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# Summary of Tax Credit Reviews

2019 to 2023 Evaluation Period



## **Independent Fiscal Office**

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# Introduction

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Act 48 of 2017 requires the Independent Fiscal Office (IFO) to review the various Pennsylvania state tax credits every five years.<sup>1</sup> The IFO must submit all tax credit reviews to the Performance-Based Budget (PBB) Board for approval and make the reports available to the public on the IFO website.

The act specifies that tax credit reviews contain the following content:

- The purpose for which the tax credit was created.
- Whether the tax credit is accomplishing its legislative intent.
- Whether the tax credit could be more efficiently implemented through other methods.
- Any alternative methods which would make the tax credit more efficient.
- The costs to provide the tax credit, including the administrative costs to the Commonwealth and local government entities within this Commonwealth.

The act also specifies that the IFO shall develop a tax credit plan for all tax credits subject to review. The plan includes performance measures and economic outcomes or performance benchmarks against similar state programs or similar programs of other states or jurisdictions.

In January 2023, the PBB Board approved the last of the tax credit reviews required during the initial five-year evaluation period. This report summarizes highlights from all 20 of the initial reports. Please note:

- The information contained in each summary was accurate as of the date the original report was issued. No effort has been made to update previously published information. For convenience, the year the report was issued is reflected at the top of each page.
- **Changes Enacted** are limited to those enacted since the original review was issued.

A summary of the **Economic Impact** is included if economic development was a primary goal of the program, and the computation was feasible given available data. If shown, all values are net of a balanced budget adjustment (i.e., net of the economic impacts that could be derived from the alternative use of state spending), as the estimates assume that states must reduce spending or raise taxes to fund tax credits. The **Net Tax Revenue Impact** reflects the net increase in tax collections resulting from the tax credit as compared to the alternative use of state spending. **Net ROI** (return on investment) is the net return for every dollar of tax credit spent and is equal to Net Tax Revenue Impact divided by the dollar value of **Tax Credits Awarded**. Net ROI is only one metric used to evaluate programs and tax credits are not designed to pay for themselves (i.e., gross ROI >\$1). Any full-time equivalent positions attributable to the tax credit may or may not be permanent.

The table on the final page of this report includes summary statistics for all 20 tax credits included in the initial evaluation cycle. For more detailed information on any tax credit, please refer to the full reports published on the IFO website.

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<sup>1</sup> Act 48 of 2017 is also known as the Performance-Based Budgeting and Tax Credit Efficiency Act.

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# Film Production Report Cycle 2019

## Purpose

To incentivize film and television production to increase state economic output and overall job creation.

## Findings

- Unless Pennsylvania increases the tax credit by a substantial amount, it will be difficult to entice production firms to relocate from states where they have already invested significant resources and established a long-term presence.
- Although the tax credit incentivizes productions, it is difficult to see the impact in available government data. The current tax credit retains jobs, but it is likely insufficient to expand the industry due to competition from other states and the transient nature of annual production activity.
- Nearly all (95%) tax credits are transferred or sold because recipients lack sufficient tax liability to utilize the credits. Data show that sellers receive an average of 93 to 94 cents on the dollar (reflects 6% to 7% leakage).

## State Comparison

- Three states dominate film and television productions: California, Georgia and New York. As of 2019, those states spend between \$330 million (CA) to \$533 million (GA) on film tax credits.
- Thirty-two states offer some form of tax credit, rebate or grant to encourage film or television production activity in the state.
- The prevalence of the tax credit has declined over time as a number of states eliminated or allowed their tax credits to expire.

## Economic Impact

- Tax Credits Awarded **\$65.0 million**
- Net Tax Revenue Impact **+\$8.5 million**
- Net ROI **+13.1 cents per dollar**

- Jobs Created **1,140 full-time equivalents (FTEs)**
- Average Wage for Retained Jobs **\$52,000**

## Recommendations

- Incentivize the use of resident labor for mid-tier productions.
- Consider separate credit pools for film, television and small independent productions.
- Consider a temporary higher credit for television productions that relocate to Pennsylvania.
- Track outcomes for productions that were approved for tax credits but did not receive an award.
- Make the credit refundable as well as transferable.

## Other Highlights

- For fiscal year (FY) 2017-18 and FY 2018-19, television productions comprised roughly 55% of tax credits authorized, while feature films comprised nearly all of the residual.
- Roughly 40% of qualified tax credit spending flows out-of-state (e.g., actor salaries).
- Targeted productions are highly mobile, and the tax credit has a significant impact on location decisions.

## Conclusion

The results of the review are unclear; the credit is large enough to attract significant economic activity and productions, but too small to attract large feature films and longer-term investments.

## Changes Enacted

- Increased the program cap from \$65 million to \$70 million. (Act 13 of 2019)
- Permitted the award of credits to multi-film projects, if produced by the same taxpayer over a period of one to four years. (Act 25 of 2021)
- Increased the program cap to \$100 million. (Act 53 of 2022)

# Historic Preservation Report Cycle 2019

## Purpose

To preserve culture and history that is unique to local communities or the state, and if applicable, the long-term revitalization of historic communities.

## Findings

- The tax credit is insufficient to motivate large projects and likely incentivizes small projects only. Historically, the credit offsets roughly 1% of total qualified rehabilitation expenses (QREs). Stakeholders noted that at least a 5% offset is needed to incentivize additional projects.
- Credit allocations are subject to too many constraints: an aggregate dollar cap (\$3 million), a per project dollar cap (\$500,000) and regional considerations. Due to these constraints and the volume of applications, the Department of Community and Economic Development (DCED) does not award more than \$250,000 to any single project. This makes the credit ineffective for mid-size and large projects.
- Stakeholders noted that the application process is generally not burdensome. However, the awards process would benefit from quicker turnaround, and more transparency and predictability.

## State Comparison

- Thirty-two states have a historic preservation tax credit. Pennsylvania is on the low end at \$3 million per annum. Eleven states have an annual dollar cap between \$12 million and \$60 million. Thirteen states do not have an annual dollar cap.
- Most states also have a per project dollar cap, although many states with high dollar caps or no cap have no per project limit.
- Nearly all states offer a base credit rate between 20% and 25% of QRE.

## Benefits

Projects motivated by the credit provide many positive spillover effects that are difficult to quantify: (1) improved property values and the “halo effect”, (2) development

waves and clustering, (3) more affordable rental units, (4) environmental benefits and (5) community and/or social benefits.

## Recommendations

- If the tax credit is extended, increase the aggregate dollar and per project caps.
- Change the credit allocation process from a lottery system to a scoring system to make the awards process more transparent. It will also allow DCED to more efficiently target state resources to maximize desired outcomes.
- Implement an application fee to offset program costs and make credit allocations at the same time every year.

## Other Highlights

- Data show that 15 to 21 projects received a credit allocation, and allocations typically comprised 50% to 75% of the requested amount, or roughly 1% of estimated project costs.
- The credit is oversubscribed. Data show that additional projects sought credit allocations, but available funds had been exhausted before the applications could be approved.
- Unless the credit is extended, tax credits may not be awarded after June 30, 2020.

## Conclusion

The review finds that it is unclear whether the credit meets its intended purpose because the credit is too small to incentivize large projects. Research shows potential for significant returns if the tax credit is targeted more efficiently to projects that truly require state funding to be viable.

## Changes Enacted

The program was extended, and the cap was lifted from \$3 million to \$5 million annually. An application processing fee of \$2,000 was created to offset administrative costs. Application and award deadlines were established. (Act 13 of 2019)

## Purpose

To incentivize economic development through the expansion of existing Pennsylvania firms and the attraction of new economic development opportunities to the state.

## Major Findings

- The current tax credit level and duration are insufficient to incentivize job creation. A \$1,000 tax credit represents no more than 3.4% of the cost of adding an additional full-time employee. At this rate, an employer is unlikely to create new jobs unless they know there is sufficient demand for the firm's services to support the expenditure, and therefore, would have likely created the job anyway.
- Firms do not apply for the higher credit amounts available for hiring veterans or previously unemployed individuals (\$2,500) because they don't want to lose the credit if they can't find qualified unemployed individuals or veterans to fill the position(s).
- The portion of the credit allocation reserved for small businesses may be inefficient as the credit may not be sold or refunded and these firms often lack sufficient tax liability to utilize the credit.
- Research finds that roughly 95% of the jobs created under the program would be created in absence of the credit. Using that parameter, the analysis finds that the jobs tax credit has a negative net economic impact.

## State Comparison

- Twenty-five states offer some version of a broad-based program to incentivize job creation.
- Most states provide a non-refundable credit offered annually over a period of years and equal to (1) a specified amount per job or (2) a share of payroll associated with newly created jobs.

## Economic Impact

- Tax Credits Awarded **\$10.1 million**
- Net Tax Revenue Impact **-\$67,400**
- Net ROI **<0 cents per dollar**
- Jobs Leveraged **505**

## Recommendations

- Require a specified amount of capital investment to qualify for the tax credit.
- Allow recipients the option to convert the higher credit amount for veterans or previously unemployed individuals (\$2,500) to a standard credit (\$1,000) if the company is unable to fill a position with a qualified veteran or previously unemployed applicant.
- Consider significant program revisions, reprogram the tax credit funding to benefit another more efficient economic development program or convert to a job creation grant program.

## Other Highlights

- Roughly three-quarters of credits are awarded by the Governor's Action Team.
- Over the five years reviewed for the report, four counties (Allegheny, Montgomery, Philadelphia and York) received more than 40% of all credit awards.
- Recipients refer to the tax credit as an "accounting function" and not a basis for making decisions regarding business operation or relocation.

## Conclusion

The review finds that it is unlikely that the current program has achieved its intended purpose.

## Changes Enacted

The tax credit was repealed. (Act 13 of 2019)

## Purpose

To increase entrepreneurial activity with a goal of generating more output and employment in targeted, high-tech sectors in geographic zones across the state.

## Findings

- Act 84 of 2016 reduced the annual tax credit cap from \$25 million to \$15 million and the program has been oversubscribed every year since the change.
- Most program participants lack sufficient tax liability to utilize the credits. Approximately 80% to 90% of awarded credits are sold or transferred for an average of 92 cents per dollar awarded. An average commission of 5% might also be paid to a sales broker or facilitator.
- Research finds that the clustering of high-tech research and development firms around labs and institutions of higher learning facilitates the exchange of ideas and increases innovation.
- The local Keystone Innovation Zone (KIZ) coordinator plays a key role in the administration of the zone but receives no state remuneration for their efforts.

## State Comparison

- Maryland's Regional Institution Strategic Enterprise (RISE) Zone Tax Credit is the only program comparable to the KIZ Tax Credit.
- Other states have various programs with similar goals and objectives, but the parameters vary considerably, precluding a comparison with the Pennsylvania program.

## Economic Impact

- Tax Credits Awarded **\$15.0 million**
- Net Tax Revenue Impact **+\$4.0 million**
- Net ROI **+27.0 cents per dollar**
- Jobs Created **542 FTEs**

Note that the data upon which the economic impact was based is limited and speculative.

## Recommendations

- Make the tax credit refundable for 95 cents per credit dollar to eliminate tax credit brokers and facilitators.
- Remunerate KIZ coordinators with state funds.
- DCED should collaborate with the Department of Labor and Industry to track firms after they age out of the program.
- Revisit the statutory program deadlines to facilitate the inclusion of supporting documents with the tax credit application and to allow for a more thorough evaluation of applicants.
- Expand and verify the number of program metrics reported by KIZ firms.

## Other Highlights

- In recent years, the credit has been oversubscribed by roughly \$4 million annually.
- For FY 2018-19, 251 firms were awarded an average tax credit of \$58,725. The maximum award of \$84,182 (prorated from \$100,000), was granted to 112 of those firms.
- The KIZ Tax Credit likely overlaps with other state programs that support entrepreneurial activity in technology intensive sectors (e.g., the Ben Franklin Technology Partners and the Research and Development Tax Credit).

## Conclusion

The review finds that it is plausible that the KIZ Tax Credit has achieved some portion of its defined purpose. The program has significant potential but requires much stronger data collection and verification efforts to facilitate a more detailed analysis that will allow researchers to make more definitive statements regarding outcomes.

## Changes Enacted

None.

# Mobile Broadband Investment Report Cycle 2020

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## Purpose

To expand the availability and enhance the quality of broadband internet access across Pennsylvania.

## Findings

- Broadband projects in unserved/underserved areas tend to be higher cost and offer lower return on the capital investment. Therefore, the lack of requirements on the placement and quality of the new infrastructure eligible for the tax credit likely results in the placement of equipment in areas that already have one or more high-speed broadband options.
- The report projects that 90% of the mobile-telecom broadband investment (MTBI) would have occurred in the absence of the credit. The IFO could not locate data or research to support or refute that an MTBI credit equal to only 5% of the equipment purchased (an estimated 3% to 4% of the total project costs) has a significant impact on new investment in Pennsylvania broadband infrastructure.
- Only a small number of taxpayers currently apply for the MTBI Tax Credit, and it is unclear why eligible applicants are limited to wireless broadband providers (excludes fixed-line providers).

## State Comparison

- Twenty-four states (includes Pennsylvania) offer one or more incentives to encourage investment in broadband infrastructure.
- Many states limit funding to, or provide a greater incentive for, equipment that (1) is deployed in unserved/underserved areas and (2) meets minimum speed requirements.

## Economic Impact

- Tax Credits Available **\$5.0 million**
- Net Tax Revenue Impact **+\$0.4 million**
- Net ROI **+9.0 cents per dollar**
- Jobs Created **39 FTEs**

## Recommendations

- Convert the existing tax credit to a competitive grant program that targets unserved/underserved areas.
- If the current tax credit program is retained, amend the program to focus on unserved/underserved areas and incorporate minimum speed requirements.
- Subject tax credit recipients to reporting requirements.

## Other Highlights

- Over the five-year period reviewed for the report, \$12.2 million in tax credits were awarded to three firms.
- The Pennsylvania tax credit differs from incentives reviewed in most studies identified by the IFO because the Pennsylvania credit has no location or minimum speed requirements.

## Conclusion

Based on existing research, conversations with stakeholders and reasonable assumptions, this review finds it is unlikely that the current MTBI Tax Credit has achieved its intended purpose.

## Changes Enacted

The tax credit was repealed and replaced with a competitive grant program. (Act 132 of 2020)

# Organ and Bone Marrow Donation Report Cycle 2020

## Purpose

Increase the number of patients cured through organ and bone marrow donation by easing the financial barriers to living donation.

## Findings

- No firm has utilized the tax credit since its most recent enactment in 2014. Prior to that date, credits claimed by three firms totaled less than \$4,000.
- The availability of the tax credit is not well-known. None of the stakeholders contacted by the IFO were aware of the credit. This likely contributes to the credit's underutilization.
- The tax credit provides for leaves of absence up to five days, but most living donation procedures require a two- to eight-week absence from work.
- Although lost wages are the most significant financial obstacle to organ donation, other costs (e.g., transportation and hotel stays) can contribute to the burden as well. These costs vary considerably depending on how far a donor lives from the transplant hospital and how long a donor is required to stay near the hospital for follow-up care.

## State Comparison

- Twenty other states offer a tax incentive to mitigate the financial burden of living organ or bone marrow donation. Some incentives are more generous than the Pennsylvania tax credit, but all appear to be similarly underutilized.
- Only Pennsylvania has a living donor tax incentive that is limited to employers.

## Benefits

None as the credit is not currently utilized.

## Recommendations

- Increase the maximum absence period covered by the tax credit.
- Provide direct financial support to the living donor.
- Increase outreach and education related to the tax credit.

## Other Highlights

- Nationally, there were 6,831 living organ donors in 2018 (excludes bone marrow donations). Shared to Pennsylvania based on population, it is estimated that employers of as many as 250 living organ donors and an unknown number of bone marrow donors may have been eligible for the tax credit.
- Tax incentives available to support living donors do not appear to be widely utilized and the state costs associated with the programs are generally reported to be less than \$50,000 annually.
- Separate from state tax incentive programs, there are also various non-profit organizations that provide expense and lost wage reimbursement for certain donors.

## Conclusion

Due to a lack of credit utilization, the review finds that the current program has not achieved its intended purpose.

## Changes Enacted

None.

# Research and Development Report Cycle 2020

## Purpose

Expand economic activity and employment in research and development (R&D) intensive sectors and increase entrepreneurial activity among small, start-up firms that bring new products or services to market.

## Findings

- The tax credit flows to subsectors that are R&D intensive (e.g., manufacturers, internet and data processing firms and certain professional service firms).
- Many studies have found that \$1.00 of tax credit could incentivize between \$1.00 to \$1.50 of private R&D spending.
- For eligible firms, the tax credit can be an important incentive to offset a high statutory corporate net income tax rate. Many firms that claim the tax credit are large multistate corporations that can shift R&D spending between states. For many firms that regularly claim the credit, the data show that it significantly reduces their tax liability.

## State Comparison

- Thirty-two states offer a similar tax credit, but three states dominate awards: California (\$1.8 billion), Texas (\$660 million) and Massachusetts (\$242 million).
- Nine states award annual tax credits between \$40 million and \$100 million, while the remainder award various amounts under \$40 million.

## Economic Impact

- Tax Credits Awarded **\$55.0 million**
- Net Tax Revenue Impact **+\$6.1 million**
- Net ROI **+12.0 cents per dollar**
- Jobs Created **915 FTEs**

## Recommendations

- Adjust the eligible qualified research expense (QRE) computation to (1) limit expenses that can qualify as QRE and (2) exclude contract labor.

- Impose a per firm dollar limit to reduce the impact of large, one-time awards.
- Make the tax credit refundable for 95 cents per credit dollar.
- Modify the statutory program deadlines. A review period greater than 90 days would provide the administering agencies more time to review applications and supporting documentation.

## Other Highlights

- Credits awarded for the years reviewed were equal to roughly 1.5% of the current year QRE.
- Data show that 20% to 25% of tax credits are sold for 93 to 94 cents on the dollar. Brokers also receive a fee for their services that may range from 4% to 6% of the credit. The discount and fee represent material leakage that does not incentivize R&D spending.
- Industry data suggest Pennsylvania remains relatively R&D intensive, but less dramatically relative to other states over the past decade. However, these results do not demonstrate that the tax credit is ineffective. It is possible that spending and employment would have contracted in the absence of the credit.

## Conclusion

The review finds that the tax credit has partially achieved program goals, but it is unclear whether that has translated to the purpose and intent of the tax credit. Employment and spending data suggest that Pennsylvania has lost ground compared to national trends. However, the tax credit can be an effective mechanism to reduce tax liability for firms in targeted economic subsectors.

## Changes Enacted

- The credit approval deadline changed from December 15 of the application year to May 1 of the next year. (Act 25 of 2021)
- The annual program cap increased from \$55 million to \$60 million. The small business allocation was increased from \$11 million to \$12 million. (Act 53 of 2022)

# Entertainment Economic Enhancement Program Report Cycle 2021

## Purpose

Expand economic activity in the live entertainment and related sectors and bolster the purchase of local goods and services.

## Findings

- There was limited program history available for the tax credit review (two years and 15 recipients) and rehearsal/tour schedules for FY 2019-20 were significantly impacted by mitigation efforts related to the COVID-19 pandemic.
- All tax credit recipients received the maximum credit allowed for a single tour, yielding an average effective tax credit of roughly 10%.
- The tax credit provides a substantial benefit to the only Pennsylvania qualified rehearsal facility. The availability of this facility limits the number of concerts/tours that can take advantage of the tax credit program.
- Tours and rehearsals are highly mobile, and it is likely that the tax credit has a material impact on location decisions.
- For less established performers, the tax credit may provide a greater incentive by making a tour more financially viable.

## State Comparison

- Three other states (Georgia, Louisiana and New York) offer a tax credit for live musical performances.
- Tax credit rates vary by state (7% to 40%), but Pennsylvania's tiered program offers the most generous credit percentages.
- Annual program caps vary, with the Pennsylvania tax credit ranking third highest.

## Economic Impact

- Tax Credits Awarded **\$8.0 million**
- State Tax Revenue Impact **+\$1.2 to \$2.8 million**

- Net ROI **+15.0 to +35.0 cents per dollar**
- Jobs Created **53 to 203 FTEs**

Note that this economic impact should be viewed as tentative due to the limited program history and lack of applicable research from other states or academics.

## Recommendations

- Eliminate the requirement that a tour must rehearse at a qualified rehearsal studio and allow the rehearsal to occur at any Pennsylvania rehearsal studio.
- Evaluate the interaction between (1) the maximum allowable tax credit for a single tour and (2) the tax credit rates for effectiveness.
- Make the tax credit refundable. The fees and discounts charged by third parties represent leakage and do not contribute to the economic output of the industry.

## Other Highlights

- Nearly all tax credits are sold for 84 cents on the dollar after the deduction of a 10% facilitator fee and a 6% discount to the purchaser.
- Data show that qualified in-state expenditures typically comprise 96% of total expenses for concert rehearsals and tours.

## Conclusion

The review found that the tax credit does help to expand the economic activity in the live entertainment and related sectors.

## Changes Enacted

- Allows unallocated credits to be carried forward to the next program year. Expands the parameters of eligible concert tour equipment, tour expenses, and qualified taxpayers. Temporarily expands eligible venues to include rehearsal facilities used for streaming performances from July 1, 2021, to July 30, 2023. (Act 25 of 2021)
- Increased the program cap from \$8 million to \$24 million. (Act 53 of 2022)



# Keystone Special Development Zone Program Report Cycle 2021

## Purpose

Encourage private investment in the remediation and redevelopment of former industrial and commercial sites.

## Findings

- Only two Special Industrial Area (SIA) sites have been designated as Keystone Special Development Zones (KSDZs).
- Only two of the six firms located within the KSDZs have applied for tax credits. It is unclear why the remaining four firms have not applied.
- To be self-financed, 39% of the tax credits must go to firms where the credit is the decisive factor that tips the decision to locate within Pennsylvania. Based on insufficient data points, the analysis is unable to determine if this threshold is met.
- A firm that closes a non-KSDZ Pennsylvania facility (laying off current workers) and opens at a new KSDZ site hiring new employees will be eligible for tax credits based on the newly hired staff.

## State Comparison

- Many states offer programs targeted at brownfield remediation and most focus on one or more of the following categories: (1) reducing lender risk by offering loan guarantees or environmental insurance subsidies, (2) reducing the borrower's cost of financing via subsidized interest, (3) releasing the developer/owner from liability for approved remediation and (4) offering tax abatements and credits to reduce the overall cost of redevelopment.
- Eleven states offer tax credits for this purpose. Some of these states (e.g., Colorado and Mississippi) provide a credit as a share of remediation costs. Other states (e.g., Iowa and Kentucky) provide credit as a portion of qualified investment or expenditures at the site. Delaware provides a credit of \$650 to \$900 for each employee hired and another \$650 to \$900 for each \$100,000 invested at the site. New York provides multiple credits that are available to offset redevelopment costs, property taxes and environmental insurance premiums.

## Economic Impact

- Tax Credits Awarded **\$4.3 million**
- Net Tax Revenue Impact **+\$4.1 million**
- Net ROI **+96.0 cents per dollar**
- Jobs Created **1,355 FTEs**

Note that the impact is computed on the "breakeven" point, which assumes that 39% of the tax credits go to firms where the credit is the deciding factor in the location decision. It is unclear if that threshold is met.

## Recommendations

- Subject the tax credit to annual program and project caps to limit potential tax revenue impact.
- Modify the program to increase participation (e.g., provide more funds upfront for a shorter timeframe).
- Reevaluate application due dates to allow more time for end of year payroll reconciliation.
- Require applicants to demonstrate that jobs were created within the zone and not transferred from other in-state locations.

## Other Highlights

- Due to the increased risk inherent in brownfield redevelopment projects, investors often require a 10% to 15% higher rate of return to participate.
- Unlike most other Pennsylvania tax credits, there is no annual program cap for the KSDZ Tax Credit program.
- Additional firms have expressed interest in moving to a KSDZ site, but have yet to make a commitment. As a result, the amount of tax credits awarded could increase in future years.

## Conclusion

Additional data are required to determine if the current program has achieved its intended purpose.

## Changes Enacted

None.

# Neighborhood Assistance Program Report Cycle 2021

## Purpose

Enhance the safety and quality of life for residents of distressed communities through private investments in community development, educational assistance, job training and other projects.

## Findings

- Although DCED collects a significant amount of project performance data, it is difficult to aggregate and measure outcomes due to the wide variety of projects supported by the tax credit and the diverse metrics used by those projects.
- Multi-year awards for the Neighborhood Partnership Program component comprise the largest share of commitments (roughly 40% of the total). Some stakeholders indicate a preference for multi-year programs because the extended projects cultivate donor/charity relationships and facilitate better reporting of outcomes.
- Stakeholders report that the timing of the tax credit has become problematic in recent years. There is no advance announcement of when the application period will open, and approval decisions are often not transmitted until December. For tax planning purposes, firms generally want to make donation decisions by calendar year end.

## State Comparison

- Eighteen states offer similar tax credit programs and most employ a flat credit rate of 50%.
- Fourteen states cap tax credits and Pennsylvania has the highest annual cap at \$36 million. Five states have no cap.
- Most states define qualified nonprofits based on the primary service provided, while other states require that a certain portion of the nonprofit organization's budget be spent on a specific service area.

## Economic Impact

- Tax Credits Awarded **\$36.0 million**
- Net Tax Revenue Impact **+\$1.7 million**

- Net ROI **+5.0 cents per dollar**
- Jobs Created **320 FTEs**
- Leveraged Private Contributions **\$49.4 million**

In addition to economic development, private investment projects that serve distressed neighborhoods and communities provide social, environmental and aesthetic benefits for residents. These projects can improve the quality of life in neighborhoods that would not otherwise benefit from such an investment.

## Recommendations

- Standardize the application period and announce commitment decisions earlier in the calendar year.
- Create an approved project database to facilitate the ability of potential donors to find projects that align with their organizational priorities/mission.
- Provide educational materials for one-year project applicants and increase reporting requirements.

## Other Highlights

- For FY 2018-19, corporations claimed the largest share of tax credit awards (47.9%), with an average award of \$49,900. Banks were the second largest beneficiary (36.0%), with an average award of \$39,100.
- A significant amount of performance data is collected related to the credit, but it is difficult to compile due to the nature of diverse projects/metrics.
- Studies from other states note significant social impacts (i.e., positive externalities or spillovers) that are not accurately captured by economic models.

## Conclusion

The review finds that it is likely that the tax credit incentivizes private investment in projects that serve distressed neighborhoods and communities.

## Changes Enacted

None.

# Resource Enhancement and Protection Report Cycle 2021

## Purpose

Improve water quality by reducing nitrogen, phosphorus and sediment pollution through best management practices (BMPs) on agricultural operations.

## Findings

- For 2019, the average project totaled \$60,400 (includes eligible and non-eligible expenses). Roughly 42% of the cost was reimbursed by the tax credit, with the remainder funded via grants and private investment.
- Most tax credits are issued to individuals and pass-throughs and are utilized against personal income tax liabilities, implying the program benefits small businesses.
- Roughly 55% of tax credits are sold for an average of 85 cents per dollar of credit issued. (Farmers lack necessary tax liability.) The remaining 15 cents is retained by the purchaser and third-party facilitator.
- Available research generally concludes that incentives combined with regulatory compliance efforts are the most effective ways to increase the use of agricultural BMPs and reduce pollution in waterways.

## State Comparison

- Pennsylvania and Virginia are the only states in the Chesapeake Bay watershed that utilize tax credits to incentivize the implementation of BMPs.
- Other states rely on grants, loans, technical assistance programs or the creation and enforcement of land management regulations.

## Benefits

It is difficult to quantify the pollution reduction attributable to the tax credit for three reasons: (1) factors such as soil, geographic location and proximity to a body of water may improve or reduce the effectiveness of BMPs installed and maintained on the land, (2) there is no cost-effective way to measure pollution from nonpoint sources (e.g., agricultural operations) and (3) the impact of the tax credit award on farmer behavior is not easily

separated from a grant that may be awarded for the same project.

## Recommendations

- The State Conservation Commission should collaborate with the Department of Environmental Protection (DEP) to estimate the reduction of nitrogen, phosphorus and sediment resulting from tax credits issued to qualified BMP projects.
- Review the current policy of approving tax credit applications for projects that have been completed. Credits awarded after the BMP is in place subsidizes existing activity and does not incentivize new pollution reduction practices.
- If the current tax credit program is retained, make the credit fully or partially refundable.

## Other Highlights

- For the most recent year reviewed, the average tax credit issued was \$25,500.
- Pennsylvania is part of the Chesapeake Bay Watershed Agreement, along with six other states and the District of Columbia. This agreement assigns pollution reduction goals for member jurisdictions that must be completed by 2025. In terms of reaching these goals, Pennsylvania is the furthest behind.
- The tax credit is not oversubscribed. All projects that were issued tax credits received the full amount of eligible credit, and total credits issued are less than the current program cap.

## Conclusion

Although the IFO was unable to determine specific pollution reductions attributable to the tax credit, based on existing research, conversations with stakeholders and reasonable assumptions, this review finds that the credit does reduce agricultural pollution by making BMPs more affordable.

## Changes Enacted

None.

# Video Game Production Report Cycle 2021

## Purpose

Generate economic activity in video game production and related sectors and enhance the long-term economic impact of that activity by incentivizing the consumption of Pennsylvania goods and services.

## Findings

- More than one-half of the tax credit allotment goes to established Pennsylvania firms. For this reason, it's unlikely that the credit has a significant impact on location decisions although it may retain established firms.
- For small firms, the credit may provide crucial financial support that facilitates the movement of projects from the design to production phase and enhances the long-term viability of those firms.
- Based on employment data for the Software Publishers subsector, it does not appear that the tax credit has had a significant impact on Pennsylvania employment.
- This tax credit generally overlaps with the Research and Development Tax Credit.

## State Comparison

- Nineteen states offer one or more incentives to encourage video game production. Twelve states offer tax credits, and the remaining states offer grants or rebates.
- Pennsylvania is one of only a few states that offers an incentive that is separate from its program for film production.
- Annual program caps vary by state and Pennsylvania provides one of the lowest amounts.

## Economic Impact

Based on discussions with stakeholders, the analysis assumes that the tax credit incentivizes between 25% and 50% of eligible spending.

- Tax Credits Awarded **\$1.0 million**
- Net Tax Revenue Impact **+\$0.1 to \$0.2 million**
- Net ROI **+8.0 to +16.0 cents per dollar**
- Jobs Created **11 to 25 FTEs**

## Recommendations

- Convert the tax credit into a competitive grant or rebate program and award projects based on projected economic impact. Incentivize the use of resident labor for mid-tier productions.
- Consider limiting the tax credit (or grant) to young firms that may not be viable without the initial, temporary public support.
- Make the tax credit refundable for 95 cents per credit dollar. The fees and discounts charged by third parties do not contribute to the economic output of the industry.

## Other Highlights

- The program is relatively new and only three years of historical data were available for analysis.
- For FY 2017-18 through FY 2019-20, DCED authorized credits up to the maximum statutory cap. For FY 2019-20, the credit was oversubscribed by a small amount with potential to be significantly oversubscribed.
- Data show that qualified in-state expenditures typically comprise 94% of total video game expenditures.
- The average qualifying project extended 2.2 years and no project extended beyond four years.

## Conclusion

The analysis defers comment regarding whether the tax credit has successfully achieved its assumed goals and purpose. Additional data are needed to make that determination.

## Changes Enacted

None.

## Purpose

Generate economic activity and create jobs related to malt and brewed beverage manufacturing.

## Findings

- For most years, roughly one half of awarded tax credits flowed to large brewers that request the annual maximum of \$200,000. Those brewers are generally able to use the entire tax credit within one or two years.
- Most very small brewers that receive tax credits are unable to use them before they expire at the end of four years due to insufficient tax liability.
- Due to insufficient malt beverage tax liability and the accumulation of unused credits, the analysis estimates that nearly one half of recently awarded credits will not be utilized prior to expiration.

## State Comparison

- Twelve states offer a tax incentive to encourage brewery start-ups and production. Six offer tax credits, while five offer a tax reduction/exemption, and one offers a tax rebate.
- Pennsylvania is the only state that offers an incentive based on brewing equipment and machinery purchases. Brewer eligibility varies by state but for the majority of states, it is generally based on annual production.

## Economic Impact

- For most years, 25 to 30 brewers receive roughly \$2 million in tax credits.
- The review did not compute an economic impact for this tax credit because, in its current form, it is likely that the great majority of awarded tax credits do not incentivize new qualified investment, expansions or location decisions.

## Recommendations

- Target the credit to the early years of a brewer's operation.
- Limit the tax credit to small and very small brewers based on annual production.
- Adjust the tax credit to provide more assistance to small brewers, (e.g., make it partially refundable or convert it to a grant program that provides a direct infusion of funds).

## Other Highlights

- For most years, the credit offsets 70% to 85% of verified qualified expenditures for brewers that were awarded credits.
- Very small brewers generate significant tax credits but are unable to use them due to insufficient production volume. For recent years, these brewers could only use 5% to 6% of awarded tax credits to offset tax liability generated during the tax year of application.
- Three large brewers claim the maximum \$200,000 tax credit each year. These firms are well-established and have stable annual sales volume across many states. For these firms, the tax credit is likely a windfall.

## Conclusion

The review finds that that the tax credit does not achieve its intended purpose.

## Changes Enacted

None.

# Coal Refuse Energy and Reclamation Report Cycle 2022

## Purpose

Reduce or eliminate the environmental impact and various negative externalities imposed on communities by coal refuse piles and abandoned mine lands.

## Findings

- For 2020, data from the U.S. Energy Information Administration show that 11 of the 16 waste coal generators in operation were located in Pennsylvania.
- For 2019, the effective tax credit rate was \$2.70 per ton of coal refuse burned due to the 22.2% per firm cap on credit awards and roughly 15% leakage due to sales discounts and transfer fees.
- Refuse piles closer to generators have been remediated so that refuse must now be transported over longer distances. Higher transport costs, excess capacity and robust growth of natural gas production have contributed to facility closures.
- For 2018 and 2019, nearly all tax credits were sold for an average of 85 cents per tax credit dollar. The residual 15 cents was retained by the purchaser and third-party facilitator.

## State Comparison

- Pennsylvania is the only state that provides a tax credit to incentivize the burning of coal refuse in the generation of electricity and the reclamation of abandoned mine lands.
- Other states primarily rely on federal Abandoned Mine Land grants to fund environmental cleanup projects on lands affected by legacy coal mining.

## Benefits

- As of December 2020, 34% of the 1,200 coal refuse piles tracked by DEP have been reclaimed.
- DEP notes that the removal of coal refuse piles controls for erosion and sedimentation, provides revegetation and reduces the potential for abandoned mine drainage. However, data are not currently compiled in a manner that facilitates an assessment of whether pollution declined due to the remediation.

## Recommendations

- Target the tax credit to high priority coal refuse piles to incentivize reclamation activities which result in more significant environmental benefits.
- Tie awards to average wholesale electricity prices for the calendar year. When wholesale electricity prices are high, the tax credit likely incentivizes little or no incremental activity. This adjustment provides more revenue stability and maintains incentives.
- If the current tax credit program is retained, make the credit fully or partially refundable.
- Move the application deadline to March 1. Stakeholders noted that the current application deadline is earlier than the due date for the Air Information Management System report that must be submitted as part of the tax credit application.

## Other Highlights

- Over the review period, the tax credit was claimed by 11 to 13 coal refuse generators, burning 6 to 8 million tons of coal refuse per annum.
- Current mining regulations do not require that pollution metrics improve over time, only that sites are monitored to ensure that reclamation efforts do not exacerbate environmental contamination.

## Conclusion

The review finds that the tax credit has generally achieved its intended goals and purpose. However, two caveats are noted. First, it is likely that the tax credit incentivizes only a moderate share of total coal refuse burned in most years. Second, it is unclear to what extent the tax credit will continue to meet the intent of the legislation as any positive impact on the environment will diminish now that the largest and most hazardous coal refuse piles have been reclaimed.

## Changes Enacted

None.

## Purpose

Enhance the educational opportunities available to all Pennsylvania students.

## Findings

- Article XX-B of the Public School Code expressly limits the data that may be collected related to the program to those that are specifically enumerated in authorizing legislation. Key data necessary to evaluate the program are not available.
- Qualifying income limitations for scholarship recipients are roughly 500% of the federal poverty level (FPL) for a family of four. This level is higher than all other states that have an income limitation.
- Modest state savings are realized from students switching from public to private school (\$350/student on average) due to strong hold harmless provisions.
- Compared to other states, Pennsylvania has the highest allowance (20%) for administrative and other costs.

## State Comparison

- Nineteen states provide some form of tax credit to offset a share of contributions for scholarships and/or educational programs.
- In most states, the incentive is available to businesses and individuals, and ten states provide a tax credit at a rate equal to 100% of the contribution (excludes Pennsylvania). Nine states provide a credit at 50% to 90% of qualified contributions.
- For states that have an income limitation, most tie income limits to the FPL, or the federal free and reduced-lunch program guidelines. Five states have no income limitation for scholarship recipients.
- Most states allow organizations to retain 5% to 10% of contributions to offset costs.

## Benefits

For FY 2019-20, 68,426 students received a scholarship under the program.

## Recommendations

- Require more accountability for contributions not used to fund scholarships or educational improvement programs.
- Amend the statute to allow for the collection of student performance and demographic data so that program effectiveness can be evaluated.
- Eliminate the early application period for firms that renew a two-year contribution commitment.

## Other Highlights

- The share of contributions retained for administrative and other costs ranged from 5.6% to 10.4%, depending on the year and organization type. The program provides no guidance or limitations on how the retained funds may be spent. Conversations with stakeholders revealed a variety of uses, such as offsetting application or staffing costs and the provision of scholarships to students that would not otherwise qualify for the program due to income limitations.
- Firms electing to make two-year contribution commitments comprised roughly 99% of program participants and those firms are able to apply for credits before firms that have not previously participated in the program. Because the program is oversubscribed and credits are awarded on a first-come, first-served basis, new firms are effectively excluded from the program and current participants are the primary beneficiaries when credit allocations increase.

## Conclusion

The review was unable to determine if the tax credit substantially enhances educational opportunities to all Pennsylvania students due to statutory limits on data that may be collected related to the program.

## Changes Enacted

Increased the program cap from \$280 million to \$405 million. (Act 55 of 2022)

# Mixed-Use Development Report Cycle 2022

## Purpose

Increase affordable housing and commercial corridor development where significant need and impact can be identified and documented.

## Findings

- For FY 2017-18 to FY 2020-21, the Pennsylvania Housing Finance Authority (PHFA) sold \$10.0 million of tax credits, the maximum amount allowable during that period.
- Tax credit sales generated \$8.6 million, as \$1.4 million (14%) of the \$10.0 million sold flowed to purchasers of the tax credits. PHFA also retained \$0.4 million (roughly 4%) to offset administrative costs. Therefore, only 82% of the tax credit was available for mixed-use development projects.
- For FY 2018-19 to FY 2020-21, the same two applicants submitted bids that, when combined, totaled the exact amount of tax credits available each year. Those two applicants also applied for and received credits in the first year (FY 2017-18), along with a third applicant.

## State Comparison

- Three states offer similar tax credit incentives.
- Pennsylvania's program is unique in that proceeds from the sale of the tax credit are deposited in the Community Revitalization Fund and then distributed to eligible construction and rehabilitation projects. In other states, the tax credit is available directly to developers to offset a share of project costs.

## Economic Impact

Due to the recent enactment of the program and the minimal data available, an economic impact could not be determined at this time.

## Recommendations

- Convert the tax credit to a competitive grant or rebate program.
- Offer the tax credit as a share of project costs directly to qualified developers and require the applicant to demonstrate that the credit is a major factor needed to complete the project.
- If the credit is retained in its current form, more must be done to publicize the sale of the tax credit and attract competitive bids.

## Other Highlights

- The PHFA authorized \$10.0 million in tax credits to nine applicants over the four-year reporting period.
- Through FY 2020-21, 16 eligible mixed-use development projects across seven counties received a total of \$6.9 million in funding, or 10.9% of the total development costs. Each project was awarded either \$400,000 or \$500,000.
- Development projects included 189 residential units and 88,676 square feet of commercial space.

## Conclusion

The review finds that the credit does achieve its stated goals and purpose but would be more effective if funds were used to provide direct support to project developers. It is unclear how many projects would have been completed regardless of state funds. Therefore, it is unknown whether the tax credit truly increased the stock of affordable housing or merely provided support.

## Changes Enacted

None.



## Purpose

Generate economic development through the creation of family-sustaining manufacturing jobs.

## Findings

- Program data are limited, but applicants have committed to creating 415 full-time manufacturing jobs with an average wage of \$86,000. Tax credits were authorized at an average of roughly \$3,800 per new job created (\$1.6 million).
- Although data are limited, the current tax credit is likely insufficient to incentivize job creation. A 5% tax credit represents less than 4% of the first-year costs to add an additional employee (assumes an average wage of \$86,000 plus 30% in benefit costs). The tax credit is only awarded in the first year, but the newly-created job must be retained for five years. At this modest rate, an employer is unlikely to create new jobs unless there is sufficient demand for the firm's products to support the expenditure. Therefore, it is likely the job would have been created regardless.

## State Comparison

- Pennsylvania, Oklahoma, Maryland and Washington offer a manufacturing tax credit incentive.
- Some states offer the credit as a fixed dollar amount per job (\$500 to \$4,000) while others compute the credit as a share of payroll (4.75% to 5.00%).
- Each state has its own requirements for minimum qualified wages and minimum increases in payroll or employment.

## Economic Impact

Due to the recent enactment of the program and the minimal data available, an economic impact could not be determined at this time.

## Recommendations

- Consider program revisions, redirect the funding to benefit another more efficient economic development program or convert to a grant program.
- If the credit is maintained, program performance metrics should be compiled and tracked.
- Amend the definition of "new job" consistent with a recommendation from DCED.

## Other Highlights

- Tax credits were first authorized in FY 2021-22 and the program only had five approved participants for that year (\$1.6 million in tax credits).
- Participating firms committed to a \$31.7 million increase in annual taxable payroll and investment of \$3.5 billion in private capital.
- The job commitments impact Allegheny, Luzerne and Lycoming counties.

## Conclusion

The review finds that additional data are needed to determine whether the program has achieved its goals and purpose. The program is relatively new and less than one year of data was available for review. However, based on research available for the New Jobs Tax Credit that was reviewed by the IFO in 2019, it is unlikely that a tax credit equal to 5% of payroll is sufficient to incentivize the creation of new jobs that must be retained for at least five years.

## Changes Enacted

None.

# Resource Manufacturing Report Cycle 2023

## Purpose

Establish a robust petrochemical industry cluster in Pennsylvania by encouraging investment in and development of ethane processing facilities and infrastructure in Pennsylvania.

## Findings

- At the time of the review, only one ethylene manufacturing (“cracker”) plant existed in Pennsylvania and it began operation in November 2022.
- The Pennsylvania cracker plant was expected to consume 100,000 barrels of ethane each day and generate 3,600 direct/indirect/induced FTE jobs. At that rate, tax credits total \$76.7 million annually, or roughly \$21,300 per job. Over 20 years, that level of production generates \$1.53 billion in tax credits.
- At the time of the report, no applications had been submitted for the tax credit and therefore, no tax credits had been issued.

## State Comparison

- Pennsylvania is the only state that provides a tax credit to incentivize the purchase of ethane for the purpose of manufacturing ethylene or other plastic polymers.
- Eight states have enacted special tax credits to encourage the development of specific manufacturing industries, primarily renewable energy or alternative fuels. Four of those states require a capital investment (e.g., construction of a new facility) to qualify for the program.

## Economic Impact

No taxpayers have applied for the tax credit to date. Due to the minimal data available, an economic impact could not be determined at this time.

## Recommendations

- Impose an annual program cap to limit the potential impact on state tax revenues.

- Taxpayers that create jobs necessary to meet the standards of the program should be required to maintain those jobs for a set period of time.
- Eliminate the requirement that recipients exclusively offer unused credits for sale, assignment or transfer to upstream and/or downstream firms.
- Annually track performance metrics related to the effectiveness of the program.

## Other Highlights

- It is unknown whether the tax credit was the deciding factor to locate the cracker plant in Pennsylvania, as the credit was one part of a larger package of economic development incentives granted to the developer. An executive familiar with the location decision cited three primary factors that motivated the location decision (the tax credit was one).
- Because demand for ethane is generally limited to the petrochemical industry, and it is difficult to transport ethane by any mode other than dedicated pipelines, infrastructure is a key component for industry growth and development. As a result, facilities tend to be concentrated in select states and regions of the United States. For example, 31 ethylene steam crackers operate in Texas and Louisiana alone due to the significant amount of ethane produced along the Gulf Coast. This clustering of related firms, both upstream and downstream, increases the number of indirect jobs that could result from the tax credit.
- By May 1, 2028, DCED must publish a reconciliation report on the effectiveness of the tax credit.

## Conclusion

The review finds that the tax credit is still in its early stages of implementation, and additional data are required to determine its effectiveness.

## Changes Enacted

None.

## Purpose

Stimulate economic growth and job creation in rural areas by providing rural business owners, who may otherwise have difficulty obtaining investment, with increased access to capital for business development.

## Findings

- The funds have three years from the closing date to invest capital in approved rural businesses. According to the latest data available, three rural growth funds provided \$7.3 million in capital to four rural businesses. Based on filed reports, 106 jobs have been created or retained due to the program.
- Rural growth funds have an incentive to make investments that provide the highest economic return to their investors instead of those that provide the greatest benefit to state residents.
- The tax credit provides significant benefits for the funds, even if they must repay some portion of the tax credits upon exit from the program. For example, the funds raise \$50 million to invest in rural businesses (typically loans) for seven years. The investors receive \$30 million in tax credits to subsidize the investment, repayment of the \$50 million in loans (or equivalent equity), plus any applicable interest and fees.
- Evaluations of similar programs in other states find concerns regarding program effectiveness and efficiency.

## State Comparison

- Most states have developed their own New Markets Tax Credit (NMTC), or Certified Capital Company Program, or both that function similarly to the federal NMTC and the Pennsylvania tax credit.
- The differences between the programs are generally limited to the type of investment required, the share of the investment awarded as a tax credit, and the number of years over which credits can be claimed.

## Economic Impact

Due to the recent enactment of the program and the minimal data available, an economic impact could not be determined at this time.

## Recommendations

- Increase program effectiveness by converting the tax credit to a loan program administered by DCED.
- Do not allocate additional funds until the impact of the initial \$30 million in tax credits can be fully accessed.

## Other Highlights

- The first rural growth funds were approved in 2021 and requests for investment authority exceeded the program limit.
- DCED approved four funds with a total investment authority of \$50 million (\$12.5 million each), \$30 million of which (\$7.5 million each) represented credit-eligible capital contributions.
- DCED authorized \$30 million in tax credits (maximum) to seven business applicants (investors in rural growth funds) in FY 2021-22.
- Based on the level of credit eligible contributions awarded, investments by each rural growth fund must generate 250 new or retained jobs to avoid state repayment penalties.

## Conclusion

The analysis defers comment regarding whether the tax credit has achieved its assumed goals and purpose. The program is still new and additional data are needed to make that determination.

## Changes Enacted

None.

# Waterfront Development Report Cycle 2023

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## Purpose

Contribute to the livelihood of waterfront municipalities and to the quality of life of residents and visitors.

## Findings

- For FY 2021-22, the total projected costs for all projects were \$103.4 million. These costs represent 14 projects from five nonprofit organizations.
- Program data for the tax credit are limited. Projects were first approved for FY 2019-20 and only a small number of contributions were received for that year. In addition, only two years of performance monitoring reports had been filed at the time of review, which reflects about \$0.9 million in spending.
- Most contributions (75%) fund urban development and enhanced public access to waterfront areas.

## State Comparison

- The tax credit program is unique to Pennsylvania. Alabama, Maryland and New Jersey have tax credit programs that incentivize contributions to projects undertaken by nonprofit economic development organizations. However, none specifically target waterfront properties.

## Benefits

Waterfront development projects may generate positive noneconomic spillover effects and research suggestions that these effects could be significant.

## Recommendations

- Key performance metrics related to the economic impact of the tax credit should be developed, reported and tracked.

- Create marketing and educational materials related to the tax credit to assist organizations in soliciting donations.
- Amend the statute to allow individuals to directly contribute to projects.
- Impose a cap on the amount of tax credits that can be awarded to a business for contributions to a single organization.

## Other Highlights

- Most nonprofit projects were impacted by delays resulting from the COVID-19 pandemic.
- For FY 2021-22, credit requests exceeded the annual program cap for the first time. Two business applicants were denied credits due to the cap, and one business applicant's credit request was prorated down by 85%. It is noted that even in the absence of the credit, \$1.0 million of these contributions were still made to the organizations.
- The program functions similar to the Neighborhood Assistance Program (NAP) Tax Credit. The nonprofit organizations within this program have noted that they must compete for the same contributors as NAP Tax Credit projects.

## Conclusion

This review finds that it is unclear if the tax credit has achieved its stated goals and purpose. The tax credit is still in its early stages of implementation, and additional data are required to make a determination regarding its effectiveness.

## Changes Enacted

None.

# Summary of Selected Results

Tax Credit	Year Enacted	Annual Cap <sup>1</sup>	Net ROI	Econ. Impact <sup>2</sup>	FTEs <sup>3</sup>	% Sold <sup>4</sup>	Results <sup>5</sup>
Brewers'	2016	\$5	<0	--	--	--	No
Coal Refuse Energy and Reclamation	2016	None	--	--	175	99%	Yes
Educational	2001	\$280	--	--	--	--	Unclear
Entertainment Economic Enhancement	2016	\$8	15-35	\$14-\$41	53-203	100%	Yes
Film Production	2007	\$65	13	\$71	1,140	95%	Yes
Historic Preservation	2012	\$3	--	--	--	91%	Unclear
Keystone Innovation Zone	2004	\$15	27	\$89	542	80%-90%	Plausible
Keystone Special Development Zone <sup>6</sup>	2011	None	--	--	--	--	Unclear
Manufacturing	2016	\$4	--	--	--	--	Unlikely
Mixed-Use Development	2016	\$5	--	--	--	86%	Yes
Mobile Telecom Broadband Investment	2013	\$5	9	\$10	39	--	No
Neighborhood Assistance Program	1994	\$36	5	\$52	320	6%-8%	Yes
New Jobs	1996	\$10	<0	-\$2	505	--	No
Organ and Bone Marrow Donation	2006	None	--	--	--	--	No
Research and Development	1997	\$55	12	\$121	915	20%-25%	Yes
Resource Enhancement and Protection	2007	\$13	--	--	--	55%	Yes
Resource Manufacturing	2012	None	--	--	--	--	Unclear
Rural Jobs and Investment	2016	\$6	--	--	--	--	Unclear
Video Game Production	2016	\$1	8-16	\$2-\$4	11-25	--	Unclear

Note: Annual Cap and Economic Impact in dollar millions. Net ROI in cents per tax credit dollar.

1 Cap represents annual limit as of the report date. See summary for changes enacted since the report was issued.

2 The net output or spending by firms, supplier firms, employees and others who receive spending as income and then respend those monies. The amount is net of the economic impact that could be derived from the alternative use of state spending (balanced budget adjustment).

3 The annual full-time equivalent (FTE) jobs associated with the tax credit. Jobs are not additive over multiple years.

4 When credits are sold, a portion of the benefit (generally 5-15%) leaks to purchasers of the credit and any third-party intermediaries that facilitate the sale.

5 Indicates whether the tax credit is accomplishing its legislative intent.

6 The economic impacts presented for the Keystone Special Development Zone Program represent a breakeven analysis and not a projection of actual program results. Therefore, they are not comparable with other program results and are omitted from the table.