State of Oklahoma
Incentive Evaluation Commission
Aerospace Employer & Employee Tax Credits Draft Evaluation

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Contents

Key Findings and Recommendations

Incentive Overview
Effective January 1, 2009, the State enacted a package of tax credits designed to "address the critical shortage of engineering and technical talent facing the Oklahoma aerospace industry," including:[1]

Table 3: Summary of Tax Credits for Aerospace Employers and Employees

Incentive	Program Description*
Tax Credit for Compensation Paid by Aerospace Employers ("Employer Credit")	Qualified employers can receive an income tax credit for compensation paid to a qualified employee. The credit is equal to 10% of the compensation paid for the first five years of employment in the aerospace sector if the employee graduated from an in-state institution or 5% if from an out-of-state institution. The credit is capped at $12,500 per employee per year and is non-refundable, non-transferrable and cannot be carried forward.
Tax Credit for Aerospace Employees ("Employee Credit")	Qualified employees in the aerospace sector can receive income tax credits of up to $5,000 per year for up to five years. Unused credits can be carried forward for five years but are non-refundable.

Source: 68 O.S. §§ 2357.302-304

Recommendation: Retain, with modifications.

Key Findings Pertaining to the Employer Tax Credit

- **Between 2020 and 2022, the number of employer returns claiming the credit decreased by a compound annual growth rate (CAGR) of 5.3 percent.** Simultaneously, the amount used to reduce tax liability, representing the foregone revenue to the State, has decreased by 7.8 percent, from $291,056 to $247,654. The amount used to reduce tax liability on a per return basis has decreased more modestly from $5,018 to $4,763, or by a CAGR of 2.6 percent.

Key Findings Pertaining to the Employee Tax Credit

- **Between 2009, the year Oklahoma's credits began being offered, and 2024, aerospace engineer employment has increased by a CAGR of 8.6 percent.** At the national level, aerospace engineer employment declined by a CAGR of 0.2 percent. This suggests that while a skills gap continues to exist, Oklahoma's efforts to recruit aerospace engineers have been successful relative to other states, perhaps due, in some degree, to the existence of the incentive programs.

- **Despite the prevalence of the industry in Oklahoma's economy, employers continue to face a skills gap in recruiting aerospace engineers.** The number of degrees conferred in engineering fields at public institutions in Oklahoma decreased between 2018 and 2024, from 2,814 to 2,140. The decrease in degree conferral simultaneous to the increase in employment may indicate Oklahoma's relative success, due, in some degree, to the incentive, at attracting out-of-state talent.

- **The skills gap is compounded by growing recruitment and retention challenges.** According to a 2025 study conducted by the Aerospace Industries Association, roughly a quarter of the aerospace and defense workforce is over 55.

- **Annual median wage growth for aerospace engineers in Oklahoma has lagged behind that of other industries in Oklahoma as well as national industry trends.** Over the past twenty years, aerospace engineer wages have increased by a CAGR of 2.0 percent, compared to overall Oklahoma

[1] Per HB 3229

pay increases of 3.0 percent. In 2024, average annual aerospace engineer pay was $109,920 in Oklahoma, compared to $136,110 in bordering states and $134,830 nationally. Some, but not all, of this difference is accounted for by regional price parity differences. While the credit is not aimed at payroll growth, the credit's value is diminished by the existing pay gap and may not be substantial enough to attract some talent that would otherwise be employed in another state.

- **Credit use and total amount claimed have remained fairly constant in recent years, declining slightly in tax year 2022.** While use was increasing annually at the time of the previous evaluation, use of the credit seems to have stabilized with an average of 2,738 jobs and $21.2 million claimed.

- **The estimated State tax revenue exceeds the cost to the State on an annual basis, as measured by the amount claimed.** The Gross State Product (GSP) associated with program employment is estimated to generate over $25.8 million in tax revenue to the State of Oklahoma, yielding $1.23 in tax revenue per $1.00 in program spending. In order for the fiscal returns to the state as a result of the program on a per dollar claimed basis to exceed $1.00, at least 81 percent of the employment claiming the credit must be directly attributable to the tax credit program itself, meaning those employees would not have located in Oklahoma *but for* the availability of the incentive program.

- **The total economic activity associated with the tax credits substantially exceeds the cost to the State each year.** For each $1 paid by the State between tax years 2020 and 2022, the economic output generated ranged from $67 to $76 annually. In 2022, the most recent year with data available, total economic activity associated with the 2,722 jobs for which claims were made reached $1.5 billion. Indirect and induced activity supported an additional 1,262 jobs, with total employment reaching 3,984 jobs.

- **The incentive's Accreditation Board for Engineering and Technology (ABET) accreditation requirement continues to cause confusion for employees claiming the credit.** Several of the program's key stakeholders noted that many claimants learned that they did not qualify for the credits after their tax forms claiming the credit had been approved. Ineligible claims are identified through the Oklahoma Tax Commission's Compliance Division audits, whereover 5.7 percent of claimants were ineligible but had claimed the tax credits.

- **Oklahoma's tax credits for aerospace engineers remain somewhat unique compared to other states.** Kansas has a similar suite of programs aimed at recruiting aviation employees, including payroll-based benefits and tuition reimbursement. While some states, such as North Dakota and Arkansas, offer tax incentives in order to recruit for hard-to-fill positions or compensate employers for tuition reimbursement provided, none are aimed at a specific industry like Oklahoma's program.

Recommendations Pertaining to the Employee Tax Credit

- **Increase the amount of the credit by an amount that accounts for some or all of the reduction in value because of inflation since the credit's introduction.** Since the credit's introduction in 2009, inflation has reduced the value of the credit by 50.6 percent. Between 2009 and 2025, aerospace engineer pay has increased, as has the cost of living. Due to these factors, the $5,000 amount may no longer be sufficient to attract talent that would locate in the state because of the program.

- **Provide a list of frequently asked questions with the tax form in order to limit the number of ineligible claimants.** Despite clear language on the tax form itself, the by-right nature of the program and the lack of simplicity related to identifying program eligibility contributes to a high volume of ineligible employees claiming credits, which later end up clawed back. A list of frequently asked questions or centralized repository to review eligible and ineligible programs may serve to deter this activity.

Introduction

Incentive Evaluation Commission Overview

In 2015, HB 2182 established the Oklahoma Incentive Evaluation Commission (the Commission). It requires the Commission to conduct evaluations of all qualified state incentives over a four-year timeframe. Between 2016 and 2024, the Commission conducted more than 100 evaluations.

The State's Tax Credits for Aerospace Engineer Employees and Employers, first evaluated in 2016 and evaluated again in 2020, are among the programs scheduled for an updated review by the Commission in 2025. Based on this evaluation and their collective judgment, the Commission will make recommendations to the Governor and the Legislature related to these incentives.

2020 Evaluation: Key Findings and Recommendations

Significant findings from the 2020 evaluation of these programs are displayed in the following table.

Table 1: Summary of Findings, 2020 Evaluation

Fiscal and Economic Impact	Fiscal Impact: Between 2013 and 2017, the average amount used to reduce tax liability, representing foregone tax revenue for the State, was $1.6 million for the Employer Tax Credit and $6.0 million for the Employee Tax Credit. Economic Impact: Between 2013 and 2017, the employer and employee tax credits resulted in between $72 and $89 of economic output per $1 paid by the State. In 2017, the programs supported 2,384 jobs and $1.6 billion in economic output.
Adequate Protections for Future Fiscal Impact?	The various benefit limitations, coupled with the fact that these credits are neither transferable nor refundable and have a limited (5 year) carry-forward, provide adequate protection against significant, unanticipated fiscal impact.
Effective Administration?	The incentive's Accreditation Board for Engineering and Technology (ABET) accreditation requirement has led to confusion among some employees claiming the Employee Tax Credit.
Achieving Its Goals?	Overall, the "skills gap" still exists within the aerospace industry, however the industry continues to grow, and the number of aerospace engineers employed outperforms other types of engineering jobs. Additionally, Oklahoma has seen a rise in the number of related degrees conferred within the state.
Changes to Improve Future Evaluation	Enhance employer reporting to show the overlap with Quality Jobs incentives. Consider broadening the employee tax credit incentive eligibility and clarify eligibility requirements in statute.

The project team recommended in 2020 that the program be retained. The Commission voted 5-0 to approve the project team's recommendation, and the incentive is still in place. Further, the sunset date for this credit program was extended through tax year 2032, per SB287, which was enacted in 2024.

2025 Criteria for Evaluation

The provisions of HB 2182 require that criteria specific to each incentive be used for the evaluation. A key factor in evaluating the effectiveness of incentive programs is to determine whether they are meeting the

stated goals as established in state statute or legislation. In the case of this tax credit, the specific goal included in legislation is to "address the critical shortage of engineering and technical talent facing the Oklahoma aerospace industry."[2]

Additionally, to assist in a determination of program effectiveness, the Commission has adopted the following criteria:

- Number and dollar value of approved credits by year of program;
- Employment growth in state aerospace industry – comparison to period prior to the credit and comparable states;
- Payroll growth in state aerospace industry – comparison to period prior to the credit and comparable states;
- Change in measures of the 'skills gap' for engineering and technical skills in the aerospace industry;
- Use with other related State business incentives;
- Return on investment.

2025 Evaluation Approach

To conduct its 2025 review of these tax credits, the project team conducted the following activities:

- Submitted a data request to the Oklahoma Tax Commission (OTC);
- Reviewed and analyzed OTC-provided data;
- Completed subject matter expert/internal stakeholder interviews with representatives from the OTC, Department of Commerce, and Oklahoma Department of Aerospace and Aeronautics;
- Benchmarked Oklahoma to other states.

[2] Per HB 3239 of the 51st Oklahoma Legislature. Available at http://okhouse.gov/Documents/2008SessionInReview.pdf

Industry Background

Oklahoma Aerospace Background and History

Oklahoma is home to one of the nation's foremost aerospace and aviation industries, with roots tracing back to the early 20th century, when aviation pioneer Clyde Cessna began testing aircraft in the state. Following World War I, two airlines were established in Oklahoma – both of which were later acquired by American Airlines.[3] During World War II, the federal government constructed two major industrial facilities in the state to produce bombers for the U.S. Army Air Forces. One of these facilities evolved into Tinker Air Force Base, now recognized as the world's largest aircraft maintenance and military aviation logistics center.[4]

Today, aerospace and aviation remain vital pillars of Oklahoma's economy. Per the Oklahoma Department of Commerce, the aerospace and defense sector is the state's fastest growing industry, with over $146 million in new capital investment secured in 2024 alone. This growth has been driven by 25 new or expanding businesses, resulting in the creation of more than 1,000 new jobs.[5]

The Aerospace Engineering Skills Gap

The "skills gap" defines a fundamental mismatch between the skills that employers rely upon in their employees, and the skills that job seekers possess. This mismatch makes it difficult for individuals to find jobs and for employers to find appropriately trained workers.[6]

Specifically in the aerospace and defense industry (A&D), which can require highly specialized and technical knowledge, employers are left with critical gaps as their workforce continues to age and retire. A 2024 study conducted by McKinsey's Aerospace & Defense Practice estimated that closing the talent gap could be worth over $300 million in global potential cost avoidance and financial outcomes.[7] A younger workforce leads to manager and middle manager attrition and vice versa, raising retraining costs and leaving cognitive gaps in the remaining workforce. The Bureau of Labor Statistics (BLS) estimates that, between 2023 and 2033, the United States will need 4,100 new aerospace engineers every year, sparking the need for more young people to pursue degrees in science, technology, engineering, and mathematics (STEM) in order to close the gap.[8] The BLS' estimates may in fact under-project the workforce needed, as growing interest in space enterprise may amplify the need.

In their 2025 Annual Workforce Study, the Aerospace Industries Association (AIA) found that the most difficult to fill roles were for skilled technical labor workers and mid-career engineers.[9] The majority of companies surveyed indicated that their top candidates who did not accept job offers did so based on higher salaries elsewhere, highlighting the competitive compensation environment in the industry. Despite increasing

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[3] The University of Tulsa Department of Special Collections and University Archives, "The Rise of the Aerospace and Aviation Industries in Oklahoma," (February 18, 2013). Available at http://orgs.utulsa.edu/spcol/?p=2798

[4] Oklahoma Historical Society, "The Encyclopedia of Oklahoma History and Culture: Tinker Air Force Base." Available at https://www.okhistory.org/publications/enc/entry?entry=TI004.

[5] Oklahoma Department of Commerce, "Aerospace and Defense Continue Rapid Growth in 2024 With Almost $150 Million in New Capital Investment," (April 2, 2025). Available at https://www.okcommerce.gov/wp-content/uploads/Aerospace-and-Defense-Continue-Rapid-Growth-in-2024-With-Almost-150-Million-in-New-Capital-Investment.pdf.

[6] The Brookings Institution, "Understanding the Skills Gap – and What Employers Can Do About It," (December 6, 2019). Available at https://www.brookings.edu/research/understanding-the-skills-gap-and-what-employers-can-do-about-it/

[7] McKinsey & Company, "The talent gap: The value at stake for global aerospace and defense," (July 17, 2024). Available at https://www.mckinsey.com/industries/aerospace-and-defense/our-insights/the-talent-gap-the-value-at-stake-for-global-aerospace-and-defense.

[8] Bureau of Labor Statistics, "Aerospace Engineers Summary". Available at https://www.bls.gov/ooh/Architecture-and-Engineering/Aerospace-engineers.htm.

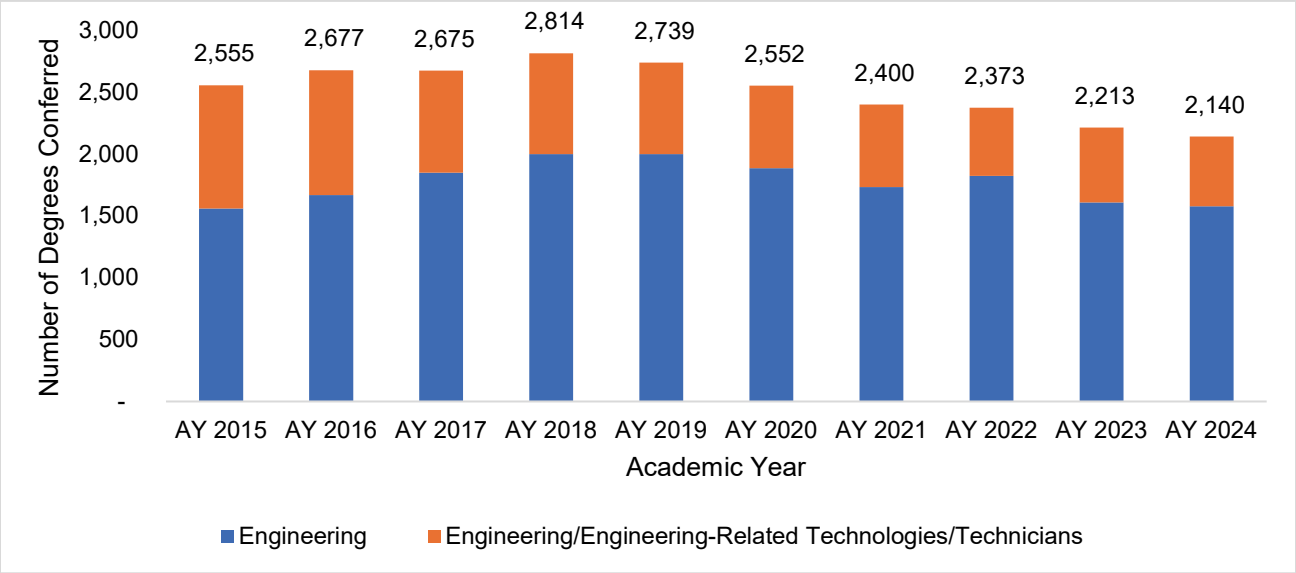
[9] Aerospace Industries Association, "Accelerating progress: maximizing the return on talent in A&D," (2025). Available at https://www.aia-aerospace.org/wp-content/uploads/AIA-McKinsey-Annual-Workforce-Study-2025.pdf.

workforce growth (3.7 percent between 2021 and 2022 compared to 4.8 percent between 2022 and 2023), increased demand outpaces the labor market supply, especially for engineering roles.[10] As the technology used in the aerospace and defense sectors accelerates, many of the engineers needed are opting to work at traditional technology companies, both creating a skills gap and potential security and safety threats in A&D.

Not only is the industry facing recruitment challenges, but attrition and retention challenges create a compounding threat to the workforce, with nearly a quarter of the A&D workforce over 55.[11] Attrition rates are significantly higher in the A&D sector than other industries and, despite modest decreases over the past four years, is anticipated to continue increasing due to competition.

Despite these observations and the Oklahoma State Regents for Higher Education finding that Oklahoma is still in need of more traditional STEM graduates, data shows that, between academic years 2015 and 2024, the number of STEM degrees conferred in the state trended upward. Across all degree types, total degrees conferred increased from 6,700 to 8,194, a Compound Annual Growth Rate (CAGR) of 2.0 percent.[12] Over the same period, the total number of engineering degrees conferred in the State increased for three years to 2,814 in academic year 2018, then fell through academic year 2024.

Figure 1: Degrees Conferred at Oklahoma Public Institutions, Engineering Fields*



Source: Oklahoma State Regents for Higher Education
** Fields of study include Engineering and Engineering/Engineering-Related Technologies/Technicians*

Despite lagging growth in degree and certificate conferrals and a widening skills gap, Oklahoma remains well-established and competitive within the aerospace industry overall. To better understand how aerospace employment growth in Oklahoma compares to national trends, PFM conducted a shift-share analysis. This analytical method helps isolate the factors driving state employment changes by comparing industry performance to national benchmarks. The shift share analysis examines data within Oklahoma's aerospace sector, defined by NAICS codes, broken into three components:

- **Shared growth effect**: how much a change in employment is due to overall U.S. economic growth;

[10] Ibid.
[11] Ibid.
[12] Oklahoma State Regents for High Education, "STEM Degrees and Certificates Conferred by Institution, AY15 to AY24."

- **Industry mix effect**: how much the change in employment is due to the performance of the industry nationally;
- **Competitive component**: how much of the change in employment is due to Oklahoma's unique advantages (or disadvantages).

Table 2 presents the shift share analysis for the three identified aerospace engineer subsectors:

Table 2: Oklahoma Aerospace Employment Shift Share Analysis

Description	US 2014	US 2024	OK 2014	OK 2024	Share Comp	Mix Comp	Competitive Comp
Total Private Employment	115,568,686	132,453,345					
Aerospace Product & Parts Manufacturing	486,689	559,825	7,085	13,455	1,035	30	5,305
Aerospace Systems & Components Manufacturing	123,446	122,682	493	551	72	-75	61
Aerospace Research & Development	391,980	546,842	809	1,389	118	201	260

Source: QCEW data for NAICS codes 336400, 334511, and 541751

The analysis indicates that Oklahoma's aerospace sector has experienced significant employment growth, particularly in aerospace product and parts manufacturing, which added over 6,000 jobs. Of this growth, 5,305 jobs are attributed to competitive effects, meaning Oklahoma outperformed national trends. The share component of 1,035 jobs reflects growth expected from overall national expansion, while the mix component of 30 jobs shows a modest contribution from the aerospace industry's national performance.

By contrast, Aerospace systems and components manufacturing saw minimal growth, with a slightly negative mix component, indicating national decline in the subsector, but positive competitive component of 61, indicating that Oklahoma still outperformed the national average. Aerospace research and development also showed strong growth with a competitive component of 260 jobs, highlighting Oklahoma's increasing strength in innovation.

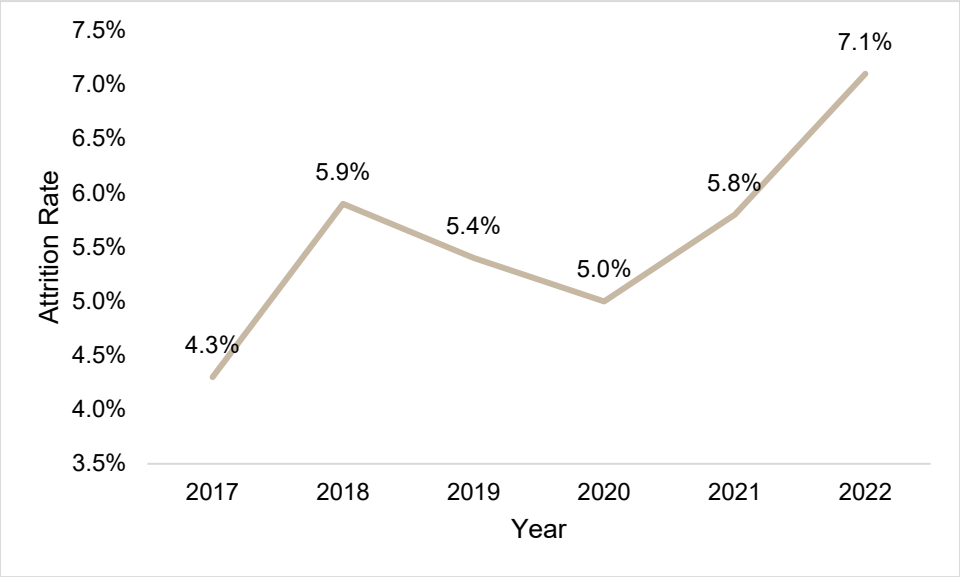
Overall, the analysis suggests that Oklahoma's aerospace industry is not only growing but is doing so at a rate that exceeds national expectations, with a competitive job gain of 5,626 between 2014 and 2024 across these sectors.

Covid-19 Impacts on the Aerospace Industry

The Covid-19 pandemic was accompanied by a highly significant reduction in air travel, especially in the commercial sector. Additionally, due to pandemic-era restrictions, the aerospace industry was hit by production line disruptions, revenue loss, and the "great resignation" – culminating in a wave of retirements.[13] A 2022 study conducted by Ernst & Young on behalf of the Aerospace Industries Association showed the significant rise in attrition following the pandemic.

[13] Aerospace Industries Association, "AIA's '2021 Facts & Figures' report details the pandemic's impact on the A&D industries," (September 15, 2021). Available at https://www.aia-aerospace.org/news/aias-2021-facts-figures-u-s-aerospace-defense-report-details-the-pandemics-impact-on-the-ad-industries/.

Figure 2: Aerospace and Defense Attrition, 2017-2022



Source: Ernst & Young, "2022 Aerospace and Defense Workforce Study"

These high levels of attrition – combined with the pandemic-caused uncertainty in the industry – has had ripple effects in the years since. More employees have reported a willingness to switch careers, and a highly skilled labor supply is difficult to identify and attract away from more lucrative fields. With the rebound in commercial air travel and aviation activity following the lift of pandemic restrictions, pressure to meet demand is confronted by a less experienced younger workforce, creating significant industry vulnerabilities. Deloitte reported that as of August 2024, global air passenger traffic had increased by 11.6 percent year to date, while total capacity had increased by 10.2 percent.[14] Labor force challenges, in tandem with increased demand, may be ameliorated by the adoption of digital technologies like artificial intelligence (AI), which may be used to supplement a leaner workforce.

Aerospace Engineering Employment and Pay

According to the BLS,[15] aerospace engineers primarily design, develop, and test aircraft, spacecraft, satellites, and missiles. Their duties typically include:

- Coordinate and direct the design, manufacture, and testing of aircraft and aerospace products;
- Assess project proposals in order to determine technical and financial feasibility;
- Determine if proposed projects will result in safe operations that meet the defined goals;
- Evaluate designs to ensure that the products meet engineering principles, customer requirements, and environmental regulations;
- Develop criteria for design methods, quality standards, sustainment after delivery, and completion dates;
- Ensure that projects meet quality standards;
- Inspect malfunctioning or damaged products to identify sources of problems and possible solutions.

[14] Deloitte Research Center for Energy and Industrials, "2025 Aerospace and Defense Industry Outlook," (October 23, 2024). Available at https://www.deloitte.com/us/en/insights/industry/aerospace-defense/aerospace-and-defense-industry-outlook.html.
[15] BLS, "Occupational Outlook Handbook: Aerospace Engineers." Available at https://www.bls.gov/ooh/architecture-and-engineering/aerospace-engineers.htm.

As of 2023, there were 68,900 aerospace engineer jobs in the U.S. There is an anticipated employment change of 4,100 jobs projected annually from 2023 to 2033. This projects to an annual growth rate of 6.0 percent, which is higher than the growth rate for the total U.S. jobs market. A driver behind this projected growth is the increased interest in unmanned aerial systems and the operationalization of AI technologies. These technologies are emerging as pressure mounts on the aerospace industry due to several high-profile aircraft problems, increasing demand for skilled engineers to address and prevent future malfunctions. Employment demand growth may be stymied by industry attrition and subject-matter expert retirements, necessitating states, like Oklahoma, with large, already-developed aerospace industries, to focus on recruiting and retaining that technical workforce.

The largest employers of aerospace engineers are aerospace product and parts manufacturing firms (35 percent), followed by the federal government (15 percent), and engineering service firms (14 percent).

Aerospace Engineering Employment

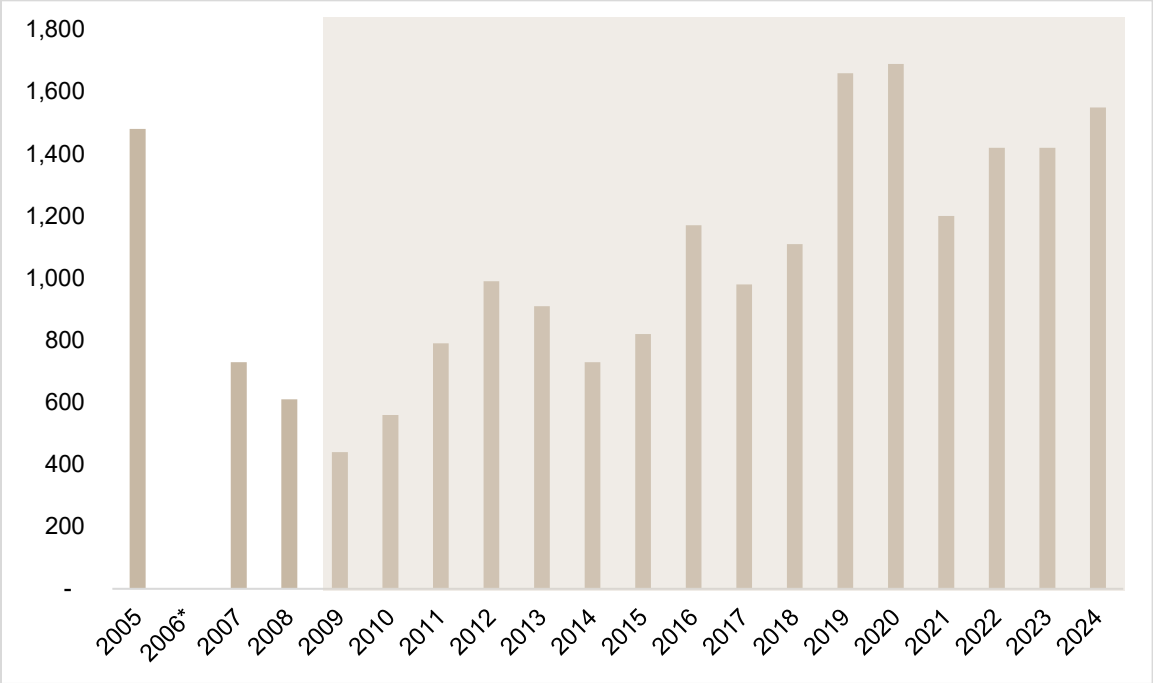
According to BLS estimates, Oklahoma had 1,550 aerospace engineers as of May 2024 (the most recent available data).[16] At the time of the 2020 review, Oklahoma ranked fifth among states for aerospace engineer employment per 1,000 jobs (1.026 in May 2019). Employment per 1,000 jobs has since fallen to 0.915 in the state, while other states have gotten more competitive. The fifth ranked state is now Kansas, with significantly higher aerospace engineer employment per 1,000 jobs (1.326), exceeding both that of Oklahoma when it was ranked fifth, and Oklahoma today. Oklahoma similarly ranked fifth for location quotient at the time of last review, with a location quotient of 2.38. As of May 2024, the fifth-ranking state for aerospace engineer location quotient is Kansas, with a location quotient of 2.99, which demonstrates the competition between states in the sector.

The top five states previously included Alabama, Washington, Kansas, Maryland, and Oklahoma; today, they are Alabama, New Mexico, Washington, Colorado, and Kansas. New Mexico and Colorado, which border Oklahoma, are emerging economies in the industry. While Oklahoma is still favorably positioned relative nationally in the aerospace sector, it is becoming less competitive compared to other specific states with significant aerospace employment, such as Texas and New Mexico.

The BLS has been reporting data on aerospace engineers for over 25 years. Over the past 20 years, aerospace engineer employment in Oklahoma increased by a compound annual growth rate of just 0.2 percent, however the annual data shows a more complicated picture. Between 2005 and 2008, the year prior to when Oklahoma's incentives began to be offered, employment declined by a CAGR of 25.6 percent. Following implementation of the credits in 2009, in conjunction with the end of the Great Recession, employment has increased by a CAGR of 8.6 percent – with peak employment at 1,690 aerospace engineers in 2020, followed by a steep decrease to 1,200 in 2021 and steady growth since.

[16] BLS Occupational Employment Statistics data for Aerospace Engineers (Standard Occupational Classification code 172011). Estimates do not include self-employed workers.

Figure 3: Aerospace Engineering Employees in Oklahoma, 2005-2024



Source: BLS Occupational Employment Statistics data for Aerospace Engineers (SOC code 172011)
** No data reported for 2006*
Note: shaded area represents the existence of Oklahoma's incentives

Nationally, between 2005 and 2008, aerospace engineering employment decreased by a CAGR of 16.4 percent; between 2009 and 2024, the national aerospace engineer workforce continued to decline, however by a much more moderate 0.2 percent CAGR. This suggests that Oklahoma's effort to recruit aerospace engineers has been successful in recent history relative to other states, perhaps due in some degree to the existence of its tax incentive programs.

Aerospace Engineering Pay

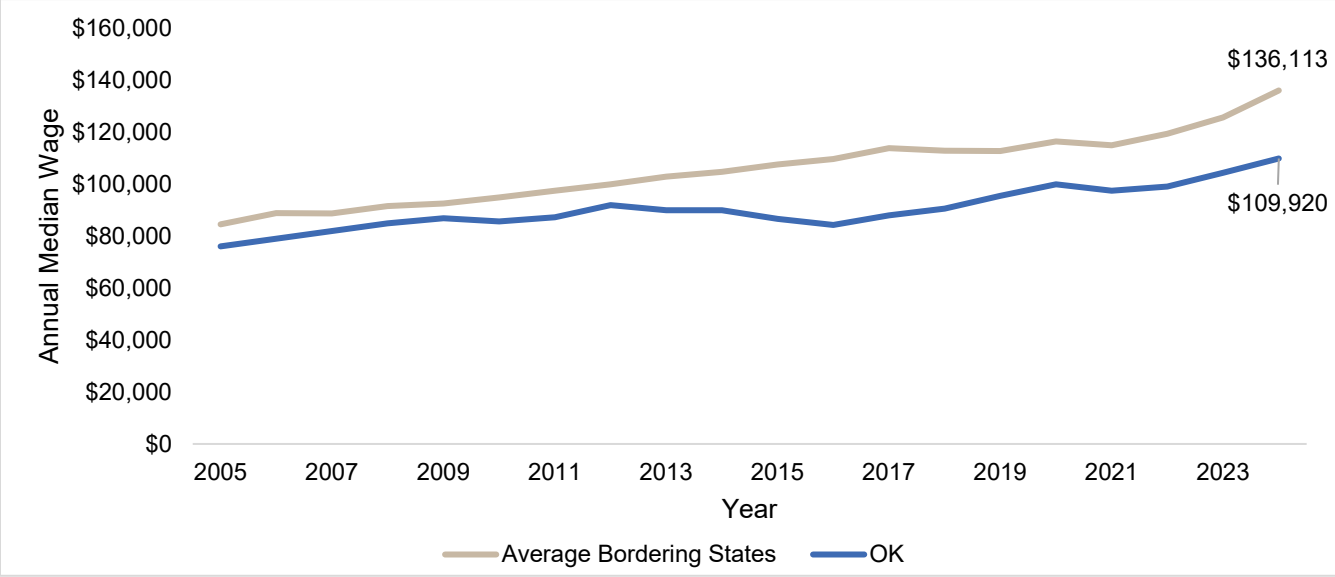
According to BLS, annual median pay for aerospace engineers was roughly $109,920 in 2024. While not an apples-to-apples comparison due to cost of living and other economic factors, Oklahoma's average wage for aerospace engineering is low in comparison to both national trends and bordering state trends. In 2024, average annual pay for all aerospace engineers was roughly $134,830 nationwide and $136,110 for bordering states for which data was available, indicating the significant competition for talent regionally. Looking at these pay trends over time, Oklahoma has lagged its peers' average pay consistently, with a roughly $26,000 gap in 2024. Table 3 below presents the Regional Price Parity by state, demonstrating the lower cost of living in Oklahoma compared to some of its neighboring states.

Table 3: Regional Price Parity by State[17]

State	2023 RPP
Arkansas	86.508
Colorado	101.382
Kansas	89.965
Missouri	91.762
New Mexico	90.386
Oklahoma	**88.286**
Texas	97.175

While this does not fully make up for the pay gap, it does indicate that it is more narrow than it appears on a nominal basis.

Figure 4: Aerospace Engineer Pay, Oklahoma vs. Surrounding States



Source: BLS Occupational Employment Statistics data for Aerospace Engineers (SOC code 172011)

Oklahoma's bordering states saw an annual median wage growth rate of 2.5 percent over the past twenty years, compared to the Oklahoma aerospace engineer annual median wage growth of 2.0 percent and overall annual median wage growth of 3.0 percent. This, combined with the nominally lower wages than its regional competitors, places Oklahoma at a disadvantage in terms of attracting and retaining key talent. Despite trends that suggest that Oklahoma firms have had some success in recruiting aerospace employees, they have not kept pace with the compensation increases seen in other occupations within Oklahoma as well as with regional aerospace engineer compensation trends.

[17] Federal Research Bank of St. Louis, Regional Price Parities by State.

Industry Background Summary

Oklahoma's aerospace and aviation industry continues to be a cornerstone of the state's economy, with the aerospace and defense sector quickly growing. In 2024 alone, over $146 million in new capital investment was secured, driven by 25 new or expanding businesses and resulting in more than 1,000 new jobs. However, the industry faces significant workforce challenges, particularly in recruiting skilled technical labor and engineers. Competitive compensation elsewhere has made it difficult for Oklahoma firms to attract top talent, and attrition remains a concern, especially with nearly a quarter of the workforce over age 55.

Despite a growing demand for aerospace engineers, fueled by advancements in unmanned aerial systems and AI technologies, Oklahoma's engineering degree output has not kept pace. While STEM degrees overall have increased, engineering degrees peaked in 2018 and declined through 2024. Employment of aerospace engineers in Oklahoma saw steady growth following the introduction of the tax credit program in 2009, peaking in 2020 before beginning to decline. Wage growth for aerospace engineers in Oklahoma has also trailed neighboring states and national levels, potentially hindering long-term talent retention. As the industry evolves and faces mounting technical and safety demands, it will be crucial for Oklahoma to address workforce gaps in order to maintain its position in the aerospace industry.

Incentive Usage and Administration

Incentive Characteristics

In the beginning of the 21st century, Oklahoma's aerospace industry increasingly encountered a lack of qualified applicants for engineering positions, posing a significant barrier to entry and an impediment to growth. In response to this issue, effective January 1, 2009, the State enacted a package of tax credits designed to "address the critical shortage of engineering and technical talent facing the Oklahoma aerospace industry," including:[18]

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Tax Credit for Aerospace Employees ("Employee Credit")	Qualified employees in the aerospace sector can receive income tax credits of up to $5,000 per year for up to five years. Unused credits can be carried forward for five years but are non-refundable.

Source: 68 O.S. §§ 2357.302-304

It should be noted that the focus of this evaluation is on (1) the credit for qualified employers for compensation paid to qualified employees and (2) the credit for qualified employees. During initial discussions with the Tax Commission, it was determined that a third credit, for tuition reimbursement for aerospace employers, is not in use. For that reason, the project team suggested – and the Commission approved – exempting it from the evaluation process so that the focus of the analysis can be on those programs which are actively in use by the state's aerospace engineers and employers.

Since the incentive's previous review in 2020, Oklahoma enacted SB 893 in 2021, effective for tax year 2021. This bill expanded the definition of qualified employees under the incentive program to include those who are licensed as a Professional Engineer by the Oklahoma State Board of Licensure for Professional Engineers and Land Surveyors, pursuant to 59 O.S. §475.15. The definition of a qualified program was also expanded under this bill to mean a program at an institution that includes a graduate or undergraduate program accredited by ABET. Both the undergraduate and graduate programs of the same discipline of engineering at an institution will be considered part of a qualified program if either is accredited.

Additionally, HB 4072 was enacted in 2024, clarifying that the 'aerospace sector' means any private or public organization located in Oklahoma, and provides that for tax year 2024 and subsequent tax years, "qualified employee" will not exclude any person who previously qualified for and established the credit and becomes employed by a different qualified employer, or who establishes the credit for the first time and becomes employed by a different qualified employer in subsequent years, provided a person in either case has not claimed the credit for more than five years. The legislation further allows a qualified employee to claim the credit for five non-consecutive tax years.

[18] Per HB 3229

Employer Tax Credit

Qualifications
Qualified employers are private or public organizations[19] whose principal business activity involves the aerospace sector, which refers to those engaged in the manufacture of aerospace or defense hardware or software, aerospace maintenance, aerospace repair and overhaul, supply of parts to the aerospace industry, provision of services and support relating to the aerospace industry, research and development of aerospace technology and systems, and the education and training of aerospace personnel.

The compensation paid to qualified employees refers to wages and salaries, and does not include employer-provided retirement, medical or healthcare benefits, reimbursement for travel, meals, lodging or any other expenses.

Historic Use of the Tax Credits
As shown in the following table, the number of employer returns claiming the credit has decreased since 2020 by a CAGR of 5.3 percent, the amount used to reduce tax liability, representing foregone revenue to the State, has decreased by 7.8 percent, and the amount used to reduce tax liability per return has decreased, more modestly, by 2.6 percent. On average between 2020 and 2022, 53 returns were filed annually, compared to an average of 35 returns per year between 2013 and 2017, the period evaluated in the previous incentive analysis. Despite recent reductions in incentive usage since 2020, it appears that the program is growing in participation when examining a wider range of credit years.

Table 4: Usage of Tax Credits for Aerospace Employers, 2020-2022

Tax Year	Number of Returns	Total Amount Claimed	Estimated Employees Claimed*	Amount Used to Reduce Tax Liability	Average Amount Used to Reduce Tax Liability / Return
2020	58	$621,639	60-120	$291,056	$5,018
2021	48	$464,620	50-100	$363,478	$7,572
2022	52	$440,378	40-90	$247,654	$4,763
Avg.	53	$508,879	50-100	$300,729	$5,710

Source: Oklahoma Tax Commission; PFM analysis
** Calculation uses the average wage per OES data referenced in the preceding chapter; ranges are based on 10% credit for in-state degree and 5% for out-of-state degree. Estimates have been rounded.*

The biggest users of the employer credit are typically companies with a large presence in Oklahoma, such as the Boeing Company and NORDAM (an aerospace component manufacturing and repair company). While the government sector accounts for much of the aerospace employment within the State (e.g., Tinker Air Force Base), these entities are not required to pay income tax and therefore do not use or apply for the credit. Further, from conversations with key industry stakeholders, one large firm did mention that they only minimally took advantage of the employer tax credit program due to the availability (as well as exclusivity, from a layering perspective) of the Quality Jobs tax credits.

The State does not track employee activity following the five-year credit period, so it is not possible to determine the extent to which the tax credits retain employees in the state long-term, or whether employees leave Oklahoma after claiming credits. However, while employee/talent retention is an important element of the effort to close the skills gap in Oklahoma, tracking this activity is probably not likely or feasible.

[19] This includes sole proprietors, general partnerships, limited partnerships, limited liability companies, corporations, other legally recognized business entities or public entities.

Employee Tax Credit

Qualifications
A qualified employee must have been awarded an undergraduate or graduate degree from a qualified program by an accredited institution. The program must be accredited by the Engineering Accreditation Commission of the Accreditation Board for Engineering and Technology (ABET). The employee must not have been employed in the aerospace sector in Oklahoma immediately preceding employment with the employer.

The statutory definition does not exclude any person who was employed in the aerospace sector, but not as a full-time engineer, prior to being awarded an undergraduate or graduate degree from a qualified program by an institution or any person who has been awarded an undergraduate or graduate degree from a qualified program by an institution and is employed by a professional staffing company and assigned to work in the aerospace sector in Oklahoma.

In April 2025, SB 287 extended the sunset data of both programs from tax year 2031 to tax year 2032.

Historic Use of the Credit
As shown in the following table, the incentive's use has remained relatively consistent in recent years – both in terms of the number of returns (CAGR of -0.4 percent) and the amount used to reduce tax liability (CAGR of 0.8 percent). The average amount used to reduce tax liability has increased slightly to $3,365 in 2022, representing a CAGR of 1.2 percent.

Table 5: Usage of Tax Credits for Aerospace Employees, 2020-2022

Tax Year	Number of Returns	Unused Credit Carried Over	Credit Established, Current Tax Year	Total Claimed	Amount Used to Reduce Tax Liability	Amount Used to Reduce Tax Liability / Return
2020	2,742	$9,717,622	$11,369,352	$21,086,974	$9,010,406	$3,286
2021	2,751	$10,289,892	$11,291,697	$21,581,589	$9,589,050	$3,486
2022	2,722	$9,847,222	$11,069,584	$20,916,806	$9,160,707	$3,365
Avg.	2,738	$9,951,579	$11,243,544	$21,195,123	$9,253,388	$3,379

Source: Oklahoma Tax Commission

Notably, the number of returns in the preceding table exceeds the estimated number of employees claimed by employers in Table 4. As referenced previously, employment of aerospace engineers by the government sector may account for some of this, as well as employers opting for other tax credit programs offered by the State. Additionally, while the employee credits can be carried forward, the employer credits cannot.

Several large employers in the State noted that the employee tax credit as an advantageous program that many of their employees took advantage of. Furthermore, one noted that, especially in STEM fields, individuals have lots of options for careers, so anything the State can do to promote aerospace engineering is valuable at enabling Oklahoma to remain competitive.

Incentive Administration

The OTC is responsible for the administration of these incentives, which is relatively straight-forward and entails two key components: employer/employee application for credit, and the OTC's verification and acceptance of claims. For intake and reporting purposes, this information comes from income tax returns along with either Form 564 or Form 565. These are summarized in the following.

Application for Credit
To claim the credits, qualified employers must fill out and submit Form 565 (Credit for Employers in the Aerospace Sector); qualified employees must fill out and submit Form 564 (Credit for Employees in the Aerospace Sector). These forms collect the following information:

Table 6: Tax Credit Application Requirements

Credits for Employers in the Aerospace Sector (Form 565 Part 2)	Credit for Employees in the Aerospace Sector (Form 564)
- Name of qualified employer and federal employer identification number; - Business type; - Itemized credit computation, including the name of qualified employee(s), social security number, date of employment in Oklahoma, name of institution, compensation paid and credit amount; - Total credit for compensation paid.	- Name; - Social Security Number; - Employer name and federal employer identification number; - Date of employment in Oklahoma; - College or university name and location; name of ABET-accredited program - Date of graduation; - Credit computation, including credit for employment during current tax year, unused carryover credit and total credit available.

Source: OTC Forms 564 and 565

All claimants must also fill out the applicable fields of Form 511CR (Other Credits), including (1) unused credit carried over from prior year(s) (not applicable for employers), (2) credit established during the current tax year, and (3) total available credit (the sum of 1 and 2).

OTC Verification and Acceptance of Claims
When the OTC receives the required forms, they review them for accuracy and completeness. According to OTC representatives, typically, if an employee's application is denied, it is due to having a degree but not the "right one." This is discussed in the ABET Accreditation Requirement section that follows.

Administrative Issues

ABET Accreditation Requirement
Recent changes to the definitions of "qualified employee" and "qualified program" have sought to reduce or eliminate confusion around eligibility for the employee credit, however the confusion persists, with a total of 5.7 percent of audited credits issued leading to claw backs of incentive dollars.

As mentioned previously; to qualify for the employee credit, an employee must have been awarded an undergraduate or graduate degree from a qualified program that is accredited by the Engineering Accreditation Commission (EAC) of the Accreditation Board for Engineering and Technology (ABET). According to ABET data, there are 786 EAC-accredited institutions worldwide, 590 of which are in the United States.[20] However, there are many programs offered that are not ABET accredited, or that are at ABET accredited institutions, but are not accredited programs.

Eligibility Issues
In recent years, concerns have emerged around the employee tax credit program in Oklahoma, particularly regarding eligibility tied to ABET-accredited degrees and programs. Some individuals who were initially

[20] Accreditation Board for Engineering and Technology, "Accredited Programs". Available at https://amspub.abet.org/aps/category-search?commissions=3&countries=US.

approved later discovered they did not meet the necessary qualifications, following audits conducted by the OTC. These audits, part of OTC's routine compliance reviews, have revealed cases where credits may have been mistakenly awarded.

Data Availability Issues
Efforts to evaluate the effectiveness of these incentives have been hampered by limited data availability. Although the project team has requested key metrics such as degree counts by institution type and payroll data, the OTC reported that this information was not available.

Based on a review of Forms 564 and 565, the project team's understanding is that the OTC would have access to the requested information. Form 564 collects the name and location of the college or university, the name of the qualified program and the employee's graduation date. Form 565 collects the total compensation paid to employees for which an employer is claiming a credit.

Alignment with Incentive Best Practices

The Aerospace Employer and Employee Tax Credits are well-aligned with the identified best practices for incentive design. The programs are industry-specific, have requirements for claimants, leverage a varying degree of private capital based on employment generated, and aim to create and sustain qualified employment in an industry that otherwise faces barriers to growth. However, as noted above, the eligibility requirements are somewhat opaque to users and while there is a cap on the value of awards on a per-recipient basis, the program has no overall annual cap.

Figure 6: Best Practice Implementation in Incentive Design

Best Practice	Aerospace
Targeted to specific companies or industries	●
Discretionary	●
Leverage significant private capital	◌
Limited duration / front-load benefits to 1-3 years	○
State / Local conditions considered	●
Overcoming practical barriers to growth	●
Transparency	◌
Accountability	○
Cap on value of awards	○
Simple and understandable	●
Sunset on program duration	●

Legend: Dark circle = full adoption, Light circle = partial adoption, Empty circle = limited adoption

Economic and Fiscal Impact

Fiscal Impact

From a fiscal perspective, State tax revenue from this activity exceeds the incentive credits claimed. The following table illustrates the economic impact benefits. For analysis purposes, the table compares total impacts with total estimated tax revenue and total claimed credit. These comparisons are provided only at the total impact level for each year and not the component elements, because there are no corresponding credits at the component levels. In the most recent tax year for which data is available, 2022, the 2,722 employees claiming $20.9 million in the credit were associated with $486.2 million in contribution to the Gross State Product and $25.8 million in estimated State tax revenues.

Economic Impact

The total economic impact is assessed based on the output generated by jobs that are supported through the aerospace employee incentive. It is assumed that the jobs claimed under the incentive program represent the employment that would not have been created or retained in the absence of the incentive. To ascertain total economic impact, the project team used the input-output IMPLAN software.[21]

The total economic activity associated with the employment attribute to the incentive exceeds the total cost of the incentive, measured by the amount claimed, by a significant margin on an annual basis. The economic output per $1 claimed ranges from $67 to $76 over the period from tax year 2020 through tax year 2022. In tax year 2022, the most recent year for which data was available, the 2,722 claimants of the Aerospace Employee tax credit were associated with over $1.5 billion in economic output. Indirect and induced activity supported an additional 1,262 jobs, for a direct to indirect jobs ratio just above 2:1. This is in contrast to the less than 1:1 ratio exhibited in the years reviewed in the prior evaluation, indicating that previously, the jobs supported through the credit program had a greater impact in terms of supporting additional indirect and induced employment. Much of this change in relationship can be attributed to the impact of the COVID-19 pandemic on the jobs market.

The figures on the total economic output and State tax revenues associated with program claimants are evaluated on the aggregate level, however it would be inaccurate to attribute all of the employees claiming the credit to the credit itself. Much of this employment would have already located in the State, therefore only some unknown portion of claimants are directly attributable to the credit program, meaning that they would not have located in Oklahoma and/or conferred the requisite degree *but for* the availability of the program. 'But for' testing seeks to determine whether some or all economic activity would have occurred even without the existence of the incentive, and it is critical for understanding how much of the program's benefit should be attributed to the incentive. While a wealth of literature exists on 'but for' testing, it is both difficult to quantify due to the exogenous nature of career choices for employees, and it is used inconsistently in incentive evaluations. An alternative approach is conducting a breakeven analysis. The breakeven analysis calculates the total level of benefits of the program that would have to be attributable to the incentive in order for the State to 'break even' on their investment, as represented by the amount claimed.

In order for the State tax revenues associated with the program to equal or exceed the claims associated with the program, at least 81 percent of claimants must be directly attributable to the program. This means that up to 19 percent of activity could have occurred without the credit for the credit to still generate a positive return on investment to the State.

The $1.5 billion in economic output associated with the aerospace employee tax credit in tax year 2022 was attributable to more than 450 industries (among the 536 tracked in IMPLAN's input/output model),

[21] Additional discussion of IMPLAN is provided in Appendix B.

demonstrating how the incentives ripple throughout the state's economy and create significant benefits beyond the industry they are targeting. While the aerospace industry accounts for just over 80 percent of the economic activity, other key sectors benefitting from the activity associated with the program include real estate for employee housing, retail and wholesale sellers, and medical providers and institutions.

Despite lower indirect and induced impacts associated with the employment supported through the credit program, the estimated tax revenues to the State of Oklahoma from activity supported by the credit program exceeded the total amount claimed each year under the credit program during tax year 2020-2022. In tax year 2022, the most recent year for which data is available, for every $1.00 claimed under the aerospace employee tax credit program, $1.23 of State taxes were generated. These tax revenues are estimated using the long-term history ratio of Oklahoma's gross state tax collections, as published by the Oklahoma Tax Commission, to the Gross State Product. Additional detail is provided in the appendix.

Ultimately, the Aerospace Employer and Employee Tax Credits provide significant economic benefits to the Oklahoma economy well beyond just the aerospace industry they are targeted at. From a fiscal perspective, the programs generate a positive ROI to the state, with State tax revenue associated with program activity exceeding the credits claimed. The following table illustrates both the economic and fiscal benefits of the program based on data for tax years 2020 through 2022.

Table 7: Economic Impacts per Year, FY2020-FY2022

Year	Effect	Output	Value Added	Labor Income	Jobs	Estimated OK Tax Revenue	Total Claimed	Ratio: Output/ Claims	Ratio: Revenue/ Claims
2020	Direct Effect	$1,272,296,476	$284,412,794	$368,897,133	2,742				
	Indirect Effect	$153,186,166	$70,147,198	$44,547,379	536				
	Induced Effect	$172,770,195	$103,700,313	$48,679,322	887				
	Total Effect	**$1,598,252,837**	**$458,260,304**	**$462,123,834**	**4,165**	**$24,299,683**	**$21,086,974**	**$75.79**	**$1.15**
2021	Direct Effect	$1,159,164,722	$312,230,392	$399,056,348	2,751				
	Indirect Effect	$112,105,178	$48,366,256	$30,215,697	386				
	Induced Effect	$175,617,562	$101,813,704	$48,103,275	873				
	Total Effect	**$1,446,887,461**	**$462,410,351**	**$477,375,321**	**4,010**	**$24,519,743**	**$21,581,589**	**$67.04**	**$1.14**
2022	Direct Effect	$1,229,405,059	$340,965,574	$396,565,164	2,722				
	Indirect Effect	$109,650,887	$46,946,662	$28,385,559	386.37				
	Induced Effect	$171,909,405	$98,305,168	$46,118,780	875.68				
	Total Effect	**$1,510,965,351**	**$486,217,404**	**$471,069,503**	**3,984**	**$25,782,134**	**$20,916,806**	**$72.24**	**$1.23**

Incentive Benchmarking

Benchmarking Peer State Programs

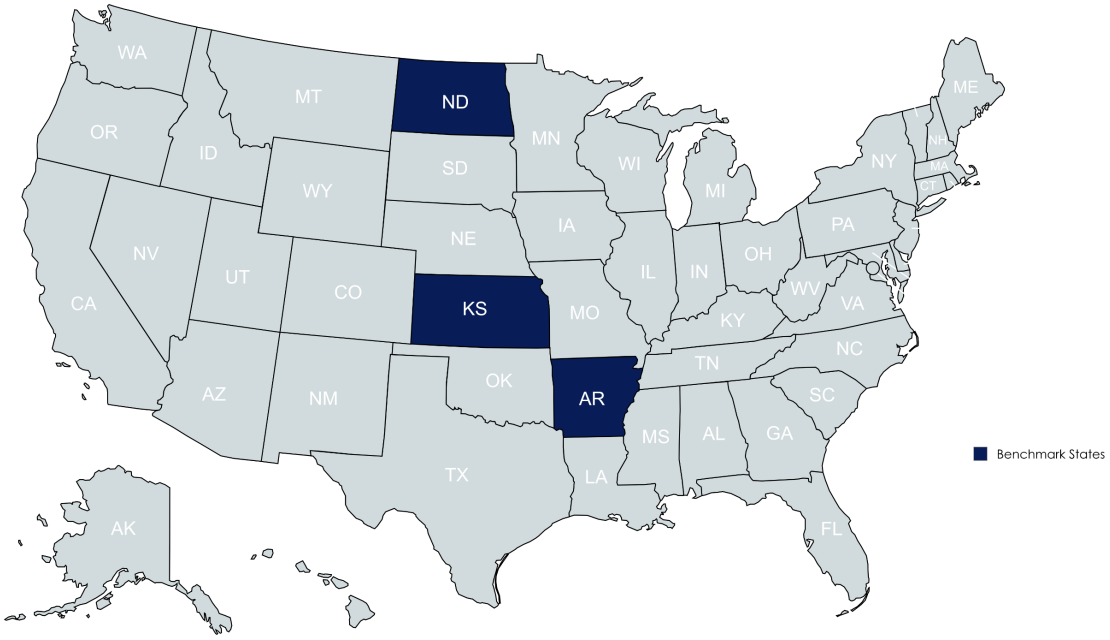
For evaluation purposes, benchmarking provides information related to how peer states use and evaluate similar incentives. At the outset, it should be understood that no states are 'perfect peers' – there will be multiple differences in economic, demographic and political factors that will have to be considered in any analysis; likewise, it is exceedingly rare that any two state incentive programs will be exactly the same.[22] These benchmarking realities must be taken into consideration when making comparisons – and, for the sake of brevity, the report will not continually re-make this point throughout the discussion.

The process of creating a comparison group for incentives typically begins with bordering states. This is generally the starting point, because proximity often leads states to compete for the same regional businesses or business/industry investments. Second, neighboring states often (but not always) have similar economic, demographic or political structures that lend themselves to comparison.

In the case of the Aerospace Employer and Employee tax credits, comparable state programs – incentives which focus on recruiting aerospace industry talent – or more generally, recruiting for difficult-to-fill positions – are rare. Tuition reimbursement programs like that offered under the Aerospace Employer Tax Credit are similarly uncommon, especially for targeted industries.

Comparable incentive programs can be broken into three general categories: those aimed at recruiting employees into hard-to-fill position, those providing a credit to employers who offer tuition reimbursement, and the least uncommon of the three, those aimed at recruiting and providing tuition reimbursement for employees *in a specific industry.*

Figure 5: Map of Peer Program States



Source: MapChart

[22] The primary instances of exactly alike state incentive programs occur when states choose to 'piggyback' onto federal programs.

North Dakota has a program targeting workforce recruitment for hard-to-fill positions, known as the Workforce Recruitment Credit.[23] The program similarly provides a credit based on the compensation paid to eligible employees, however, unlike Oklahoma's programs, North Dakota's program is not targeted at a specific industry, nor does the credit amount vary based on the location of the institution that the employee graduated from.

Kansas has a suite of aviation tax credit programs similar to Oklahoma's programs, known as the Employer Hiring Incentive and Tuition Reimbursement.[24] This program includes both the employer- and employee-targeted credits specifically in the aviation industry, including tuition reimbursement credits and credits based on compensation paid for aviation employers, and income tax credits for qualified aviation employees.

The below table synthesizes Kansas' program, as well as Arkansas' program targeting tuition reimbursement for employees pursuing in-state degrees:

Table 7: State Incentives Related to Recruitment and Tuition Reimbursement

State	Program	Description
Kansas	Employer Hiring Incentive and Tuition Reimbursement	Qualified aviation employees may receive an income tax credit up to $5,000 per year. Employers may receive a non-refundable credit for 10 percent of the compensation paid to each new qualified employee and may be eligible for an additional up to 50 percent of reimbursed tuition.
Arkansas	Tuition Reimbursement Tax Credit[25]	Eligible companies may claim an income tax credit equal to 30 percent of tuition, books, and fees reimbursed to a full-time permanent employee if the employee has completed one semester at an eligible education institution located in the State.

Minnesota has a current bill pending, S.F. 519, to create Aerospace and Aviation Credits, which include individual income tax employee credits, an employer tuition reimbursement credit, and employer compensation credit.[26] Though the program has not been enacted, it highlights an additional state's pursuit specifically of enhancing their aerospace industry and labor market. The program has the same three elements as Kansas' as well as those offered between the two programs in Oklahoma.

[23] North Dakota Tax Commission, Income Tax Exemptions & Credits. Accessed electronically at https://www.tax.nd.gov/tax-exemptions-credits/income-tax-exemptions-credits.
[24] Kansas Commerce, Kansas Aviation Tax Credits – Employer Hiring and Tuition Reimbursement. Accessed electronically at https://www.kansascommerce.gov/businesses/kansas-aviation-tax-credits/.
[25] Arkansas Economic Development Commission, Exemptions/Reductions. Accessed electronically at https://www.arkansasedc.com/why-arkansas/business-climate/incentives-old/pages/exemptions-reductions#:~:text=Tuition%20Reimbursement,Arkansas%20post%2Dsecondary%20educational%20institution.
[26] Minnesota Legislature Office of the Revisor of Statutes, SF 519, accessed electronically at https://www.revisor.mn.gov/bills/text.php?number=SF519&version=0&session=ls94&session_year=2025&session_number=0.

Appendix

Appendix A: Incentive Statute

§68-2357.301. Definitions.

As used in Sections 2357.301 through 2357.304 of this title:

1. "Aerospace sector" means a private or public organization located in this state and engaged in the manufacture of aerospace or defense hardware or software, aerospace maintenance, aerospace repair and overhaul, supply of parts to the aerospace industry, provision of services and support relating to the aerospace industry, research and development of aerospace technology and systems and the education and training of aerospace personnel;
2. "Compensation" means payments in the form of contract labor for which the payor is required to provide a Form 1099 to the person paid, wages subject to withholding tax paid to a part-time employee or full-time employee or salary or other remuneration. Compensation shall not include employer-provided retirement, medical or health-care benefits, reimbursement for travel, meals, lodging or any other expense;
3. "Institution" means an institution within The Oklahoma State System of Higher Education or any other public or private college or university that is accredited by a national accrediting body;
4. "Qualified employer" means a sole proprietor, general partnership, limited partnership, limited liability company, corporation, other legally recognized business entity or public entity whose principal business activity involves the aerospace sector;
5. "Qualified employee" means any person, regardless of the date of hire, employed in this state by or contracting in this state with a qualified employer on or after January 1, 2009, who was not employed in the aerospace sector in this state immediately preceding employment or contracting with a qualified employer, and who has been either:
    A. awarded an undergraduate or graduate degree from a qualified program by an institution, or
    B. licensed as a Professional Engineer by the State Board of Licensure for Professional Engineers and Land Surveyors pursuant to Section 475.15 of Title 59 of the Oklahoma Statutes.

Provided, the definition shall not be interpreted to exclude any person who was employed in the aerospace sector, but not as a full-time engineer, prior to being awarded an undergraduate or graduate degree from a qualified program by an institution or any person who has been awarded an undergraduate or graduate degree from a qualified program by an institution and is employed by a professional staffing company and assigned to work in the aerospace sector in this state.
Beginning on or after January 1, 2024, the definition shall also not be interpreted to exclude any person (1) who previously qualified and established the credit against the tax imposed pursuant to Section 2355 of this title and becomes employed by a different qualified employer, or (2) who establishes the credit against the tax imposed pursuant to Section 2355 of this title for the first time and becomes employed by a different qualified employer in subsequent years, provided a person in either case has not claimed the credit for the lifetime maximum of five (5) years;
6. "Qualified program" means a program at an institution that includes a graduate or undergraduate program that has been accredited by the Engineering Accreditation Commission of the Accreditation Board for Engineering and Technology (ABET) and that awards an undergraduate or graduate degree. Both the undergraduate and graduate programs of the same discipline of engineering at an institution shall be part of the qualified program if either program is ABET accredited; and
7. "Tuition" means the average annual amount paid by a qualified employee for enrollment and instruction in a qualified program. Tuition shall not include the cost of books, fees or room and board.

Added by Laws 2008, c. 417, § 1, eff. Jan. 1, 2009. Amended by Laws 2014, c. 30, § 1, eff. Nov. 1, 2014; Laws 2021, c. 579, § 1, eff. Nov. 1, 2021; Laws 2024, c. 313, § 1, eff. Nov. 1, 2024.

§68-2357.302. Credit for employee tuition reimbursement.

A. Except as provided in subsection F of this section, for taxable years beginning after December 31, 2008, and ending before January 1, 2026, a qualified employer shall be allowed a credit against the tax imposed pursuant to Section 2355 of this title for tuition reimbursed to a qualified employee.

B. The credit authorized by subsection A of this section may be claimed only if the qualified employee has been awarded an undergraduate or graduate degree within one (1) year of commencing employment with the qualified employer.
C. The credit authorized by subsection A of this section shall be in the amount of fifty percent (50%) of the tuition reimbursed to a qualified employee for the first through fourth years of employment. In no event shall this credit exceed fifty percent (50%) of the average annual amount paid by a qualified employee for enrollment and instruction in a qualified program at a public institution in Oklahoma.
D. The credit authorized by subsection A of this section shall not be used to reduce the tax liability of the qualified employer to less than zero (0).
E. No credit authorized by this section shall be claimed after the fourth year of employment.
F. No credit otherwise authorized by the provisions of this section may be claimed for any event, transaction, investment, expenditure or other act occurring on or after July 1, 2010, for which the credit would otherwise be allowable. The provisions of this subsection shall cease to be operative on July 1, 2011. Beginning July 1, 2011, the credit authorized by this section may be claimed for any event, transaction, investment, expenditure or other act occurring on or after July 1, 2011, according to the provisions of this section.

Added by Laws 2008, c. 417, § 2, eff. Jan. 1, 2009. Amended by Laws 2010, c. 327, § 26, eff. July 1, 2010; Laws 2011, c. 5, § 1; Laws 2014, c. 30, § 2, eff. Nov. 1, 2014; Laws 2017, c. 153, § 1, eff. Nov. 1, 2017.

§68-2357.303. Credit for compensation paid to employees.

A. Except as provided in subsection F of this section, for taxable years beginning after December 31, 2008, and ending before January 1, 2026, a qualified employer shall be allowed a credit against the tax imposed pursuant to Section 2355 of this title for compensation paid to a qualified employee.
B. The credit authorized by subsection A of this section shall be in the amount of:
1. Ten percent (10%) of the compensation paid for the first through fifth years of employment in the aerospace sector if the qualified employee graduated from an institution located in this state; or
2. Five percent (5%) of the compensation paid for the first through fifth years of employment in the aerospace sector if the qualified employee graduated from an institution located outside this state.
C. The credit authorized by this section shall not exceed Twelve Thousand Five Hundred Dollars ($12,500.00) for each qualified employee annually.
D. The credit authorized by this section shall not be used to reduce the tax liability of the qualified employer to less than zero (0).
E. No credit authorized pursuant to this section shall be claimed after the fifth year of employment.
F. No credit otherwise authorized by the provisions of this section may be claimed for any event, transaction, investment, expenditure or other act occurring on or after July 1, 2010, for which the credit would otherwise be allowable. The provisions of this subsection shall cease to be operative on July 1, 2011. Beginning July 1, 2011, the credit authorized by this section may be claimed for any event, transaction, investment, expenditure or other act occurring on or after July 1, 2011, according to the provisions of this section.

Added by Laws 2008, c. 417, § 3, eff. Jan. 1, 2009. Amended by Laws 2010, c. 327, § 27, eff. July 1, 2010; Laws 2011, c. 5, § 2; Laws 2014, c. 30, § 3, eff. Nov. 1, 2014; Laws 2017, c. 153, § 2, eff. Nov. 1, 2017.

§68-2357.304. Credit for employees.

A. Except as provided in subsection D of this section, for taxable years beginning after December 31, 2008, and ending before January 1, 2026, a qualified employee shall be allowed a credit against the tax imposed pursuant to Section 2355 of this title of up to Five Thousand Dollars ($5,000.00) per tax year for a period of time not to exceed five (5) years during the lifetime of the qualified employee. This credit may be claimed in nonconsecutive tax years.
B. The credit authorized by this section shall not be used to reduce the tax liability of the taxpayer to less than zero (0).
C. Any credit claimed, but not used, may be carried over, in order, to each of the five (5) subsequent taxable years.

D. No credit otherwise authorized by the provisions of this section may be claimed for any event, transaction, investment, expenditure or other act occurring on or after July 1, 2010, for which the credit would otherwise be allowable. The provisions of this subsection shall cease to be operative on July 1, 2011. Beginning July 1, 2011, the credit authorized by this section may be claimed for any event, transaction, investment, expenditure or other act occurring on or after July 1, 2011, according to the provisions of this section.

Added by Laws 2008, c. 417, § 4, eff. Jan. 1, 2009. Amended by Laws 2010, c. 327, § 28, eff. July 1, 2010; Laws 2011, c. 5, § 3; Laws 2014, c. 30, § 4, eff. Nov. 1, 2014; Laws 2017, c. 153, § 3, eff. Nov. 1, 2017; Laws 2024, c. 313, § 2, eff. Nov. 1, 2024.

Appendix B: IMPLAN Economic Impact Methodology

The economic impact methodology utilized to determine the multiplier effects is IMPLAN, a proprietary model; PFM has obtained a license for use of the IMPLAN model for these evaluations.

IMPLAN's Social Accounting Matrices (SAMs) capture the actual dollar amounts of all business transactions taking place in a regional economy as reported each year by businesses and governmental agencies. SAM accounts are a better measure of economic flow than traditional input-output accounts because they include "non-market" transactions. Examples of these transactions would be taxes and unemployment benefits.

Multipliers

SAMs can be constructed to show the effects of a given change on the economy of interest. These are called Multiplier Models. Multiplier Models study the impacts of a user-specified change in the chosen economy for 440 different industries. Because the Multiplier Models are built directly from the region- specific SAMs, they will reflect the region's unique structure and trade situation.

Multiplier Models are the framework for building impact analysis questions. Derived mathematically, these models estimate the magnitude and distribution of economic impacts, and measure three types of effects which are displayed in the final report. These are the direct, indirect, and induced changes within the economy.

- **Direct** effects are determined by the Event as defined by the user (i.e., a $10 million order is a $10 million direct effect).
- The **indirect** effects are determined by the amount of the direct effect spent within the study region on supplies, services, labor, and taxes.
- Finally, the **induced** effect measures the money that is re-spent in the study area as a result of spending from the indirect effect.

Each of these steps recognizes an important leakage from the economic study region spent on purchases outside of the defined area. Eventually, these leakages will stop the cycle.

Appendix B: Economic Impacts by Sector

Sector Description	Employment	Output
Aircraft manufacturing	2,633	$1,232,440,578
Wholesale - Machinery, equipment, and supplies	34	$12,091,125
Wholesale - Household appliances and electrical and electronic goods	27	$22,094,138
Other aircraft parts and auxiliary equipment manufacturing	16	$4,220,157
Management of companies and enterprises	18	$5,106,801
Truck transportation	17	$5,962,514
Wholesale - Other durable goods merchant wholesalers	14	$5,770,432
Data processing, hosting, and related services	13	$5,044,814
Employment services	21	$2,837,000
Warehousing and storage	16	$1,339,749

Sector Description	Employment	Output
Monetary authorities and depository credit intermediation	19	$6,442,395
Couriers and messengers	9	$1,287,885
Fabricated structural metal manufacturing	6	$2,848,272
Custom computer programming services	5	$959,493
Computer systems design services	5	$1,471,198
Other computer related services, including facilities management	5	$1,408,343
Accounting, tax preparation, bookkeeping, and payroll services	10	$1,561,101
Aircraft engine and engine parts manufacturing	4	$2,051,657
Retail - Motor vehicle and parts dealers	21	$4,687,455
Valve and fittings, other than plumbing, manufacturing	4	$1,599,828
Legal services	9	$2,435,539
Full-service restaurants	52	$5,039,013
Business support services	6	$629,066
Wholesale - Professional and commercial equipment and supplies	6	$1,797,839
Wholesale - Wholesale electronic markets and agents and brokers	4	$438,967
Postal service	5	$597,235
Services to buildings	6	$689,106
Iron, steel pipe and tube manufacturing from purchased steel	2	$2,193,149
Management consulting services	4	$739,212
Advertising, public relations, and related services	3	$787,119
Other support services	3	$749,851
Wholesale - Other nondurable goods merchant wholesalers	6	$2,606,291
Scenic and sightseeing transportation and support activities for transportation	3	$361,799
Investigation and security services	4	$368,026
Machine shops	2	$360,327
Other local government enterprises	11	$5,372,557
Wired telecommunications carriers	3	$2,311,129
Landscape and horticultural services	4	$639,297
Commercial and industrial machinery and equipment repair and maintenance	2	$567,442
Software publishers	2	$1,665,470
Spring and wire product manufacturing	1	$542,362
Wholesale - Motor vehicle and motor vehicle parts and supplies	2	$1,187,983
Nondepository credit intermediation and related activities	5	$1,671,940
Limited-service restaurants	51	$5,917,370

Sector Description	Employment	Output
Office administrative services	2	$317,638
All other food and drinking places	20	$1,684,161
Other real estate	4	$5,559,204
Insurance agencies, brokerages, and related activities	4	$1,439,108
Architectural, engineering, and related services	2	$483,679
Hotels and motels, including casino hotels	11	$1,695,170
lectric power transmission and distribution	2	$3,643,315
Iron and steel mills and ferroalloy manufacturing	1	$1,879,571
aintenance and repair construction of nonresidential structures	2	$411,907
Other plastics product manufacturing	1	$325,763
Paperboard container manufacturing	1	$537,141
All other miscellaneous professional, scientific, and technical services	1	$452,438
Insurance carriers, except direct life	4	$2,806,316
Electronic and precision equipment repair and maintenance	2	$358,180
Automotive repair and maintenance, except car washes	10	$1,959,391
Radio and television broadcasting	1	$525,079
Other motor vehicle parts manufacturing	1	$391,733
Commercial and industrial machinery and equipment rental and leasing	1	$658,683
Environmental and other technical consulting services	1	$309,774
Specialized design services	1	$225,595
Automotive equipment rental and leasing	3	$1,201,593
Dry-cleaning and laundry services	2	$262,448
Waste management and remediation services	2	$589,738
Printing	1	$180,927
Retail - Gasoline stores	10	$1,563,704
Rail transportation	1	$597,564
Retail - General merchandise stores	34	$2,843,873
Turned product and screw, nut, and bolt manufacturing	0	$118,380
Internet publishing and broadcasting and web search portals	1	$665,482
Securities and commodity contracts intermediation and brokerage	1	$1,108,802
Wholesale - Drugs and druggistsâ€™ sundries	1	$1,341,998
Electroplating, anodizing, and coloring metal	0	$61,403
Personal and household goods repair and maintenance	1	$429,377
Scientific research and development services	1	$306,588
Satellite, telecommunications resellers, and all other telecommunications	1	$286,189

Sector Description	Employment	Output
Air transportation	1	$876,853
General and consumer goods rental except video tapes and discs	1	$249,720
Fluid power pump and motor manufacturing	0	$149,706
Other miscellaneous chemical product manufacturing	0	$208,226
Wholesale - Grocery and related product wholesalers	4	$1,179,984
Newspaper publishers	1	$143,395
Facilities support services	1	$117,473
Retail - Building material and garden equipment and supplies stores	7	$1,135,936
lectric power generation - Fossil fuel	1	$866,262
Wireless telecommunications carriers (except satellite)	1	$1,929,327
Abrasive product manufacturing	0	$67,953
Rolled steel shape manufacturing	0	$279,050
Motion picture and video industries	1	$201,289
Motor vehicle seating and interior trim manufacturing	0	$87,300
Local government passenger transit	1	$109,549
Travel arrangement and reservation services	1	$321,480
Cable and other subscription programming	0	$461,731
atural gas distribution	1	$842,346
Search, detection, and navigation instruments manufacturing	0	$72,887
Other personal services	3	$629,434
Wholesale - Petroleum and petroleum products	1	$1,376,675
Local government electric utilities	0	$208,453
Metal coating and nonprecious engraving	0	$58,935
Plate work manufacturing	0	$53,725
Other financial investment activities	3	$2,373,867
il and gas extraction	1	$4,755,638
Junior colleges, colleges, universities, and professional schools	6	$642,383
Promoters of performing arts and sports and agents for public figures	1	$247,513
Fitness and recreational sports centers	3	$201,401
Periodical publishers	0	$123,059
Commercial Sports Except Racing	0	$199,560
Custom compounding of purchased resins	0	$67,748
State government electric utilities	0	$129,897
Transit and ground passenger transportation	0	$150,898
Paint and coating manufacturing	0	$92,642
Car washes	2	$265,748
Other federal government enterprises	1	$12,557

Sector Description	Employment	Output
Business and professional associations	1	$349,534
Other amusement and recreation industries	3	$281,834
Sign manufacturing	0	$22,306
Other educational services	5	$749,384
Lessors of nonfinancial intangible assets	0	$1,268,996
Other textile product mills	0	$12,739
Ready-mix concrete manufacturing	0	$91,340
Independent artists, writers, and performers	0	$125,042
Ornamental and architectural metal work manufacturing	0	$25,703
Carpet and rug mills	0	$46,832
Fabricated pipe and pipe fitting manufacturing	0	$22,400
Performing arts companies	1	$142,218
Other state government enterprises	0	$176,516
ther nonmetallic mineral mining and quarrying	0	$11,716
Hardware manufacturing	0	$25,487
Other fabricated metal manufacturing	0	$25,582
Ferrous metal foundries	0	$18,718
All other petroleum and coal products manufacturing	0	$98,734
Petroleum refineries	0	$6,006,547
Photographic services	0	$101,924
and and gravel mining	0	$24,957
Iron and steel forging	0	$19,474
Metal window and door manufacturing	0	$19,483
Paper mills	0	$211,253
lectric power generation - Wind	0	$240,168
Nonferrous forging	0	$15,880
Ball and roller bearing manufacturing	0	$15,552
aintenance and repair construction of residential structures	3	$637,998
Other rubber product manufacturing	0	$13,396
Polystyrene foam product manufacturing	0	$30,821
Metal heat treating	0	$11,565
Retail - Miscellaneous store retailers	11	$1,298,626
Brick, tile, and other structural clay product manufacturing	0	$16,863
Steel wire drawing	0	$25,151
Plastics packaging materials and unlaminated film and sheet manufacturing	0	$27,217
Other concrete product manufacturing	0	$24,782
All other miscellaneous wood product manufacturing	0	$13,676
Sheet metal work manufacturing	0	$12,935

Sector Description	Employment	Output
Motor vehicle steering, suspension component (except spring), and brake systems manufacturing	0	$34,590
Pipeline transportation	0	$511,127
News syndicates, libraries, archives and all other information services	0	$15,131
Prefabricated metal buildings and components manufacturing	0	$14,482
Plastics pipe and pipe fitting manufacturing	0	$39,382
Fluid power cylinder and actuator manufacturing	0	$6,266
Metal crown, closure, and other metal stamping (except automotive)	0	$8,643
Wood container and pallet manufacturing	0	$35,707
Motor and generator manufacturing	0	$9,375
aintenance and repair construction of highways, streets, bridges, and tunnels	0	$8,542
Retail - Food and beverage stores	21	$2,269,141
Air conditioning, refrigeration, and warm air heating equipment manufacturing	0	$26,515
Retail - Sporting goods, hobby, musical instrument and book stores	6	$593,855
ater, sewage and other systems	0	$29,996
tone mining and quarrying	0	$23,890
Machine tool manufacturing	0	$5,035
Industrial mold manufacturing	0	$3,577
Paperboard mills	0	$18,813
Scales, balances, and miscellaneous general purpose machinery manufacturing	0	$4,370
Retail - Furniture and home furnishings stores	4	$957,497
Aluminum sheet, plate, and foil manufacturing	0	$14,042
Motor vehicle transmission and power train parts manufacturing	0	$19,326
Retail - Electronics and appliance stores	4	$326,206
All other miscellaneous manufacturing	0	$42,292
Lime manufacturing	0	$15,363
Gypsum product manufacturing	0	$20,532
Cutting tool and machine tool accessory manufacturing	0	$2,858
Other accommodations	1	$81,632
Manufactured home (mobile home) manufacturing	0	$4,264
Directory, mailing list, and other publishers	0	$16,760
Watch, clock, and other measuring and controlling device manufacturing	0	$5,348
Tire manufacturing	0	$157,983
Laminated plastics plate, sheet (except packaging), and shape manufacturing	0	$4,553
Motor vehicle body manufacturing	0	$3,884

Sector Description	Employment	Output
Concrete block and brick manufacturing	0	$11,789
Other millwork, including flooring	0	$7,362
Truck trailer manufacturing	0	$3,508
Petroleum lubricating oil and grease manufacturing	0	$24,043
Metal cans manufacturing	0	$14,161
Motor vehicle electrical and electronic equipment manufacturing	0	$13,305
Metal tank (heavy gauge) manufacturing	0	$3,128
Nonferrous metal foundries	0	$2,093
Overhead cranes, hoists, and monorail systems manufacturing	0	$4,565
Urethane and other foam product (except polystyrene) manufacturing	0	$8,943
Wood kitchen cabinet and countertop manufacturing	0	$5,690
Travel trailer and camper manufacturing	0	$68,705
Oil and gas field machinery and equipment manufacturing	0	$9,382
eenhouse, nursery, and floriculture production	1	$72,976
Broadcast and wireless communications equipment manufacturing	0	$2,889
Sawmills	0	$8,964
Glass product manufacturing made of purchased glass	0	$12,511
oal mining	0	$15,084
Industrial and commercial fan and blower and air purification equipment manufacturing	0	$1,621
Amusement parks and arcades	0	$74,493
Cement manufacturing	0	$12,929
Photographic film and chemical manufacturing	0	$5,026
ommercial logging	0	$1,864
Funds, trusts, and other financial vehicles	2	$2,024,094
Retail - Health and personal care stores	12	$1,730,820
read and bakery product, except frozen, manufacturing	1	$195,501
nimal production, except cattle and poultry and eggs	1	$162,591
Other aluminum rolling, drawing and extruding	0	$2,200
Plastics material and resin manufacturing	0	$9,335
upport activities for oil and gas operations	0	$14,772
Other basic inorganic chemical manufacturing	0	$9,552
Pottery, ceramics, and plumbing fixture manufacturing	0	$5,255
Concrete pipe manufacturing	0	$8,499
Wood windows and door manufacturing	0	$2,502
Custom roll forming	0	$2,328
Other ambulatory health care services	3	$435,434

Sector Description	Employment	Output
Industrial gas manufacturing	0	$12,373
Power boiler and heat exchanger manufacturing	0	$1,516
Paper bag and coated and treated paper manufacturing	0	$2,404
Retail - Clothing and clothing accessories stores	10	$1,450,219
Wiring device manufacturing	0	$1,400
Turbine and turbine generator set units manufacturing	0	$1,146
Power-driven handtool manufacturing	0	$2,001
Sound recording industries	0	$18,021
Prefabricated wood building manufacturing	0	$2,148
Gasket, packing, and sealing device manufacturing	0	$3,379
lectric power generation - Hydroelectric	0	$3,646
Copper rolling, drawing, extruding and alloying	0	$4,878
Motor vehicle metal stamping	0	$1,438
Asphalt paving mixture and block manufacturing	0	$15,763
Mattress manufacturing	0	$8,064
Motor vehicle gasoline engine and engine parts manufacturing	0	$3,175
Sanitary paper product manufacturing	0	$27,952
Asphalt shingle and coating materials manufacturing	0	$16,134
Metal barrels, drums and pails manufacturing	0	$1,257
Surgical and medical instrument manufacturing	0	$1,966
Heavy duty truck manufacturing	0	$4,574
Engineered wood member and truss manufacturing	0	$2,270
Military armored vehicle, tank, and tank component manufacturing	0	$1,118
Cut stone and stone product manufacturing	0	$22,802
oultry processing	0	$144,233
Stationery product manufacturing	0	$4,952
Handtool manufacturing	0	$1,444
ottled and canned soft drinks and water	1	$504,096
Glass container manufacturing	0	$14,863
lectric power generation - Solar	0	$2,992
Miscellaneous nonmetallic mineral products manufacturing	0	$2,020
Nitrogenous fertilizer manufacturing	0	$22,900
Custom architectural woodwork and millwork	0	$695
Reconstituted wood product manufacturing	0	$4,526
Special tool, die, jig, and fixture manufacturing	0	$380
Boat building	0	$33,982
Major household appliance manufacturing	0	$6,248
Direct life insurance carriers	1	$705,084

Sector Description	Employment	Output
Book publishers	0	$24,808
Measuring, dispensing, and other pumping equipment manufacturing	0	$3,297
Unlaminated plastics profile shape manufacturing	0	$1,749
upport activities for agriculture and forestry	0	$7,798
Commercial and service industry machinery manufacturing	0	$1,086
Plastics bottle manufacturing	0	$3,600
Adhesive manufacturing	0	$1,809
Semiconductor and related device manufacturing	0	$1,412
nimal, except poultry, slaughtering	0	$149,252
Secondary processing of other nonferrous metals	0	$1,272
Other electronic component manufacturing	0	$477
Ground or treated mineral and earth manufacturing	0	$577
luid milk manufacturing	0	$213,887
Polish and other sanitation good manufacturing	0	$4,044
Breweries	0	$65,031
Industrial truck, trailer, and stacker manufacturing	0	$607
ther animal food manufacturing	0	$82,437
ll other crop farming	0	$51,933
Other leather and allied product manufacturing	0	$523
Construction machinery manufacturing	0	$2,992
Printed circuit assembly (electronic assembly) manufacturing	0	$481
Flat glass manufacturing	0	$2,461
Totalizing fluid meter and counting device manufacturing	0	$440
Wineries	0	$34,381
Jewelry and silverware manufacturing	0	$19,162
Wood preservation	0	$2,404
Relay and industrial control manufacturing	0	$285
Cut and sew apparel manufacturing (except contractors)	0	$1,137
Other household nonupholstered furniture manufacturing	0	$1,386
Rolling mill and other metalworking machinery manufacturing	0	$448
airy cattle and milk production	0	$45,151
eef cattle ranching and farming, including feedlots and dual-purpose ranching and farming	0	$139,725
Racing and Track Operation	0	$15,045
Automatic environmental control manufacturing	0	$261
etal mining services	0	$2,386
Industrial process furnace and oven manufacturing	0	$300

Sector Description	Employment	Output
All other miscellaneous electrical equipment and component manufacturing	0	$261
Veterinary services	3	$423,797
Support activities for printing	0	$147
Mineral wool manufacturing	0	$509
Cut stock, resawing lumber, and planing	0	$464
All other converted paper product manufacturing	0	$1,110
Lighting fixture manufacturing	0	$269
Electronic connector manufacturing	0	$261
Other basic organic chemical manufacturing	0	$4,938
ther clay, ceramic, refractory minerals mining	0	$428
All other industrial machinery manufacturing	0	$171
Industrial process variable instruments manufacturing	0	$245
Speed changer, industrial high-speed drive, and gear manufacturing	0	$188
Nonupholstered wood household furniture manufacturing	0	$802
ain farming	0	$78,303
Farm machinery and equipment manufacturing	0	$435
Secondary smelting and alloying of aluminum	0	$691
Curtain and linen mills	0	$538
Cut and sew apparel contractors	0	$172
Textile bag and canvas mills	0	$731
rozen cakes and other pastries manufacturing	0	$15,017
Soap and other detergent manufacturing	0	$3,057
lectric power generation - Biomass	0	$691
oultry and egg production	0	$98,367
Synthetic dye and pigment manufacturing	0	$346
ookie and cracker manufacturing	0	$61,528
Wood office furniture manufacturing	0	$142
ce cream and frozen dessert manufacturing	0	$9,847
Showcase, partition, shelving, and locker manufacturing	0	$182
Battery manufacturing	0	$1,233
Electricity and signal testing instruments manufacturing	0	$103
Other pressed and blown glass and glassware manufacturing	0	$579
Railroad rolling stock manufacturing	0	$116
Medical and diagnostic laboratories	3	$552,582
Small arms, ordnance, and accessories manufacturing	0	$154
Printing ink manufacturing	0	$138

Sector Description	Employment	Output
Pesticide and other agricultural chemical manufacturing	0	$19,023
lectric power generation - All other	0	$17
Fiber optic cable manufacturing	0	$140
Manufactured ice	0	$12,019
Broom, brush, and mop manufacturing	0	$832
Textile and fabric finishing mills	0	$147
Gambling industries (except casino hotels)	1	$270,274
orestry, forest products, and timber tract production	0	$1,075
Upholstered household furniture manufacturing	0	$1,293
Office supplies (except paper) manufacturing	0	$430
eat processed from carcasses	0	$284,344
Apparel accessories and other apparel manufacturing	0	$1,694
Synthetic rubber manufacturing	0	$219
Doll, toy, and game manufacturing	0	$191
Rope, cordage, twine, tire cord and tire fabric mills	0	$190
Manufacturing and reproducing magnetic and optical media	0	$188
rozen specialties manufacturing	0	$18,056
Grantmaking, giving, and social advocacy organizations	1	$391,966
Automobile and light duty motor vehicle manufacturing	0	$20,887
Telephone apparatus manufacturing	0	$168
ortilla manufacturing	0	$22,626
Switchgear and switchboard apparatus manufacturing	0	$55
Leather and hide tanning and finishing	0	$379
Nonwoven fabric mills	0	$185
Heating equipment (except warm air furnaces) manufacturing	0	$1,179
Motor home manufacturing	0	$161,941
Other communications equipment manufacturing	0	$98
Mechanical power transmission equipment manufacturing	0	$41
Other engine equipment manufacturing	0	$225
ther snack food manufacturing	0	$10,067
ll other food manufacturing	0	$16,111
lour milling	0	$55,626
oybean and other oilseed processing	0	$13,416
oasted nuts and peanut butter manufacturing	0	$12,143
rilling oil and gas wells	0	$47
Museums, historical sites, zoos, and parks	1	$78,947
Veneer and plywood manufacturing	0	$42

Sector Description	Employment	Output
Electric lamp bulb and part manufacturing	0	$51
Fertilizer mixing	0	$173
Elevator and moving stairway manufacturing	0	$27
Narrow fabric mills and schiffli machine embroidery	0	$25
tton farming	0	$805
Small arms ammunition manufacturing	0	$222
Surgical appliance and supplies manufacturing	0	$900
Fasteners, buttons, needles, and pins manufacturing	0	$2,229
Blind and shade manufacturing	0	$351
anned specialties	0	$7,747
getable and melon farming	0	$17,272
Lawn and garden equipment manufacturing	0	$311
endering and meat byproduct processing	0	$2,892
Packaging machinery manufacturing	0	$16
Air and gas compressor manufacturing	0	$65
Musical instrument manufacturing	0	$1,236
ther nonmetallic minerals services	0	$26
Computer storage device manufacturing	0	$378
offee and tea manufacturing	0	$3,645
Office furniture, except wood, manufacturing	0	$22
All other transportation equipment manufacturing	0	$2,051
heese manufacturing	0	$4,040
Institutional furniture manufacturing	0	$20
ats and oils refining and blending	0	$3,602
Fabric coating mills	0	$35
anned fruits and vegetables manufacturing	0	$2,662
Audio and video equipment manufacturing	0	$652
Analytical laboratory instrument manufacturing	0	$17
Welding and soldering equipment manufacturing	0	$11
Computer terminals and other computer peripheral equipment manufacturing	0	$12
Pharmaceutical preparation manufacturing	0	$12,984
Toilet preparation manufacturing	0	$1,649
uit farming	0	$1,699
ee nut farming	0	$2,318
lseed farming	0	$423
Labor and civic organizations	2	$305,917
Bowling centers	0	$20,620
Small electrical appliance manufacturing	0	$425
Food product machinery manufacturing	0	$22
Dental equipment and supplies manufacturing	0	$8

Sector Description	Employment	Output
Electromedical and electrotherapeutic apparatus manufacturing	0	$60
onchocolate confectionery manufacturing	0	$2,053
ry pasta, mixes, and dough manufacturing	0	$3,749
Electronic computer manufacturing	0	$27
Distilleries	0	$365
ayonnaise, dressing, and sauce manufacturing	0	$710
og and cat food manufacturing	0	$48,864
Ophthalmic goods manufacturing	0	$38
hocolate and confectionery manufacturing from cacao beans	0	$1,821
Video tape and disc rental	0	$6,214
Sporting and athletic goods manufacturing	0	$144
Sawmill, woodworking, and paper machinery	0	$3
Motorcycle, bicycle, and parts manufacturing	0	$233
Offices of dentists	11	$1,760,534
Tobacco manufacturing	0	$476,806
lavoring syrup and concentrate manufacturing	0	$171
pice and extract manufacturing	0	$90
Power, distribution, and specialty transformer manufacturing	0	$0
Biological product (except diagnostic) manufacturing	0	$126
In-vitro diagnostic substance manufacturing	0	$553
ommercial hunting and trapping	0	$25,194
Irradiation apparatus manufacturing	0	$1
Burial casket manufacturing	0	$3,877
Dental laboratories	0	$770
Hospitals	60	$12,677,059
Offices of physicians	24	$5,011,376
Nursing and community care facilities	17	$1,616,162
Individual and family services	13	$892,084
Private households	11	$185,381
Offices of other health practitioners	10	$1,247,423
Child day care services	9	$700,177
Outpatient care centers	9	$1,559,615
Home health care services	6	$475,657
Elementary and secondary schools	5	$365,237
Residential mental health, substance abuse, and other residential care facilities	4	$369,385
Religious organizations	4	$420,238
Community food, housing, and other relief services, including rehabilitation services	3	$387,990
Personal care services	3	$558,524

Sector Description	Employment	Output
Tenant-occupied housing	1	$2,581,815
Death care services	1	$154,944
eet sugar manufacturing	0	$0
* Employment and payroll of local govt, hospitals and health services	0	$0
* Employment and payroll of state govt, hospitals and health services	0	$0
ther metal ore mining	0	$0
ron ore mining	0	$0
onstruction of new commercial structures, including farm structures	0	$0
opper, nickel, lead, and zinc mining	0	$0
Fiber, yarn, and thread mills	0	$0
reamery butter manufacturing	0	$0
onfectionery manufacturing from purchased chocolate	0	$0
onstruction of new health care structures	0	$0
Carbon and graphite product manufacturing	0	$0
* Employment and payroll of federal govt, non-military	0	$0
Knit fabric mills	0	$0
ice milling	0	$0
Footwear manufacturing	0	$0
Water transportation	0	$9,772
old ore and silver ore mining	0	$0
Ship building and repairing	0	$0
onstruction of new single-family residential structures	0	$0
Nonferrous metal, except copper and aluminum, shaping	0	$0
onstruction of other new nonresidential structures	0	$0
onstruction of new manufacturing structures	0	$0
* Employment and payroll of federal govt, military	0	$0
Artificial and synthetic fibers and filaments manufacturing	0	$0
onstruction of other new residential structures	0	$0
* Employment and payroll of local govt, education	0	$0
Medicinal and botanical manufacturing	0	$0
Broadwoven fabric mills	0	$0
Other communication and energy wire manufacturing	0	$0
ommercial fishing	0	$0
* Employment and payroll of state govt, education	0	$0
Greeting card publishing	0	$0
alt manufacturing	0	$0
Phosphatic fertilizer manufacturing	0	$0
Bare printed circuit board manufacturing	0	$0

Sector Description	Employment	Output
Guided missile and space vehicle manufacturing	0	$0
onstruction of new multifamily residential structures	0	$0
Owner-occupied housing	0	$30,837,847
* Not an industry (Used and secondhand goods)	0	$0
Plumbing fixture fitting and trim manufacturing	0	$0
reakfast cereal manufacturing	0	$0
eafood product preparation and packaging	0	$0
bacco farming	0	$0
ry, condensed, and evaporated dairy product manufacturing	0	$0
lectric power generation - Geothermal	0	$0
garcane and sugar beet farming	0	$0
State government passenger transit	0	$0
Cutlery, utensil, pot, and pan manufacturing	0	$0
Propulsion units and parts for space vehicles and guided missiles manufacturing	0	$0
Surface active agent manufacturing	0	$0
Capacitor, resistor, coil, transformer, and other inductor manufacturing	0	$0
* Employment and payroll of local govt, other services	0	$0
Ammunition, except for small arms, manufacturing	0	$0
Nonferrous metal (exc aluminum) smelting and refining	0	$0
et corn milling	0	$0
Pulp mills	0	$0
Federal electric utilities	0	$0
lectric power generation - Nuclear	0	$0
rozen fruits, juices and vegetables manufacturing	0	$0
* Not an industry (Noncomparable foreign imports)	0	$0
onstruction of new power and communication structures	0	$0
Petrochemical manufacturing	0	$0
ugar cane mills and refining	0	$0
ehydrated food products manufacturing	0	$0
* Not an industry (Rest of world adjustment)	0	$0
onstruction of new highways and streets	0	$0
* Employment and payroll of state govt, other services	0	$0
* Not an industry (Scrap)	0	$0
Apparel knitting mills	0	$0
Semiconductor machinery manufacturing	0	$0
onstruction of new educational and vocational structures	0	$0
Explosives manufacturing	0	$0

Sector Description	Employment	Output
Conveyor and conveying equipment manufacturing	0	$0
Rubber and plastics hoses and belting manufacturing	0	$0
Alumina refining and primary aluminum production	0	$0
Mining machinery and equipment manufacturing	0	$0
Total	**3,569**	**$1,510,965,351**

Appendix C: Fiscal Impact Methodology

While the IMPLAN tax report captures all tax revenue in the study area across all levels of government that exist in the area, it has limitations related to industry-specific profiles, therefore this evaluation has used historic long-range data on Gross State Product, as published by the Bureau of Economic Analysis, and total state tax revenue, as published by the Oklahoma Tax Commission. These ratios can be found in the following table.

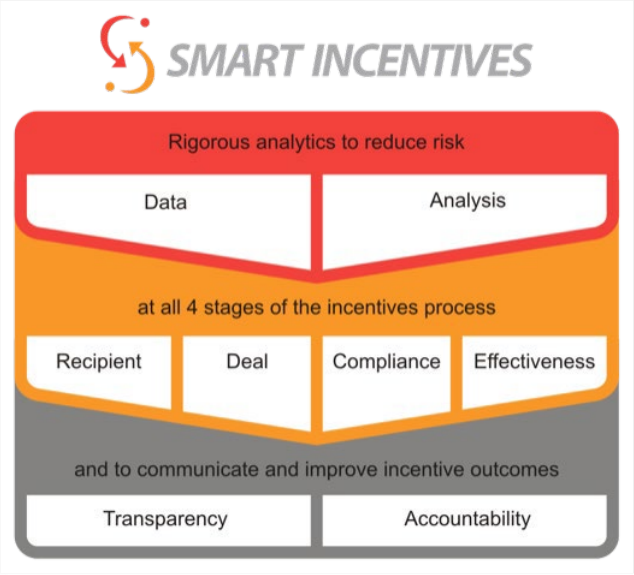
State of Oklahoma Tax Collection/Gross State Product

Year	Oklahoma GSP	Oklahoma Tax Revenue	Ratio
2005-06	$137,602,100,000	$8,435,214,025	6.1%
2006-07	$144,862,600,000	$8,685,842,682	6.0%
2007-08	$165,364,200,000	$9,008,981,280	5.4%
2008-09	$145,546,500,000	$8,783,165,581	6.0%
2009-10	$154,421,600,000	$7,774,910,000	5.0%
2010-11	$166,386,300,000	$8,367,871,162	5.0%
2011-12	$174,894,400,000	$8,998,362,975	5.1%
2012-13	$181,922,200,000	$9,175,334,979	5.0%
2013-14	$196,303,200,000	$9,550,183,790	4.9%
2014-15	$186,865,600,000	$9,778,654,182	5.2%
2015-16	$181,808,800,000	$8,963,894,053	4.9%
2016-17	$191,762,700,000	$8,789,362,844	4.6%
2017-18	$203,258,300,000	$9,837,247,035	4.8%
2018-19	$205,672,300,000	$11,091,161,884	5.4%
2019-20	$179,094,200,000	$10,494,867,628	5.9%
2020-21	$214,724,900,000	$11,605,521,952	5.4%
2021-22	$247,149,600,000	$13,401,926,174	5.4%
2022-23	$253,872,900,000	$14,176,086,119	5.6%
2023-24	$264,596,300,000	$12,627,649,733	4.8%
Average	**$189,268,878,947**	**$9,976,117,794**	**5.3%**

Appendix D: Incentive Best Practices

There has been extensive writing around what constitute business incentives best practices. From the project team's review of many sources,[27] it has identified 10 important best practices and sought to incorporate them into the analysis and discussion of this incentive.

As a starting point, business incentives should be viewed as a process, not an event. The award of an incentive and the incentive features are part of that process, and many of the identified best practices reflect that. The process itself should take into consideration each of these factors, which PFM's subcontractor, Smart Incentives, demonstrates in the following illustration:



While the project team believes this is a strong set of best practices, there may well be others that are as (or more applicable) in specific situations. It is also likely that some of the best practices will come into conflict in some situations. For example, application and reporting requirements may reduce the simplicity of business compliance. As a result, these will always be subject to analysis on a case-by-case basis.

The 10 best practices are:

1. **For maximum impact, incentives should be targeted.** Examples of useful targeting include companies or industries that export their goods or services out-of-state; high economic impact companies or industries – such as those with higher wages and benefits, significant job creation, or significant capital investment.

2. **Incentives should be discretionary.** In most instances, an application process enables the state government to require company disclosure of information related to

[27] Three resources in particular were relied upon putting together the list of best practices. They are "What Factors Influence the Effectiveness of Business Incentives?" The Pew Charitable Trusts, April 4, 2019, accessed electronically at https://www.pewtrusts.org/en/research-and-analysis/issue-briefs/2019/04/what-factors-influence-the-effectiveness- of-business-incentives; "Improving Economic Development Incentives," Timothy J. Bartik, W.E. Upjohn Institute for Employment Research, 2018, accessed electronically at https://research.upjohn.org/cgi/viewcontent.cgi?article=1000&context=up_policybriefs; "Best Practices for the Design and Evaluation of State Tax Incentives Programs for Economic Development," Matthew N. Murray and Donald J. Bruce, January 2017, included within another evaluation at https://media.al.com/news_mobile_impact/other/AL%20ENTERTAIN%20NEWMKTS%203%209%2017.pdf Aerospace Employer and Employee Tax Credits Draft Evaluation

eligibility criteria and enables the state to reject applications that do not meet its standards.

3. **Incentives should leverage significant private capital.** Ideally, the incentive should leverage private investment that is at least several multiples of the state investment.

4. **Incentives should provide most of the benefit within 1-3 years and have a limited duration.** Company discount rates are much higher than for the state, and businesses will significantly devalue incentive payments in later years.

5. **Incentives should take into consideration state and/or local as well as industry economic conditions.** Incentives that are provided in high performing areas or for stable and profitable businesses or industries will likely fail the 'but for test' – meaning the activity would likely occur without the state incentive.

6. **'Smart' incentives help businesses overcome practical barriers to growth.** In particular, customized assistance for locally owned, small and medium-sized businesses can have significant impact.

7. **Incentives should be transparent.** The incentive purpose should be clearly articulated, as are eligibility requirements, and regular, detailed reporting should be required from all program recipients.

8. **Incentives should require accountability.** When upfront financial incentives are offered in return for job creation, retention, or capital investment, there should be contract language in place that allows the state to 'claw back' state resources should the company not meet performance requirements.

9. **Incentives should have caps.** To ensure the state's financial health, program dollar caps or limits should be in place. Incentive programs should also have a limited duration, with sunsets in place to require regular review of incentive performance.

10. **Incentives should be simple and understandable.** The state should be able to easily and effectively administer the incentive, and users should be able to readily comply with its requirements.