1,920
Sun Star, Inc.	\$7,338	\$0	\$3,171	\$3,171
Acutec Precision Machining, Inc.	\$7,239	\$0	\$0	\$0
Markel Corporation	\$7,132	\$0	\$1,110	\$759
CDG Environmental, LLC	\$6,997	\$0	\$0	\$0
Towercare Technologies, Inc.	\$6,928	\$0	\$35,520	\$35,520
Met Pro Corporation	\$6,912	\$0	\$3,757	\$3,757
Expansyn Technologies, Inc.	\$6,655	\$0	\$0	\$0
Weir Hazleton, Inc.	\$6,586	\$0	\$0	\$0
Lee-Simpson Associates, Inc.	\$6,516	\$0	\$0	\$0
EF Precision, Inc.	\$6,439	\$0	\$0	\$0
McCormick Taylor, Inc.	\$6,341	\$0	\$4,329	\$4,329
E.A. Fischione Instruments, Inc.	\$6,312	\$0	\$22,217	\$22,217
Pennsylvania-American Water Company	\$6,286	\$0	\$0	\$0

<i>Taxpayer Name</i>	<i>2011 Credit Awarded</i>	<i>2011 Credit Utilized¹</i>	<i>2009 & 2010 Credit Awarded</i>	<i>2009 & 2010 Credit Utilized¹</i>
Dyco, Inc.	\$6,148	\$0	\$0	\$0
Cardinal Systems, Inc.	\$5,989	\$0	\$3,477	\$2,623
Novocell Semiconductor, Inc.	\$5,930	\$0	\$0	\$0
Video Display Corporation	\$5,895	\$0	\$10,006	\$1,961
R.M. Palmer Company	\$5,889	\$0	\$7,323	\$7,323
Hydac Technology Corp.	\$5,813	\$0	\$6,036	\$6,036
Lasko Products, Inc.	\$5,804	\$0	\$5,358	\$5,358
M-Mech Defense, Inc.	\$5,763	\$0	\$0	\$0
Solar Innovations, Inc.	\$5,749	\$0	\$5,695	\$5,695
Bergmann Associates, Inc.	\$5,723	\$0	\$0	\$0
Ashland, Inc.	\$5,710	\$0	\$8,821	\$0
Eriez Manufacturing	\$5,708	\$0	\$27,278	\$27,278
Newage Testing Instruments, Inc.	\$5,643	\$0	\$1,930	\$1,930
Duke Brewing Company, Inc.	\$5,631	\$0	\$0	\$0
Polymetric Systems, Inc.	\$5,612	\$0	\$1,553	\$1,553
PBM, Inc.	\$5,586	\$0	\$337	\$337
Harry Miller Corporation	\$5,542	\$0	\$0	\$0
ANSYS, Inc.	\$5,531	\$0	\$0	\$0
Frontier North, Inc.	\$5,497	\$0	\$0	\$0
Richardson Cooling Packages, LLC	\$5,470	\$0	\$4,856	\$874
Juniata Fabrics, Inc.	\$5,468	\$0	\$7,883	\$7,883
Eastern Manufacturing, Inc.	\$5,451	\$0	\$5,331	\$2,194
Amgen USA, Inc.	\$5,401	\$0	\$0	\$0
Consolidated Comm Enterprise Services	\$5,373	\$0	\$0	\$0
JWF Defense Systems, LLC	\$5,314	\$0	\$1,944	\$1,944
Tyrone Milling,	\$5,257	\$0	\$3,150	\$0
Fiber-Line, Inc.	\$5,221	\$0	\$5,802	\$4,509
SFS Intec Incorporated	\$5,202	\$0	\$2,458	\$1,828
SmoothOn, Inc.	\$5,186	\$0	\$3,399	\$1,835
EAM-Mosca Corp.	\$5,094	\$0	\$0	\$0
CTR Holdings, Inc.	\$5,080	\$0	\$5,888	\$5,888
InspiraFS, Inc.	\$5,060	\$0	\$2,395	\$809
Rampart Hydro Services, Inc.	\$5,016	\$0	\$0	\$0
Blair Strip Steel Co.	\$5,015	\$0	\$0	\$0
Regeneron Pharmaceuticals, Inc.	\$4,956	\$0	\$10,326	\$735
Interbots, LLC	\$4,939	\$0	\$5,069	\$5,069
Levan Machine Co., Inc.	\$4,915	\$0	\$2,362	\$2,362
Patrick M. Dentinger	\$4,882	\$0	\$22,817	\$0
Ismael J. Hidalgo	\$4,879	\$0	\$22,817	\$0
Oven Industries, Inc.	\$4,824	\$0	\$31,320	\$14,815

<i>Taxpayer Name</i>	<i>2011 Credit Awarded</i>	<i>2011 Credit Utilized¹</i>	<i>2009 & 2010 Credit Awarded</i>	<i>2009 & 2010 Credit Utilized¹</i>
Crystal, Inc. - PMC	\$4,820	\$0	\$0	\$0
Wabtec Corporation	\$4,663	\$0	\$0	\$0
TDY Industries, Inc.	\$4,653	\$0	\$3,040	\$1,088
SAS Institute, Inc.	\$4,649	\$0	\$2,054	\$2,054
Advanced Mobile Solutions Worldwide, Inc.	\$4,536	\$0	\$5,085	\$0
Deasey Machine Tool & Die Works, Inc.	\$4,516	\$0	\$2,643	\$2,643
GAI-Tronics Corporation	\$4,441	\$0	\$14,576	\$14,576
Crestwood Membranes, Inc.	\$4,389	\$0	\$0	\$0
World Electronics Sales and Service, Inc.	\$4,361	\$0	\$2,731	\$2,238
Pittsburgh Plastics Mfg, Inc.	\$4,346	\$0	\$3,870	\$3,130
NE Foods, Inc.	\$4,343	\$0	\$5,966	\$5,966
Benefit Coordinators Corp.	\$4,336	\$0	\$0	\$0
Beaumont Development, LLC	\$4,296	\$0	\$0	\$0
Henson Company, Inc.	\$4,187	\$0	\$12,305	\$1,603
Ernst Conservation Seeds, Inc.	\$4,172	\$0	\$5,565	\$5,565
Magnesita Refractories Company	\$4,168	\$0	\$2,594	\$2,594
Synopsys, Inc.	\$4,112	\$0	\$13,366	\$4,664
Pepperidge Farms Incorporated	\$4,053	\$0	\$0	\$0
Weiler Corporation	\$4,030	\$0	\$5,369	\$4,950
Interstate Building Materials, Inc.	\$3,985	\$0	\$3,820	\$0
Creative Engineers, Inc.	\$3,955	\$0	\$0	\$0
Lebanon Tool Company, Inc.	\$3,920	\$0	\$1,537	\$0
Eagle Brass Company	\$3,910	\$0	\$0	\$0
Forms and Surfaces, Inc.	\$3,808	\$0	\$0	\$0
Henry Molded Products, Inc.	\$3,801	\$0	\$0	\$0
Cyoptics, Inc.	\$3,784	\$0	\$89,235	\$0
Edlon, Inc.	\$3,784	\$0	\$0	\$0
Healthcare Lighting, Inc.	\$3,781	\$0	\$2,694	\$2,694
Valley Instrument Co., Inc.	\$3,756	\$0	\$480	\$442
Erie Custom Computer Applications	\$3,754	\$0	\$0	\$0
Superior Tire & Rubber Corp.	\$3,731	\$0	\$0	\$0
Minnotte Manufacturing Corporation	\$3,644	\$0	\$4,906	\$3,342
Edgemate, Inc.	\$3,614	\$0	\$3,539	\$3,539
ITT Corporation	\$3,589	\$0	\$3,444	\$0
Rearick Tooling, Inc.	\$3,545	\$0	\$0	\$0
Croda, Inc.	\$3,532	\$0	\$0	\$0
J Baur Machining, Inc.	\$3,478	\$0	\$4,007	\$4,007
ThreeRivers 3D, Inc.	\$3,448	\$0	\$0	\$0
Finish Thompson, Inc.	\$3,446	\$0	\$4,570	\$4,570
VT Graphics, Inc.	\$3,265	\$0	\$12,186	\$7,763

Taxpayer Name	2011 Credit Awarded	2011 Credit Utilized¹	2009 & 2010 Credit Awarded	2009 & 2010 Credit Utilized¹
Johnson McCormick Technologies, LLC	\$3,206	\$0	\$0	\$0
David Michael & Co., Inc.	\$3,171	\$0	\$6,058	\$6,058
Wampum Hardware co.	\$3,147	\$0	\$2,686	\$2,686
New Standard Corporation	\$3,092	\$0	\$9,688	\$466
Maloney Plastics, Inc.	\$3,072	\$0	\$0	\$0
Advanced Manufacturing Technologies	\$3,010	\$0	\$0	\$0
Watson Standard Company	\$2,995	\$0	\$0	\$0
Renaissance Nutrition, Inc.	\$2,979	\$0	\$3,752	\$3,253
GapVax, Inc.	\$2,919	\$0	\$0	\$0
Big B Manufacturing, Inc.	\$2,903	\$0	\$3,768	\$0
Just Born, Inc.	\$2,895	\$0	\$0	\$0
Strata Company (f/k/a Strata Graphics, Inc.)	\$2,872	\$0	\$0	\$0
Motors Drives & Controls, Inc.	\$2,841	\$0	\$0	\$0
Materion Brush, Inc. (f/k/a Brush Wellman, Inc.)	\$2,692	\$0	\$0	\$0
Outsourcing USA	\$2,641	\$0	\$0	\$0
Sweet Ovations, LLC	\$2,636	\$0	\$0	\$0
Cybergenetics Corp.	\$2,605	\$0	\$1,124	\$0
Robert Bosch Tool Corporation	\$2,541	\$0	\$4,524	\$4,524
Weaver Industries, Inc.	\$2,508	\$0	\$3,334	\$3,334
Magnetic Windings Co., Inc.	\$2,500	\$0	\$0	\$0
Quantum Software Solutions, Inc.	\$2,496	\$0	\$4,487	\$4,487
Trimetric Enterprises, Inc.	\$2,431	\$0	\$0	\$0
Industrial Vision Systems, Inc.	\$2,415	\$0	\$0	\$0
Dental Designs, Inc.	\$2,381	\$0	\$1,445	\$1,445
Huntingdon County Customs, LLC	\$2,363	\$0	\$0	\$0
Electric Owl Studios, Ltd.	\$2,345	\$0	\$0	\$0
ST-Ericsson, Inc.	\$2,234	\$0	\$0	\$0
PRL, Inc.	\$2,197	\$0	\$1,290	\$0
TM Industrial Supply, Inc.	\$2,158	\$0	\$2,516	\$2,284
Extol International, Inc.	\$2,144	\$0	\$7,183	\$0
Nexus Pharma, Inc.	\$2,143	\$0	\$0	\$0
Dean Technology, Inc.	\$2,119	\$0	\$0	\$0
Frontline Technologies, Inc.	\$2,103	\$0	\$0	\$0
Strobic Air Corporation	\$2,092	\$0	\$0	\$0
Dontech, Inc.	\$2,008	\$0	\$11,361	\$11,361
Patriot Sensors and Controls Corporation	\$1,979	\$0	\$2,159	\$2,159
American Turned Products, Inc.	\$1,978	\$0	\$0	\$0
Godshall's Quality Meats, Inc.	\$1,895	\$0	\$1,730	\$1,730
Angstrom Sciences, Inc.	\$1,890	\$0	\$2,780	\$2,777
Packworld USA, Ltd.	\$1,865	\$0	\$0	\$0

<i>Taxpayer Name</i>	<i>2011 Credit Awarded</i>	<i>2011 Credit Utilized¹</i>	<i>2009 & 2010 Credit Awarded</i>	<i>2009 & 2010 Credit Utilized¹</i>
Jamestown Paint Company	\$1,796	\$0	\$4,709	\$4,709
Ateeco, Inc.	\$1,769	\$0	\$0	\$0
Blair Companies	\$1,753	\$0	\$996	\$996
General Machine Products Co., Inc.	\$1,633	\$0	\$2,806	\$2,806
Fairmount Automation, Inc.	\$1,631	\$0	\$732	\$249
S&S X-Ray Products, Inc.	\$1,618	\$0	\$2,477	\$1,543
Fry Communications, Inc.	\$1,582	\$0	\$2,577	\$2,577
Thompsons Candle Co.	\$1,565	\$0	\$2,047	\$28
Fidelity Flight Simulation	\$1,501	\$0	\$49,868	\$49,868
Co-eXprise, Inc.	\$1,493	\$0	\$9,589	\$4,604
Cisco Systems, Inc.	\$1,477	\$0	\$108,254	\$61,615
Cellular Tracking Technologies, LLC	\$1,433	\$0	\$0	\$0
Lehigh Valley Technologies, Inc.	\$1,415	\$0	\$6,930	\$224
X F Enterprises, Inc.	\$1,392	\$0	\$670	\$77
BSC Technologies, Inc.	\$1,324	\$0	\$0	\$0
Polymer Products Company, Inc.	\$1,279	\$0	\$0	\$0
Sentry Data Systems, Inc.	\$1,271	\$0	\$0	\$0
Appcove, Inc.	\$1,254	\$0	\$12,694	\$12,694
IMC Biotechnology, Inc.	\$1,254	\$0	\$1,315	\$1,315
W.L. Gore & Associates, Inc.	\$1,236	\$0	\$0	\$0
Talbar, Inc.	\$1,223	\$0	\$0	\$0
W.W. Patterson Company	\$1,105	\$0	\$3,750	\$3,750
Olympic Steel, Inc.	\$1,091	\$0	\$1,225	\$1,225
Portec Rail Products, Inc.	\$1,033	\$0	\$1,704	\$1,704
Kenco Corporation	\$973	\$0	\$3,457	\$1,808
Clark Filer, Inc.	\$969	\$0	\$0	\$0
Neville Chemical Company	\$946	\$0	\$1,881	\$0
Tactical Technologies, Inc.	\$871	\$0	\$6,669	\$0
Atlas Minerals & Chemicals, Inc.	\$854	\$0	\$145	\$145
Regal Cast, Inc.	\$851	\$0	\$455	\$0
Bryton Distribution Group, Inc.	\$802	\$0	\$0	\$0
Follett Corporation	\$727	\$0	\$6,706	\$6,706
Mars Fishcare NA, Inc.	\$718	\$0	\$0	\$0
Elite Sportswear LLP	\$656	\$0	\$498	\$0
Misco Products Corporation	\$610	\$0	\$843	\$0
Basic Carbide Corporation	\$570	\$0	\$11,053	\$11,053
Bosch Rexroth Corporation	\$548	\$0	\$0	\$0
Synerge, LLC	\$530	\$0	\$4,769	\$4,769
Antakamatics, Inc.	\$496	\$0	\$0	\$0
Universal Refractories, Inc.	\$459	\$0	\$794	\$0

Taxpayer Name	2011 Credit Awarded	2011 Credit Utilized¹	2009 & 2010 Credit Awarded	2009 & 2010 Credit Utilized¹
Smart Structures, Inc.	\$435	\$0	\$0	\$0
The Fredericks Company	\$429	\$0	\$4,004	\$3,394
KCF Technologies	\$428	\$0	\$7,965	\$7,965
Computer Consultant Team, LLC	\$407	\$0	\$9,836	\$9,836
PRL Industries, Inc.	\$405	\$0	\$179	\$0
The Loomis Company	\$357	\$0	\$0	\$0
invivodata, Inc.	\$328	\$0	\$3,566	\$0
Sylvin Technologies, Inc.	\$328	\$0	\$112	\$0
East Coast Erosion Blankets LLC	\$321	\$0	\$5,269	\$5,269
Control Chief Corporation	\$318	\$0	\$143	\$0
Breen Energy Solutions LLC	\$259	\$0	\$0	\$0
Integrated Microwave Technologies, LLC (f/k/a RF Extreme, LLC)	\$239	\$0	\$2,353	\$2,136
JW Kitko & Sons Wood Products, Inc.	\$235	\$0	\$0	\$0
J.L. Clark, Inc.	\$205	\$0	\$0	\$0
Custom Milling & Consulting, Inc.	\$202	\$0	\$0	\$0
Cook Technologies, Inc.	\$195	\$0	\$0	\$0
JIT Prototyping LLC	\$135	\$0	\$0	\$0
HCKPM, LLC	\$84	\$0	\$0	\$0
Riggs Industries, Inc.	\$59	\$0	\$167	\$0
Roaring Spring Blank Book Company	\$20	\$0	\$0	\$0
Betts Industries, Inc.	\$7	\$0	\$16,798	\$16,798
General Electric Company	\$0	\$0	\$1,726,520	\$389,233
Rohm and Haas Chemicals, LLC	\$0	\$0	\$585,724	\$133,583
Carpenter Technology Corporation	\$0	\$0	\$479,978	\$368,582
Shire Pharmaceuticals, Inc.	\$0	\$0	\$475,334	\$475,334
Sanofi Aventis US, Inc.	\$0	\$0	\$416,252	\$329,360
Centocor Research & Development, Inc.	\$0	\$0	\$402,833	\$402,833
MEDRAD, Inc.	\$0	\$0	\$341,407	\$341,407
Amgen, Inc.	\$0	\$0	\$336,279	\$7,778
Edcomm, Inc.	\$0	\$0	\$245,441	\$111,227
Prescient Medical, Inc.	\$0	\$0	\$227,016	\$227,016
Morphotek, Inc.	\$0	\$0	\$221,088	\$221,088
Ception Therapeutics, Inc.	\$0	\$0	\$214,975	\$18,228
SEI Global Services, Inc.	\$0	\$0	\$201,787	\$0
Mutual Pharmaceutical Company, Inc.	\$0	\$0	\$194,735	\$99,530
Promedior, Inc.	\$0	\$0	\$177,894	\$177,894
Pfizer Burgundy, Inc. (f/k/a Wyeth)	\$0	\$0	\$154,958	\$154,958
Novartis Pharmaceuticals Corporation	\$0	\$0	\$146,044	\$146,044
Corridor Pharmaceuticals, Inc. (f/k/a Immune Control, Inc.)	\$0	\$0	\$144,421	\$1,490

Taxpayer Name	2011 Credit Awarded	2011 Credit Utilized¹	2009 & 2010 Credit Awarded	2009 & 2010 Credit Utilized¹
Pennsylvania General Energy Company, LLC	\$0	\$0	\$144,224	\$0
II-VI Incorporated	\$0	\$0	\$133,496	\$16,085
Bullseye Securities, Inc. (f/k/a BitArmor Systems, Inc.)	\$0	\$0	\$125,066	\$57,820
Melior Discovery, Inc.	\$0	\$0	\$124,820	\$124,820
P.H. Glatfelter Company	\$0	\$0	\$120,344	\$120,344
Syth, Inc.	\$0	\$0	\$114,808	\$0
Powercast, LLC	\$0	\$0	\$101,051	\$101,051
Innovative Solutions & Support, Inc.	\$0	\$0	\$100,541	\$0
Compunetix, Inc.	\$0	\$0	\$99,194	\$47,570
Accenture LLP	\$0	\$0	\$95,815	\$0
McKesson Automation, Inc.	\$0	\$0	\$94,527	\$59,724
Dragonfly Pictures, Inc.	\$0	\$0	\$83,759	\$0
Allegheny Ludlum Corporation	\$0	\$0	\$83,133	\$82,532
Tengion, Inc.	\$0	\$0	\$81,105	\$18,400
Mars Incorporated	\$0	\$0	\$77,512	\$68,811
Protez Pharmaceuticals, Inc.	\$0	\$0	\$76,744	\$207
Global Seating Systems, LLC	\$0	\$0	\$76,590	\$69,955
Synthes North America, Inc.	\$0	\$0	\$76,539	\$0
ABB, Inc.	\$0	\$0	\$75,615	\$75,615
Prism Pharmaceuticals, Inc.	\$0	\$0	\$72,619	\$131
Corry Rubber Corporation	\$0	\$0	\$69,479	\$59,373
Flexuspine, Inc.	\$0	\$0	\$68,775	\$2,495
Gemin X Pharmaceuticals US, Inc.	\$0	\$0	\$68,564	\$0
Sungard Higher Education, Inc.	\$0	\$0	\$64,454	\$64,454
Mine Safety Appliances Company	\$0	\$0	\$62,222	\$62,222
Strategic Polymer Sciences, Inc.	\$0	\$0	\$56,877	\$56,877
National Medical Services Biopharm, LLC	\$0	\$0	\$56,378	\$56,378
Locus Pharmaceuticals, Inc.	\$0	\$0	\$56,349	\$0
HindlePower, Inc.	\$0	\$0	\$54,631	\$54,631
Synthes USA HQ, Inc.	\$0	\$0	\$53,661	\$53,561
Protalex, Inc.	\$0	\$0	\$53,141	\$603
RSI Silicon Products, LLC	\$0	\$0	\$47,372	\$7,816
NuTec Tooling Systems, Inc.	\$0	\$0	\$47,225	\$39,340
TeleTracking Technologies, Inc.	\$0	\$0	\$47,083	\$47,083
Agrofresh, Inc.	\$0	\$0	\$46,961	\$46,961
Plantronics, Inc.	\$0	\$0	\$46,395	\$40,039
New Pig Corporation	\$0	\$0	\$43,981	\$43,981
NVIDIA Corporation	\$0	\$0	\$43,493	\$1,573
JLG Industries, Inc.	\$0	\$0	\$42,981	\$0
Integrated Management Solutions, Inc.	\$0	\$0	\$41,397	\$41,397

Taxpayer Name	2011 Credit Awarded	2011 Credit Utilized¹	2009 & 2010 Credit Awarded	2009 & 2010 Credit Utilized¹
Neuro Kinetics, Inc.	\$0	\$0	\$41,027	\$41,027
Thermal Therapeutic Systems, Inc.	\$0	\$0	\$40,613	\$40,476
International Business Machines Corporation	\$0	\$0	\$38,909	\$38,909
Pride Mobility Products Corporation	\$0	\$0	\$38,587	\$11,992
Listrak, Inc. (f/k/a Remark Internet, Inc.)	\$0	\$0	\$37,796	\$22,461
Greenleaf Corporation	\$0	\$0	\$37,207	\$0
FLSmith, Inc.	\$0	\$0	\$36,969	\$36,969
Air Products and Chemicals, Inc.	\$0	\$0	\$35,953	\$0
Harley Davidson Motor Company Operations, Inc.	\$0	\$0	\$34,383	\$34,383
The Clemens Family Corporation	\$0	\$0	\$34,067	\$34,067
Gentis, Inc.	\$0	\$0	\$33,312	\$33,286
Keystone Nano, Inc.	\$0	\$0	\$31,161	\$31,161
Sealstrip Corporation	\$0	\$0	\$29,599	\$29,599
Blade Diagnostics Corporation	\$0	\$0	\$28,821	\$28,821
Animas Corporation	\$0	\$0	\$28,118	\$2
Frewmill Die Crafts, Inc.	\$0	\$0	\$27,335	\$27,335
RedZone Robotics, Inc.	\$0	\$0	\$27,214	\$27,214
Crystalplex Corporation	\$0	\$0	\$27,196	\$27,196
Orthovita, Inc.	\$0	\$0	\$25,999	\$10,887
CA Research, Inc.	\$0	\$0	\$25,826	\$25,826
NKT, Co. (f/k/a Nielsen-Kellerman Co.)	\$0	\$0	\$25,070	\$25,070
Eyenvision, Inc.	\$0	\$0	\$24,837	\$0
Express Dynamics, LLC	\$0	\$0	\$23,772	\$23,772
Aerotech, Inc.	\$0	\$0	\$23,412	\$23,412
Teletronics Technology Corporation	\$0	\$0	\$22,319	\$10,347
Bioconnect Systems, Inc.	\$0	\$0	\$22,119	\$22,119
Verizon Corporate Resource Group, LLC	\$0	\$0	\$21,986	\$0
American Manufacturing & Engineering	\$0	\$0	\$21,645	\$21,645
Schell Games, LLC	\$0	\$0	\$21,219	\$3,656
Relax Software	\$0	\$0	\$20,901	\$20,901
Theraquest Biosciences, Inc.	\$0	\$0	\$20,558	\$20,558
Micromechatronics, Inc.	\$0	\$0	\$20,535	\$20,535
HomeNet, Inc.	\$0	\$0	\$20,404	\$20,404
Wuppagus Holdings, Ltd. (f/k/a Solid Cactus, Inc.)	\$0	\$0	\$19,776	\$19,776
ProSanos Corporation	\$0	\$0	\$19,632	\$19,632
Elan Drug Delivery, Inc.	\$0	\$0	\$19,544	\$19,544
Collages.net, Inc.	\$0	\$0	\$19,352	\$0
S. Vitale Pyrotechnic Industries, Inc.	\$0	\$0	\$19,105	\$19,105
Syandus, Inc.	\$0	\$0	\$18,587	\$18,587
Tim-Bar Corporation	\$0	\$0	\$18,260	\$18,260

Taxpayer Name	2011 Credit Awarded	2011 Credit Utilized¹	2009 & 2010 Credit Awarded	2009 & 2010 Credit Utilized¹
Gyroton Technology, Inc.	\$0	\$0	\$18,178	\$12,885
Graco Children's Products, Inc.	\$0	\$0	\$18,164	\$3,385
Neotropix, Inc.	\$0	\$0	\$18,164	\$0
First Insight, Inc.	\$0	\$0	\$17,721	\$17,721
Xylos Corporation	\$0	\$0	\$17,668	\$525
Adhesives Research, Inc.	\$0	\$0	\$17,643	\$1,741
Kuhn Tool & Die Co.	\$0	\$0	\$17,552	\$1,779
Ellwood Investment Corp.	\$0	\$0	\$17,397	\$17,397
Fairmount Foundry, Inc.	\$0	\$0	\$17,164	\$17,164
CertainTeed Corporation	\$0	\$0	\$16,970	\$16,970
RCD Technology, Inc.	\$0	\$0	\$16,887	\$16,887
NAC Carbon Products, Inc.	\$0	\$0	\$16,685	\$16,685
East Penn Manufacturing Company	\$0	\$0	\$16,488	\$16,488
Jordan Acquisition Group, LLC (dba American Auto Matrix)	\$0	\$0	\$16,455	\$16,455
Graymont (PA), Inc.	\$0	\$0	\$16,443	\$9,597
Giorgio Foods, Inc.	\$0	\$0	\$16,336	\$1,552
Onconova Therapeutics, Inc.	\$0	\$0	\$16,274	\$1,228
Can Corporation of America, Inc.	\$0	\$0	\$16,211	\$0
Discovery Laboratories, Inc.	\$0	\$0	\$15,709	\$15,709
WER Corporation	\$0	\$0	\$15,544	\$15,544
Jeannette Shade and Novelty Company (dba JSG Oceana)	\$0	\$0	\$15,249	\$159
Emerson Process Management Power & Water Solutions, Inc.	\$0	\$0	\$15,044	\$0
Schneider, Inc.	\$0	\$0	\$14,981	\$14,163
FedEx Ground Package System, Inc.	\$0	\$0	\$14,774	\$0
Azur Pharma, Inc.	\$0	\$0	\$14,639	\$0
Sim Ops Studios, Inc.	\$0	\$0	\$14,508	\$14,508
OfficeDigs, Inc.	\$0	\$0	\$13,918	\$13,918
Kenexa Corporation	\$0	\$0	\$13,581	\$13,581
Kaolin Mushroom Farms, Inc.	\$0	\$0	\$13,579	\$13,579
Pro-Soft Technologies, Inc.	\$0	\$0	\$13,338	\$13,338
LPS Mortgage Processing Solutions, Inc.	\$0	\$0	\$12,877	\$12,877
S&W Race Cars Components, Inc.	\$0	\$0	\$12,741	\$12,741
Osram Sylvania, Inc.	\$0	\$0	\$12,543	\$0
Urban Engineers, Inc. & Subsidiaries	\$0	\$0	\$12,457	\$12,457
Omega Design Corporation	\$0	\$0	\$12,414	\$12,414
Autodesk, Inc.	\$0	\$0	\$12,325	\$12,325
National Magnetics Group, Inc.	\$0	\$0	\$12,319	\$12,319
Pharmabridge, Inc.	\$0	\$0	\$12,141	\$12,141
Richter Precision, Inc.	\$0	\$0	\$12,076	\$12,076

<i>Taxpayer Name</i>	<i>2011 Credit Awarded</i>	<i>2011 Credit Utilized¹</i>	<i>2009 & 2010 Credit Awarded</i>	<i>2009 & 2010 Credit Utilized¹</i>
Bel Fuse, Inc. (f/k/a Bel Connector, Inc.)	\$0	\$0	\$11,985	\$3,754
Electron Energy Corporation	\$0	\$0	\$11,904	\$11,904
Beaumont Technologies, Inc.	\$0	\$0	\$11,857	\$11,857
C&J Industries, Inc.	\$0	\$0	\$11,794	\$11,794
Medical Products Laboratories, Inc.	\$0	\$0	\$11,788	\$10,895
Aethon, Inc.	\$0	\$0	\$11,779	\$11,779
Electronics for Imaging, Inc.	\$0	\$0	\$11,720	\$11,720
Combined Systems, Inc.	\$0	\$0	\$11,618	\$11,618
The Magnus Group, Inc. (dba Progressive Information Technologies)	\$0	\$0	\$11,140	\$7,500
C&T Machining, Inc.	\$0	\$0	\$10,919	\$7,472
Contec Systems Industrial Corp.	\$0	\$0	\$10,896	\$10,896
Verizon Corporate Services Group, Inc.	\$0	\$0	\$10,746	\$10,746
Enantigen Therapeutics, Inc.	\$0	\$0	\$10,532	\$2,057
Solo Laboratories, Inc.	\$0	\$0	\$10,412	\$10,031
Graphite Machining, Inc.	\$0	\$0	\$10,345	\$10,345
Qadalyt, LLC	\$0	\$0	\$10,298	\$0
Entech Engineering, Inc.	\$0	\$0	\$10,179	\$7,623
Woodings Industrial	\$0	\$0	\$9,982	\$9,982
Science Applications International Corp.	\$0	\$0	\$9,538	\$9,538
Penn Engineering and Manufacturing Corp.	\$0	\$0	\$9,422	\$5,602
LL Kurtz Manufacturing, Inc.	\$0	\$0	\$9,351	\$9,351
Advanced Cooling Technologies, Inc.	\$0	\$0	\$9,150	\$6,622
Bloom Engineering Company, Inc.	\$0	\$0	\$9,106	\$9,106
Robert Bosch Corporation	\$0	\$0	\$8,734	\$0
Ira G. Steffy & Son, Inc.	\$0	\$0	\$8,460	\$8,460
Ontelaunee Farms, Inc.	\$0	\$0	\$8,310	\$8,310
RE2, Inc.	\$0	\$0	\$8,197	\$2,781
Reading Alloys, Inc	\$0	\$0	\$7,893	\$7,527
Ecore International, Inc.	\$0	\$0	\$7,825	\$1,731
Hermance & Strouse, Inc.	\$0	\$0	\$7,712	\$73
Pittsburgh African Venture Partners, LLC	\$0	\$0	\$7,686	\$4,533
Applied Systems Associates, Inc.	\$0	\$0	\$7,362	\$0
Controlled Chemicals, Inc. (Samada Research)	\$0	\$0	\$7,292	\$7,292
M-Dot, Inc.	\$0	\$0	\$7,140	\$7,140
VideoMining Corporation	\$0	\$0	\$6,967	\$0
Therm-Omega-Tech, Inc.	\$0	\$0	\$6,955	\$6,955
Aberdeen Road Company	\$0	\$0	\$6,872	\$6,872
Pyrotek Incorporated	\$0	\$0	\$6,861	\$6,418
York Laboratories, LLC	\$0	\$0	\$6,844	\$0
Elsner Engineering Works, Inc.	\$0	\$0	\$6,791	\$6,678

Taxpayer Name	2011 Credit Awarded	2011 Credit Utilized¹	2009 & 2010 Credit Awarded	2009 & 2010 Credit Utilized¹
Clinical Financial Services, LLC	\$0	\$0	\$6,649	\$0
Artsana USA, Inc.	\$0	\$0	\$6,440	\$6,440
Boehringer Laboratories, Inc.	\$0	\$0	\$6,436	\$6,436
Cardone Industries, Inc.	\$0	\$0	\$6,398	\$6,398
Carnegie Learning, Inc.	\$0	\$0	\$6,367	\$0
R-V Industries, Inc.	\$0	\$0	\$6,338	\$6,338
ETA Industries, Inc.	\$0	\$0	\$6,247	\$3,733
Phonetics, Inc. (dba Sensaphone)	\$0	\$0	\$6,228	\$6,228
PB Heat, LLC	\$0	\$0	\$6,118	\$6,118
Saladax Biomedical, Inc.	\$0	\$0	\$6,111	\$6,111
McDaniel Advanced Ceramic	\$0	\$0	\$6,015	\$6,015
Hamill Manufacturing Company	\$0	\$0	\$6,012	\$5,361
Neutronics, Inc.	\$0	\$0	\$5,998	\$5,998
FMC Technologies Measurement Solutions, Inc.	\$0	\$0	\$5,996	\$5,996
SureLogic, Inc.	\$0	\$0	\$5,822	\$0
Diasome Pharmaceuticals, Inc.	\$0	\$0	\$5,777	\$123
Snap-tite, Inc.	\$0	\$0	\$5,754	\$2,116
O.F. Zurn Company	\$0	\$0	\$5,722	\$5,722
PoolPak Technologies Corporation	\$0	\$0	\$5,683	\$5,683
Seco/Warwick Corporation	\$0	\$0	\$5,553	\$93
JMG Services, Inc. (f/k/a Pittsburgh Materials Technology, Inc.)	\$0	\$0	\$5,456	\$5,456
J.R. Peters, Inc.	\$0	\$0	\$5,345	\$5,345
Vivisimo, Inc.	\$0	\$0	\$5,318	\$0
C.F. Martin Co., Inc.	\$0	\$0	\$5,269	\$5,269
Reinsel Kuntz Leshner, LLP	\$0	\$0	\$5,238	\$0
BioSpectra, Inc.	\$0	\$0	\$5,219	\$5,203
Chariot Solutions, LLC	\$0	\$0	\$4,984	\$0
Wolf Technologies, LLC	\$0	\$0	\$4,952	\$4,952
Biocoat, Inc.	\$0	\$0	\$4,836	\$4,836
Radius Corporation	\$0	\$0	\$4,830	\$179
Local Focal, Inc.	\$0	\$0	\$4,779	\$4,779
Precision Medical Products, Inc.	\$0	\$0	\$4,770	\$4,770
Mallet and Company, Inc.	\$0	\$0	\$4,743	\$4,743
Bolttech, Inc.	\$0	\$0	\$4,653	\$0
Oberg Industries, Inc.	\$0	\$0	\$4,624	\$4,624
A Cubed Corporation	\$0	\$0	\$4,509	\$4,509
Topflight Corporation	\$0	\$0	\$4,404	\$780
Enzo Life Sciences International, Inc.	\$0	\$0	\$4,340	\$0
World Wide Plastics, Inc.	\$0	\$0	\$4,242	\$4,242
GardenGenetics, LLC	\$0	\$0	\$4,191	\$4,191

Taxpayer Name	2011 Credit Awarded	2011 Credit Utilized¹	2009 & 2010 Credit Awarded	2009 & 2010 Credit Utilized¹
Yuasa Battery, Inc.	\$0	\$0	\$4,191	\$4,191
Bulk Chemicals, Inc.	\$0	\$0	\$4,157	\$4,157
Melior Pharmaceuticals I, Inc.	\$0	\$0	\$4,135	\$4,135
Thermal Transfer Corporation	\$0	\$0	\$4,051	\$4,051
Scientific Systems, Inc.	\$0	\$0	\$4,042	\$587
SPX Flow Technology USA, Inc. (f/k/a Flair Corporation)	\$0	\$0	\$3,978	\$3,978
EQT Gathering, Inc. (f/k/a Equitable Gathering, Inc.)	\$0	\$0	\$3,967	\$3,967
John Paul Mitchell Systems	\$0	\$0	\$3,920	\$3,920
Erdman Anthony Associates, Inc.	\$0	\$0	\$3,899	\$3,899
Interstate Chemical Company, Inc.	\$0	\$0	\$3,808	\$3,808
Virione, Inc.	\$0	\$0	\$3,787	\$0
West Penn Oil Company, Inc.	\$0	\$0	\$3,728	\$0
Precision Ctg Tech & Mnfg, Inc.	\$0	\$0	\$3,671	\$1,579
Herley Industries, Inc.	\$0	\$0	\$3,455	\$3,455
Robinson Fans, Inc.	\$0	\$0	\$3,453	\$3,453
Dynamet Incorporated	\$0	\$0	\$3,423	\$3,423
Boose Aluminum Foundry Co., Inc.	\$0	\$0	\$3,352	\$3,171
L T H, Inc,	\$0	\$0	\$3,246	\$0
Lincoln Contracting Equipment Co., Inc.	\$0	\$0	\$3,163	\$0
Russell Biotech, Inc.	\$0	\$0	\$3,104	\$3,104
LCM Technologies, Inc.	\$0	\$0	\$3,082	\$3,082
Johnstown Machining and Fabrication, Inc.	\$0	\$0	\$3,016	\$2
Altoona Beasley Manufacturing, Inc.	\$0	\$0	\$3,007	\$20
Sealed Air Corporation (US)	\$0	\$0	\$2,970	\$2,970
Drug Plastics & Glass Co. Inc.	\$0	\$0	\$2,939	\$2,939
Thomas Erie, Inc.	\$0	\$0	\$2,929	\$2,929
Spring City Electrical Mfg. Co.	\$0	\$0	\$2,917	\$2,917
Hamilton Precision Metals, Inc.	\$0	\$0	\$2,875	\$2
Cummins-Allison Corp.	\$0	\$0	\$2,843	\$2,843
Try Tek Machine Works Incorporated	\$0	\$0	\$2,814	\$283
Keymatrix, Inc.	\$0	\$0	\$2,771	\$0
AMETEK Pittman, Inc.	\$0	\$0	\$2,728	\$0
PHW, Inc.	\$0	\$0	\$2,646	\$2,646
Packaging Specialists, LLC	\$0	\$0	\$2,630	\$2,630
Tray-Pak Corporation	\$0	\$0	\$2,620	\$2,620
VPI Acquisition Corp.	\$0	\$0	\$2,616	\$0
Teikoku USA, Inc.	\$0	\$0	\$2,567	\$2,567
Benton Foundry, Inc.	\$0	\$0	\$2,562	\$2,562
Monsanto Company	\$0	\$0	\$2,555	\$2,555
ConAgra Foods Enterprise Services, Inc.	\$0	\$0	\$2,516	\$0

Taxpayer Name	2011 Credit Awarded	2011 Credit Utilized¹	2009 & 2010 Credit Awarded	2009 & 2010 Credit Utilized¹
The W.W. Henry Company LP	\$0	\$0	\$2,489	\$0
Orion Security LSP, LLC	\$0	\$0	\$2,411	\$2,411
Medici Group, Inc.	\$0	\$0	\$2,396	\$2,396
Sonitu Pharmaceuticals, LLC	\$0	\$0	\$2,382	\$2,382
Computer Sciences Corporation	\$0	\$0	\$2,364	\$0
Civil & Environmental Consultants	\$0	\$0	\$2,292	\$2,292
Georgeko Industries, Inc.	\$0	\$0	\$2,282	\$2,282
Data View, Inc.	\$0	\$0	\$2,165	\$0
InfraScan, Inc.	\$0	\$0	\$2,117	\$0
Supreme Mid-Atlantic Corp.	\$0	\$0	\$2,052	\$2,052
TVM Building Products, Inc.	\$0	\$0	\$1,962	\$0
K&H Technologies	\$0	\$0	\$1,936	\$1,936
Protective Industries, Inc.	\$0	\$0	\$1,933	\$1,933
TI Lehigh Valley Incorporated (f/k/a Ciclon Semiconductor Device Corporation)	\$0	\$0	\$1,856	\$0
Herr Foods, Inc.	\$0	\$0	\$1,842	\$1,842
Dart Container Corporation of PA	\$0	\$0	\$1,832	\$1,832
Brainbond, LLC	\$0	\$0	\$1,794	\$1,794
D&E Machining, Inc.	\$0	\$0	\$1,706	\$1,706
Implementation & Consulting Service	\$0	\$0	\$1,701	\$1,701
Vigon International, Inc.	\$0	\$0	\$1,687	\$1,687
American Precision Powder Coating, LLC	\$0	\$0	\$1,682	\$1,682
J.B. Kintner & Sons	\$0	\$0	\$1,661	\$1,661
Circadiance, LLC	\$0	\$0	\$1,622	\$0
Jennison Precision Machine, Inc.	\$0	\$0	\$1,598	\$1,598
Target Precision, LLC	\$0	\$0	\$1,585	\$1,585
NewAge Industries, Inc.	\$0	\$0	\$1,553	\$1,553
Amplifier Research Corp.	\$0	\$0	\$1,505	\$1,505
Technology, Patents, & Licensing, Inc.	\$0	\$0	\$1,501	\$1,501
Kop-Coat, Inc.	\$0	\$0	\$1,487	\$1,487
Surface Chemistry Discoveries, Inc.	\$0	\$0	\$1,480	\$0
Hazleton Casting Company	\$0	\$0	\$1,434	\$1,434
RJM Manufacturing, Inc.	\$0	\$0	\$1,421	\$4
PSG Controls, Inc.	\$0	\$0	\$1,386	\$1,386
Boose at Cornwall, Inc.	\$0	\$0	\$1,367	\$0
Lake Tool, Inc.	\$0	\$0	\$1,287	\$1,287
Pennlake Corporation (dba R. Conrader Company)	\$0	\$0	\$1,265	\$1,265
Straight Arrow Products, Inc.	\$0	\$0	\$1,261	\$1,261
NH Laboratories, Inc.	\$0	\$0	\$1,243	\$1,243
The Beistle Company	\$0	\$0	\$1,237	\$1,237
American Hydro Corporation	\$0	\$0	\$1,197	\$1,197

<i>Taxpayer Name</i>	<i>2011 Credit Awarded</i>	<i>2011 Credit Utilized¹</i>	<i>2009 & 2010 Credit Awarded</i>	<i>2009 & 2010 Credit Utilized¹</i>
BayOne Urethane Systems, LLC	\$0	\$0	\$1,174	\$622
Magnatech International, Inc.	\$0	\$0	\$1,162	\$0
The Drucker Company, Inc.	\$0	\$0	\$1,136	\$1,136
RJ Lee Group, Inc.	\$0	\$0	\$1,108	\$1,108
Nitor Technologies, Inc.	\$0	\$0	\$1,088	\$1,088
Fusion Coatings, Inc.	\$0	\$0	\$1,079	\$1,079
Essent Corporation	\$0	\$0	\$1,065	\$0
WSG Solutions, Inc.	\$0	\$0	\$1,065	\$1,065
Cancer Innovations, Inc.	\$0	\$0	\$1,058	\$1,058
Workhorse Rail, LLC	\$0	\$0	\$1,049	\$1,049
Keystone Abrasives Co.	\$0	\$0	\$1,027	\$1,027
Deborah A. Rinehart	\$0	\$0	\$1,011	\$0
Alertek, LLC	\$0	\$0	\$1,004	\$1,004
Caledonian Dye Works, Inc.	\$0	\$0	\$991	\$26
Dauphin Precision Tool, LLC	\$0	\$0	\$983	\$613
B&G Manufacturing Co., Inc.	\$0	\$0	\$983	\$983
M.H. Eby, Inc.	\$0	\$0	\$976	\$976
RVL Packaging, Inc.	\$0	\$0	\$834	\$0
Powell Steel Corporation	\$0	\$0	\$810	\$810
Giorgi Mushroom Co.	\$0	\$0	\$738	\$738
QBC Diagnostics, Inc.	\$0	\$0	\$726	\$726
Minus Nine Technologies, Inc.	\$0	\$0	\$662	\$0
Lozier Corporation	\$0	\$0	\$644	\$644
Comprehensive Safety Compliance, Inc.	\$0	\$0	\$588	\$588
Hauck Manufacturing Company, Inc.	\$0	\$0	\$581	\$581
Visual Composites, LLC	\$0	\$0	\$556	\$556
SMGT, Inc.	\$0	\$0	\$550	\$0
Rexmet Corporation	\$0	\$0	\$547	\$386
Bio Rad Laboratories, Inc.	\$0	\$0	\$541	\$541
Schust Development, Inc.	\$0	\$0	\$521	\$521
The Creative Touch, Inc.	\$0	\$0	\$493	\$0
By-Product Industries, Inc.	\$0	\$0	\$472	\$472
21st Century Software, Inc.	\$0	\$0	\$466	\$466
TIW Technology, Inc.	\$0	\$0	\$426	\$0
Whirley Industries, Inc.	\$0	\$0	\$401	\$401
Gaspari Farm Products, Inc.	\$0	\$0	\$399	\$0
Comfort Care & Resources, Inc.	\$0	\$0	\$348	\$348
DFT, Inc.	\$0	\$0	\$347	\$347
Kovatch Mobile Equipment	\$0	\$0	\$337	\$0
C.U.E., Inc.	\$0	\$0	\$307	\$307

<i>Taxpayer Name</i>	<i>2011 Credit Awarded</i>	<i>2011 Credit Utilized¹</i>	<i>2009 & 2010 Credit Awarded</i>	<i>2009 & 2010 Credit Utilized¹</i>
LWI & Associates, Inc.	\$0	\$0	\$288	\$0
Marvell Semiconductor, Inc.	\$0	\$0	\$277	\$277
PM Computing, Inc.	\$0	\$0	\$274	\$107
L.F. Lambert Spawn Company, Inc.	\$0	\$0	\$181	\$0
PSB Industries, Inc.	\$0	\$0	\$120	\$120
Kovatch Corp.	\$0	\$0	\$119	\$119
TekResults, Ltd.	\$0	\$0	\$109	\$109
ImageCube, LLC	\$0	\$0	\$98	\$98
TOTAL	\$55,000,000	\$0	\$38,000,000	\$28,897,613

Footnote:

¹ "Utilized" means that the tax credit has been applied in full or partial payment of a tax liability according to the records of the Department. If no tax liability exists for the tax and period where the credit has been applied or if previous tax credits exceed the tax liability, the utilized amount is shown as zero. Until a tax year has been closed, it is possible that the tax credits indicated as being utilized may still be transferred, sold or assigned at the option of the taxpayer. Pass through credits and unused credits that were sold or assigned are also included as utilized.