Commonwealth of Virginia
November 9, 2026

Report to the Governor and the General Assembly of Virginia

Economic Development Incentives 2026
Spending and Performance



COMMISSION DRAFT

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Commission Draft

This Commission draft of the JLARC report, *Economic Development Incentives 2026,* has been assembled for discussion, verification, and review. Do not quote, publish, or release any of the material contained in this draft until it has been received by the Commission and posted on the JLARC website.

Joint Legislative Audit and Review Commission
November 2026

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Economic Development Incentives 2026 – Summary

WHAT WE FOUND

- Virginia spent $6.8 billion on 99 economic development incentive programs from FY16 to FY25. This amounts to 2.7 percent of total general fund spending during this period. Total spending on incentives was $1.8 billion in FY25.
- Nearly 82 percent of incentive spending between FY16 and FY25 was for tax incentives, with 60 percent being for the data center sales and use tax exemption alone. Grants made up 16 percent of incentive spending, and incentive programs such as loans and gap funding made up the remaining 2 percent.
- Total incentive spending increased between FY16 and FY25, with significant increases beginning in FY21 because of improved reporting requirements for the data center exemption and increases in the number of data centers in Virginia. Tax savings from the data center exemption have averaged $812 million over the last five years and are estimated to have been $1.4 billion in FY25.
- Even excluding the data center exemption, incentive spending rose in recent years, driven in large part by the Virginia Business Ready Sites Program. In FY25, spending on this program comprised $126 million of the $399 million spent on incentives other than the data center exemption.
- A majority of the incentive programs that have been adopted since 2020 have been custom grants. Payouts are contingent on meeting performance milestones and can vary from year to year. Custom grant spending has been between $23 million and $29 million annually since FY22.
- Collectively, grant programs awarded $2.1 billion to 5,000 projects between FY16 and FY25. A substantial portion of this amount was a $750 million custom grant award for Amazon HQ2 in FY19.
- Completed projects that received grant awards created approximately 59,000 jobs and $19 billion in capital investment or other spending. The majority

WHY WE DID THIS STUDY

Through language in the Appropriation Act, the General Assembly directs the Joint Legislative Audit and Review Commission (JLARC) to review and evaluate economic development initiatives. Topics include spending on incentives and activity generated by businesses receiving incentives; the economic benefits of incentives; and the effectiveness of incentives.

JLARC releases two reports each year: a high-level summary report on overall spending and business activity and an in-depth report on the effectiveness of selected individual incentives. (See Appendix A: Study mandate.) JLARC contracted with the Weldon Cooper Center for Public Service to perform the analysis for both reports.

This report is the 10th in the series on overall spending and business activity and focuses on incentives that were provided between FY16 and FY25.

of these projects met their capital investment goals, but only slightly more than one-quarter met their job creation goals.

- Business savings from tax incentives, other than the data center exemption, fluctuated between FY16 and FY25 but have remained at approximately $175 million annually since FY23. Tax savings changes can be partially explained by new or expanded tax incentive programs, such as the Major Research and Development Tax Credit, and the expiration or repeal of other programs, such as the Virginia coal tax credits. Tax savings are also influenced by general economic conditions and industry-specific changes.
- Business savings from economic development tax credits will decrease because all but three credits have expired or will expire by January 1, 2027.
- Grants have higher economic benefits than tax incentives. A greater proportion of grant funding is directed to projects in traded industry sectors, which tend to have high economic multipliers and pay higher wages. In addition, businesses that receive awards from most grant programs must commit to creating jobs and making capital investments.
- After grants, the data center exemption generates the next-highest economic benefits, although the estimates in this report are lower than the estimates reported in prior editions. These lower estimates reflect recent empirical research showing the exemption drives less data center location and expansion activity than previously assumed.

Economic Development Incentives 2026

Virginia provides economic development incentives to encourage businesses to locate or expand their operations in the state as part of its economic development strategy. To better understand the effectiveness of these incentives in stimulating business activity, the General Assembly directed the Joint Legislative Audit and Review Commission (JLARC) to review spending on and performance of economic development incentives such as grants, tax preferences, and other assistance. (See Appendix A.) JLARC contracted with the University of Virginia's Weldon Cooper Center for Public Service to perform the evaluation.

This report is the 10th in a series of annual reports about Virginia's economic development incentives, trends in state spending on incentives, and the performance of incentive programs. Every other year the reports in this series include information about the economic benefits of total spending on economic development incentives; information on economic benefits is included in this year's report.

This report provides summary information on 99 economic development incentive programs, including grants, tax preferences, business loans, and gap financing. The incentive programs covered in this report are funded by the state, provided funding for businesses between FY16 and FY25, and have a primary purpose of promoting economic activity through location or expansion of businesses. Businesses may also benefit from a variety of other state grants, tax credits, and exemptions for purposes other than economic development; these programs are not included in this report.

For purposes of this report, **incentive spending** refers to (1) actual state expenditures in the form of grant awards or other financing and (2) estimated tax expenditures, in the form of forgone revenue, through tax credits, sales and use tax exemptions, or other incentives.

For most grants, spending is allocated to the fiscal year in which awards were approved. For custom grants, spending is allocated to the fiscal year in which grant payments are made to the company.

For refundable tax credits, such as the film credit, spending may reflect actual expenditures rather than forgone revenue.

See Appendix B for more information on methods used to estimate spending for each program.

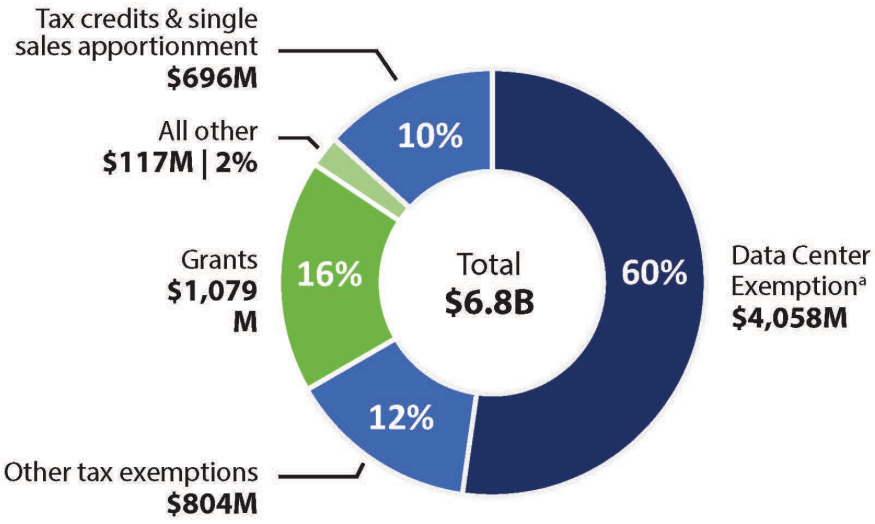
State spent $6.8 billion on incentives FY16–FY25

Virginia spent $6.8 billion on 99 economic development incentive programs over the past 10 fiscal years (Figure 1), for an average of $675 million per year (not adjusted for inflation). Nearly all incentives are funded by the state general fund, except for incentives provided by the Tobacco Region Revitalization Commission and several transportation infrastructure incentives. Spending on incentives represented approximately 2.7 percent of total general fund spending between FY16 and FY25. As in past reports in this series, the majority of spending on incentives was forgone revenue from tax incentives. Retail sales and use tax exemptions made up 72 percent of spending, and tax credits and single sales apportionment for manufacturers together made up 10 percent of spending (Figure 1). Almost all the remaining spending was for grants.

Spending is concentrated in a small number of incentives. Ten incentives accounted for 81 percent of the incentive spending between FY16 and FY25 (Table 1). The largest incentive during the 10-year period—the data center exemption from the retail sales and use tax—accounts for almost 60 percent of spending on incentives and is 16 times larger than the next-largest incentive, the manufacturing single sales factor

apportionment income tax incentive. (See Appendix D for more information on spending on each incentive by year.)

FIGURE 1
Over four-fifths of spending on incentives was for tax incentives (FY16–FY25)



SOURCE: Weldon Cooper Center analysis of economic development incentive programs.
NOTE: Estimates may not sum because of rounding. Adjusted for canceled projects, recaptures, and award reductions. Exemptions exclude the 1 percent sales tax for localities and the additional amounts collected in localities with higher rates, such as Northern Virginia and the Historic Triangle. For custom grants, actual payments are allocated to the fiscal year when they were paid. Estimate for single sales apportionment includes both manufacturer and data center estimates.
[a] Amount reflects spending for only the last five years (FY21–FY25) because the method for collecting and reporting information on the exemption changed.

TABLE 1
Ten incentives are responsible for 81% of spending (FY16–FY25)

	10-year period (FY16–FY25)	
Incentive	**Spending**	**% of spending**
Data Center Exemption [a]	$4,058M	60%
Manufacturing Single Sales Factor Apportionment	254	4
Virginia Business Ready Sites Program	223	3
Railroad Common Carriers Exemption	174	3
Commonwealth's Development Opportunity Fund	172	3
Airline Common Carriers Exemption	168	2
Coalfield Employment Enhancement Tax Credit	116	2
Real Property Investment Grant (Enterprise Zone)	111	2
Major Research and Development Tax Credit	107	2
Certain Printed Materials for Out-of-State Distribution Exemption	96	1
Subtotal	**$5,479M**	**81%**
All others	$1,275M	19%
TOTAL	**$6,754M**	**100%**

SOURCE: Weldon Cooper Center analysis of economic development incentives.
NOTE: Excludes several tax preferences for which data was not available. Adjusted for canceled projects, recaptures, and award reductions. Totals may not sum because of rounding. Exemptions exclude the 1 percent sales tax for localities and the additional amounts collected in some localities, such as Northern Virginia and the Historic Triangle. (See Appendix C for a description and Appendix D for spending for all incentives.)
[a] Amount reflects spending for only the last five years (FY21–FY25) because the method for collecting and reporting information on the exemption changed.

Beginning with last year's report, more **precise estimates of the tax revenue impact of the data center exemption** were available. Data centers using the retail sales and use tax exemption are now required to report to the Virginia Economic Development Partnership their annual eligible exemption expenditures. Because VEDP estimates of eligible expenditures are available only for FY21–FY25, only these figures are reported here.

All but one of these incentives (the certain printed materials for out-of-state distribution exemption) were also among the top incentives for spending in FY25, with the data center exemption being the largest incentive that year ($1.4 billion in spending or 78 percent of spending).

Incentives have increased in number and spending

The state has increased its economic development incentive programs over time. The oldest is the Economic Development Access Program—a grant program designed to improve transportation access for industrial sites—which was adopted in 1956. In the 33 years between 1956 and 1989, the state adopted only 14 incentives that are still active. Since 1989, the state has adopted an additional 85 incentives, and half of the currently active incentives were adopted since 2010.

The state has also started adopting more customized performance grants, which are designed to attract specific companies to locate or expand in the state. Of the 19 incentives adopted since 2020, 14 have been custom incentives. Three of these incentives were grants that replaced tax credits: the Barge and Rail Usage Grant, the International Trade Facility Grant, and the Port Volume Increase Grant.

Custom grants are offered to attract unique business location or expansion project opportunities to the state. The state's typical package of incentives (grants, tax credits, exemptions, etc.) is relatively modest compared with a custom grant. For example, grant awards for non-custom projects were an average of $207,000 per project between FY16 and FY25, compared with custom grants, which were an average of $77 million per project (or $29 million per project excluding the outsized custom grant for Amazon HQ2).

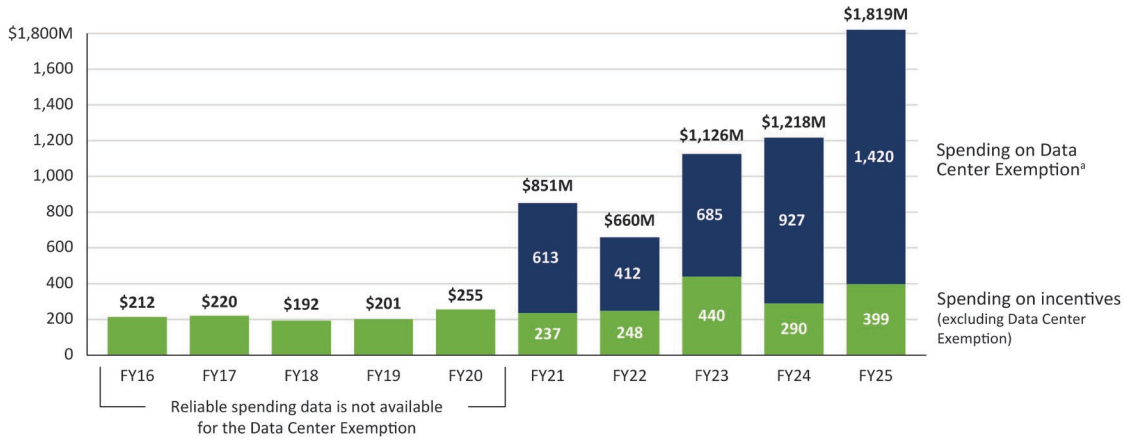
Total economic development incentive spending increased after FY21, most notably because of the improved estimates of the data center exemption's tax revenue impact (Figure 2). Growth in the data center exemption spending was greater than spending on other incentives, more than doubling between FY23 and FY25. However, excluding the data center exemption, spending on incentives increased, primarily because of the Virginia Business Ready Sites Program ($89 million in FY23 and $126 million in FY25).

Custom grant programs also constitute a relatively large share of incentive program funding aside from the data center exemption, but payouts are now contingent on meeting performance milestones and can vary from year to year. The largest custom grant spending was in FY20 because of a $50 million payment for a Micron custom grant. However, custom grant spending has fluctuated within a narrower band ($23 million to $29 million) since FY22.

Economic development grants are financial incentives provided to businesses in return for locating in the state or expanding business activity and increasing general fund revenue to the state. Some grants are discretionary, which means that the state can negotiate the terms of the grant with the business. Other grants are automatically awarded if the business meets the minimum requirements. Grants are not repaid if businesses meet program requirements.

Several programs that are not commonly identified as grant programs are included in this category because they provide financial assistance to businesses (or to a third party for their benefit). These programs include the Commonwealth Commercialization Fund and Virginia Leaders in Export Trade (VALET) Program.

FIGURE 2
Spending on incentives has increased each year since FY22



SOURCE: Weldon Cooper Center analysis of economic development incentive programs.
NOTE: Adjusted for canceled projects, recaptures, and award reductions. Amounts differ from earlier economic development incentives reports because of project cancelations, recaptures for nonperforming projects, and adjusted reporting on completed projects. For custom grants, payments are allocated to the fiscal year in which they were paid. Not adjusted for inflation. Exemptions exclude the 1 percent sales tax for localities and the additional amounts collected in some localities, such as Northern Virginia and the Historic Triangle.
[a] Data center exemption amounts are reported only for FY21–FY25 because the method for collecting and reporting information on the exemption changed.

Approximately 5,000 projects were awarded $2.1 billion in grants FY16–FY25

Even though tax incentives—particularly retail sales and use tax exemptions—have historically had a larger overall impact on the state budget, Virginia's grant programs are also a widely recognized economic development incentive. Custom grants, in particular, receive considerable media attention because they are provided to business location or expansion projects promising to create a substantial number of jobs and

make substantial capital investments. For example, Virginia's $750 million custom grant award for Amazon to locate its East Coast headquarters in Virginia received national attention in 2018 and 2019. Grant payments are scheduled to begin in FY27 and end in FY43. To receive the full award, Amazon must create at least 37,850 jobs with average salaries of at least $150,000 and make a capital investment of at least $2 billion.

Collectively, Virginia's economic development incentive grant programs—which are typically funded with general funds with some exceptions—awarded more than $2.1 billion to 4,973 projects between FY16 and FY25 (Table 2). Twelve of the 40 grant programs each provided more than $30 million in awards during the time period. For most grant programs, awards were also paid out during the 10-year period.

However, only about half of the $2.1 billion in grant awards was paid out or "spent" between FY16 and FY25, because most of the custom awards are not scheduled to be paid out until after FY25. Spending on grants, and thus total incentives, will increase substantially in the future if custom grant awards meet performance expectations and are paid.

TABLE 2
Grant programs made approximately 5,000 awards totaling $2.1 billion (FY16–FY25)

Program	Total FY16–FY25		Annual average	
	Award amount	# of awards	Award amount	# of awards
Major Headquarters Workforce Grant Fund (Amazon HQ2) [a]	$750.0M	1	n.a.	n.a.
Commonwealth's Development Opportunity Fund	235.6	299	23.6	30
Virginia Business Ready Sites Program	223.9	67	24.9	7
Real Property Investment Grant (Enterprise Zone)	111.3	1,447	11.1	145
Precision Plastic Manufacturing Grant Program (LEGO Group) [a b]	75.0	1	n.a.	n.a.
Semiconductor Manufacturing Grant Fund (Micron 2019) [a c]	70.0	1	n.a.	n.a.

Program	Total FY16–FY25		Annual average	
	Award amount	# of awards	Award amount	# of awards
Tobacco Region Opportunity Fund	57.4	154	5.7	15
Virginia Jobs Investment Program	56.6	604	5.7	60
Governor's Motion Picture Opportunity Fund	50.7	33	5.1	3
Virginia Investment Performance Grant	46.1	59	4.6	6
Advanced Shipbuilding Production Facility Grant (Huntington Ingalls) [a]	46.0	1	n.a.	n.a.
Virginia Economic Development Incentive Grant	32.8	9	3.3	1
Virginia Talent Accelerator Program [e]	29.3	65	4.9	11
Commonwealth Commercialization Fund [d]	23.7	393	2.4	39
Transportation Partnership Opportunity Fund	22.8	9	2.3	1
Technology Development Grant Fund (Microsoft) [a]	22.5	1	n.a.	n.a.
Job Creation Grant (Enterprise Zone)	22.4	484	2.2	48
Economic Development Access Program	22.1	37	2.2	4
GO Virginia	19.1	33	2.1	4
Tobacco Commission Megasite Grant	16.9	6	1.7	1
Truck Manufacturing Grant Fund (Volvo) [a b c]	16.5	1	n.a.	n.a.
Property Analytics Firm Infrastructure Grant Fund (CoStar Group) [a]	15.0	1	n.a.	n.a.
Financial Services Expansion Grant Fund (Wells Fargo) [a]	15.0	1	n.a.	n.a.
Space Flight Operations Facilitation Program (Rocket Lab) [a]	15.0	1	n.a.	n.a.
Rail Industrial Access Program	14.0	34	1.4	3
Agriculture and Forestry Industries Devel. Grant	13.1	129	1.3	13
Nitrile Glove Manufacturing Training Program (Blue Star) [a c]	13.1	1	n.a.	n.a.
Special Workforce Grant Fund (Amazon Web Services) [a]	10.5	1	n.a.	n.a.
Shipping and Logistics Headquarters Grant Program (CMA CGM)[a]	9.0	1	n.a.	n.a.
Small Business Investment Grant Fund	7.7	197	0.8	20
Pharmaceutical Manufacturing Grant Program (Merck) [a]	7.5	1	1.3	0
VALET Program	7.3	252	0.7	25
Port of Virginia Economic and Infrastructure Grant	7.1	25	0.7	3
Advanced Production Grant Program and Fund (Morgan Olson) [a c]	7.0	1	n.a.	n.a.
Trade Show Assistance Program	5.5	592	0.6	66
New Company Incentive Program [f]	1.3	2	0.2	0

Program	Total FY16–FY25		Annual average	
	Award amount	# of awards	Award amount	# of awards
Small Business Jobs Grant Fund Program	0.9	18	0.2	5
Port Volume Increase Grant	0.5	5	0.5	5
Governor's New Airline Service Incentive Fund	0.5	4	0	1
Barge and Rail Usage Grant	0.1	2	0.1	2
All programs	**$2,100.9M**	**4,973**	**$108.4M**	**518**

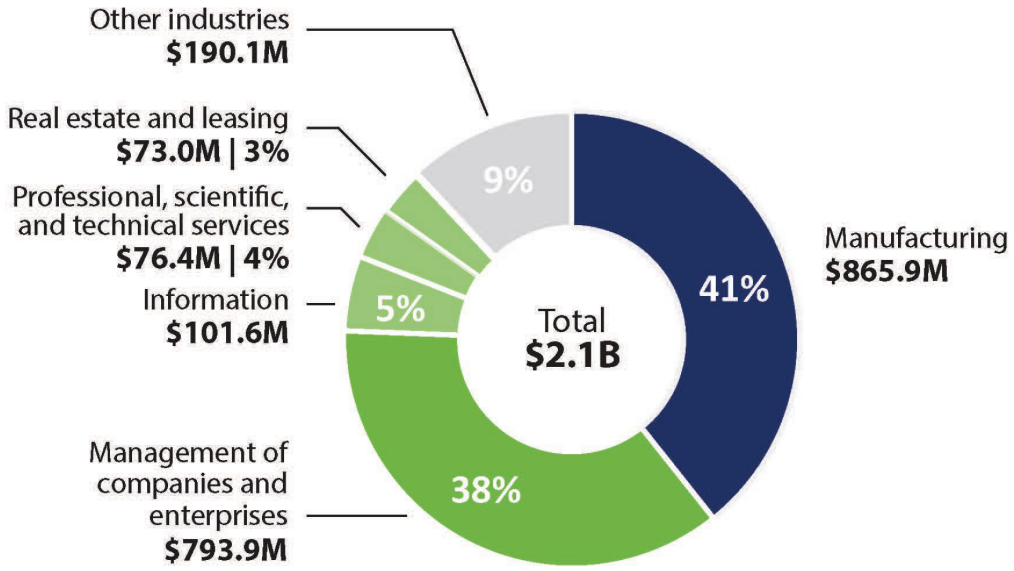
SOURCE: Weldon Cooper Center analysis of economic development incentive grants.
NOTE: Includes all awards and amounts prior to recaptures, cancelations, or reductions. For this reason, amounts for the Tobacco Region Opportunity Fund, Commonwealth's Development Opportunity Fund, and Virginia Jobs Investment Program are higher than amounts shown in Table 1. Total award amounts for custom grants are shown. The Small Business Jobs Grant Fund Program was eliminated by the 2020 General Assembly.
[a] These grants provide custom one-time awards that are or will be paid out over several years based on performance. The $10.5 million Special Workforce Grant (Amazon Web Services) and $70.0 million Semiconductor Manufacturing Grant (Micron) have been fully paid. [b] $19 million of the $75 million in grant funding for the Precision Plastic Manufacturing Grant (LEGO Group) is from Virginia Business Ready Sites Program funding. [c] Program has been canceled. [d] In 2020, the Commonwealth Research Commercialization Fund was combined with other programs to become the Commonwealth Commercialization Fund. [e] The Virginia Talent Accelerator Program was created in 2019 and began making awards in FY20. The program provides recruitment and training services and is not a cash grant to a company. Its value is estimated and represents the internal cost of the accelerator services at the time of announcement. [f] Program expired January 1, 2025.

Grant awards targeted corporate headquarters and manufacturing sectors and urban localities

Between FY16 and FY25, more than three-quarters of all grant funding was awarded to corporate headquarters (38 percent) and manufacturing (41 percent) operations (Figure 3). Custom grant awards, such as those for Amazon HQ2, largely drove the high concentration of funding in corporate headquarters. Until FY20, the state generally provided fewer and smaller grants for headquarters locations or expansions. Both the manufacturing and corporate headquarters sectors are traded industry sectors, which export at least half their goods or services outside the state. Targeting businesses in traded industry sectors is desirable because they bring new revenue into the state.

Geographically, the largest amount of grant awards went to urban localities, such as Arlington County, Chesterfield County, the City of Richmond, City of Newport News, and Fairfax County. Rural counties—such as Henry County and Pittsylvania County—also received large amounts. Ten localities received approximately 68 percent of the total amount awarded for the period (Table 3).

FIGURE 3
Three-quarters of grant award amounts were directed to corporate headquarters and manufacturers (FY16–FY25)



SOURCE: Weldon Cooper Center analysis of economic development incentive grants.
NOTE: The "other industries" category includes businesses in a variety of sectors such as agriculture and forestry, construction, utilities, finance and insurance, wholesale or retail trade, transportation and warehousing, and other service sectors. Estimates may not sum because of rounding.

TABLE 3
Businesses in 10 localities received 68 percent of total grant award amount (FY16–FY25)

Locality	Amount awarded	% of total amount	# awards	% of total awards
Arlington County	$779M	37.1%	107	2.2%
Chesterfield County	144	6.8	70	1.4
Richmond City	79	3.8	446	9.0
Manassas City	72	3.4	16	0.3
Newport News City	70	3.3	238	4.8
Fairfax County	69	3.3	296	6.0
Chesapeake City	69	3.3	76	1.5
Norfolk City	49	2.3	191	3.8
Henry County	47	2.2	117	2.4
Pittsylvania County	43	2.0	99	2.0
Subtotal	**$1,421M**	**67.6%**	**1,656**	**33.3%**
All others	$680M	32.4%	3,317	67.7%
TOTAL	**$2,101M**	**100.0%**	**4,973**	**100.0%**

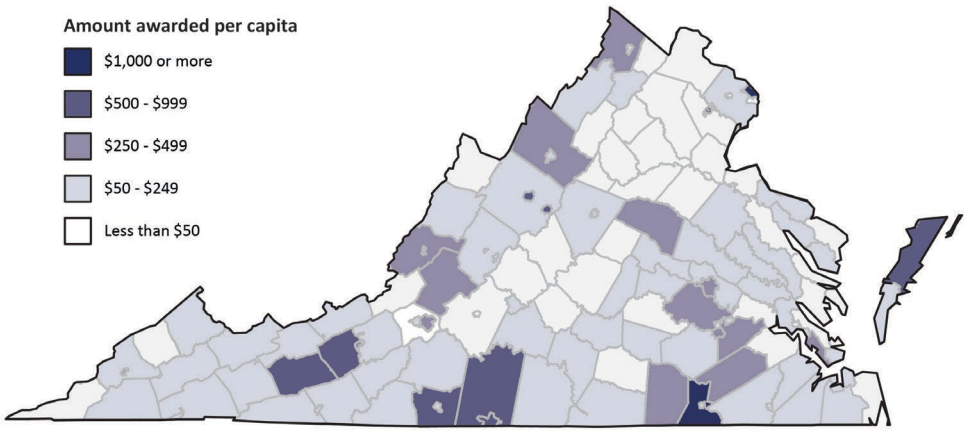
SOURCE: Weldon Cooper Center analysis of economic development incentive grants.
NOTE: Localities were not assigned to 11 GO Virginia, six Governor's Motion Picture Opportunity Fund, four Port Volume Increase, two Governor's New Airline Incentive, and one Barge and Rail Usage grant projects because the grants benefited more than one locality.

Businesses in urban localities in Northern Virginia and rural localities in the southern part of the state were awarded a large proportion of grant funding, relative to population size (Figure 4). Businesses in the Northern Virginia Regional Commission service area (the counties of Arlington, Fairfax, Loudoun, and Prince William and the cities of Alexandria, Fairfax, Falls Church, Manassas, and Manassas Park) received approximately 45 percent of all economic development incentive grant awards. Businesses in Tobacco Region localities received approximately 14 percent of all economic development grant awards, largely because of the contributions of the Tobacco Commission's Tobacco Region Opportunity Fund and Megasite Grant programs and, in Henry County, the Virginia Business Ready Sites Program. The highest per capita award amounts were in:

- Arlington County ($3,244) primarily for the location of Amazon HQ2;
- Greensville County ($1,981) primarily for development of the Mid-Atlantic Advanced Manufacturing Center;
- Manassas City ($1,757) primarily for the Micron expansion; and
- Wythe County ($984) primarily for the Blue Star manufacturing custom grant (which was later canceled).

(See Appendix E for maps of the regional distribution of grant awards, overall and per capita.)

FIGURE 4
Awards per capita are concentrated in Arlington, Manassas, and rural localities in Southern Virginia (FY16–FY25)



SOURCE: Weldon Cooper Center analysis of economic development incentives and U.S. Census Bureau estimates of Virginia population, 2020 decennial census.
NOTE: The award per capita for Arlington is $3,245.

The award amounts per capita have slightly positive correlations with the local unemployment rate, poverty rate (which increases when the uniquely large Amazon HQ2 custom grant in Arlington is excluded), and percentage of population that is Black, indicating that more funds are generally provided to businesses in localities that are

economically disadvantaged. The number of awards per capita has a much higher positive correlation with these variables.

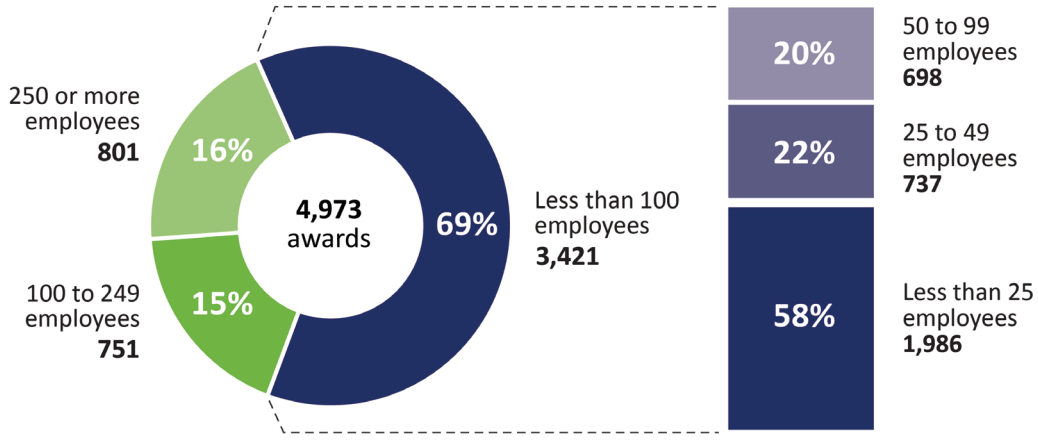
Majority of grant projects were for business locations that had fewer than 100 employees at the time of the award

More than two-thirds of the grant awards between FY16 and FY25 went to business locations that had fewer than 100 employees at the time the awards were made (Figure 5). Of this group, 58 percent were for business locations with fewer than 25 employees. These businesses received grant awards from programs, such as the Small Business Investment Grant or Commonwealth Commercialization Fund, which typically make awards to start-up businesses with 10 or fewer employees, on average. These projects, however, represented only 17 percent of grant award amounts.

In contrast, 16 percent of grant awards were for large businesses with 250 or more employees, and these projects accounted for more than three-quarters of grant award amounts. Custom grants and nine other grant programs—the Transportation Partnership Opportunity Fund, Port Volume Increase Grant, Governor's New Airline Service Incentive Fund, Virginia Talent Accelerator Program, Virginia Investment Performance Grant, Commonwealth's Development Opportunity Fund, Port of Virginia Economic and Infrastructure Grant, Virginia Economic Development Incentive Grant, and Rail Industrial Access Program—tend to make awards to business locations with 250 employees or more. (See Appendix F for the average employment size of grant recipients by program.)

Many businesses have operations in multiple **locations**. Grants and other incentives are often provided to projects that occur at a specific business location.

FIGURE 5
Majority of grant recipients were business locations with fewer than 100 employees (FY16–FY25)

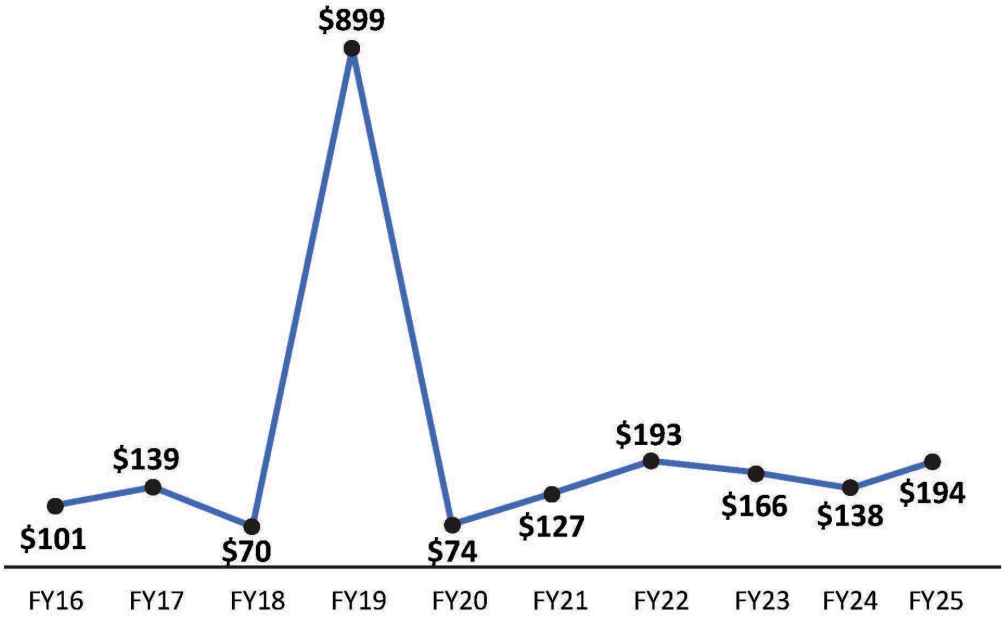


SOURCE: Weldon Cooper Center analysis of economic incentive grant awards.
NOTE: Employment records were matched with 2,815 of the 4,973 awards (57 percent) and $1.265 billion of $2.1 billion (60 percent) in total awards. The numbers and percentages shown in the figure reflect a weighted distribution of awards and amounts using information from the matched records.

Grant awards trended upwards recently because of large custom and site development grant awards

Grant awards spiked in FY19 and have trended upwards slightly since FY21 because large economic development projects received substantial custom or site development grants (Figure 6). Awards spiked at $899 million in FY19 because of custom grants for Amazon HQ2, Amazon Web Services, and Micron, which totaled $830.5 million and represented 92 percent of all awards that year. In FY22, custom grants and other incentive awards for Blue Star Manufacturing, CMA CGM, and LEGO Group totaled $97.1 million, contributing to total awards of $193 million. Award levels remained elevated in FY23 and FY25, largely because of sizable site development grants through the Virginia Business Ready Sites Program. (See Appendix D for grant awards by program.)

FIGURE 6
Grant awards spiked in FY19 because of the Amazon HQ2 custom grant ($M)



SOURCE: Weldon Cooper Center analysis of economic incentive grant awards.
NOTE: Adjusted for canceled projects, recaptures, and award reductions. Amounts differ from earlier economic development incentives reports because of project cancelations, recaptures for nonperforming projects, and adjusted reporting on completed projects. Sizable custom grants were awarded to Amazon HQ2 ($750 million), Micron ($70 million), and Amazon Web Services ($10.5 million) in FY19.

Programs vary in amount awarded per job created and level of business investment

The size of grant awards varied widely by program (Table 4). Awards ranged from a low of $9,316 to a high of $3.6 million per project, excluding the custom grant awards. Custom grant awards, which tend to be much larger, ranged from $7.0 million to $750 million. The size of grant awards also varied when compared with the number of jobs

created or investment made (Table 4). Grant programs require projects to meet certain minimum requirements to be eligible for grant funding. These minimum requirements vary based on program goals, but the most common are the creation of jobs paying wages over a minimum threshold and some form of business investment or spending in Virginia. The average grant award per expected job for Virginia projects was $9,202 between FY16 and FY25, but the awards ranged from a high of $63,291 per job (custom grant for Micron) to a low of less than $1,000 (Small Business Jobs Grant and Virginia Jobs Investment Program). The average grant award for capital investment or additional spending was $42 per $1,000 spent and ranged from a high of $3,516 (custom grant for Microsoft) to a low of $4 (Agriculture and Forestry Industries Development Grant).

TABLE 4
Average grant awards by program varied widely (FY16–FY25)

Program	Average award amount per		
	Project	$1,000 in spending or investment in Virginia (expected)	Jobs created in Virginia (expected)
Custom grants			
Semiconductor Manufacturing Grant Fund (Micron 2019)	$70,000,000	$23	$63,291
Space Flight Operations Facilitation Program (Rocket Lab)	15,000,000	146	60,976
Pharmaceutical Manufacturing Grant Program (Merck)	7,500,000	8	49,342
Advanced Shipbuilding Production Facility Grant (Huntington Ingalls)	46,000,000	61	46,000
Precision Plastic Manufacturing Grant Program (LEGO Group)	75,000,000	72	42,589
Shipping and Logistics Headquarters Grant Program (CMA CGM)	9,042,875	251	21,790
Truck Manufacturing Grant Fund (Volvo)	16,500,000	42	21,236
Major Headquarters Workforce Grant Fund (Amazon HQ2)	750,000,000	375	19,815
Technology Development Grant Fund (Microsoft)	22,500,000	3,516	15,000
Financial Services Expansion Grant Fund (Wells Fargo)	15,000,000	172	13,636
Advanced Production Grant Program and Fund (Morgan Olson)	7,000,000	121	9,957
Property Analytics Firm Infrastructure Grant Fund (CoStar Group)	15,000,000	33	7,560

Program	Average award amount per Project	$1,000 in spending or investment in Virginia (expected)	Jobs created in Virginia (expected)
Special Workforce Grant Fund (Amazon Web Services)	10,500,000	125	7,000
Nitrile Glove Manufacturing Training Program (Blue Star)	13,101,000	18	5,317
Average custom grants	**$76,581,705**	**$110**	**$20,399**
All other grants			
Economic Development Access Program	$596,737	$236	$19,133
Small Business Investment Grant Fund	38,985	217	9,035
Virginia Investment Performance Grant	780,508	12	7,667
Transportation Partnership Opportunity Fund	2,534,774	15	7,022
Virginia Economic Development Incentive Grant	3,644,444	86	6,127
Commonwealth's Development Opportunity Fund	788,066	17	4,969
Agriculture and Forestry Industries Devel. Grant	101,781	4	3,771
Rail Industrial Access Program	412,406	11	3,718
Tobacco Region Opportunity Fund	372,659	13	3,020
New Company Incentive Program	656,500	254	2,951
Port of Virginia Economic and Infrastructure Grant	284,960	n.a.	2,139
Job Creation Grant (Enterprise Zone)	46,249	n.a.	1,889
Small Business Jobs Grant Fund Program	47,939	108	998
Virginia Jobs Investment Program	93,741	7	821
Barge and Rail Usage Grant	71,850	n.a.	n.a.
Commonwealth Research Commercialization Fund	60,361	346	n.a.
Go Virginia	579,627	n.a.	n.a.
Governor's Motion Picture Opportunity Fund	1,535,086	n.a.	n.a.
Governor's New Airline Service Incentive Fund	117,500	n.a.	n.a.
Port Volume Increase Grant	100,000	n.a.	n.a.
Real Property Investment Grant (Enterprise Zone)	76,913	37	n.a.
Tobacco Commission Megasite Grant	2,809,308	n.a.	n.a.
Trade Show Assistance Program	9,316	n.a.	n.a.
VALET Program	29,107	n.a.	n.a.

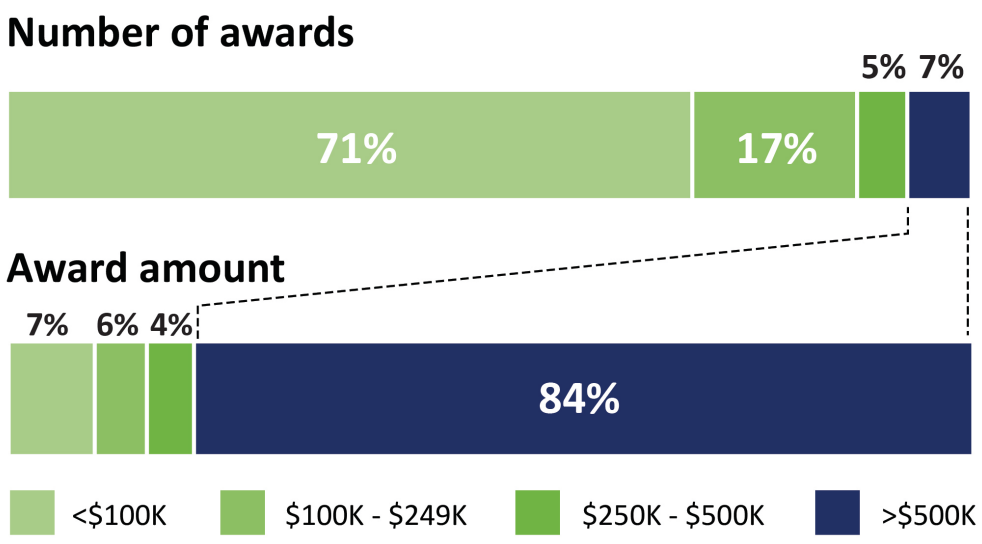
Program	Average award amount per		
	Project	$1,000 in spending or investment in Virginia (expected)	Jobs created in Virginia (expected)
Virginia Business Ready Sites Program	3,341,512	n.a.	n.a.
Virginia Talent Accelerator Program	450,888	n.a.	n.a.
Average, non-custom projects	**$207,442**	**$26**	**$5,854**
Average, all projects	**$422,451**	**$42**	**$9,202**

SOURCE: Weldon Cooper Center analysis of economic development incentive grants.
NOTE: Expected jobs and spending or investment were used for programs that awarded grants prior to when project performance began. Actual jobs and spending or investment were used for programs for which performance already occurred prior to projects receiving a grant award. Average award amounts are calculated using total spending across programs divided by the total number of projects, amount of expected capital investment, and expected jobs across programs. The Small Business Jobs Grant Fund Program was eliminated by the 2020 General Assembly.
n.a. indicates that job creation or investment is not among the criteria considered for obtaining the grant.

The 59,500 jobs and $19 billion in capital investment or other spending are unduplicated amounts, but many projects receive more than one grant. For example, Navy Federal Credit Union received a Commonwealth's Development Opportunity Fund grant, Transportation Partnership Opportunity Fund grant, and Virginia Jobs Investment Program grant to create 1,400 jobs and make a $100 million capital investment in Frederick County.

From FY16 to FY25, only 7 percent of awards were more than $500,000. However, these larger awards accounted for 84 percent of grant funding (Figure 7). In fact, the 14 custom grant awards alone accounted for 50 percent of grant funding.

FIGURE 7
Seven percent of grant awards accounted for over 80 percent of total grant funding (FY16–FY25)



SOURCE: Weldon Cooper Center analysis of economic development incentive grants.
NOTE: Number of grants awarded is 4,973. Total amount awarded is $2.1 billion (not adjusted for cancelations, recaptures, and refunds).

Completed projects created over 59,000 jobs and $19 billion in business investment and spending

Projects that received grant awards between FY16 and FY25 and completed their location or expansion project (including those that did not fully perform), collectively created an estimated 59,543 jobs and $19.4 billion in capital investment or other spending (Table 5). Completed projects that received Virginia Jobs Investment Program grants accounted for the largest share of jobs (31,884) and second largest amount of capital investment and other spending ($5.7 billion). Projects funded through the Commonwealth's Development Opportunity Fund ranked second in job creation (16,940 jobs) but first in capital investment and other spending ($6.6 billion).

Majority of completed projects met capital investment goals, but only one-quarter met their job creation goals

Some grant programs establish an "upfront" award agreement with project-specific goals. The most common project-specific goals are job creation, capital investment, and average wages paid. Several programs use alternative goals that are more relevant to their program. For example, transportation-related programs, such as the Rail Industrial Access Program and Port of Virginia Economic and Infrastructure Grant, establish project-specific goals for rail car volume and Virginia port usage, respectively. (See Appendix G for goals across programs.)

TABLE 5
Completed projects created over 59,500 jobs and $19 billion in business spending or investment (FY16–FY25)

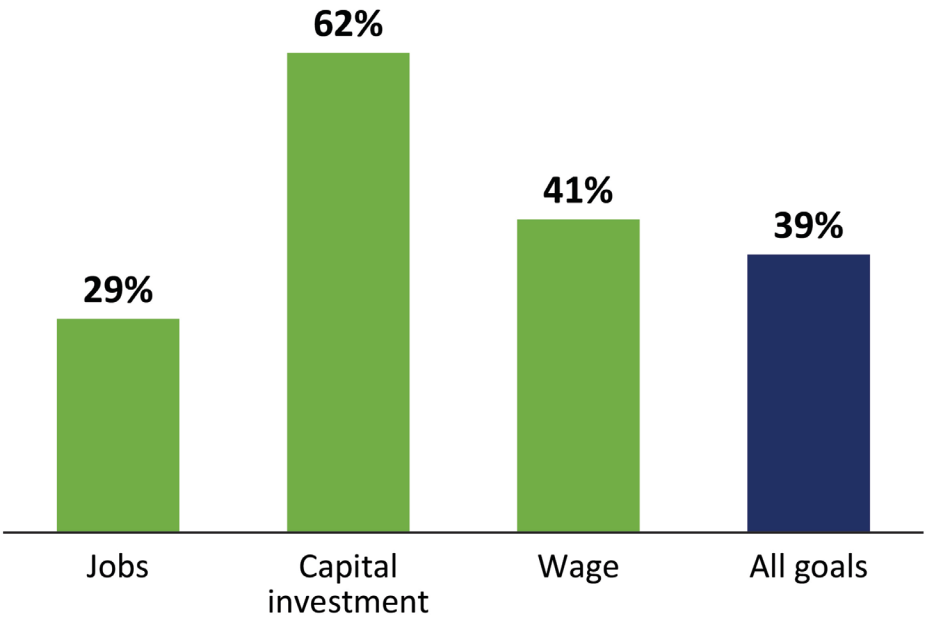
Program	# of projects	Spending or Investment	Jobs created
Virginia Jobs Investment Program	502	$5,713M	31,884
Commonwealth's Development Opportunity Fund	181	6,608	16,940
Job Creation Grant (Enterprise Zone)	484	n.a.	11,847
Port of Virginia Economic and Infrastructure Grant	24	n.a.	3,228
Tobacco Region Opportunity Fund	80	917	3,005
Rail Industrial Access Program	27	466	2,765
Transportation Partnership Opportunity Fund	5	277	2,053
Special Workforce Grant (Amazon Web Services)	1	113	1,682
Advanced Shipbuilding Production Facility Grant (Huntington Ingalls)	1	1,821	1,382
Agriculture and Forestry Industries Development Grant	56	517	701
Advanced Production Grant (Morgan Olson)	1	64	506
Semiconductor Manufacturing Grant (Micron 2019)	1	2,089	415
Truck Manufacturing Grant (Volvo)	1	233	65

Program	# of projects	Spending or Investment	Jobs created
Small Business Jobs Grant Program	8	0	27
Real Property Investment Grant (Enterprise Zone)	1,447	2,978	n.a.
Governor's Motion Picture Opportunity Fund	30	445	n.a.
Economic Development Access Program	20	284	n.a.
Commonwealth Commercialization Fund	370	66	n.a.
Virginia Investment Performance Grant	16	31	n.a.
New Company Incentive Program	2	0	0
Small Business Investment Grant	2	0	0
Virginia Economic Development Incentive Grant	2	0	0
Total (duplicated):	**3,261**	**$22,622M**	**76,500**
Total (unduplicated):		**$19,387M**	**59,543**

SOURCE: Weldon Cooper Center analysis of economic development incentive grants.
NOTE: Completed projects represented about $498 million in total awards across programs. Some grant programs, such as the Virginia Economic Development Incentive Grant and some custom grants, had no completed projects during this time period. Jobs are not counted for the Governor's Motion Picture Opportunity Fund program because they are not permanent full-time jobs. Many projects receive grants from more than one program. No unique identifiers exist to easily identify projects that received grants from multiple programs. The unduplicated number of jobs and investment or spending is an estimate based on a review of projects with similar business names, locations, time periods, and other factors. VALET and Trade Show Assistance programs (194 and 592 completed projects, respectively) are not included in the table because their goals are to increase a company's international sales, and job creation and capital investment are not reported by program participants. The Tobacco Commission Megasite Grant, Virginia Business Ready Sites Program (site development projects only), Virginia Talent Accelerator Program, and Governor's New Airline Service Incentive Fund (nine, 10, 16, and three completed projects respectively) did not report job creation or investment completion attainment.
n.a. indicates that job creation or investment is not one of the criteria for receiving the grant.

Sixty-two percent of completed projects met or exceeded their project-specific goals for capital investment or other spending (Figure 8). Forty-one percent met their average wage goals, and 29 percent met their job creation goals.

FIGURE 8
Majority of completed projects met their capital investment goals (FY16–FY25)



SOURCE: Weldon Cooper Center analysis of economic development incentive grants.
NOTE: N=1,328 duplicated projects. Only includes projects from programs that establish project-specific goals.

Attainment rates for project-specific goals varied widely by program (Table 6). The Port of Virginia Economic and Infrastructure Development Grant is the only program with multiple projects where all projects attained specific goals. Goal achievement was especially low for some programs.

TABLE 6
Attainment of project-specific goals varied by program (FY16–FY25)

Program	# of projects	Job creation	Capital investment	Average wage	All goals
Special Workforce Grant Fund (Amazon Web Services)	1	100%	100%	100%	100%
Advanced Shipbuilding Production Facility Grant (Huntington Ingalls)	1	100	100	100	100
Port of Virginia Economic and Infrastructure Grant	24	100	n.a.	n.a.	100
Commonwealth Commercialization Fund	370	n.a.	n.a.	n.a.	81
Rail Industrial Access Program	27	n.a.	67	n.a.	63
Economic Development Access Program	20	n.a.	75	n.a.	75
Virginia Talent Accelerator Program	30	n.a.	n.a.	n.a.	53
Virginia Jobs Investment Program-Retraining	50	n.a.	90	38	24

Program	# of projects	Job creation	Capital investment	Average wage	All goals
Commonwealth's Development Opportunity Fund	181	25	37	46	23
Transportation Partnership Opportunity Fund	5	20	60	n.a.	20
Tobacco Region Opportunity Fund	80	38	43	29	18
Virginia Jobs Investment Program-New Jobs	452	26	77	42	14
Agriculture and Forestry Industries Development Grant	56	34	41	43	14
Virginia Investment Performance Grant	16	n.a.	6	n.a.	6
Small Business Jobs Grant	8	0	**	38	0
Truck Manufacturing Grant Fund (Volvo)	1	0	0	100	0
Semiconductor Manufacturing Grant Fund (Micron 2019)	1	0	0	100	0
Advanced Production Grant Program and Fund (Morgan Olson)[a]	1	0	100	100	0
Virginia Economic Development Incentive Grant	2	0	0	0	0
Small Business Investment Grant	2	0	0	**	0
Total	**1,328**	**29%**	**62%**	**41%**	**39%**

SOURCE: Weldon Cooper Center analysis of economic development incentive grants.
NOTE: Some programs have other goals, which are reflected in the "All goals" column. Some programs do not collect information on average wage levels upon completion of the project. The goal of the VALET program is to increase international sales, and 71 percent of the participants met or exceeded their goal for increased international sales. The goal of the Virginia Talent Accelerator Program is job training, and the percentage in all goals is based on the proportion of jobs that completed training.
n.a. indicates that job creation or investment is not one of the criteria for receiving the grant.
** indicates that data was not provided for the program.
[a] Morgan Olson ceased operations and the custom grant was canceled, but it exceeded the expected capital investment and wage goals during operation.

Some grant programs were more successful overall in achieving goals for job creation and capital investment, even though some of the projects did not achieve their project-specific goals. For example, only 37 percent of completed projects that received a Commonwealth's Development Opportunity Fund grant fully achieved their capital investment goals (Table 6). However, because some projects far exceeded their capital investment goals, collectively all projects created 92 percent of the total capital investment that was expected (Table 7). The Commonwealth's Development Opportunity Fund also achieved 59 percent of its job creation and 124 percent of average wage goals collectively. Most grant programs overall had success in achieving average wage goals, even if they did not meet other goals.

TABLE 7
Projects for most grant programs collectively met or almost met their average wage goals (FY16–FY25)

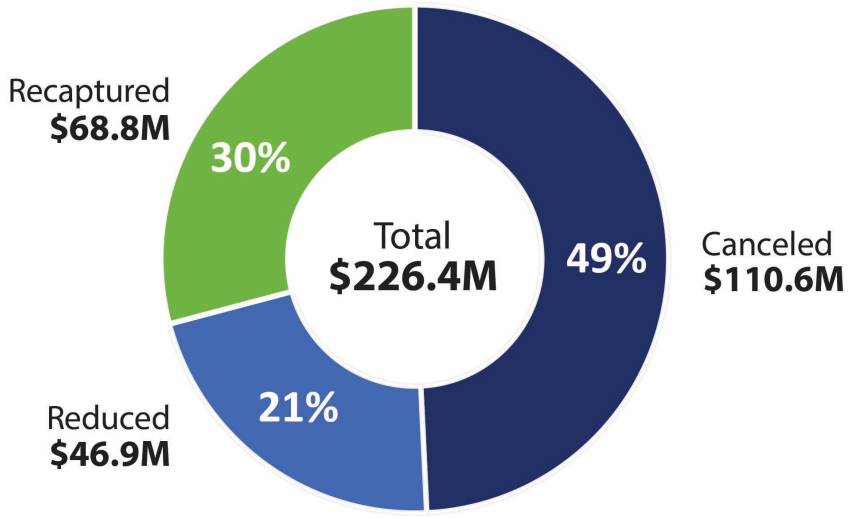
Program	Job creation	Spending or investment	Average wage
Advanced Shipbuilding Production Facility Grant (Huntington Ingalls)	138%	243%	145%
Special Workforce Grant Fund (Amazon Web Services)	112	135	173
Port of Virginia Economic and Infrastructure Grant	100	n.a.	n.a.
Transportation Partnership Opportunity Fund	87	96	n.a.
Rail Industrial Access Program	80	42	n.a.
Advanced Production Grant (Morgan Olson) [a]	72	110	147
Commonwealth's Development Opportunity Fund	59	92	124
Agriculture and Forestry Industries Devel. Grant	57	64	104
Virginia Jobs Investment Program	53	87	95
Semiconductor Manufacturing Grant Fund (Micron 2019) [a]	38	70	164
Tobacco Region Opportunity Fund	24	31	72
Truck Manufacturing Grant Fund (Volvo) [a]	8	59	124
Small Business Jobs Grant	7	19	106
Economic Development Access Program	n.a.	540	n.a.
Commonwealth Commercialization Fund	n.a.	99	n.a.
Small Business Investment Grant	0	n.a.	n.a.
Virginia Investment Performance Grant	0	4	0
Virginia Economic Development Incentive Grant	0	0	0

SOURCE: Weldon Cooper Center analysis of economic incentive grants.
NOTE: Not all projects collect average wage levels upon completion of the project to calculate the percentage of projects that attained wage goals. The VALET program is excluded from the table because its goal is to increase international sales. Collectively, program participants increased international sales by 185 percent of the expected goal.
n.a. indicates that job creation or investment is not one of the criteria for receiving the grant.
[a] Programs were canceled.

Grant awards totaling $226 million were canceled, reduced, or recaptured because projects did not achieve goals

When projects do not go forward or do not meet their goals, the grant awards may be canceled, reduced, or recaptured. Grant awards totaling $226 million (or 11 percent of the total paid or committed between FY16 and FY25) were canceled, reduced, or recaptured because the projects did not go forward or meet their goals (Figure 9). Nearly half of the $226 million was never paid because projects did not go forward and were canceled. Another 21 percent was not paid to projects for which awards were reduced because the projects did not meet their goals.

FIGURE 9
Grant awards totaling $226 million were canceled, reduced, or recaptured (FY16–FY25)



SOURCE: Weldon Cooper Center analysis of economic development incentive grant awards or award commitments and program information on recaptures, reductions, and cancelations. Numbers may not sum because of rounding.

Approximately $69 million was recaptured between FY16 and FY25 from 137 projects that failed to meet their performance goals. Grant programs that make upfront award payments include recaptures. Each of these programs recaptured a portion of their award:

- Commonwealth's Development Opportunity Fund: 12 percent;
- Agriculture and Forestry Industries Development Fund: 11 percent;
- Commonwealth Commercialization Fund: 1 percent; and
- Tobacco Region Opportunity Fund: 1 percent.

In addition, 55 percent ($38.2 million) of the original $70 million award for the Micron Semiconductor Manufacturing Grant Fund custom grant was recaptured when the grant was canceled.

Through tax incentives, businesses saved $5.6 billion FY16–FY25

Virginia's economic development tax incentives, which include exemptions, credits, and single sales apportionment, resulted in $5.6 billion in tax savings to businesses between FY16 and FY25. Most ($4.1 billion or 83 percent over the 10-year period, or 90 percent since FY21) of this amount was from the data center retail sales and use tax exemption. To use this exemption, data centers must meet minimum job creation and capital investment thresholds. Ten other retail sales and use tax exemptions each provided more than $20 million in incentives to businesses between FY16 and FY25 (Table 8). Many of these exemptions are provided to capital-intensive industries, such

Exemptions to Virginia's **retail sales and use tax** can be claimed by businesses for qualifying purchases.

Virginia's retail sales and use tax rate varies by locality: Williamsburg, James City, and York (7 percent); Northern Virginia, Hampton Roads, and Central Virginia (6 percent); Danville, Charlotte, Gloucester, Halifax, Henry, Northampton, Patrick, and Pittsylvania (6.3 percent); rest of state (5.3 percent). One percent is retained by the locality where the purchase is made.

The **sales tax** applies to the sale of certain goods and services purchased in the state and is generally collected by the merchant at the point of sale.

The **use tax** is levied on out-of-state purchases that are used in Virginia and is self-assessed and remitted to the state by the consumer.

as data centers, railroads, and airlines, which make substantial equipment purchases to start or upgrade their operations.

TABLE 8
Retail sales and use tax exemptions provided an estimated $4.9 billion in tax savings to businesses (FY16–FY25)

Exemption	Total savings ($M)	Average savings per year ($M)
Data Center Exemption [a]	$4,057.6	$811.5
Railroad Common Carriers Exemption	173.7	17.4
Airline Common Carriers Exemption	168.3	16.8
Certain Printed Materials for Out-of-State Distribution Exemption	96.2	9.6
Ships and Vessels Exemption	74.3	7.4
Media Provider Equipment Exemption	69.8	7.0
Research & Development Exemption	62.0	6.2
Aircraft Parts, Engines, and Supplies Exemption	40.5	4.1
Pollution Control Equipment & Facilities Exemption	36.4	5.2
Railroad Rolling Stock Exemption	26.7	2.7
Film, Television, & Audio Production Inputs Exemption	22.2	2.2
Semiconductor Manufacturers Exemption	10.0	1.0
Uniform Rental & Laundry Businesses Exemption	9.3	0.9
Virginia Spaceport Users Exemption	7.7	0.8
Semiconductor Wafers Exemption	3.2	0.3
Out-of-state Nuclear Facility Repair Exemption	1.4	0.1
Contractor Temporary Storage Exemption	1.2	0.1
Taxi Parts & Radios Exemption	1.0	0.1
Controlled Environment Agriculture Exemption	0.4	0.2
Electrostatic Duplicators Exemption	0.1	0.0
All programs	**$4,862.0**	**$893.7**

SOURCE: Weldon Cooper Center analysis of economic development incentives.
NOTE: Exempted amounts are estimates and exclude the 1 percent sales tax for localities and, in most cases, the additional amounts collected in localities with higher rates, such as Northern Virginia and the Historic Triangle. (See Appendix B for methodology used to estimate the sales and use tax exemptions.)
[a] Amounts reflect total and average savings for only a five-year period (FY21–FY25) because the method for collecting and reporting information on the exemption changed.

Information on job creation, spending, and other business requirements in return for receiving tax incentives is not readily available as it is for grants.

Unlike for grants, many tax incentives do not have specific job creation and capital investment requirements. The one exception for which information is readily available is the data center exemption because of new reporting requirements adopted in 2021.

Economic development tax credits provided $442 million in savings to businesses between FY16 and FY25 (Table 9), accounting for about 8 percent of spending on tax incentives. Two coal tax credits account for 30 percent of total economic development tax credits. The largest credit—the Coalfield Employment Enhancement Tax Credit—

was available to coal mining companies to help slow the decline of coal mining activity in Virginia. Economic development tax credits will account for lower amounts of business tax savings going forward because all but three tax credits have expired or will expire by January 1, 2027. The three tax credits that will remain are the:

- Motion Picture Production Tax Credit (expires January 1, 2031),
- Farm Wineries and Vineyards Tax Credit, and
- Biodiesel and Green Diesel Fuels Producers Tax Credit.

The port-related tax credits were converted to grant programs effective January 1, 2025.

TABLE 9
Tax credits provided nearly $442 million in tax savings to businesses (FY16–FY25)

Tax credits allow businesses or their owners to reduce their income tax liability, dollar for dollar, according to the amount allowed under the credit.

Tax credit	Total savings ($M)
Coalfield Employment Enhancement Tax Credit [a]	$116.2
Major Research and Development Tax Credit [a]	106.6
Motion Picture Production Tax Credit	60.6
Research and Development Expenses Tax Credit [a]	38.8
Qualified Equity and Subordinated Debt Investment Tax Credit [a]	34.1
Major Business Facility Job Tax Credit [a]	27.6
Recyclable Materials Processing Equipment Tax Credit [a]	18.2
Virginia Coal Production and Employment Incentive Tax Credit [a]	16.1
Virginia Port Volume Increase Tax Credit [a]	16.1
International Trade Facility Tax Credit [a]	2.6
Farm Wineries and Vineyards Tax Credit	1.7
Worker Retraining Tax Credit/Worker Training Tax Credit [a]	1.4
Barge and Rail Usage Tax Credit [a]	1.2
Green Job Creation Tax Credit [a]	0.3
Telework Expenses Tax Credit [a]	0.2
Biodiesel and Green Diesel Fuels Producers Tax Credit	0.0
All programs	**$441.7**

SOURCE: Weldon Cooper Center analysis of tax credit information from Virginia Tax.
NOTE: The average tax credit award per year is not reported for tax credits because several new programs were adopted during this time period, and several other programs provided too few awards for disclosure purposes. The Telework Expenses Tax Credit expired January 1, 2019.
[a] Expired or will expire by January 1, 2027.

Since 2014, Virginia has allowed manufacturers to use single sales apportionment—a method that could reduce their income tax liability—to help stem the decline of manufacturing jobs in the state. Tax savings for manufacturers using single sales apportionment are estimated to have been $254 million between FY16 and FY25, or about $25 million per year. Since 2017, Virginia has allowed data centers meeting certain eligibility requirements to also use single sales apportionment. Tax savings for data centers using single sales apportionment are estimated to be $0.3 million in FY25.

Business savings from tax incentives have increased since FY22 even when excluding the data center exemption

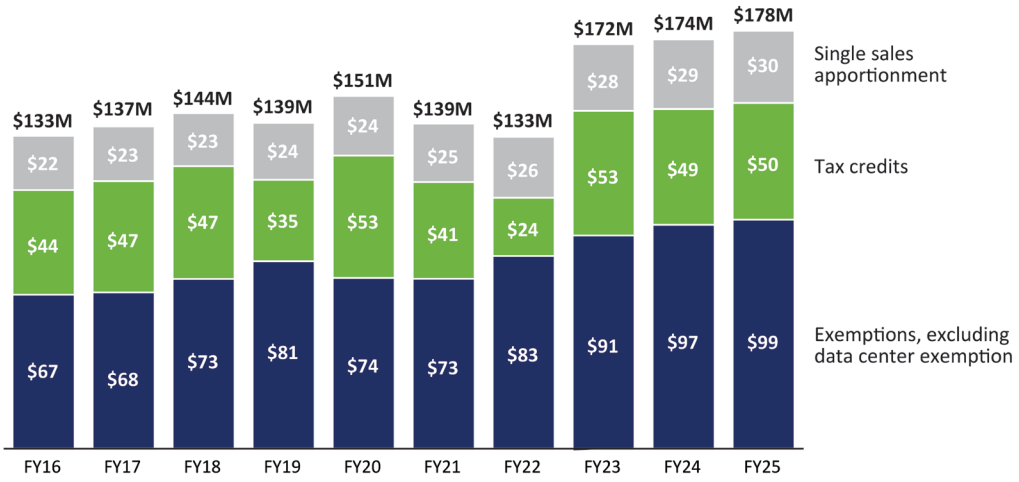
Business savings from tax incentives over the last three years have been higher than in previous years in the 10-year period. Not including the data center exemption, savings from tax incentives fluctuated over the 10-year period but increased to $172 million or slightly more starting in FY23 (Figure 10). (Including the data center exemption, business savings from tax incentives increased dramatically to $1.6 billion in FY25 because of data center growth and increased use of the exemption.)

Tax savings changes between years can partially be explained by the introduction of new or expanded tax credit programs and expiration or repeal of other programs. Increased business savings resulted from the introduction of the Major Research and Development Tax Credit in 2018, which had grown to $20.7 million in FY25. In contrast, the Virginia coal tax credits were repealed in 2021. Thus, coal tax credit usage decreased from $23.4 million in FY16 to $10.7 million in FY25 because companies can no longer earn new credits. Tax savings from credits will continue to decline because most of the credits have expired or will expire.

Tax incentive spending, particularly for tax exemptions, is influenced by general economic conditions. Gradual economic improvement through FY20 led to a recovery in business spending and investment, likely increasing the use of sales and use tax exemptions targeted to capital-intensive industries, such as rail, air, and water transportation. Similarly, the negative impact of the COVID-19 pandemic on businesses and the economy is one likely reason why businesses' tax savings declined in FY21 and FY22, followed by a rebound in the subsequent three fiscal years.

Industry-specific changes also affect tax incentive usage over time. Before its termination, usage of the Virginia Coal Employment and Production Incentive Tax Credit, which was targeted at thermal coal production, had been declining. Demand for thermal coal had been decreasing because of competition from gas-fired and alternative energy power generation.

FIGURE 10
Business savings from tax incentives (excluding the data center exemption) have increased since FY22



SOURCE: Weldon Cooper Center analysis of economic development incentives.
NOTE: Exempted amounts are estimates and exclude the 1 percent sales tax for localities and the additional amounts collected in some localities, such as Northern Virginia and the Historic Triangle.

Venture capital is financing that investors provide to startup companies and small businesses that are believed to have long-term growth potential.

Businesses obtained $149 million in loans and gap funding through financing programs FY16–FY25

Virginia offers six incentive programs that are designed to assist firms in securing additional debt and equity financing. The Virginia Small Business Financing Authority (VSBFA) administers four of these programs, which provide loan assistance to eligible businesses:

- Economic Development Loan Fund provides loan financing for eligible small businesses that create permanent full-time jobs;
- Loan Guaranty Program helps small businesses obtain loans by reducing bank credit risk;
- State Cash Collateral Program assists small businesses that lack the necessary collateral to obtain a loan; and
- Microloan Program provides small loans to small businesses to use for working capital, financing accounts receivable and inventory, and other short-term financing needs.

Virginia also offers two gap financing programs. The Virginia Innovation Partnership Corporation offers gap funding through its Virginia Venture Partners Growth Acceleration Program (GAP) Funds, which enable technology firms with high growth potential to obtain additional venture capital investment. The Virginia Tourism Corporation administers the Tourism Development Financing Program to large-scale tourism projects.

These financing programs incentivize different types of business activity than the state's grant programs. Over 78 percent of VSBFA assistance was provided to small businesses in services and trade industries between FY16 and FY25. Seventy percent of Virginia Venture Partner GAP Funds went to businesses in professional, scientific, and technical services and information industries, which include businesses in high-tech fields such as biotechnology and software development. In contrast, 79 percent of grant funding was for corporate headquarters and manufacturers.

Awards from financing programs have typically been more concentrated in metropolitan areas of the state than grant programs, although grant programs have also been more concentrated in urban localities recently. Seventy-nine percent of VSBFA loans and 99 percent of GAP Fund awards went to projects in metropolitan areas between FY16 and FY25. Fifty-nine percent of GAP Fund assistance went to firms in Northern Virginia, with 32 percent to Fairfax County companies alone. A large portion (24 percent) of the remaining award amounts were made to firms in three localities that are home to the state's major research universities. In comparison, the percentage of grant funding that went to projects in metropolitan areas over the FY16–FY25 period was 85 percent.

Higher amounts of total loan assistance and GAP Fund awards were also provided to areas with stronger economic conditions. Loans and loan assistance were negatively associated with the poverty rate and the unemployment rate but positively associated with the percentage of the locality's population that is Black. GAP Fund awards were negatively associated with the poverty rate, the unemployment rate, and the percentage of a locality's population that is Black. Both types of programs were positively associated with median household income.

VSBFA programs helped businesses obtain over $33 million in loans and loan enhancements

Small businesses aided by VSBFA programs obtained over $33 million in loan and loan enhancement financing between FY16 and FY25 (Table 10). In most cases, state appropriations were not directly used to finance the loans or provide the obligation to secure the loans. While programs may have received appropriations in the past, the programs use revolving loan funds, which means they utilize interest and principal payments on old loans to issue new ones or receive funding from other self-financing programs offered by VSBFA.

The average loan or loan enhancement was $145,937, but the average varied among the four programs. The Economic Development Loan Fund provided the greatest amount of average loan assistance per project at $730,648. The Microloan Program provided the least, at $33,453 per project.

TABLE 10
VSBFA programs helped businesses secure over $33 million in loans or equity financing (FY16–FY25)

Program	Amount awarded	# of projects	Average award	# of jobs	Loan/loan enhancement per job
Economic Development Loan Fund	$10,959,723	15	$730,648	340	$32,234
Loan Guaranty Program	17,630,438	73	241,513	438	40,252
Microloan Program [a]	4,683,436	140	33,453	567	8,260
Total	**$33,273,598**	**228**	**$145,937**	**1,345**	**$24,739**

SOURCE: Weldon Cooper Center analysis of economic development incentives.
NOTE: VSBFA programs use only a small portion of state funding to secure loan financing. Jobs reported are expected jobs. For the FY16–FY25 period, the State Cash Collateral Program issued no loans that relied on state funding. [a] Formerly the SWAM Loan Fund.

The programs collectively were expected to add 1,345 jobs. The average loan or loan enhancement assistance per job was $24,739. This figure is not directly comparable to the average grant award per job ($9,202), because state funding for these programs represents only a small portion of the total loan and loan enhancement amount. For example, the Loan Guaranty Program provides a financial guarantee for an eligible business to secure a loan provided by a private bank. The program would be required to obligate funds only if an eligible business were to default on its loan. The Microloan Program is a direct loan provided by VSBFA, but funding for the loan is derived from fees from other bond financing provided by VSBFA and not state appropriations.

Virginia Venture Partner GAP Funds provided businesses a total of $31 million in financing

Recipients of GAP Fund financing received $30.6 million between FY16 and FY25 to attract venture capital investment. This program made awards to 369 projects, for an average award of $82,875 per project. Most (85) of the 98 completed projects in the GAP Funds program met their financing objectives for the period, according to the Virginia Innovation Partnership Corporation.

Tourism Development Financing Program provided tourism projects $84.9 million in financing

The Tourism Development Financing Program was created in 2011 to provide gap financing for tourism development projects otherwise unable to access capital. The program allows eligible projects to keep a portion of state sales and use taxes that are generated by the project. Through FY25, the program has approved eight projects, led by the Kalahari Resort in Spotsylvania County ($73.8 million).

Grants have higher economic benefits than tax incentives

Virginia's economic development incentives are estimated to generate additional economic activity for the state. Economic impact analysis estimates that private sector employment increased by about 14,946 jobs per year, Virginia GDP increased by $3.2 billion per year, and statewide personal income increased by $1.7 billion per year, on average, because of all incentives between FY16 and FY25 (Table 11). For every $1 million in spending on all incentives, it is estimated that an additional 32 jobs, $7 million in Virginia GDP, and $4 million in personal income per year, on average, are added to the Virginia economy. These estimates assume that only a portion of the economic activity can be attributed to incentives. Research on incentives nationally suggests that between 75 percent and 98 percent of projects would have occurred anyway without incentives (Bartik 2018). (See Appendix H for more information about the assumptions used by type of incentive.)

The additional economic activity generated varies by incentive type. Because of its size, the data center exemption is estimated to account for more than half of the net additional jobs and almost half of Virginia GDP and personal income attributed to incentives (Table 11). Tax credits, in contrast, are estimated to generate net losses in jobs, Virginia GDP, and personal income. These losses occur because the reduction in jobs, Virginia GDP, and personal income that results from increasing taxes to pay for the credits, particularly the Coalfield Employment Enhancement Tax Credit, is greater than the total additional jobs, GDP, and income generated because of the credits.

Grants have higher economic benefits than tax incentives when benefits are assessed per $1 million spent (Table 11). For every $1 million spent on grants between FY16 and FY25, it is estimated that an additional 131 jobs, $30 million in Virginia GDP, and $16 million in personal income are added to the Virginia economy. Tax credits generate the lowest amounts of economic benefits, generating six jobs and less than $1 million in Virginia GDP and personal income each per every $1 million in spending.

The return in revenue to the state for every $1 spent on incentives also varies widely by type of incentive (Table 11), with grants generating higher returns in revenue than tax incentives. For every $1 spent on grants between FY16 and FY25, it is estimated that the state receives $1.29 in revenue in return.

Grant programs have higher economic benefits and returns in state revenue than tax incentives for several reasons. A higher percentage of grants go to traded industry sectors, which typically have high economic multipliers and pay higher wages. Therefore, economic benefits per $1 million spent and returns in revenue are higher when awards are made to projects in these sectors. Forty-one percent of grants are made to manufacturers alone, while only 22 percent of non-data center sales and use tax expenditures, 16 percent of loan and gap financing, and 11 percent of tax credit expenditures are directed to manufacturing businesses.

TABLE 11
Virginia's economic development incentives are estimated to generate additional economic activity for the state (FY16–FY25)

	Annual average (FY16–FY25)					
	Grants	**Tax credits**	**Tax exemptions (except data center)**	**Data center exemption [a]**	**Other incentives**	**All incentives [b]**
Net impact to Virginia economy						
Private employment	5,368 jobs	-50 jobs	464 jobs	18,130 jobs	99 jobs	14,946 jobs
Virginia GDP (millions)	$1,254.9M	-$22.2M	$49.7M	$3,904M	$9.1M	$3,243.6M
Personal income (millions)	$661.8M	-$8.2M	$49.7M	$2,009M	$10.0M	$1,717.7M
Impact to Virginia economy per $1 million of spending						
Private employment	131 jobs	6 jobs	14 jobs	29 jobs	10 jobs	32 jobs
Virginia GDP (millions)	$30.1M	$0.6M	$2.0M	$5.9M	$1.4M	$6.6M
Personal income (millions)	$16.1M	$0.7M	$1.7M	$3.2M	$1.1M	$3.7M
Impact on state revenue						
Total revenue (millions)	$55.8M	$1.9M	$7.8M	$179.4M	$1.4M	$157.0M
Spending on incentives (millions)	$43.2M	$44.2M	$69.6M	$811.5M	$28.6M	$591.4M
Net revenue (millions)	$12.6M	-$42.3M	-$61.8M	-$632.1M	-$27.2M	-$434.8M
Return in revenue per $1 spent	$1.29	4¢	11¢	22¢	5¢	26¢

SOURCE: Weldon Cooper Center economic impact analysis of economic incentive programs.
NOTE: Includes direct, indirect, and induced impacts. Grant economic impacts include completed projects that received an award between FY16 and FY25. Assumes that only a small portion of the economic activity (i.e., jobs, capital investment, sales) can be attributed to grants.
[a] Only FY21–FY25 data center exemption economic and tax revenue impacts are included.
[b] Data center exemption impacts are based on FY21–FY25 only, whereas "all incentives" reflects the full FY16–FY25 period. Therefore, average annual amounts in the individual columns do not sum to the "all incentives" total.

Businesses that receive grants must also agree to create jobs and make capital investments, usually above minimum levels. Economic benefits and returns in revenue are higher for programs targeted to businesses that commit to creating jobs and making capital investments. In contrast to grants, other incentives often do not have similar job creation and capital investment requirements. The data center exemption is one exception.

Estimates of grant programs' economic benefits and returns in revenue are also more precise and less likely to be underestimated than other programs because employment and capital expenditure performance data are more readily available. Conversely, employment and capital expenditures of businesses that received tax credits and most sales and use tax exemptions (with exception of the data center exemption) must be inferred from model simulations and may be slightly underestimated. These simulations generate conservative estimates of employment and output impacts, which may result in slightly understated estimates of overall economic benefits.

After grants, the data center exemption generates the next-highest economic benefits and returns in state revenue, although both are lower than the estimates reported in prior editions of this report. The lower estimates are primarily due to a revised assumption about the exemption's influence on data center location and expansion decisions (the "but for" assumption). Prior reports assumed that 90 percent or more of data center location and expansion activity occurred because of the exemption based on a commonly used methodology for determining an incentive's influence (Bartik 2018). This report assumes that 50.2 percent of data center activity occurred because of the exemption, based on more recent empirical research examining the average effect of state sales and use tax exemptions on the number, square footage, and energy use of data centers across states (Rephann, Ferreira, and Scheffel 2026). The more recent empirical research is expected to lead to more accurate assumptions of the exemption's impact on data center activity.

Appendix A: Study mandate

2026–2028 Appropriation Act
Passed as Chapter 1 of the Acts of Assembly, Special Session I, June 29, 2026

§ 1-11 Item 25 E

E.1. The General Assembly hereby designates the Joint Legislative Audit and Review Commission (JLARC) to conduct, on a continuing basis, a review and evaluation of economic development initiatives and policies and to make such special studies and reports as may be requested by the General Assembly, the House Appropriations Committee, or the Senate Finance Committee.

2. The areas of review and evaluation to be conducted by the Commission shall include, but are not limited to, the following: (i) spending on and performance of individual economic development incentives, including grants, tax preferences, and other assistance; (ii) economic benefits to Virginia of total spending on economic development initiatives at least biennially; (iii) effectiveness, value to taxpayers, and economic benefits to Virginia of individual economic development initiatives on a cycle approved by the Commission; and (iv) design, oversight, and accountability of economic development entities, initiatives, and policies as needed.

3. For the purpose of carrying out its duties under this authority and notwithstanding any contrary provision of law, JLARC shall have the legal authority to access the facilities, employees, information, and records, including confidential information, and the public and executive session meetings and records of the board of VEDP, involved in economic development initiatives and policies for the purpose of carrying out such duties in accordance with the established standards, processes, and practices exercised by JLARC pursuant to its statutory authority. Access shall include the right to attend such meetings for the purpose of carrying out such duties. Any non-disclosure agreement that VEDP enters into on or after July 1, 2016, for the provision of confidential and proprietary information to VEDP by a third party shall require that JLARC also be allowed access to such information for the purposes of carrying out its duties.

4. Notwithstanding the provisions of subsection A or B of § 58.1-3 or any other provision of law, unless prohibited by federal law, an agreement with a federal entity, or a court decree, the Tax Commissioner is authorized to provide to JLARC such tax information as may be necessary to conduct oversight of economic development initiatives and policies.

5. The following records shall be excluded from the provisions of the Virginia Freedom of Information Act (§ 2.2-3700 et seq.), and shall not be disclosed by JLARC:

(a) records provided by a public body as defined in § 2.2-3701, Code of Virginia, to JLARC in connection with its oversight of economic development initiatives and policies, where the records would not be subject to disclosure by the public body providing the records. The public body providing the records to JLARC shall identify the specific portion of the records to be protected and the applicable provision of the Freedom of Information Act or other provision of law that excludes the record or portions thereof from mandatory disclosure.

(b) confidential proprietary records provided by private entities pursuant to a promise of confidentiality from JLARC, used by JLARC in connection with its oversight of economic development initiatives and policies where, if such records are made public, the financial interest of the private entity would be adversely affected.

6. By August 15 of each year, the Secretary of Commerce and Trade shall provide to JLARC all information collected pursuant to § 2.2-206.2, Code of Virginia, in a format and manner specified by JLARC to ensure that the final report to be submitted by the Secretary fulfills the intent of the General Assembly and provides the data and evaluation in a meaningful manner for decision-makers.

7. JLARC shall assist the agencies submitting information to the Secretary of Commerce and Trade pursuant to the provisions of § 2.2-206.2, Code of Virginia, to ensure that the agencies work together to effectively develop standard definitions and measures for the data required to be reported and facilitate the development of appropriate unique project identifiers to be used by the impacted agencies.

8. The Chairman of JLARC may appoint a permanent subcommittee to provide guidance and direction for ongoing review and evaluation activities, subject to the full Commission's supervision and such guidelines as the Commission itself may provide.

9. JLARC may employ on a consulting basis such professional or technical experts as may be reasonably necessary for the Commission to fulfill its responsibilities under this authority.

10. All agencies of the Commonwealth shall cooperate as requested by JLARC in the performance of its duties under this authority.

Appendix B: Research methods and activities

JLARC contracted with the University of Virginia's Weldon Cooper Center for Public Service (Weldon Cooper Center) for this review. Key research activities performed by Weldon Cooper Center for this study included

- data collection and analysis,
- estimation of sales and use tax exemptions,
- agency staff interviews, and
- review of documents and research.

Data collection and analysis

Weldon Cooper Center collected project data from 13 state agencies that administer Virginia economic development incentive programs. Data was provided for grant, tax credit, and loan or gap financing programs that have made awards. Among the data elements collected for the incentive programs were business identifiers, location, industry type, amount of grant approved and paid, and program performance metrics, such as number of jobs created, average wage levels, and capital investment (Table B-1). Some programs, namely the small business loan and tax incentive programs, do not collect performance data or maintain it electronically.

TABLE B-1
Data and information were collected from 13 state agencies on incentive awards

Agencies	Types of information
Department of Housing and Community Development Department of Rail and Public Transportation Tobacco Region Revitalization Commission Virginia Department of Agriculture and Consumer Services Virginia Department of Aviation Virginia Department of Taxation Virginia Department of Transportation Virginia Economic Development Partnership Virginia Film Office Virginia Innovation Partnership Corporation Virginia Port Authority Virginia Small Business Financing Authority Virginia Tourism Corporation	Business identifiers (name, federal tax ID number) Industry Location (locality) of project Amount of incentive approved and paid Number of jobs promised and created and timing Capital investment promised and delivered and timing Average wages promised and delivered and timing Other performance metrics as specified

SOURCE: Weldon Cooper Center.

Analysis of grant programs

For the spending analysis, program spending for discretionary and by-right grant programs by fiscal year was computed as the funds paid for completed projects and grant funds still committed toward active but unfinished projects. For most grant programs, spending was assigned to the same date/year when awards were approved. For purposes of this report, the approval date represents when a contract between the agency and the business is signed in either a memorandum of understanding (MOU) or performance agreement. Many programs make award payments upon approval or soon after. Because custom grants are often large awards with long performance periods, spending is assigned to the fiscal year in which payments are made.

For the grant award analysis, awards for all grant awards and award amounts were assigned to the fiscal year in which the award was approved, or for custom grants, the fiscal year in which the MOU was signed. Awards were also categorized by location and industry using North American Industrial Classification System (NAICS) codes provided by the agency administering the grant or from information available from the Department of Workforce Development and Advancement (Virginia Works) or other sources. Because several agencies did not provide NAICS codes for each project, many grant projects were matched to Quarterly Census of Employment and Wages (QCEW) records obtained under a confidentiality agreement with Virginia Works.

These grant records were matched with QCEW records using firm name, address, and when available, taxpayer identification numbers. In some instances, matches could not be found. In these cases, additional online research using Manta.com, other business directories, and company websites was conducted to characterize the primary industry of the establishment and/or firm. When information was not available, certain assumptions about the nature of the firm or prospective firm were made. For Enterprise Zone Real Property Investment Grant projects that could not be otherwise identified (generally Limited Liability Corporation beneficiaries set up for commercial real estate development purposes), a NAICS code of "531120" ("Real Estate and Rental and Leasing") was assigned. Governor's Motion Picture Opportunity Fund projects were characterized as NAICS 512110 ("Motion Picture and Video Production"). Speculative infrastructure projects funded by the Tobacco Commission Megasite Program, Virginia Business Ready Sites Program, and Economic Development Access Program were assumed to be NAICS 333000 ("Machinery Manufacturing").

Twenty-four grants were not assigned to localities. Eleven GO Virginia projects ($10.6 million) for site improvements benefited several multijurisdictional industrial parks. Six Governor's Motion Picture Opportunity Fund awards totaling $17.5 million were also not assigned to localities because filming activities for these projects occurred in multiple locations throughout the state but principally in Central Virginia. Four Port Volume Increase Grant awards ($374,000) and one Barge and Rail Usage Grant award ($1,975) were not assigned to localities because cargo was derived from multiple points, including points outside the Commonwealth. Lastly, two New Airline Incentive Fund grant awards benefitted an airline (Breeze Airways) that provided new airline service to several airports ($380,000).

Grant project records do not systematically include the employment of businesses receiving awards. Estimation of grant recipients' employment was conducted by matching grant records with QCEW payroll employment records that corresponded to the year of the award. Many companies have more than one location in Virginia, and only the employment levels for the specific location of the business

that qualified for the grant were included in the analysis. Project records for FY16 through FY25 were matched by fiscal year of award with the corresponding QCEW employment data by calendar year between 2015 and 2024 (i.e., FY25 project records were matched to calendar year 2024 employment records). Using this process, 57 percent of the total number of awards and 60 percent of the award amounts were accounted for.

Project awards were weighted to account for the underrepresentation of smaller awards (and correspondingly small establishments) relative to their occurrence in the grant files to improve the representation of smaller establishments in the tabulations.

Analysis of loan programs

For the four loan programs administered by the Virginia Small Business Financing Authority—the Economic Development Loan Fund, Loan Guaranty Program, State Cash Collateral Program, and Microloan Program—there were no state appropriations for the programs for the FY16–FY25 period.

These programs are primarily revolving loan funds or secure funding outside the legislative appropriation process, but some have received state appropriations in the past. Since some programs have relied or continue to rely on federal funding, only those projects that could be attributed to previous state funding were included in this analysis. The costs of the programs were estimated to be the actual or projected defaults. Except for the Microloan Program, there were no defaults over the FY16–FY25 period. Therefore, the historical default rate of approximately 4.6% was applied to loans still in progress but no default rate was applied to two other VSBFA loan programs. In the same manner, no default rate was applied to awarded loans to estimate the "cost" of the loan portion of Tobacco Region Opportunity Fund (TROF) awards. In the last eight years, the Tobacco Region Revitalization Commission has begun to issue a larger portion of its TROF awards in the form of revolving loans. The State Cash Collateral Program issued no new loans over the period from state resources but instead relied on funding from the federal government (the State Small Business Credit Initiative or SSBCI) that was set up during the pandemic as part of the American Rescue Plan Act.

Analysis of Virginia Venture Partners GAP Funds

The Virginia Venture Partners GAP Funds, administered by the Virginia Innovation Partnership Corporation, generate returns from investments in early-stage firms. Gross realized returns derive from merger and acquisition activity, including escrows, dividends, and milestone payments, along with secondary sale of assets (GAP Funds' equity positions) and convertible note repayments. Based on prior analysis of the program for the period FY11–FY20, the funds recouped nearly $20 million in gross returns for $32.3 million in state appropriations during the period (62 percent). Thus, to estimate program expenditures, it is assumed that only 38 percent of total completed project investment relied on new state appropriations over the period and represented new state spending on the program.

Analysis of tax credits

For quantifying the revenue impact of state economic development-related tax credits, Weldon Cooper Center used corporate and individual tax credit files obtained from the Virginia Department of Taxation (Virginia Tax). These files list tax credit redemptions by fiscal year of utilization based on when the return was processed. (See the Virginia Tax annual report, Table 3.1: Fiscal Year Tax Credits.)

Incentives excluded from the analysis and report

Several programs did not make awards during the analysis period (FY16–FY25) and are not included in this report. Three grant programs have been active for over a decade but have not yet funded private business projects:

- Tobacco Commission Agribusiness Grant Program,
- Tobacco Commission Southside Economic Development Grant Program, and
- Tobacco Commission Southwest Economic Development Grant Program.

Three grant programs made awards that occurred earlier than FY16, and these incentives are not included in the sections pertaining to awards and performance. They are included in the spending analysis since grant payments were issued between FY16 and FY25. These grants include:

- Aerospace Engine Manufacturing Performance Grant Program (Rolls-Royce),
- Advanced Shipbuilding Training Facility Grant Program (Huntington Ingalls), and
- Semiconductor Grant Program (custom grant for Micron awarded in 2005).

Three economic development incentive programs are new to this report: the Barge and Rail Usage grant, the International Trade Facility grant, and the Port Volume Increase grant. These programs were converted from tax credits to grants beginning in 2025. Only the Barge and Rail Usage and Port Volume Increase grant programs made awards in FY25.

Estimation of business savings from sales and use tax exemptions

Exemptions provide relief from sales and use taxes on selected taxable goods and services for businesses in targeted industries. For most exemptions, eligible businesses obtain a sales and use exemption certificate from Virginia Tax (available online) and present it to merchants at the point of sale to claim the exemption. Neither the merchant nor the purchaser is required to report the tax savings to Virginia Tax outside of an audit process. Therefore, the size of these tax savings to businesses must be estimated by other means. For other exemptions, such as the data center and pollution control equipment exemptions, Virginia Tax issues the exemption certificate after approving an application. The business may not have the certificate at the time of eligible purchases and can apply for a refund once the exemption certificate is obtained.

To quantify forgone revenue from sales and use tax exemptions, Weldon Cooper Center relied on Virginia Tax fiscal impact estimates and staff-generated estimates based on IMPLAN and other data sources (Table B-2). Virginia Tax estimates are based on a variety of approaches, including industry surveys, industry association tallies, and imputations from secondary data sources such as federal statistical data. Some estimates rely on sales and use tax exemption estimates published as part of detailed tax expenditure studies conducted by Virginia Tax in the early- and mid-1990s. More recent estimates are sometimes available when Virginia Tax issues fiscal impact estimates to inform new General Assembly legislation. Weldon Cooper Center estimates were substituted for Virginia Tax estimates in three different situations:

- if the Virginia Tax estimates were based on much older estimates and credible estimates could be generated using more recent data and alternative methods;

- if Virginia Tax estimates were not available for a specific sales and use tax exemption; and
- if an alternative methodology had practical or conceptual advantages over the Virginia Tax estimates.

Weldon Cooper Center estimates for tax revenue rely primarily on IMPLAN data for Virginia. IMPLAN is a commercial economic impact model produced by IMPLAN Group, LLC. It is based on input-output analysis, which requires estimates of the value of intermediate input purchases for each industry. Researchers estimated how much money businesses spent on goods and services (i.e., intermediate inputs) to estimate the impact on Virginia's sales tax revenues. Spending on durable and leased good inputs was estimated by multiplying industry output by gross absorption coefficients for relevant IMPLAN commodity sectors, using the most recent data for industries and commodities. These coefficients represent the input purchases for various commodities per dollar of output. For example, the construction machinery manufacturing industry spent $0.00170 per dollar of output on commodity railroad rolling stock. This absorption coefficient was multiplied by the output of the construction machinery equipment industry for 2015 ($122,220,940) to obtain the estimated expenditure on this input ($208,000).

Because the exemptions are sometimes more narrowly targeted than the individual IMPLAN sectors available, supplemental data from Lightcast™, Virginia Works, Bureau of Labor Statistics, and Bureau of Transportation Statistics was used to apportion the sector purchases to narrower industry subsets. For example, the airline common carrier exemption is available for air common carriers that provide scheduled service to Virginia airports at least once per week. Eligible purchases were imputed by apportioning IMPLAN input purchase estimates by the percentage of the air transportation industry (NAICS 481) providing scheduled service (NAICS 4811---Scheduled Air Transportation) and apportioning again based on the percentage of scheduled departures from airlines that provide service at least once per week based on Bureau of Transportation Statistics T-100 Air Carrier Traffic Segment data.

TABLE B-2
Estimates of business savings from sales and use tax exemptions were based on different methods and sources

Exemption	Sources used to derive estimate
Airline Common Carriers Exemption	IMPLAN, Bureau of Transportation Statistics (BTS), Lightcast™
Aircraft Parts, Engines, and Supplies Exemption	Federal Aviation Administration aircraft registration data and Conklin & de Decker Aircraft Cost Evaluation V18.20
Certain Printed Materials for Out-of-State Distribution Exemption	IMPLAN, Economic Census, Lightcast™
Controlled Environment Agriculture Exemption	Virginia Department of Agriculture and Consumer Services, Virginia Employment Commission (VEC), and IMPLAN
Contractor Temporary Storage Exemption	Virginia Tax (Sales and use tax study 1995)
Data Centers Exemption	VEDP Data Center Exemption Survey data
Electrostatic Duplicators Exemption	IMPLAN, Lightcast™
Film, Television, & Audio Production Inputs Exemption	IMPLAN, Lightcast™
Media Provider Equipment Exemption	IMPLAN
Out-of-State Nuclear Facility Repair Exemption	IMPLAN, VEC QCEW, Lightcast™
Pollution Control Equipment & Facilities Exemption	Weldon Cooper Center survey of Virginia Tax form ST-11A users
Railroad Common Carriers Exemption	IMPLAN
Railroad Rolling Stock Exemption	RailInc, Lightcast™, U.S. Census Commodity Flow data
Research & Development Exemption	NSF Business R&D and Innovation Survey
Semiconductor Manufacturers Exemption	IMPLAN, industry use estimate
Semiconductor Wafers Exemption	IMPLAN, industry use estimate
Ships and Vessels Exemption	Weldon Cooper Center survey of ship repair and dredging firms, VEC QCEW
Taxi Parts & Radios Exemption	Virginia Taxicab Association, Virginia Department of Motor Vehicles, BLS QCEW
Uniform Rental & Laundry Businesses Exemption	IMPLAN, Lightcast™
Virginia Spaceport Users Exemption	Number of Mid-Atlantic Regional Spaceport launches and revenue per launch from Federal Aviation Administration

SOURCE: Weldon Cooper Center.

The data center exemption methodology relies on survey data from the Virginia Economic Development Partnership. In 2021, VEDP began collecting annual job creation, capital investment, and the exemption value from all data centers using the exemption for a new biennial report required

in statute. Eligible data center expenditures for computer equipment and software were multiplied by the effective state tax rate (4.28 percent after adjusting for the dealer discount) to arrive at new state revenue impact estimates. Exempted amounts pertaining to the local option sales tax and regional sales taxes are excluded in this report. This more complete information is available only for FY21 through FY25. Estimates for FY16 through FY20 were based solely on the job creation and capital investment data centers report to VEDP to demonstrate they met the eligibility requirement to use the exemption.

For other sales and use tax exemptions, the sectors targeted vary by exemption, as do the categories of purchases that are eligible for exemption. Generally speaking, tangible personal property purchases and leases are covered though the specific items sometimes differ. For instance, the railroad rolling stock exemption gives rolling stock manufacturing firms an exemption on the sale or lease of rolling stock. The tax base is determined by aggregating all Virginia purchases of rolling stock from rolling stock manufacturers.

Other adjustments are needed to convert calendar years to fiscal years. IMPLAN purchases are expressed in terms of calendar years; thus, fiscal year estimates were calculated by averaging two calendar years (e.g., FY16 is the average of CY15 and CY16). The last calendar year of data available from IMPLAN is 2024. Therefore, FY25 revenue estimates were calculated by inflating the FY24 estimates by the consumer price index (CPI).

Agency interviews

In 2017, Weldon Cooper Center and JLARC staff conducted structured interviews with state agency staff that administered and/or provided research support for economic development incentive programs. The interviewees included representatives of each of the 13 agencies that administer grants, loans, and gap financing and several staff from Virginia Tax. Topics included the purpose of each program, criteria used to select award recipients and amounts, and data availability and quality for tracking program performance. Additional interviews are performed only as needed, such as when new incentive programs are adopted, programs are substantially changed, or programs are selected as part of an intensive review for that year.

Review of documents and research

Weldon Cooper Center reviewed several sources of information, including documents, reports, and published or unpublished research. The purpose of this literature review was to understand the purpose and goals of Virginia economic development incentive programs, determine the best approach to quantify the revenue impacts of sales and use tax exemptions, and develop an approach for performance evaluation that draws on best practices from other states. Sources consulted included

- Virginia agency documents that describe economic development incentive program purpose, application requirements, award criteria, and other features;
- Virginia Legislative Information System documents describing grant and sales and use exemption statutes and Virginia Tax fiscal impact estimates; and
- state economic development performance evaluations published by state agencies or their consultants in Virginia and other states.

Appendix C: Incentive program descriptions

Ninety-nine economic development incentive programs are subject to this review. These include 50 grant programs, 16 tax credits, 20 tax exemptions, and 13 other programs.

Grant programs

Twelve state agencies administer 50 economic development incentive grant programs that are subject to this review. These programs reflect a variety of economic development goals and often target different activities, including development in disadvantaged regions (Tobacco Region Opportunity Fund and Enterprise Zone grants), transportation enhancements for business expansion and recruitment (Economic Development Access Program, Rail Industrial Access Program, and Transportation Partnership Opportunity Fund grants), and small business development (Small Business Investment Grant).

Programs also target industries such as agriculture and forestry (Agriculture and Forestry Industries Development Grant), corporate headquarters (Virginia Economic Development Incentive Grant), motion picture production (Governor's Motion Picture Opportunity Fund), and port-related activities (International Trade Facility Grant, Port of Virginia Economic and Infrastructure Development Grant, and Virginia Port Volume Increase Grant).

The state has also created customized grants for individual large industrial attraction and expansion projects, such as

- Amazon HQ2 (Major Headquarters Workforce Grant),
- Amazon Web Services (Cloud Computing Cluster Infrastructure Grant and Special Workforce Grant Fund),
- Blue Star Manufacturing (Nitrile Glove Manufacturing Training Grant),
- CMA CGM (Shipping and Logistics Headquarters Grant),
- CoStar Group (Property Analytics Firm Infrastructure Grant),
- LEGO Group (Precision Plastic Manufacturing Grant),
- Merck (Pharmaceutical Manufacturing Grant),
- Micron (Semiconductor Manufacturing Grant and Current and Mature Semiconductor Technology Grant),
- Microporous (Lithium-Ion Battery Separator Manufacturing Grant),
- Morgan Olson (Advanced Production Grant),
- Microsoft (Technology Development Grant Fund),
- Huntington Ingalls (Advanced Shipbuilding Training Facility Grant and Advanced Shipbuilding Production Facility Grant),
- Rocket Lab (Space Flight Operations Facilitation Program),
- Rolls-Royce Corporation (Aerospace Engine Manufacturing Performance Grant),
- Volvo (Truck Manufacturing Grant Fund), and
- Wells Fargo (Financial Services Expansion Grant Fund).

The Major Eligible Employer Grant program likewise targets large expansions; so far both Booz Allen Hamilton and Philip Morris have received awards for expanding their state footprints.

Eighty-three percent of total spending on economic incentive grants from FY16 to FY25 was administered by two state agencies, the Virginia Economic Development Partnership (69 percent) and the Department of Housing and Community Development (14 percent). The Virginia Film Office and Virginia Department of Transportation also awarded large portions of total grant funding at 4 percent of the total each.

TABLE C-1
Fifty incentive grant programs are administered by 12 state agencies

State agency/program *(year enacted)*	Purpose	Description
Virginia Innovation Partnership Corporation		
Commonwealth Commercialization Fund *(2011)*	Promote high technology economic development through commercialization of promising research and development.	Grants are made based on scientific merit and economic development potential for technology at the proof-of-concept stage or earlier in targeted high-technology industries. Funds must be matched by recipient.
Department of Agriculture and Consumer Services		
Agriculture and Forestry Industries Development Grant *(2012)*	Attract new and expanding agriculture and forestry processing value-added facilities that use Virginia-grown products.	Eligible projects must produce value-added agricultural or forestry products that derive at least 30% of agricultural or forestry product inputs from Virginia. Incentive grant requests are made by the host political jurisdiction and must be locally matched.
Department of Small Business and Supplier Diversity		
Small Business Jobs Grant *(2010)* *(eliminated 2020)*	Support small business job creation and investment.	Grants are made to small businesses in targeted sectors that create at least five full-time positions paying at least 1.35 times the federal minimum wage and making a capital investment of at least $50,000 within two years. Funding ($500–$2,000) per job is based on job characteristics.
Department of Housing and Community Development		
Job Creation Grant (Enterprise Zone) *(2005)*	Encourage job creation in distressed communities designated as enterprise zones.	Grants are awarded to qualified businesses that create at least four permanent full-time jobs in an enterprise zone. Qualifying jobs must pay at least 1.75 times the federal minimum wage (lowered to 1.5 times for high unemployment areas) and offer health benefits.

State agency/program *(year enacted)*	Purpose	Description
Real Property Investment Grant (Enterprise Zone) *(2005)*	Encourage private investment in distressed communities designated as enterprise zones.	Grants are awarded to investors making qualified investments in industrial, commercial, or mixed-use real property in an enterprise zone. The grant is computed as 20% of the investment amount minus a base investment with a project cap of $200,000.
GO Virginia (Virginia Growth and Opportunity Fund Grants) site development projects *(2017)*	Promote private sector business and employment growth through regional cooperation.	Grant funds are allocated to cooperative business site development projects using the guidance of competitive assessments developed by VEDP for the Virginia Business Ready Sites Program.
Department of Rail and Public Transportation		
Rail Industrial Access Program *(1987)*	Encourage construction, reconstruction, or improvement of railroad tracks serving new or expanding industrial sites and divert truck traffic to the freight rail network.	The grant is available to businesses that seek access to a common carrier railroad. Funding is capped at $750,000, and businesses must match Railroad Industrial Access funding with a minimum of 30% local or private funding. The program evaluates applicants using a project scoring system.
Department of Transportation		
Economic Development Access Program *(1956)*	Encourage construction, improvement, or maintenance of roads serving new or expanding industrial sites.	The grant is made in support of road enhanced access for basic employers that export at least half of output outside state. Award amount is capped at $850,000 and based on value of capital investment by qualifying companies who locate at the economic development site.
Transportation Partnership Opportunity Fund *(2006)*	Improve transportation access for business development projects.	Grants of up to $5 million are available to companies that make onsite and offsite transportation access improvements related to economic development such as road, rail, mass transit, or other transportation access improvements. Projects must meet Commonwealth's Development Opportunity Fund or Virginia Investment Performance Grant program criteria.
Department of Aviation		
Governor's New Airline Service Incentive Fund *(2020)*	Provide or assist in the provision of marketing, advertising, or promotional activities by airlines in connection with the	Grants are available for the first 12 months of service. Grant amounts vary from $5,000 to $50,000 for one route based on whether service is year-round

State agency/program *(year enacted)*	Purpose	Description
	launch of new air passenger service at Virginia airports.	or seasonal and daily or less than daily. Applicant airlines may qualify for multiple routes throughout the state and receive combined grants of up to $250,000. Beginning July 2026, an airline providing international service at least twice a week from a Virginia airport may qualify for grants up to $500,000 for year round service, or up to $300,000 for seasonal service.
Small Business Financing Authority		
Small Business Investment Grant Fund (*2012*)	Assist small businesses obtain investment capital.	Grant for equity or subordinated debt investment in eligible small business. Grant amount equals 10% of qualified investments made in small businesses not to exceed $250,000 per investor.
Tobacco Region Revitalization Commission		
Agribusiness Grants *(2002)*	Promote agricultural and agribusiness growth, development, and diversification in the tobacco region to help the agricultural industry pursue market opportunities and reduce dependence on tobacco and tobacco-related business.	Awards are made to projects likely to generate new income and investment and align with targeted categories such as applied research and education, product processing, livestock and crop demonstration, local foods, multi-purpose agriculture centers, and wholesale/retail cooperatives.
Megasite Grants *(2010)*	Develop large, business-ready and publicly owned industrial sites across the tobacco region to attract major employment and investment projects.	Megasite funding is available only for the eight sites that have been developed to date with Tobacco Commission support. Megasite projects are defined as those that create at least 400 jobs and $250 million in private investment.
Southside Economic Development Grants *(1999)*	Promote economic development in the Southside localities of the Tobacco Region.	Awards fall into strategic funding categories identified as important for economic development including infrastructure improvements, workforce training, regional tourism, building industry clusters, and entrepreneurial development.
Southwest Economic Development Grants *(1999)*	Promote economic development in the Southwest localities of the Tobacco Region.	Awards fall into strategic funding categories identified as important for economic development including infrastructure improvements, workforce training, regional tourism, building industry clusters, and entrepreneurial development.

State agency/program *(year enacted)*	Purpose	Description
Tobacco Region Opportunity Fund *(1999)*	Attract new jobs and investments for the Tobacco Region through business attraction and expansion.	Program provides both grants and loans. Requests are initiated by the host. Eligible projects must create jobs that pay an annual average wage that is above the locality's prevailing annual average wage. Applications are evaluated using a ROI model with award amounts based on that analysis. To receive an award, the ROI results must indicate a minimum award of $10,000.
Virginia Economic Development Partnership		
Advanced Production Grant Program and Fund (Morgan Olson) *(2020; project was canceled)*	Promote the location of business truck manufacturing facility in the Commonwealth. This customized performance-based grant was used to support the location and expansion of Morgan Olson, LLC in Pittsylvania County.	Incentive payments are based on attainment of performance milestones specified in a performance agreement between the state and the company. Performance measures include employment, capital investment, and annual average wage.
Advanced Shipbuilding Training Facility Grant Program (Huntington Ingalls) *(2011)*	Promote the expansion of advanced shipbuilding in the Commonwealth. This customized performance-based grant was used to support the growth of Huntington Ingalls Shipbuilding in Newport News City.	Incentive payments are based on attainment of performance milestones specified in a performance agreement between the state and the company. Performance measures include employment, capital investment, and training expenditures.
Advanced Shipbuilding Production Facility Grant Program (Huntington Ingalls) *(2016)*	Promote the expansion of advanced shipbuilding in the Commonwealth. This customized performance-based grant was used to support the expansion of Huntington Ingalls Shipbuilding in Newport News City.	Incentive payments are based on attainment of performance milestones specified in a performance agreement between the state and the company. Performance measures include employment and capital investment.
Aerospace Engine Manufacturing Performance Grant Program (Rolls-Royce) *(2007; project was canceled)*	Attract an aerospace engine manufacturer to locate in the Commonwealth. This customized performance-based grant was used to support the growth of the Rolls-Royce turbine plant in Prince George County and industry cluster firms.	Incentive payments are based on attainment of performance milestones specified in a performance agreement between the state and the company. Performance measures include employment, annual average wages, capital investment, and number of trainees.
Virginia Business Ready Sites Program *(2016)*	Encourage the development of sites and associated infrastructure for industrial and commercial uses as tools for business attraction.	Incentive grants consist of two types. Site characterization grants fund site needs assessment. Site development grants fund site development costs. Eligible sites must have at least 100 contiguous, developable acres and meet additional criteria except in GO Virginia Regions 1 and 2 (sites of at least 50 contiguous acres) and cities (sites of at least 25 contiguous acres).

State agency/program *(year enacted)*	**Purpose**	**Description**
Cloud Computing Cluster Infrastructure Grant (Amazon Web Services) *(2023)*	Promote cloud computing by providing funds for companies creating significant numbers of jobs and making large capital investment. This customized performance-based grant is used to support the expansion of Amazon data centers in multiple Virginia localities.	Incentive payments are based on attainment of performance milestones specified in a performance agreement between the state and the company. Performance measures include employment, annual average wages, and capital investment.
Commonwealth's Development Opportunity Fund *(1996)*	Attract new businesses and support existing business expansion.	Grant program is a discretionary deal closing fund for firms exporting at least half of output outside state and considering at least one other state for the project. Funds must be matched by host locality and are used for site acquisition and improvement, infrastructure, building construction, and employee training.
Current and Mature Semiconductor Technology Grant Fund (Micron) *(2025)*	Promote and expand semiconductor product manufacturing. This customized performance-based grant is used to support the expansion of Micron in Manassas City.	Incentive payments are based on attainment of performance milestones specified in a performance agreement between the state and the company. Performance measures include employment, capital investment, and average annual wages.
Financial Services Expansion Grant Fund (Wells Fargo) *(2024)*	Support expansion of financial services facility in the Commonwealth. This customized performance-based grant is used to support the expansion of Wells Fargo in Roanoke County.	Incentive payments are based on attainment of performance milestones specified in a performance agreement between the state and the company. Performance measures include employment, capital investment, and average annual wages.
Lithium-Ion Battery Separator Manufacturing Grant (Microporous) *(2025)*	Attract an ion battery separator manufacturer to locate in the state. This customized performance-based grant is used to support the location of Microporous in Pittsylvania County.	Incentive payments are based on attainment of performance milestones specified in a performance agreement between the state and the company. Performance measures include employment, capital investment, and wage levels.
Major Eligible Employer Grant *(1999)*	Attract new or expanding large employers to the state.	The grant is targeted to major employers that make a capital investment of at least $100 million and create at least 1,000 jobs. This job threshold is reduced if high-paying jobs are created.
Major Headquarters Workforce Grant Fund (Amazon HQ2) *(2019)*	Attract a major corporate headquarters to locate in the Commonwealth. This customized performance-based grant is used to support the establishment of the Amazon HQ2 in Arlington County.	Incentive payments are based on attainment of performance milestones specified in a performance agreement between the state and the company. Performance measures include employment, capital investment, and average annual wages.

State agency/program *(year enacted)*	**Purpose**	**Description**
Nitrile Glove Manufacturing Training Program (Blue Star) *(2022; project was canceled)*	Support location, recruitment and training for nitrile glove manufacturing company. This customized performance-based grant was used to support the location of Blue Star Manufacturing in Wythe County.	Incentive payments are based on attainment of performance milestones specified in a performance agreement between the state and the company. Performance measures include employment, capital investment, and average annual wages.
Pharmaceutical Manufacturing Grant Program (Merck) *(2020)*	Support expansion of pharmaceutical manufacturing facility in the Commonwealth. This customized performance-based grant was used to support the expansion of Merck Sharp & Dohme Corp. in Rockingham County.	Incentive payments are based on attainment of performance milestones specified in a performance agreement between the state and the company. Performance measures include employment, annual average wages, and capital investment.
Precision Plastic Manufacturing Grant Program (LEGO Group) *(2023)*	Support the location of a company that engages in the manufacture and distribution of precision plastic products in the Commonwealth. This customized performance-based grant is used to support the location of LEGO Group in Chesterfield County.	Incentive payments are based on attainment of performance milestones specified in a performance agreement between the state and the company. Performance measures include employment, capital investment, and average annual wages.
Property Analytics Firm Infrastructure Grant (CoStar Group) *(2024)*	Support expansion of real estate analytics firm in the Commonwealth. This customized performance-based grant is used to support the expansion of the CoStar Group in the City of Richmond.	Performance-based payments based on employment, capital investment, and average annual wages are used to reimburse the City of Richmond for funding infrastructure improvements in vicinity of firm expansion. The firm is also given option to utilize market-based sourcing in corporate income tax apportionment in lieu of cost of performance method if performance benchmarks are achieved and maintained.
Semiconductor Custom Grant (Micron)--Semiconductor Memory or Logic Wafer Manufacturing Performance Grant *(2004)*	Promote and expand semiconductor product manufacturing. This customized performance-based grant was used to support the expansion of Micron in Manassas City.	Incentive payments are based on attainment of performance milestones specified in a performance agreement between the state and the company. Performance measures include employment and capital investment.
Semiconductor Manufacturing Grant Fund (Micron) *(2019; project was canceled)*	Promote and expand semiconductor product manufacturing and research. This customized performance-based grant was used to support the expansion of Micron in Manassas City.	Incentive payments are based on attainment of performance milestones specified in a performance agreement between the state and the company. Performance measures include employment, capital investment, and average annual wages.

State agency/program *(year enacted)*	**Purpose**	**Description**
Shipping and Logistics Headquarters Grant Program (CMA CGM) *(2021)*	Support retention and expansion of shipping and logistics company in the Commonwealth. This customized performance-based grant is used to support the retention and expansion of CMA CGM in the City of Norfolk.	Incentive payments are based on attainment of performance milestones specified in a performance agreement between the state and the company. Performance measures include employment, capital investment, and average annual wages.
Space Flight Operations Facilitation Program (Rocket Lab) *(2024)*	Support location, including site development and construction, for guided missile and space vehicle parts company in the Commonwealth. This customized performance-based grant is used to support the location of Rocket Lab in Accomack County.	Performance-based payments based upon employment, capital investment, and average annual wages used to reimburse the Virginia Space Authority for funding construction of a shell building for the company's use.
Special Workforce Grant Fund (Amazon Web Services) *(2019)*	Attract an e-services company to locate operations in the Commonwealth. This customized performance-based grant was used to establish Amazon Web Services in Fairfax County.	Incentive payments are based on attainment of performance milestones specified in a performance agreement between the state and the company. Performance measures include employment, capital investment, and average annual wages.
Technology Development Grant Fund (Microsoft) *(2021)*	Promote location of technology company. This customized performance-based grant was used to support attraction of the Microsoft software development and R&D facility in Fairfax County.	Incentive payments are based on attainment of performance milestones specified in a performance agreement between the state and the company. Performance measures include employment, capital investment, and average annual wages.
Truck Manufacturing Grant Fund (Volvo) *(2021; project was canceled)*	Promote the expansion of truck manufacturer in Pulaski County. This customized performance-based grant was used to support the expansion of Volvo Trucks in Pulaski County.	Incentive payments are based on attainment of performance milestones specified in a performance agreement between the state and the company. Performance measures include employment, capital investment, and average annual wages.
Virginia Economic Development Incentive Grant *(2005)*	Encourage the location of significant headquarters, administrative, research and development, and basic service companies.	Grants are awarded to eligible that agree to create a minimum of 400 jobs that pay 1.5 times the local prevailing average wage (or create 300 jobs paying 2.0 times the local prevailing average wage) and make a capital investment of $6,500 per job or more.

State agency/program *(year enacted)*	**Purpose**	**Description**
Virginia Investment Performance Grant *(1999)*	Encourage Virginia manufacturer retention and expansion through new capital investment and R&D.	Grant is targeted to manufacturers that have operated in the state for at least 3 years, make a capital investment of at least $25 million, and face a high risk of relocating outside of Virginia. New job creation is not required, but current employment levels must be maintained throughout the annual grant payment period.
Virginia Jobs Investment Program *(1965)*	Support private business job creation and worker training and retraining.	Grants are awarded for creating new jobs or upgrading skills for existing workers. Criteria vary for small and large businesses: job creation awardees must create at least 5 or 25 new jobs and make a capital investment of at least $100,000 or $1 million.
Virginia Leaders in Export Trade Program *(2002)*	Help companies expand their markets and encourage the export of products and services to international markets.	The program provides grants, technical assistance, and training to assist eligible businesses to develop international export markets. Reimbursement is up to $30,000 per company for approved export-related expenses and is competitive. Awardees must complete a two-year program.
Virginia Talent Accelerator Program (custom workforce incentive) *(2019)*	Expedite set-up and scale-up of new tradable sector operations.	The program provides training and recruitment services in partnership with the Virginia Community College System to qualifying competitive economic projects in the manufacturing, distribution, IT, corporate headquarters, R&D, and shared service center sectors that create at least 25 jobs (for manufacturing and distribution) or 50 jobs (for other eligible operations) in the first year of operation and make a significant capital investment.

State agency/program *(year enacted)*	Purpose	Description
Virginia Trade Show Assistance Program *(2016)*	Help companies expand their markets and encourage the export of products and services to international markets.	The grant reimburses company trade show attendees for up to $10,000 of the cost of trade exhibits.
Virginia Film Office		
Governor's Motion Picture Opportunity Fund *(1999)*	Support growth of the film and television industries in Virginia.	Grants are awarded to production companies that film in Virginia. Awards are made on a discretionary basis considering project expenditures in Virginia, employment, presence of any local commitment, geographic diversity, and industry or company growth potential in Virginia.
Virginia Port Authority		
Barge and Rail Usage Grant *(2025)*	Encourage use of rail and waterway transportation and decrease Virginia road congestion.	Grant for facilities engaged in port-related activities utilizing barge and rail rather than motor transportation. Grant is awarded based on amount of increased cargo ($25 per twenty-foot equivalent) shipped by barge and rail over previous tax year.
International Trade Facility Grant *(2025)*	Encourage port-related economic activity by increasing capital investment or new hiring connected to international trade facilities.	Grant for international trade facilities that show at least 5 percent increase in Virginia port shipments. Employee credit is equal to $3,500 per job. Capital investment grant is equal to 2 percent of capital investment.
Port of Virginia Economic and Infrastructure Grant *(2014)*	Encourage maritime companies to locate or expand to promote the growth of the Port of Virginia.	Grants are awarded to companies in maritime industries that create at least 25 permanent full-time jobs and are involved in maritime commerce or import/export industry. The award per job is scaled to the number of jobs created.
Virginia Port Volume Increase Grant *(2025)*	Promote use of state port facilities.	Grant for qualified agricultural, manufacturing, or mining entities that use Virginia port facilities and increase cargo volume by at least 5 percent. Credit is $50 per 20-foot equivalent unit.

Tax credits

Sixteen economic development tax credits, which are available to eligible applicants when filing income tax forms, were subject to this review. The state offers three types of credits: transferable, refundable, and non-refundable and non-transferable. Most economic development tax credits in this report are the latter two types. In most cases, non-refundable and non-transferable tax credits can be credited against a company's tax liability over a designated "carryover" period. For these programs, carryover periods vary from a low of three years to a high of 15 years. Three of the economic development tax credit programs offer refundable credits: Coalfield Employment Enhancement Tax Credit, Motion Picture Production Tax Credit, and Research and Development Expenses Tax Credit. A refundable tax credit allows taxpayers to be reimbursed by the difference between the credit amount and tax liability. The Virginia Port Volume Increase Tax Credit was changed from a non-refundable and non-transferable tax credit to a transferable one in 2019. Most of the tax credits on Table C-2 have expired or will expire by January 1, 2027.

TABLE C-2
Sixteen economic development tax credits are available through state's corporate and individual income tax

Program	Purpose	Description
Barge and Rail Usage Tax Credit *(2011)* *(expired January 1, 2025)*	Encourage use of rail and waterway transportation and decrease Virginia road congestion.	Tax credit for facilities engaged in port-related activities utilizing barge and rail rather than motor transportation. Credit is awarded based on amount of increased cargo shipped by barge and rail over previous tax year.
Biodiesel and Green Diesel Fuels Producers Tax Credit *(2008)*	Promote biodiesel and green diesel production.	Tax credit for biodiesel and green diesel fuel producers making up to two million gallons of fuel per year. The credit amount is $0.01 per gallon but cannot exceed $5,000 per year.
Coalfield Employment Enhancement Tax Credit *(1996)* *(expired January 1, 2022)*	Encourage production of Virginia metallurgical coal and coalbed methane.	Tax credit for metallurgical coal and coalbed methane producers that is based on mining method and seam thickness.
Farm Wineries and Vineyards Tax Credit *(2011)*	Promote growth of the Virginia wine industry.	Tax credit for eligible vineyards and winery qualified expenditures such as equipment and supplies used in winemaking. Credit is 25% of all qualified expenditures.
Green and Alternative Energy Job Creation Tax Credit *(2010)* *(expired January 1, 2025)*	Promote creation of jobs in renewable and alternative energy industries.	Tax credit for creating green jobs during the taxable year. The annual credit amount is $500 per green full-time job created that pays at least $50,000 per year in wages. The credit is first allowed for the taxable year in which the job has been filled for at

Program	Purpose	Description
		least one year and for each of the four succeeding taxable years.
International Trade Facility Tax Credit *(2011)* *(expired January 1, 2025)*	Encourage port-related economic activity by increasing capital investment or new hiring connected to international trade facilities.	Tax credit for international trade facilities that show at least 5% increase in Virginia port shipments. Job credit is equal to $3,500 per job. Capital investment credit is equal to 2 percent of capital investment.
Major Business Facility Job Tax Credit *(1995)* *(expired July 1, 2025)*	Promote growth of company headquarters; manufacturing, agricultural, and transportation businesses; and export-oriented service industries such as legal and financial services. Retail industries are excluded.	Tax credit of $1,000 per job for creation of new, full-time jobs exceeding threshold of 50 jobs or 25 jobs for enterprise zone/economically distressed areas.
Major Research and Development Tax Credit *(2016)* *(expired January 1, 2025)*	Promote research and development activities.	Tax credit for qualified R&D expenses greater than $5 million. Credit is based on difference between R&D expenses during taxable year and 50% of the average expenses incurred during previous 3 years.
Motion Picture Production Tax Credit *(2011)*	Encourage motion picture production and use of Virginia resident labor and merchants in production.	Tax credit for qualifying expenses of eligible productions that complete a motion picture. Tax credit is equal to 15% of qualifying expenses, with bonus rates for Virginia resident payroll and production in economically distressed areas.
Qualified Equity and Subordinated Debt Investment Tax Credit *(1999)* *(expired January 1, 2026)*	Encourage investment in high-tech small business ventures.	Tax credit for equity or subordinated debt investment in qualified small businesses engaged in technology-related fields. Credit amount is equal to 50% of qualified investments during the taxable year but may not exceed tax liability or $50,000.
Recyclable Materials Processing Equipment Tax Credit *(1991)*	Encourage recycling of waste and pollution control.	Tax credit for qualifying purchases of equipment to produce items from recyclable materials. Credit is equal to 20% of the purchase price of the recycling equipment. The allowable credit cannot exceed 40% of tax liability.

Program	Purpose	Description
Research and Development Expenses Tax Credit *(2011)* *(expired January 1, 2025)*	Promote research and development activities.	Tax credit for qualified R&D expenses. Credit is equal to 15% of first $300,000 of expenses or 20% if conducted with Virginia higher education. Alternatively, credit may be computed as 10% of difference of expenses and 50% of previous 3-year average.
Telework Expenses Tax Credit *(2012)* *(expired January 1, 2019)*	Encourage telework to ease road congestion.	Tax credit for eligible expenses incurred for permitting employees to telework. Credit is equal to up to $1,200 per teleworking employee or $20,000 for conducting a telework assessment. Maximum credit is $50,000 per calendar year.
Virginia Coal Employment and Production Incentive Tax Credit *(2001)* *(expired January 1, 2022)*	Encourage use of Virginia coal by Virginia power generators to increase Virginia coal production and employment.	Tax credit of $3 per ton of Virginia mined coal purchased and consumed by qualified electricity generator or person with an economic interest in coal.
Virginia Port Volume Increase Tax Credit *(2011)* *(expired January 1, 2025)*	Promote use of state port facilities.	Tax credit for qualified agricultural, manufacturing, or mining entities that use Virginia port facilities and increase cargo volume by at least 5%. Credit is $50 per 20-foot equivalent unit.
Worker Retraining Tax Credit *(1999)* *(expired January 1, 2019)*	Encourage worker retraining to improve productivity and employment retention.	Tax credit for training costs of providing eligible worker retraining for qualified employees. The retraining must occur with a pre-designated program such as a noncredit course or apprenticeship. Tax credit is up to 30% of qualified training costs.
Worker Training Tax Credit (replaces Worker Retraining Tax Credit) *(2019)* *(expired July 1, 2025)*	Encourage worker training to improve productivity and employment retention.	Tax credit equal to 35 percent of the expenses incurred for eligible worker training up to $500 per qualified employee or $1,000 for training related to each non-highly compensated worker. Manufacturing businesses that currently qualify for the Worker Retraining Tax Credit for conducting orientation, instruction, and training in Virginia related to its manufacturing activities are also eligible. The annual aggregate credit cap is $1 million.

NOTE: The Worker Training Tax Credit replaced the Worker Retraining Tax Credit, and they are counted as one credit for purposes of this review.

Sales and use tax exemptions

Twenty retail sales and use tax exemptions reduce taxes for eligible firms that purchase or lease selected tangible personal property. Sales and use tax exemptions are generally realized at the point of sale when eligible items are purchased. Eligible firms must complete Department of Taxation forms (Commonwealth of Virginia Sales and Use Tax Certificate of Exemption) and present them to merchants at the time of sale. Two exemptions require additional authorization before use. The data center exemption statutorily requires qualifying firms to meet minimum employment, capital investment, and wage requirements and enter into a memorandum of understanding with VEDP. The MOU requires data centers to provide annual reports to VEDP to report their actual capital investment and job creation. Companies using the pollution control equipment and facilities exemption must first obtain certification from a state monitoring agency (i.e., Department of Environmental Quality, Department of Energy) before applying for the exemption. For these exemptions, the certificate may not have been issued at the time of eligible purchases, but the business can request a refund once the certificate is obtained.

TABLE C-3
Twenty sales and use tax exemptions reduce taxes at point of sale

Exemption	Purpose	Description
Airline Common Carriers Exemption *(1966)*	Encourage commercial airline service to and from Virginia airports.	Tax exemption for tangible personal property sold or leased to an airline operating in intrastate, interstate, or foreign commerce as a common carrier. The airline must provide scheduled air service on a continuing basis to one or more Virginia airports at least one day per week.
Aircraft Parts, Engines, and Supplies Exemption *(2018)*	Encourage growth of aviation sector, including unscheduled common carriers, private planes, and unmanned aviation systems.	Tax exemption for parts, engines, and supplies used for maintaining, repairing, or reconditioning aircraft.
Certain Printed Materials for Out-of-State Distribution Exemption *(1976)*	Encourage out-of-state business purchases of printing materials from state firms.	Tax exemption for catalogs, letters, brochures, reports, and similar printed materials, and paper furnished to a printer for fabrication into such printed materials, when stored for 12 months or less in Virginia and distributed outside the state.
Controlled Environment Agriculture Exemption *(2023)*	Promote growth of indoor, closed, controlled-environment commercial agricultural facilities including indoor vertical farming and greenhouses.	Tax exemption for Controlled Environment Agriculture (CEA) enterprises. Exemption applies to items needed to create, support, and maintain the necessary growing environment for plants, including internal, external, and structural components.

Exemption	Purpose	Description
Contractor Temporary Storage Exemption *(1989)*	Promote competitiveness of state construction material supply firms.	Tax exemption for personal property purchased by a contractor for use solely in another state or in a foreign country and temporarily stored in Virginia pending shipment, if such property could be similarly purchased free from sales tax in such other state or foreign country.
Data Centers Exemption *(2010)*	Promote the establishment of large-scale data centers.	Tax exemption for Virginia data centers and tenants meeting certain minimal investment, employment, and wage-level criteria. Exemption is for processing, storage, retrieval, and communications equipment.
Electrostatic Duplicators Exemption *(1986)*	Promote small-scale printing businesses by providing exemption comparable to industrial printers.	Tax exemption for high-speed electrostatic duplicators or any other duplicators having a printing capacity of 4,000 impressions or more per hour purchased or leased by persons engaged primarily in the printing or photocopying of products for sale or resale.
Film, Television, & Audio Production Inputs Exemption *(1995)*	Promote motion picture production and sound recording industries.	Tax exemption for audiovisual works acquired for licensing, distributing, broadcasting, commercially exhibiting or reproducing or production services or fabrication connected with such production. The exemption applies to purchases and leasing tangible personal property.
Media Provider Equipment Exemption *(1966)*	Promote radio and television broadcasting, cable television, and broadband media industries.	Tax exemption for broadcasting equipment, parts and accessories used by radio, television, cable, and broadband media companies. The exemption also applies to amplification, transmission, and distribution equipment used by cable television systems or other video systems.
Out-of-state Nuclear Facility Repair Exemption *(2000)*	Promote nuclear maintenance and repair industry by exempting purchases of supplies used for the purpose of providing services to out-of-state buyers.	Tax exemption for tangible personal property purchased for use or consumption in the performance of maintenance and repair services at Nuclear Regulatory Commission-licensed nuclear power plants located outside the state.
Pollution Control Equipment & Facilities Exemption *(1972)*	Encourage business adoption of pollution control equipment and technologies by reducing capital costs.	Tax exemption for pollution control equipment and facilities used for air and water pollution abatement certified by a state certifying authority.

Exemption	Purpose	Description
Railroad Common Carriers Exemption *(1978)*	Promote maintenance and expansion of state railroads.	Tax exemption for tangible personal property sold or leased to a public service corporation that is a common carrier of property or passengers by railway.
Railroad Rolling Stock Exemption *(2007)*	Encourage capital investment in railroad rolling stock.	Tax exemption for railroad rolling stock when sold or leased by the manufacturer.
Research & Development Exemption *(1966)*	Encourage research and development of new and improved products and processes.	Tax exemption for tangible personal property purchased for use or consumption directly and exclusively in basic research or research and development in the experimental or laboratory sense.
Semiconductor Manufacturers Exemption *(2006)*	Promote semiconductor manufacturing industry.	Tax exemption for semiconductor cleanrooms or equipment, fuel, and supplies used when designing, developing, manufacturing, or testing semiconductor products or equipment.
Semiconductor Wafers Exemption *(2006)*	Promote semiconductor manufacturing industry.	Tax exemption for semiconductor wafers for use or consumption by a semiconductor manufacturer.
Ships and Vessels Exemption *(1966)*	Promote maritime shipping industries, including commercial ship building, repairing, supplying, and dredging.	Tax exemption for ships or vessels used or to be used exclusively or principally in interstate or foreign commerce. The tax exemption also applies to fuel and supplies for use or consumption aboard ships or vessels plying the high seas, either in intercoastal trade or in foreign commerce.
Taxi Parts & Radios Exemption *(1984)*	Encourage commercial taxi operations and prevent their further decline.	Tax exemption for parts, tires, meters and dispatch radios sold or leased to taxicab operators for use in their services.
Uniform Rental & Laundry Businesses Exemption *(1980)*	Promote the commercial uniform rental industry by providing a tax exemption similar to other industrial manufacturers and processors.	Tax exemption for machinery and tools, supplies and materials used directly in maintaining and preparing textile products for rental or lease by an industrial processor engaged in commercial leasing or renting of laundered textile products.
Virginia Spaceport Users Exemption *(1997)*	Promote spaceport operations at facilities owned, leased, or operated by the state and the commercial space industry.	Tax exemption for space facilities and hardware, including inputs, components and supplies such as special fuels, machinery and equipment, and other goods and services for activities undertaken at a Virginia Commercial Space Flight Authority facility.

Other incentive programs

Thirteen other incentive programs included in this report fall into a "miscellaneous" category. These incentives include tax preferences such as corporate income tax apportionment methods and income tax subtractions as well as gap and loan financing programs that are difficult to classify elsewhere. The latter programs are administered by the Virginia Small Business Financing Authority and the Virginia Innovation Partnership Corporation and are designed to provide alternative funding sources for business startups and established small businesses that face financing constraints. Based on current estimates, the manufacturing single sales apportionment factor is the largest of these miscellaneous incentives. The single sales formula allows manufacturers to calculate their taxable income in Virginia based solely on the proportion of total sales that are in Virginia rather than a weighted average of sales, property, and payroll. This creates tax savings for multistate firms that have sizeable operations within the state but ship substantial amounts of products outside the state.

TABLE C-4
Thirteen other tax incentives, loan, and gap financing programs target economic development

Program	Purpose	Description
Data Center Single Sales Factor Apportionment *(2017)*	Promote the establishment and growth of data centers.	This tax rule allows eligible multistate corporations that make a capital investment of at least $150 million in a data center to use the single sales factor method of apportionment to reduce tax liability. Companies that choose to use this apportionment method must enter into an MOU with VEDP.
Economic Development Loan Fund *(2007)*	Promote small business job creation and retention by providing gap financing.	Loans are targeted to small businesses in technology, tourism, manufacturing, and services that generate a majority of sales outside the state. Project must create permanent full-time jobs that pay minimum of $10 per hour. Maximum loan available is 40% or $1 million, whichever is less.
Loan Guaranty Program *(1985)*	Promote small business capital investment.	This program helps small businesses obtain loans by reducing bank credit risk. The maximum guarantee is the lesser of $750,000 or 75% of the loan amount. The program does not have job creation requirements but considers job creation in financing decisions.

Program	Purpose	Description
State Cash Collateral Program *(2013)*	Promote small business capital investment.	This program helps small businesses obtain loans by reducing bank credit risk. The maximum guarantee is the lesser of $500,000 or 40% of the loan amount. The program does not have job creation requirements but considers job creation in financing decisions.
Manufacturing Single Sales Factor Apportionment *(2009)*	Promote manufacturing employment growth.	This tax rule allows manufacturing companies to choose single sales factor apportionment to reduce tax liability. Companies must certify that full-time employee average wages are above the state industry average and that employment is at least 90 percent of base year employment for three years.
New Company Incentive Program *(2018)* *(expired January 1, 2025)*	Promote economic development in 51 qualified economically distressed counties.	Program offers modified corporate income tax apportionment factor and consideration for grant from Commonwealth's Development Opportunity Fund for new traded sector companies creating at least 10 new jobs paying at least 1.5 times the Virginia minimum wage and $5 million in capital investment that locate in eligible counties.
Qualified Business Long-Term Capital Gain Subtraction *(2010)*	Promote high technology business investment.	Tax subtraction for income attributable to an investment in certain high technology businesses that is taxed as long-term capital gain. Investment must be made between April 1, 2010, and June 30, 2020. Qualified businesses must have gross revenues of less than $3 million and have received less than $3 million in equity or debt investments.
Microloan Program (formerly SWaM Loan Fund) *(2012)*	Promote small, women-owned, and minority-owned business capital investment and expansion.	This fund provides a maximum of $10,000 to eligible businesses, or $25,000 if business received counseling from a Small Business Development center. Loans are allocated on credit score basis. Loans may be used for working capital, financing accounts receivable and inventory, and other purposes.

Program	Purpose	Description
Tourism Development Financing Program *(2011)*	Promote tourism and economic development in Virginia.	The program provides gap financing for tourism development projects otherwise unable to access capital. The locality must apply, demonstrate a tourism deficiency, and provide tax incentives or regulatory flexibility for a designated tourism zone where the project occurs.
Venture Capital Account Subtraction *(2018)* *(Expired January 1, 2024)*	Promote investment in Virginia early-stage companies.	Income tax subtraction of certain income attributable to an investment in a Virginia venture capital account, defined as an investment fund that (i) invests at least 50 percent of its funds invested during the year in which the taxpayer claims a subtraction, or any of the previous five years, in qualified portfolio companies and (ii) employs at least one investor who has either at least four years of professional experience in venture capital investment or substantially equivalent experience. Investment must be made between January 1, 2018, and December 31, 2023.
Virginia Venture Partners Gap Funds *(2005)*	Promote expansion of early-stage high-science and technology companies in targeted fields with rapid growth potential.	Seed-stage equity investments in Virginia-based technology, green technology, and life science companies with a high growth potential. The Virginia Innovation Partnership Corporation (VIPC) holds an ownership position in the company while the company grows operations and value.
Zero G Zero Tax Act (Part I) Subtraction *(2009)*	Encourage the location and expansion of companies at a Virginia airport or spaceport involved in flying or training humans in suborbital flight.	Tax deduction for gains realized from the sale of launch services to space flight participants or launch services intended to provide individuals the training or experience of a launch, without performing an actual launch.
Zero G Zero Tax Act (Part II) Subtraction *(2009)*	Encourage the location and expansion of companies at a Virginia spaceport involved in resupplying the space station.	Tax deduction for gains realized from resupply services contracts for delivering payload with the Commercial Orbital Transportation Services division of the National Aeronautics and Space Administration or other space flight entity.

Appendix D: Spending or tax expenditures by incentive

TABLE D-1
State spending on incentive grant payments ($ millions)

Incentive	FY16	FY17	FY18	FY19	FY20	FY21	FY22	FY23	FY24	FY25	Total
Advanced Production Grant Program and Fund (Morgan Olson)	--	--	--	--	0.0	0.5	0.0	0.0	0.0	--	$0.5M
Advanced Shipbuilding Training Facility Grant Program (Huntington Ingalls)	7.59	7.16	--	--	--	--	--	--	--	--	14.7
Advanced Shipbuilding Production Facility Grant Program (Huntington Ingalls)	--	0.0	0.0	6.0	0.0	8.0	8.0	8.0	8.0	8.0	46.0
Aerospace Engine Manufacturing Performance Grant Program (Rolls Royce)	0.0	0.0	0.0	0.0	11.0	0.0	--	--	--	--	11.0
Tobacco Commission Agribusiness Grant	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Agriculture and Forestry Industries Development Grant	0.7	1.6	0.5	1.2	0.6	0.7	2.7	1.3	0.2	1.1	10.5
Virginia Business Ready Sites Program	--	0.9	0.0	0.4	0.0	0.0	6.4	89.3	0.0	126.0	223.0
Barge and Rail Usage Grant	--	--	--	--	--	--	--	--	--	0.1	0.1
Commonwealth's Development Opportunity Fund	14.4	21.3	6.8	9.3	8.5	13.0	18.5	18.8	42.1	19.7	172.4
Commonwealth Commercialization Fund	1.4	1.2	0.8	1.2	1.8	3.2	2.6	6.4	2.6	1.6	22.9
Economic Development Access Program	0.7	3.6	2.1	1.5	1.3	2.0	0.7	0.9	2.3	4.4	19.4
Financial Services Expansion Grant Fund (Wells Fargo)	--	--	--	--	--	--	--	--	0.0	0.0	0.0
GO Virginia	--	0.0	0.4	2.8	0.0	5.7	2.2	5.7	0.4	1.9	19.1
Governor's Motion Picture Opportunity Fund	12.1	0.8	5.8	1.4	3.0	5.5	7.9	9.3	2.8	0.0	48.5
Governor's New Airline Service Incentive Fund	--	--	--	--	--	--	0.2	0.0	0.1	0.1	0.4
Job Creation Grant (Enterprise Zone)	2.7	1.8	2.2	2.7	2.9	1.9	2.5	1.8	2.0	1.8	22.4
Major Eligible Employer Grant	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Major Headquarters Workforce Grant Fund (Amazon HQ2)	--	--	--	0.00	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Tobacco Commission Megasite Grant	0.0	0.0	4.8	0.0	0.0	0.0	0.0	0.0	0.0	0.0	4.8

Incentive	FY16	FY17	FY18	FY19	FY20	FY21	FY22	FY23	FY24	FY25	Total
New Company Incentive Program	--	--	0.0	0.0	0.0	0.6	0.7	0.0	0.0		1.3
Nitrile Glove Manufacturing Training Program (Blue Star)	--	--	--	--	--	--	0.0	0.0	0.0	3.9	3.9
Pharmaceutical Manufacturing Grant Program (Merck)	--	--	--	--	0.0	0.0	2.5	2.5	0.0	2.5	7.5
Port of Virginia Economic and Infrastructure Grant	0.3	2.2	0.5	0.1	1.3	0.7	1.0	0.5	0.5	0.2	7.1
Port Volume Increase Grant	--	--	--	--	--	--	--	--	--	0.5	0.5
Precision Plastic Manufacturing Grant Program (Lego Group)	--	--	--	--	--	--	0.0	9.9	8.4	0.1	18.4
Property Analytics Firm Infrastructure Grant Fund (CoStar Group)	--	--	--	--	--	--	--	--	0.0	0.0	0.0
Rail Industrial Access Program	0.5	0.0	1.3	0.7	0.6	1.3	1.7	2.5	1.5	1.7	11.8
Real Property Investment Grant (Enterprise Zone)	9.3	10.9	10.7	10.8	11.6	12.6	11.1	9.4	13.2	11.9	111.3
Semiconductor Custom Grant (Micron 2004)	3.8	--	--	--	--	--	--	--	--	--	3.8
Semiconductor Manufacturing Grant Fund (Micron 2019)	--	--	--	0.00	50.0	20.0	0.0	0.0	-38.2 [a]	--	31.8
Shipping and Logistics Headquarters Grant Program (CMA CGM)	--	--	--	--	--	--	0.0	0.0	1.4	0.5	1.9
Small Business Investment Grant	0.1	1.2	0.5	0.8	0.8	0.8	0.8	0.8	0.8	0.8	7.6
Small Business Jobs Grant	0.0	0.4	0.0	0.0	--	--	--	--	--	--	0.4
Southside Economic Development Grants	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Southwest Economic Development Grants	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Space Flight Operations Facilitation Program (Rocket Lab)	--	--	--	--	--	--	--	--	5.6	9.4	15.0
Special Workforce Grant Fund (Amazon Web Services)	--	--	--	0.0	0.0	0.0	10.5	--	--	--	10.5
Technology Development Grant Fund (Microsoft)	--	--	--	--	--	0.0	0.0	5.6	5.6	0.0	11.3
Tobacco Region Opportunity Fund	9.1	2.9	2.9	3.5	1.9	1.1	1.8	0.9	0.2	0.1	24.5
Transportation Partnership Opportunity Fund	0.0	0.0	0.0	11.2	0.0	1.0	0.0	3.0	0.0	5.0	20.2
Truck Manufacturing Grant Fund (Volvo)	--	--	--	--	--	2.0	2.0	0.0	0.0	--	4.0
Virginia Economic Development Incentive Grant	0.0	13.3	0.0	0.0	0.0	0.0	2.0	9.0	3.5	0.0	27.8
Virginia Investment Performance Grant	5.0	0.6	1.0	1.4	2.6	8.1	9.9	0.0	0.0	5.7	34.1
Virginia Jobs Investment Program	9.1	8.2	3.8	1.9	2.2	2.5	2.9	1.8	1.7	0.7	34.8

Incentive	FY16	FY17	FY18	FY19	FY20	FY21	FY22	FY23	FY24	FY25	Total
VALET Program	0.3	0.6	0.7	0.5	0.6	0.5	0.8	0.6	0.8	1.1	6.5
Virginia Talent Accelerator Program	--	--	--	--	1.0	1.9	9.8	0.8	2.7	7.9	24.0
Virginia Trade Show Assistance Program	--	0.6	0.5	0.6	0.7	0.4	0.5	0.6	0.7	0.9	5.5
Total, all grants	77.0	79.1	45.3	58.1	102.4	94.0	109.5	189.5	107.1	217.3	$1,079.4M
Total, noncustom grants	65.6	72.0	45.3	52.1	41.4	63.5	86.5	163.5	78.1	192.9	860.9
Total, custom grants	11.4	7.2	0.0	6.0	61.0	30.5	23.0	26.0	29.0	24.4	218.5

SOURCE: Weldon Cooper Center analysis of economic development incentives.
NOTE: Adjusted for canceled projects, recaptures, and award reductions. Not adjusted for inflation. Numbers may not sum because of rounding. Spending on the New Company Incentive Program is included here because the incentive payments were in the form of grants.
[a] The negative amount shown in FY24 is the amount recaptured when the grant was canceled in FY24.
-- indicates program had not been adopted or was no longer in effect.

TABLE D-2
Tax savings to businesses because of tax credits ($ millions)

Incentive	FY16	FY17	FY18	FY19	FY20	FY21	FY22	FY23	FY24	FY25	Total
Barge and Rail Usage Tax Credit	0.6	0.0	0.0	0.0	0.0	0.0	0.1	0.4	0.1	-0.1	$1.2M
Biodiesel and Green Diesel Fuels Producers Tax Credit	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Coalfield Employment Enhancement Tax Credit	23.4	18.9	15.2	16.1	7.9	9.3	0.3	8.9	5.5	10.7	116.2
Farm Wineries and Vineyards Tax Credit	0.2	0.1	0.1	0.2	0.1	0.1	0.2	0.2	0.2	0.1	1.7
Green Job Creation Tax Credit	0.0	0.0	0.1	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.3
International Trade Facility Tax Credit	0.3	0.3	0.3	0.9	0.1	0.1	0.0	0.1	0.1	0.4	2.6
Major Business Facility Job Tax Credit	0.8	6.8	1.8	1.3	6.3	2.2	0.8	4.0	1.8	1.8	27.6
Major Research and Development Tax Credit	--	--	6.1	4.8	17.2	12.0	9.9	21.3	14.6	20.7	106.6
Motion Picture Production Tax Credit	5.5	6.6	6.1	0.0	7.2	5.8	4.5	6.5	15.0	3.5	60.6
Qualified Equity and Subordinated Debt Investment Tax Credit	2.4	2.2	2.8	3.2	3.9	4.2	3.2	5.0	4.0	3.3	34.1
Recyclable Materials Processing Equipment Tax Credit	2.1	1.7	1.4	1.5	2.2	2.2	1.3	1.8	1.5	2.5	18.2
Research and Development Expenses Tax Credit	4.7	4.2	4.2	4.1	5.2	2.6	2.7	2.4	3.4	5.3	38.8

Incentive	FY16	FY17	FY18	FY19	FY20	FY21	FY22	FY23	FY24	FY25	Total
Telework Expenses Tax Credit	0.1	0.0	0.1	0.0	0.1	0.0	0.0	--	--	--	0.2
Virginia Coal Production and Employment Incentive Tax Credit	3.1	3.7	6.8	0.5	1.3	0.6	0.1	0.0	0.0	0.1	16.1
Virginia Port Volume Increase Tax Credit	0.9	2.2	1.8	1.8	1.4	1.8	0.3	2.2	2.4	1.2	16.1
Worker Retraining Tax Credit	0.2	0.2	0.3	0.0	0.2	0.0	0.0	--	--	--	0.9
Worker Training Tax Credit	--	--	--	--	0.0	0.1	0.0	0.1	0.1	0.1	0.4
Total	**44.1**	**47.0**	**47.1**	**34.5**	**53.0**	**41.1**	**23.6**	**52.9**	**48.8**	**49.5**	**$441.7M**

SOURCE: Weldon Cooper Center analysis of Virginia Tax's Annual Reports for Fiscal Years 2016–2025.
NOTE: Credits were claimed for the Biodiesel and Green Diesel Fuels Producers Tax Credit, but amounts were very minimal. Not adjusted for inflation. Numbers may not sum because of rounding.
-- indicates no credits were claimed in that year because they had not been adopted yet or the credit has since expired.

TABLE D-3
Estimated tax savings to businesses on sales and use tax exemptions ($ millions)

Incentive	FY16	FY17	FY18	FY19	FY20	FY21	FY22	FY23	FY24	FY25	Total
Aircraft Parts, Engines, and Supplies Exemption	--	--	--	5.5	5.6	5.6	5.7	5.9	6.1	6.1	$40.5M
Airline Common Carriers Exemption	13.9	14.2	15.2	16.8	13.4	10.7	15.3	21.5	23.4	24.0	168.3
Certain Printed Materials for Out-of-State Distribution Exemption	10.3	10.0	10.5	10.4	9.5	8.5	8.6	9.0	9.5	9.8	96.2
Contractor Temporary Storage Exemption	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	1.2
Controlled Environment Agriculture Exemption	--	--	--	--	--	--	--	--	0.2	0.2	0.4
Data Centers Exemption	**	**	**	**	**	613.5	411.5	685.2	927.4	1,420.0	4,057.6
Electrostatic Duplicators Exemption	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.1
Film, Television, & Audio Production Inputs Exemption	1.1	1.4	1.7	2.0	2.2	2.5	2.5	2.8	3.0	3.1	22.2
Media Provider Equipment Exemption	5.1	5.8	6.0	5.3	5.2	5.3	5.5	8.5	11.4	11.7	69.8
Out-of-state Nuclear Facility Repair Exemption	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.2	0.2	0.2	1.4
Pollution Control Equipment & Facilities Exemption	4.1	3.2	3.2	3.3	3.4	3.4	3.7	3.9	4.0	4.1	36.4
Railroad Common Carriers Exemption	18.5	18.1	19.6	19.4	15.0	15.3	18.6	17.0	15.9	16.3	173.7

Incentive	FY16	FY17	FY18	FY19	FY20	FY21	FY22	FY23	FY24	FY25	Total
Railroad Rolling Stock Exemption	2.3	2.4	2.4	2.5	2.6	2.6	2.8	2.9	3.1	3.1	26.7
Research & Development Exemption	2.9	3.4	5.1	5.4	6.4	7.9	8.0	7.4	7.7	7.9	62.0
Semiconductor Manufacturers Exemption	0.7	0.7	0.7	0.7	0.8	1.1	1.2	1.3	1.4	1.4	10.0
Semiconductor Wafers Exemption	0.2	0.2	0.2	0.2	0.2	0.3	0.4	0.4	0.5	0.5	3.2
Ships and Vessels Exemption	6.3	6.5	6.4	7.0	7.1	7.3	7.8	8.3	8.6	8.8	74.3
Taxi Parts & Radios Exemption	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	1.0
Uniform Rental & Laundry Businesses Exemption	0.9	0.9	0.9	1.0	0.9	0.9	1.0	0.9	1.0	1.0	9.3
Virginia Spaceport Users Exemption	0.0	0.5	1.0	1.0	1.0	1.6	1.1	0.8	0.7	0.1	7.7
Total	**66.9**	**67.6**	**73.5**	**80.8**	**73.7**	**686.7**	**494.1**	**776.3**	**1,024.1**	**1,518.6**	**$4,862.0M**

SOURCE: Weldon Cooper Center analysis of economic development incentives.
NOTE: Exempted amounts exclude the 1 percent sales tax for localities and, in most cases, the additional amounts collected in localities with higher rates, such as Northern Virginia and the Historic Triangle. Numbers may not sum because of rounding.
-- indicates exemption had not been adopted yet.
** indicates estimates are not available.

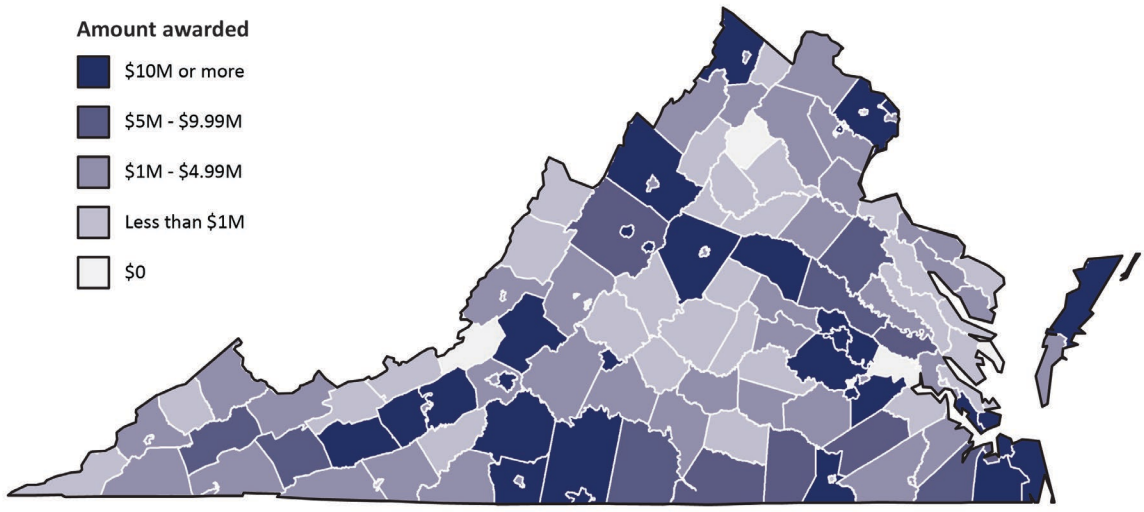
TABLE D-4
State spending on other incentives ($ millions)

Incentive	FY16	FY17	FY18	FY19	FY20	FY21	FY22	FY23	FY24	FY25	Total
Data Center Single Sales Factor Apportionment	--	--	--	0.1	0.1	0.1	0.2	0.2	0.2	0.3	$1.3M
Economic Development Loan Fund	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Loan Guaranty Program	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Manufacturing Single Sales Factor Apportionment	22.3	22.7	23.3	23.7	24.1	24.7	26.4	28.1	29.0	29.8	254.1
Microloan Program (formerly SWaM Loan Fund)	0.1	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.1	0.0	0.2
New Company Incentive Program (Corporate Apportionment Portion)	--	--	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Qualified Business Long-Term Capital Gain Subtraction	1.5	1.9	1.2	0.8	0.9	2.6	1.0	2.7	2.8	2.9	18.3
State Cash Collateral Program	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0

Appendix E: Regional distribution of grant awards

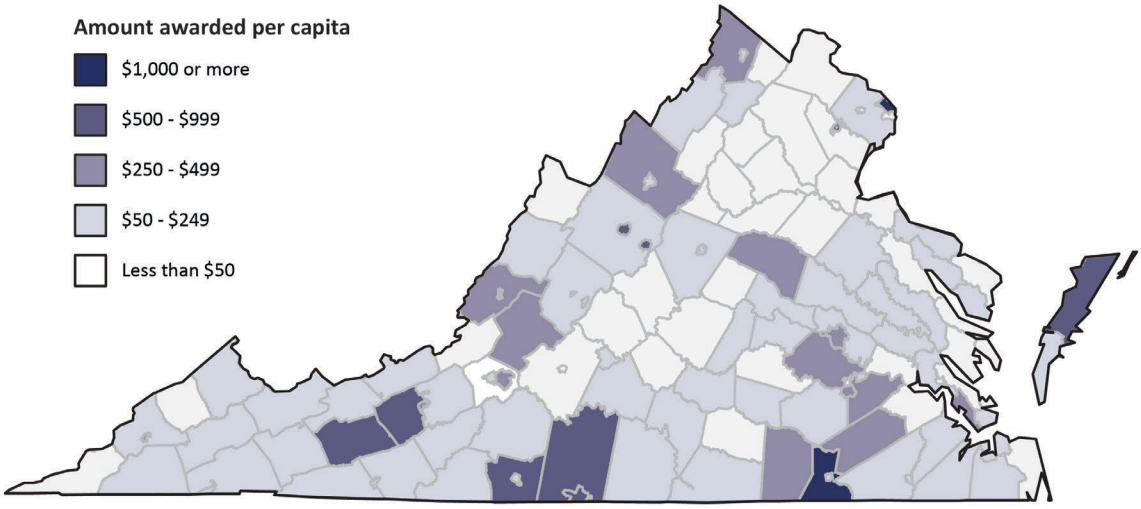
The largest amount of grant awards went to businesses in highly populated localities such as Arlington County, Chesterfield County, Richmond City, Newport News City, and Fairfax County and to rural localities in the tobacco region and in the West Central regions (Figure E-1). Adjusted for population size, awards are concentrated in urbanized localities in Northern Virginia and in rural southern and Eastern Shore localities (Figure E-2).

FIGURE E-1
Awards are concentrated in several highly populated areas and the southern region (FY16–FY25)



SOURCE: Weldon Cooper Center analysis of economic development incentives.
NOTE: Localities were not assigned to 11 GO Virginia, six Governor's Motion Picture Opportunity Fund (GMPOF), four Port Volume Increase, two Governor's New Airline Incentive, and one Barge and Rail Usage grant projects because the grants benefited more than one locality. The total award amount for Arlington is $779 million.

FIGURE E-2
Awards are concentrated in urban areas in Northern Virginia and in rural southern and eastern shore localities, adjusted for population size (FY16–FY25)

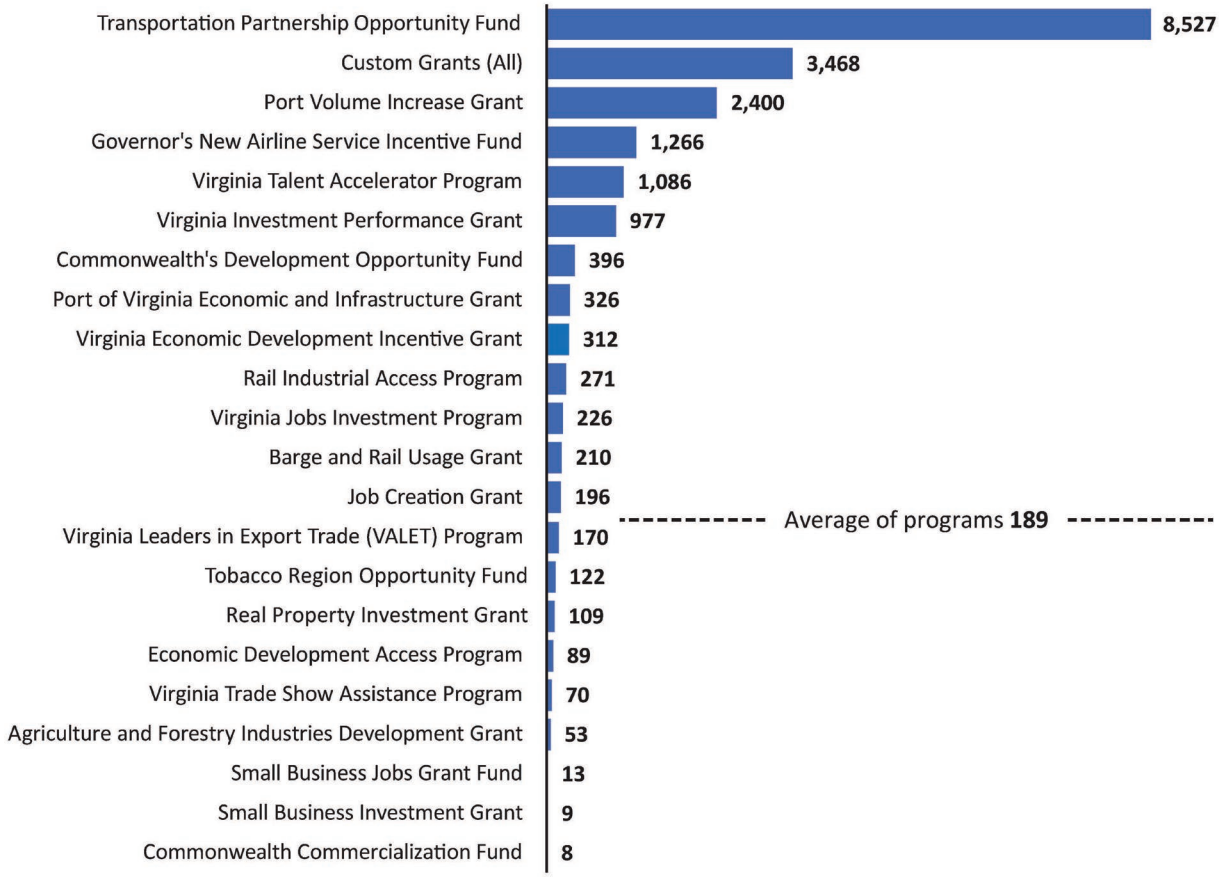


SOURCE: Weldon Cooper Center analysis of economic development incentives and U.S. Census Bureau estimates of Virginia population, 2020 decennial census.
NOTE: Localities were not assigned to 11 GO Virginia, six Governor's Motion Picture Opportunity Fund (GMPOF), four Port Volume Increase, two Governor's New Airline Incentive, and one Barge and Rail Usage grant projects because the grants benefited more than one locality. The award per capita for Arlington is $3,245.

Appendix F: Average employment size of grant recipients by program

The average establishment size of a grant recipient was 189 employees across all programs. However, the average size varied widely by program (Figure F-1). The largest average size was for the Transportation Partnership Opportunity Fund (8,527 employees). The smallest average employee sizes were for finance programs for startups—the Small Business Investment Grant Fund (9 employees) and Commonwealth Commercialization Fund (8 employees).

Figure F-1
Average employment size of business location at time of award varies widely by program (FY16– FY25)



SOURCE: Weldon Cooper Center analysis of economic development incentive grants and VEC data.
NOTE: Employment records were matched with 2,815 of the 4,973 awards (57%) and $1.265 billion of $2.1009 billion in total awards (60%).

Appendix G: Project-specific goals used by grant programs

Some programs award grants or make award commitments before projects begin. These programs require projects to achieve specific goals to obtain or keep the full award promised. Job creation, capital investment, and average wages paid are the most common goals, but several programs establish other goals that better align with the program's purpose (Table G-1).

TABLE G-1:
Job creation, average wages, and capital investment are most common performance measures

Grant program	Job creation	Wages	Capital expenditures	Other
Advanced Production Grant (Morgan Olson)	X	X	X	
Advanced Shipbuilding Training Facility Grant (Huntington Ingalls)	X	X	X	Number of apprentices, training expenses
Advanced Shipbuilding Production Facility Grant (Huntington Ingalls)	X		X	
Aerospace Engine Manufacturing Performance Grant (Rolls Royce)	X	X	X	
Agriculture and Forestry Industries Development Grant	X	X	X	Value of Virginia agricultural products
Barge and Rail Usage Grant				Barge and rail cargo volume
Cloud Computing Cluster Infrastructure Grant (Amazon Web Services)	X	X	X	
Commonwealth's Development Opportunity Fund	X	X	X	
Commonwealth Commercialization Fund				Capital attracted from other sources
Economic Development Access Program			X	
Financial Services Expansion Grant (Wells Fargo)	X	X	X	
Virginia Venture Partners GAP Funds				Capital attracted from other sources
GO Virginia (site development)	X		X	
Governor's Motion Picture Opportunity Fund	X			Total Virginia spending, Value of advertising
Governor's New Airline Service Incentive Fund				Frequency of air service
International Trade Facility Grant			X	Port cargo volume
Job Creation Grant	X			
Major Eligible Employer Grant	X	X	X	
Major Headquarters Workforce Grant (Amazon HQ2)	X	X	X	

Grant program	Job creation	Wages	Capital expenditures	Other
Nitrile Glove Manufacturing Training Program (Blue Star)	X	X	X	
Pharmaceutical Manufacturing Grant (Merck)	X	X	X	
Port of Virginia Economic and Infrastructure Grant	X			Port user
Port Volume Increase Grant				Port cargo volume
Precision Plastic Manufacturing Grant (LEGO Group)	X	X	X	
Property Analytics Firm Infrastructure Grant (CoStar Group)	X	X	X	
Rail Industrial Access Program			X	Carloads
Real Property Investment Grant			X	
Semiconductor Custom Grant (Micron)	X		X	
Semiconductor Manufacturing Grant (Micron)	X	X	X	Establishment of R&D facility
Shipping and Logistics Headquarters Grant (CMA CGM)	X	X	X	
Small Business Investment Grant Fund	X			Private equity investment
Small Business Jobs Grant Fund Program	X	X	X	
Space Flight Operations Facilitation Program (Rocket Lab)	X	X	X	
Special Workforce Grant (Amazon Web Services)	X	X	X	
SRI custom grant	X	X		
Technology Development Grant (Microsoft)	X	X	X	
Tobacco Commission Megasite Grant				
Tobacco Region Opportunity Fund	X	X	X	
Transportation Partnership Opportunity Fund	X		X	
Truck Manufacturing Grant (Volvo)	X	X	X	
Virginia Business Ready Sites Program				
Virginia Economic Development Incentive Grant	X	X	X	
Virginia Investment Performance Grant [a]	X	X	X	
Virginia Jobs Investment Program	X	X	X	Job retraining
Virginia Leaders in Export Trade (VALET) Program				International sales
Virginia Talent Accelerator Program		X		Workers receiving recruitment and training services
Virginia Trade Show Assistance Program				International sales

SOURCE: Weldon Cooper Center analysis of agency documents.

[a] New job creation not required. Some project awards include new job creation and job creation and average wages are performance goals for these projects.

Appendix H: Economic and revenue impact analysis

The economic impact analysis for incentives involved modeling (1) the additional economic activity that occurred because of the incentive and (2) the simultaneous increase in taxes that was used to "pay" for the incentive. Increasing taxes has the general effect of decreasing employment and other economic activity. Thus, increasing taxes to pay for the incentive reduced the incentive's total economic impact.

Economic impact modeling

Weldon Cooper Center staff conducted economic impact analyses of Virginia economic incentives using REMI PI+ (Policy Insight Plus) software. REMI PI+ is a dynamic, multi-sector regional economic simulation model used for economic forecasting and measuring the impact of public policy changes on local economies. The model combines different contemporary regional economic modeling methods such as input-output analysis, econometric forecasting, and computable general equilibrium to characterize the mechanics and path of a regional economy. The model has been extensively peer-reviewed and is widely used by state agencies elsewhere in the nation to model economic and tax revenue impacts of economic development incentive programs. The model used for this analysis was customized for Virginia and includes 70 industry sectors. Outcome variables examined include total employment, state GDP, and personal income. In addition, a state tax revenue impact analysis was conducted based on a methodology described further below.

The modeling of each program varied depending on the type of economic stimulus provided by the program and available information on program outcomes (Table H-1). The most comprehensive information on performance outcomes was available for grant programs, which typically track employment, capital investment, and other performance metrics related to specific goals of the programs. Information on employment benchmarks was also available for four Small Business Financing Authority loan programs, which a previous JLARC study corroborated are indicative of total employment creation. (See *Workforce and Small Business Incentives*, JLARC 2018.) Similar information was available for the Data Center Exemption because users are required to enter into an MOU with VEDP and report employment and capital investment goal attainment for each project. However, it was not available for other sales and use tax exemptions and tax credits. Thus, those programs were generally modeled as decreasing either firm capital or production costs. Programs were modeled as decreasing firms' capital costs if the incentive reduced the costs of purchasing tangible personal property. They were modeled as decreasing firm production costs if the incentive reduced costs of labor as well as equipment and supplies.

TABLE H-1
REMI policy variables

Name of incentives	REMI model policy variables	Modeling description
Agriculture and Forestry Industries Development Grant Commonwealth's Development Opportunity Fund Governor's Motion Picture Opportunity Fund Job Creation Grant (Enterprise Zone) Major Eligible Employer Grant Port of Virginia Economic and Infrastructure Grant Small Business Investment Grant Fund Small Business Jobs Grant Fund Program Tobacco Region Opportunity Fund Virginia Economic Development Incentive Grant Virginia Investment Performance Grant Virginia Jobs Investment Program—New Jobs Economic Development Loan Fund State Cash Collateral Program Microloan Program (formerly SWaM Loan Fund) Special Workforce Grant Fund (Amazon Web Services)	Labor and Capital Demand>-Employment>-Firm >-Industry	Model economic impact based on 10 percent "but for" assumption for grant programs and 31 percent for loan programs based on documented or projected employment increase. Assign REMI industry based on grant project industry identifiers.
Governor's Motion Picture Opportunity Fund	Labor and Capital Demand>-Employment>Industry >-Industry	Model economic impact based on 95 percent "but for" assumption based on documented employment increase.
Economic Development Access Program Rail Industrial Access Program Real Property Investment Grant (Enterprise Zone) Megasite Grants (Tobacco Commission) Transportation Partnership Opportunity Fund	Output and Demand>-Investment Spending>-Nonresidential	Model economic impact estimate based on 10 percent "but for" assumption based on documented investment. Assign REMI industry based on grant project industry identifiers.

Name of incentives	REMI model policy variables	Modeling description
Farm Wineries and Vineyards Tax Credit Recyclable Materials Processing Equipment Tax Credit Airline Common Carriers Exemption Aircraft Parts, Engines, and Supplies Exemption Certain Printed Materials for Out-of-State Distribution Exemption Controlled Environment Agriculture Exemption Data Center Single Sales Factor Apportionment Electrostatic Duplicators Exemption Film, Television, & Audio Production Inputs Exemption Virginia Venture Partners GAP Funds Manufacturing Single Sales Factor Apportionment Media Provider Equipment Exemption Pollution Control Equipment & Facilities Exemption Qualified Equity and Subordinated Debt Investments Tax Credit Qualified Business Long-Term Capital Gain Subtraction Railroad Common Carriers Exemption Railroad Rolling Stock Exemption Research & Development Exemption Semiconductor Manufacturers Exemption Semiconductor Wafers Exemption Ships and Vessels Exemption Taxi Parts & Radios Exemption Uniform Rental & Laundry Businesses Exemption Virginia Spaceport Users Exemption Zero G Zero Tax Act (Part I and II)	Compensation and Prices->Production Costs->Capital Costs	Model economic impact based on reduced capital cost equal to tax credit or estimated exemption tax revenue effect. Assign REMI industry based on industry(ies) affected based on program descriptions.
Barge and Rail Usage Tax Credit and Grant Biodiesel and Green Diesel Fuels Producers Tax Credit Contractor Temporary Storage Exemption Governor's New Airline Services Incentive Fund Green Job Creation Tax Credit International Trade Facility Tax Credit Major Business Facility Job Tax Credit Motion Picture Production Tax Credit Telework Expenses Tax Credit Out-of-state Nuclear Facility Repair Exemption Virginia Coal Production and Employment Incentive Tax Credit Virginia Port Volume Increase Tax Credit and Grant Worker Retraining Tax Credit	Compensation and Prices->Production Costs->Production Costs	Model economic impact based on reduced production cost. Assign REMI industry based on industry(ies) affected based on program descriptions and corporate tax credit records matched with VEC employment records.

Name of incentives	REMI model policy variables	Modeling description
Data Centers Exemption	(1) Labor and Capital Demand>-Employment>-Firm >-Industry (Exogenous Production, Nullify Investment); (2) Output and Demand>-Industry Sales (Exogenous Production)>-Power and Communication Structures	Model economic impact based on 50.2 percent "but for" assumption. Employment assigned to industry.
Virginia Jobs Investment Program (VJIP)—Retraining and Virginia Talent Accelerator Program (VTAP)	(1) Output and Demand>-Investment Spending>-Equipment, (2) Output and Demand>-Real Disposable Income>-Compensation (Adjust compensation by amount of training related wage increase). (3) Output and Demand>-Output (Adjust by ratio of output to training related wage increase)	Model economic impact based on 1.5 percent wage and salary increase with associated output increase. Also, capital investment based on 10 percent "but for" factor for VJIP. Assign to industries based on grant project records.
Tobacco Commission Megasite Program Virginia Business Ready Sites Program	Output and Demand>-Industry Sales (Exogenous Production)>-Construction	Model economic impact of state grant outlay and local match as output for the construction industry.
Virginia Trade Show Assistance Program	Output and Demand>-Industry Sales (Exogenous Production)>	Model economic impact as increased sales of advertising, public relations and related services.
VALET Program	Output and Demand>-Industry Sales (International Exports)	Model economic impact as increased international sales for industry based on grant project records. “But for” effect is estimated as 11.78 percent of firm reported sales increase from firm entry and exit surveys based on Weldon Cooper Center firm economic incentive survey. Change in sales assigned to REMI industries based on NAICS codes of firms for completed grants.

Name of incentives	REMI model policy variables	Modeling description
Research and Development Expenses Tax Credit Major Research and Development Tax Credit	Output and Demand>-Investment Demand>-Private investment in Research and Development	Model R&D tax credit investment impact as 1.75xtax credit utilization and Major R&D tax credit as 1.25xtax credit utilization. Investment is assigned to private investment in research and development based on REMI industry of tax credit utilization.

Source: Weldon Cooper Center.

Employment, capital investment, and other documented performance metrics were modeled for grant and loan programs, and the data center exemption. However, only a small portion of these program documented outcomes could be attributed to the incentive (the "but for" effect). Trying to determine this effect with precision is difficult. Site selection decisions are based on a variety of factors that affect businesses' operations and employees. While the importance of individual factors varies based on the requirements of each business and project, factors affecting long-term costs—such as transportation infrastructure and labor availability and costs—are typically most important. Incentives, if considered, often become more important toward the end of the site selection process, after a few sites meeting the fundamental business requirements have been selected. However, some businesses may rule out sites early on if incentives are not available. Site selection decisions are ultimately made by business executives whose motivations are hard to anticipate and impossible to verify after the fact. (See *Review of State Economic Development Incentive Grants*, JLARC 2012).

For this analysis, the estimated program employment levels are never equal to program reported metric attainment. Even though the success of incentives in swaying business decisions varies by program (and by project), general assumptions are made by program type. For grants, the assumption was made that 10 percent of grant employment creation is attributable to the programs, with one exception (the Governor's Motion Picture Opportunity Fund). The 10 percent "but for" effect for grant programs is derived from the 10 to 15 percent consensus value range commonly recommended for use in economic incentive evaluations (Bartik 2018; Peters and Fisher 2004) and is consistent with the methodology used in the 2018, 2020, 2022, and 2024 editions of this report. For the Governor's Motion Picture Opportunity Fund, 95 percent of film activity (job creation and Virginia spending) is attributed to the grant program based on a previous film industry evaluation study. (See *Evaluation: Film Incentives*, JLARC 2017). Film project employment was also converted to motion picture and sound recording industries full-time-equivalents because of the preponderance of part-time and seasonal employees in grant-supported film and television productions. For loan programs, 31 percent of loan program employment benchmarks were established as the program effects of the loan programs based on a previous analysis of loan program effects. (See *Workforce and Small Business Incentives*, JLARC 2018).

The 50.2 percent "but for" assumption used in this report for the data center exemption differs from the 90 percent or 100 percent used in previous editions of the report. The assumption is based on a

peer-reviewed study by Rephann, Ferreira, and Scheffel, *Understanding Data Center Location and Expansion: The Role of State Incentives*, published in *State and Local Government Review* (2026). The study examined the average effect of state sales and use tax exemptions on the number, square footage, and energy use of data centers.

Some REMI policy variables require industry level data aggregated into 70 REMI industry categories. NAICS codes were obtained or assigned and then cross-walked to REMI industry categories. NAICS-level industry information was obtained for grant projects as described in Appendix B. Tax credit projects were assigned NAICS codes based on available corporate tax filer industry characteristics when corporate users made up a large portion of filers or other information was not available. Thus, industries of corporate filers are assumed to be similar to other pass-through entities that file through the individual income tax system. Most sales and use tax exemptions are narrowly targeted to individual industries, and industry assignment was relatively straightforward. In some instances, secondary data was used. For the Pollution Control Equipment exemption, utilization was assigned to industries using industry information from the U.S. Census Bureau's Pollution Abatement Costs and Expenditures: 2005 survey (issued in 2008) on pollution abatement capital expenditures for Virginia (Table 8 of the survey report). For the Research and Development Exemption, industry information was drawn from the National Science Foundation Business Research and Innovation: 2023 report on corporate R&D expenditures by industry (Table 28b).

TABLE H-2
REMI industry assignments for modeling impacts of tax credits and sales and use tax exemptions

Programs	Industries
Tax Credit Programs	
Barge and Rail Usage Tax Credit	Corporate tax credit utilization files from Virginia Tax
Biodiesel and Green Diesel Fuels Producers Tax Credit	Chemical manufacturing
Coalfield Employment Enhancement Tax Credit	Mining
Farm Wineries and Vineyards Tax Credit	Beverage and tobacco product manufacturing
Green Job Creation Tax Credit	Construction
International Trade Facility Tax Credit	Corporate tax credit utilization files from Virginia Tax
Major Business Facility Job Tax Credit	Corporate tax credit utilization files from Virginia Tax
Motion Picture Production Tax Credit	Motion picture and sound recording industries
Qualified Equity and Subordinated Debt Investment Tax Credit	Corporate tax credit firm beneficiary files from Virginia Tax for TY17-TY20
Recyclable Materials Processing Equipment Tax Credit	Corporate tax credit utilization files from Virginia Tax
Research and Development Expenses Tax Credit	Not applicable
Telework Expenses Tax Credit	Corporate tax credit utilization files from Virginia Tax

Programs	Industries
Virginia Coal Production and Employment Incentive Tax Credit	Corporate tax credit utilization files from Virginia Tax
Virginia Port Volume Increase Tax Credit	Corporate tax credit utilization files from Virginia Tax
Worker Retraining Tax Credit	Corporate tax credit utilization files from Virginia Tax
Sales and Use Tax Exemptions	
Aircraft Parts, Engines, and Supplies Exemption	Air transportation
Airline Common Carriers Exemption	Air transportation
Certain Printed Materials for Out-of-State Distribution Exemption	Printing and related support activities
Contractor Temporary Storage Exemption	Warehousing and storage
Controlled Environment Agriculture	Support activities for agriculture and forestry
Data Centers Exemption	Data processing, hosting, and related services; Other information service (41) (50%); Telecommunications (43) (50%)
Electrostatic Duplicators Exemption	Administrative and support services
Film, Television, & Audio Production Inputs Exemption	Motion picture and sound recording industries
Media Provider Equipment Exemption	Internet publishing and broadcasting
Out-of-state Nuclear Facility Repair Exemption	Construction
Pollution Control Equipment & Facilities Exemption	Industries based on U.S. Census Bureau PACE Survey information
Railroad Common Carriers Exemption	Rail transportation
Railroad Rolling Stock Exemption	26% Wholesale trade (28), 19% Mining (4), 17% Chemical manufacturing (26), 12% Petroleum and coal production manufacturing (25), and remainder to other railroad rolling stock using industries
Research & Development Exemption	Industries based on National Science Foundation Business Research and Innovation information
Semiconductor Manufacturers Exemption	Computer and electronic product manufacturing
Semiconductor Wafers Exemption	Computer and electronic product manufacturing
Ships and Vessels Exemption	Water transportation
Taxi Parts & Radios Exemption	Transit and ground transportation
Uniform Rental & Laundry Businesses Exemption	Personal and laundry services
Virginia Spaceport Users Exemption	Air transportation
Other Incentives	
Data Center Single Sales Factor Apportionment	Data processing, hosting, and related services; Other information services (41)
Manufacturing Single Sales Factor Apportionment	Manufacturing (REMI industry aggregation)

Programs	Industries
Qualified Business Long-Term Capital Gain Subtraction	Corporate tax credit firm beneficiary files for Qualified Equity and Subordinated Debt Investment Tax Credit from Virginia Tax for TY2017-TY2020
Zero G Zero Tax Act (Part II) Subtraction	Air transportation

SOURCE: Weldon Cooper Center.

For this economic impact analysis, only completed grant and other incentive projects (i.e., loans, gap funding) were counted. Outcomes and expenditures were grouped for analysis purposes based on the date/year when awards were completed.

When modeling firm employment increases, the REMI firm employment option is used. This option assumes that firm sales associated with incentivized job creation may displace, to various degrees, the sales of other Virginia-based firms in the same industry based on market characteristics.

Input data capturing the effects of training under the Virginia Talent Accelerator Program and Virginia Jobs Investment Program (VJIP) was generated using the Virginia REMI PI+ model. First, industry-level ratios of value-added to total wages were established. These ratios were then multiplied by a 1.5 percent estimated wage increase for firms incentivized by the VJIP retraining grant to measure the net economic impact.

The results by year were assigned to the REMI policy variables "Industry Sales/Exogenous Production" by REMI industry. Estimated wage increases were assigned to the compensation policy variable. This method is the same used in an intensive review of the VJIP program. (See *Workforce and Small Business Incentives*, JLARC 2018.)

Two sales and use tax exemptions affect the Virginia economy by reducing the costs of goods sold to out-of-state buyers rather than Virginia-based firms. Thus, the sales tax exemption was modeled as an increase in sales for the Virginia warehousing and storage industry (Contractor Temporary Storage Exemption) and construction industry (Out-of-state Nuclear Facility Repair Exemption) caused by the de-facto price reduction. Industry demand for the production inputs was assumed to be relatively inelastic (0.5).

The Data Center Exemption was modeled using employment and capital investment information from VEDP MOUs. The "but for" assumption for this analysis is based on a recent empirical study (Rephann, Ferreira, and Scheffel 2026) that analyzed the causal effect of state sales and use tax exemptions for data center purchases on data center economic square footage. Data center employment was modeled as equally split between the telecommunications sector and data processing, hosting, and related services. Employment and capital investment were estimated using information from VEDP's data center survey. These expenditures are represented as sales to the power and communications structures and construction industries. Equipment expenditures were treated as a spending leakage from the state per the economic impact modeling used by JLARC (*Data Centers in Virginia*, 2024).

For each economic impact analysis, the opportunity cost of state funds was accounted for by raising personal income taxes. Personal income taxes are the largest source of tax revenue for the general fund and thus seemed appropriate as a source for offsetting the cost of the incentive programs.

REMI PI+ discontinued tax revenue estimation as part of its base package beginning with the 2.0 version and moved improved revenue modeling capabilities into its new REMI Tax PI model. To conduct tax revenue analysis, this study scaled revenues to economic outputs using the procedure described in Regional Economic Models, Inc. (2012). State tax revenues were derived from the Census of Government's State and Local Government Finance and Annual Survey of State Tax Collections. Revenue estimates are calculated by multiplying state revenue rates by the corresponding base quantity, which included state-level demand for selected industries (general sales tax, selective sales tax, license taxes), state-level personal income less transfer payments (individual income tax), corporate income tax (gross domestic product), and personal income (other taxes). The tax revenue impact analysis does not include the effect of economic development incentives on other revenues, including non-general revenues. Nor does it estimate the effect on local tax revenues. Lastly, it does not estimate the effect of economic development incentives on government expenditures at the state or local level.

Economic impact estimates

Tables H-3 through H-14 provide estimates of the total economic activity induced by each group of incentives (i.e., grants, sales and use tax exemptions, tax credits, and other incentives), and the net impact (total activity adjusted for the reduction). Economic activity reported in the tables is defined as follows:

- Total employment – private and public employment,
- Private employment – private non-farm employment,
- Virginia GDP – Gross domestic product for Virginia (the market value of goods and services produced by labor and property in Virginia), and
- Personal income – received by persons from all source.

TABLE H-3
Impact of economic development grant programs to the Virginia economy

Impact	FY16	FY17	FY18	FY19	FY20	FY21	FY22	FY23	FY24	FY25
Economic activity induced by grant program										
Total employment	788	1,876	2,496	4,339	5,179	6,498	8,574	9,162	10,546	12,267
Private employment	750	1,750	2,304	4,025	4,759	5,957	7,872	8,353	9,583	11,132
Virginia GDP	$120,121,691	$299,757,063	$435,690,706	$762,287,848	$1,004,195,772	$1,298,190,174	$1,742,356,402	$1,983,532,082	$2,403,452,385	$2,969,000,081
Personal income	$55,551,584	$144,442,998	$215,405,928	$392,242,348	$529,375,784	$702,801,974	$940,124,879	$1,082,999,931	$1,312,874,499	$1,594,862,500
Reduction in economic activity because of the tax increase to fund grant program costs										
Total employment	(128)	(234)	(223)	(234)	(331)	(277)	(354)	(234)	(495)	(557)
Private employment	(122)	(219)	(205)	(213)	(304)	(250)	(322)	(206)	(455)	(509)
Virginia GDP	-$15,054,042	-$30,103,167	-$31,481,608	-$33,851,267	-$47,951,651	-$43,459,728	-$54,781,107	-$39,910,232	-$78,311,027	-$94,748,159
Personal income	-$9,848,523	-$19,822,422	-$21,119,261	-$24,086,704	-$34,981,174	-$32,733,328	-$42,479,834	-$33,020,314	-$61,939,825	-$73,144,746
Net economic impact of grant program										
Total employment	660	1,643	2,273	4,105	4,848	6,221	8,219	8,928	10,051	11,710
Private employment	628	1,531	2,100	3,812	4,455	5,708	7,550	8,147	9,128	10,623
Virginia GDP	$105,067,650	$269,653,896	$404,209,098	$728,436,582	$956,244,120	$1,254,730,446	$1,687,575,296	$1,943,621,851	$2,325,141,358	$2,874,251,922
Personal income	$45,703,061	$124,620,576	$194,286,667	$368,155,645	$494,394,610	$670,068,646	$897,645,045	$1,049,979,616	$1,250,934,675	$1,521,717,754

TABLE H-4
Revenue collections from economic development grant programs and their return in revenue

Impact	FY16	FY17	FY18	FY19	FY20	FY21	FY22	FY23	FY24	FY25
Revenue tax collections induced by economic development grant programs										
General sales tax	$1,154,421	$2,558,478	$3,762,543	$7,738,181	$11,492,543	$15,175,424	$19,207,147	$22,676,571	$26,289,424	$31,030,596
Selective sales tax	$865,638	$1,898,471	$3,333,398	$5,624,967	$8,732,301	$12,070,439	$15,788,287	$20,155,619	$24,605,771	$30,378,847
License taxes	$117,204	$266,083	$402,287	$644,424	$905,656	$1,119,148	$1,519,643	$2,110,067	$2,168,151	$2,295,633
Individual income tax	$1,787,393	$4,654,238	$7,143,274	$13,149,595	$17,425,291	$24,037,260	$34,769,514	$31,259,485	$38,066,655	$47,388,356
Corporate income tax	$180,273	$478,727	$937,687	$1,679,820	$2,406,296	$3,276,073	$5,029,735	$11,898,126	$11,975,560	$16,306,342
Other taxes	$64,522	$171,771	$208,593	$427,755	$664,251	$1,173,060	$1,501,650	$1,127,275	$1,202,219	$1,509,156
Total revenue	$4,169,451	$10,027,768	$15,787,781	$29,264,743	$41,626,338	$56,851,404	$77,815,977	$89,227,144	$104,307,780	$128,908,930
Program cost	$16,080,613	$26,666,730	$23,519,293	$26,198,578	$42,657,454	$35,342,431	$51,309,394	$33,435,923	$83,880,185	$93,270,397
Net revenue	-$11,911,162	-$16,638,962	-$7,731,512	$3,066,165	-$1,031,116	$21,508,973	$26,506,583	$55,791,221	$20,427,594	$35,638,533
Return on investment										
Return per $1 spent	$0.26	$0.38	$0.67	$1.12	$0.98	$1.61	$1.52	$2.67	$1.24	$1.38

TABLE H-5
Impact of economic development tax credits to the Virginia economy

Impact	FY16	FY17	FY18	FY19	FY20	FY21	FY22	FY23	FY24	FY25
Economic activity induced by the tax credit program										
Total employment	165	253	328	265	354	294	231	288	284	238
Private employment	157	237	305	241	325	265	205	261	256	212
Virginia GDP	-$11,765,634	$439,576	$16,595,750	$27,301,696	$35,779,214	$34,461,222	$38,560,076	$33,790,739	$34,004,349	$49,228,661
Personal income	$11,966,452	$20,293,824	$28,537,128	$26,281,207	$36,482,285	$33,398,797	$29,307,840	$36,347,068	$37,100,360	$34,778,847
Reduction in economic activity because of the tax increase to fund tax credit										
Total employment	-353	-433	-445	-334	-414	-310	-160	-293	-266	-262
Private employment	-335	-403	-408	-299	-376	-274	-134	-263	-237	-232
Virginia GDP	-$41,317,998	-$57,447,599	-$62,386,093	-$50,437,214	-$60,737,132	-$49,071,383	-$27,333,861	-$44,504,347	-$43,485,646	-$43,455,505
Personal income	-$27,019,554	-$37,339,292	-$42,422,902	-$36,625,786	-$46,499,602	-$39,641,533	-$26,765,070	-$40,410,540	-$39,206,408	-$40,320,735
Net economic impact of tax credit program										
Total employment	-188	-179	-116	-69	-60	-15	71	-5	18	-23
Private employment	-178	-165	-103	-59	-51	-9	71	-2	19	-20
Virginia GDP	-$53,083,632	-$57,008,023	-$45,790,343	-$23,135,518	-$24,957,918	-$14,610,161	$11,226,216	-$10,713,608	-$9,481,297	$5,773,155
Personal income	-$15,053,102	-$17,045,468	-$13,885,774	-$10,344,579	-$10,017,317	-$6,242,736	$2,542,771	-$4,063,472	-$2,106,048	-$5,541,888

TABLE H-6
Revenue collections from economic development tax credits and their return in revenue

Impact	FY16	FY17	FY18	FY19	FY20	FY21	FY22	FY23	FY24	FY25
Revenue tax collections induced by tax credit program										
General sales tax	$69,583	$171,812	$295,518	$367,474	$646,916	$552,828	$516,958	$583,577	$608,214	$582,674
Selective sales tax	$52,176	$127,490	$261,812	$267,121	$491,542	$439,716	$424,940	$518,701	$569,262	$570,435
License taxes	$7,064	$17,869	$31,596	$30,603	$50,979	$40,770	$40,901	$54,302	$50,161	$43,106
Individual income tax	$386,482	$644,999	$931,631	$843,785	$1,168,574	$1,090,857	$1,012,167	$1,005,030	$1,023,045	$967,583
Corporate income tax	-$17,657	$702	$35,717	$60,164	$85,736	$86,965	$111,313	$202,692	$169,432	$270,374
Other taxes	$13,899	$24,133	$27,635	$28,661	$45,777	$55,747	$46,813	$37,833	$33,973	$32,910
Total revenue	$511,547	$987,005	$1,583,909	$1,597,806	$2,489,524	$2,266,882	$2,153,091	$2,402,135	$2,454,086	$2,467,082
Program cost	$44,145,808	$46,958,185	$47,130,867	$34,545,450	$53,027,156	$41,092,270	$23,594,117	$52,890,120	$48,777,988	$49,534,603
Net revenue	-$43,634,261	-$45,971,180	-$45,546,959	-$32,947,644	-$50,537,632	-$38,825,389	-$21,441,026	-$50,487,985	-$46,323,902	-$47,067,522
Return on investment										
Return per $1 spent	$0.01	$0.02	$0.03	$0.05	$0.05	$0.06	$0.09	$0.05	$0.05	$0.05

TABLE H-7
Impact of data center sales and use tax exemptions to the Virginia economy

Impact	FY16	FY17	FY18	FY19	FY20	FY21	FY22	FY23	FY24	FY25
Economic activity induced by the exemptions										
Total employment						13,302	11,295	21,131	27,966	49,204
Private employment						12,804	10,585	19,912	26,217	46,373
Virginia GDP						$2,100,570,471	$2,205,247,477	$4,032,530,054	$5,642,524,278	$9,932,406,245
Personal income						$1,197,463,409	$1,160,692,932	$2,210,033,665	$3,088,994,117	$5,513,848,860
Reduction in economic activity because of the tax increase to fund the exemptions										
Total employment						(4,043)	(3,265)	(4,850)	(6,223)	(8,893)
Private employment						(3,833)	(3,004)	(4,478)	(5,727)	(8,199)
Virginia GDP						-$555,185,872	-$529,835,032	-$771,478,595	-$1,030,913,151	-$1,505,911,213
Personal income						-$385,744,645	-$352,150,387	-$549,074,605	-$742,359,714	-$1,097,483,573
Net economic impact of the exemptions										
Total employment						9,259	8,030	16,280	21,743	40,311
Private employment						8,971	7,581	15,434	20,490	38,174
Virginia GDP						$1,545,384,599	$1,675,412,444	$3,261,051,458	$4,611,611,127	$8,426,495,032
Personal income						$811,718,765	$808,542,545	$1,660,959,059	$2,346,634,403	$4,416,365,287

TABLE H-8
Revenue collections from the data center sales and use tax exemptions and their return in revenue

Impact	FY16	FY17	FY18	FY19	FY20	FY21	FY22	FY23	FY24	FY25
Revenue tax collections induced by exemptions										
General sales tax						$16,201,165	$17,121,569	$30,941,038	$41,654,109	$70,729,374
Selective sales tax						$12,886,307	$14,073,941	$27,501,327	$38,986,457	$69,243,814
License taxes						$1,194,794	$1,354,635	$2,879,081	$3,435,313	$5,232,534
Individual income tax						$42,476,486	$43,412,405	$65,368,536	$91,360,600	$168,200,849
Corporate income tax						$5,300,935	$6,365,983	$24,188,946	$28,114,719	$54,550,762
Other taxes						$1,998,708	$1,853,961	$2,300,385	$2,828,638	$5,217,538
Total revenue						$80,058,395	$84,182,494	$153,179,314	$206,379,835	$373,174,871
Program cost						$613,460,481	$411,518,565	$685,194,946	$927,401,143	$1,419,989,553
Net revenue						-$533,402,086	-$327,336,071	-$532,015,633	-$721,021,308	-$1,046,814,682
Return on investment										
Return per $1 spent						$0.13	$0.20	$0.22	$0.22	$0.26

TABLE H-9

Impact of economic development sales and use tax exemptions to the Virginia economy

Impact	FY16	FY17	FY18	FY19	FY20	FY21	FY22	FY23	FY24	FY25
Economic activity induced by the exemptions										
Total employment	612	918	1,130	1,259	1,210	1,159	1,177	1,172	1,155	1,123
Private employment	585	863	1,053	1,164	1,107	1,054	1,069	1,062	1,043	1,012
Virginia GDP	$30,639,052	$84,924,664	$122,121,625	$149,106,362	$158,547,468	$159,381,603	$164,524,002	$167,936,161	$169,711,056	$172,091,579
Personal income	$44,591,471	$73,748,913	$98,470,420	$119,100,113	$124,931,064	$129,130,062	$138,492,331	$145,828,110	$151,184,904	$154,728,456
Reduction in economic activity because of the tax increase to fund the exemptions										
Total employment	(534)	(627)	(684)	(713)	(617)	(549)	(547)	(556)	(557)	(541)
Private employment	(507)	(583)	(629)	(650)	(555)	(489)	(488)	(496)	(497)	(482)
Virginia GDP	-$62,548,918	-$83,579,873	-$95,436,021	-$103,153,710	-$93,927,697	-$85,442,098	-$85,870,636	-$88,965,498	-$91,407,781	-$91,151,538
Personal income	-$40,874,560	-$54,227,278	-$64,999,346	-$73,566,842	-$70,874,749	-$68,900,337	-$72,106,309	-$76,308,067	-$79,899,728	-$81,731,606
Net economic impact of the exemptions										
Total employment	79	290	446	546	592	610	631	617	598	582
Private employment	78	280	424	515	552	564	581	565	546	530
Virginia GDP	-$31,909,866	$1,344,791	$26,685,604	$45,952,652	$64,619,770	$73,939,505	$78,653,366	$78,970,662	$78,303,275	$80,940,041
Personal income	$3,716,911	$19,521,635	$33,471,074	$45,533,271	$54,056,315	$60,229,725	$66,386,022	$69,520,044	$71,285,176	$72,996,850

TABLE H-10

Revenue collections from the economic development sales and use tax exemptions and their return in revenue

Impact	FY16	FY17	FY18	FY19	FY20	FY21	FY22	FY23	FY24	FY25
Revenue tax collections induced by exemptions										
General sales tax	$169,519	$803,814	$1,230,874	$2,051,506	$2,306,266	$2,321,072	$2,388,602	$2,499,425	$2,411,418	$2,405,205
Selective sales tax	$127,113	$596,455	$1,090,484	$1,491,262	$1,752,354	$1,846,167	$1,963,433	$2,221,565	$2,256,984	$2,354,687
License taxes	$17,211	$83,597	$131,604	$170,846	$181,743	$171,173	$188,983	$232,573	$198,875	$177,936
Individual income tax	$1,433,790	$2,343,278	$3,210,414	$3,878,857	$3,961,270	$4,224,003	$4,878,423	$4,012,274	$4,155,791	$4,328,215
Corporate income tax	$45,982	$135,629	$262,828	$328,579	$379,918	$402,210	$474,939	$1,007,357	$845,611	$945,161
Other taxes	$51,792	$87,702	$95,356	$129,883	$156,761	$215,533	$221,212	$151,790	$138,442	$146,413
Total revenue	$1,845,407	$4,050,475	$6,021,560	$8,050,933	$8,738,312	$9,180,159	$10,115,591	$10,124,984	$10,007,121	$10,357,618
Program cost	$55,403,544	$56,395,960	$61,795,398	$69,218,396	$63,004,858	$63,566,541	$72,674,614	$80,836,284	$85,899,975	$87,498,809
Net revenue	-$53,558,137	-$52,345,485	-$55,773,837	-$61,167,462	-$54,266,546	-$54,386,382	-$62,559,023	-$70,711,300	-$75,892,854	-$77,141,191
Return on investment										
Return per $1 spent	$0.03	$0.07	$0.10	$0.12	$0.14	$0.14	$0.14	$0.13	$0.12	$0.12

TABLE H-11

Impact of other incentives (loan, gap financing, manufacturing single sale apportionment, and income tax subtractions) to the Virginia economy

Impact	FY16	FY17	FY18	FY19	FY20	FY21	FY22	FY23	FY24	FY25
Economic activity induced by other incentives										
Total employment	131	197	237	257	293	329	347	379	436	432
Private employment	125	184	218	234	267	299	314	342	395	389
Virginia GDP	-$749,326.14	$11,378,653.83	$20,975,722.20	$26,961,770.36	$37,366,153	$45,160,189	$52,727,494	$59,062,676	$69,598,743	$74,276,717
Personal income	$9,839,153.19	$16,193,877.97	$21,098,959.82	$24,698,280.26	$29,746,306	$35,002,009	$38,996,964	$44,268,240	$52,451,765	$55,359,814
Reduction in economic activity because of the tax increase to fund costs of other incentives										
Total employment	-187	-222	-227	-220	-206	-193	-190	-185	-171	-160
Private employment	-178	-206	-208	-200	-185	-173	-170	-165	-152	-142
Virginia GDP	-$23,292,956	-$31,216,177	-$32,777,970	-$32,817,035	-$31,719,921	-$32,103,014	-$30,546,548	-$31,784,858	-$30,436,703	-$29,040,856
Personal income	-$14,377,549	-$19,233,778	-$21,747,235	-$23,186,447	-$23,684,250	-$24,024,189	-$24,979,766	-$25,710,689	-$25,393,588	-$25,231,721
Net economic impact of other incentives										
Total employment	-$55.68	-$25.03	$10.22	$36	87	136	157	194	265	272
Private employment	-$52.92	-$22.59	$10.66	$34	81	126	144	177	243	247
Virginia GDP	-$24,042,283	-$19,837,524	-$11,802,247	-$5,855,265	$5,646,231	$13,057,175	$22,180,946	$27,277,818	$39,162,040	$45,235,861
Personal income	-$4,538,396	-$3,039,900	-$648,275	$1,511,833	$6,062,056	$10,977,820	$14,017,198	$18,557,552	$27,058,177	$30,128,094

TABLE H-12

Revenue collections from other incentives and their return in revenue

Impact	FY16	FY17	FY18	FY19	FY20	FY21	FY22	FY23	FY24	FY25
Revenue tax collections induced by other incentives										
General sales tax	-$256,289	-$150,439	-$71,585	-$32,121	$120,518	$174,228	$241,511	$268,063	$277,098	$374,255
Selective sales tax	-$192,177	-$111,631	-$63,420	-$23,349	$91,573	$138,580	$198,522	$238,262	$259,352	$366,394
License taxes	-$26,020	-$15,646	-$7,654	-$2,675	$9,497	$12,849	$19,108	$24,943	$22,853	$27,687
Individual income tax	$316,889	$511,712	$682,753	$797,261	$944,528	$1,155,059	$1,384,495	$1,232,254	$1,472,137	$1,578,532
Corporate income tax	-$1,125	$18,172	$45,144	$59,414	$89,538	$113,965	$152,211	$354,285	$346,786	$407,943
Other taxes	$11,428	$19,258	$20,432	$26,934	$37,325	$58,422	$62,289	$46,078	$48,031	$52,385
Total revenue	-$147,294	$271,426	$605,670	$825,466	$1,292,980	$1,653,103	$2,058,135	$2,163,884	$2,426,257	$2,807,197
Program cost	$24,406,492	$25,459,918	$25,332,313	$25,807,396	$26,444,191	$28,785,009	$30,456,474	$32,909,127	$33,029,136	$33,337,707
Net revenue	-$24,553,786	-$25,188,492	-$24,726,643	-$24,981,930	-$25,151,211	-$27,131,906	-$28,398,339	-$30,745,242	-$30,602,879	-$30,530,511
Return on investment										
Return per $1 spent	-$0.01	$0.01	$0.02	$0.03	$0.05	$0.06	$0.07	$0.07	$0.07	$0.08

TABLE H-13

Impact of all economic development incentives to the Virginia economy

Impact	FY16	FY17	FY18	FY19	FY20	FY21	FY22	FY23	FY24	FY25
Economic activity induced by all incentives										
Total employment	1,697	3,244	4,191	6,120	7,036	21,582	21,624	32,133	40,387	63,265
Private employment	1,617	3,034	3,880	5,665	6,458	20,379	20,045	29,931	37,494	59,118
Virginia GDP	138,245,783	396,499,957	595,383,804	965,657,677	1,235,888,605	3,637,763,660	4,203,415,452	6,276,851,711	8,319,290,810	13,197,003,282
Personal income	121,948,660	254,679,613	363,512,437	562,321,948	720,535,438	2,097,796,251	2,307,614,946	3,519,477,014	4,642,605,645	7,353,578,477
Reduction in economic activity because of the tax increase to fund the costs of all incentives										
Total employment	(1,202)	(1,516)	(1,579)	(1,501)	(1,569)	(5,372)	(4,516)	(6,119)	(7,713)	(10,414)
Private employment	(1,141)	(1,411)	(1,449)	(1,362)	(1,420)	(5,020)	(4,118)	(5,610)	(7,067)	(9,564)
Virginia GDP	(142,213,913)	(202,346,817)	(222,081,692)	(220,259,226)	(234,336,402)	(765,262,095)	(728,367,184)	(976,643,530)	(1,274,554,308)	(1,764,307,271)
Personal income	(92,120,187)	(130,622,770)	(150,288,745)	(157,465,778)	(176,039,774)	(551,044,031)	(518,481,366)	(724,524,215)	(948,799,263)	(1,317,912,380)
Net economic impact of all incentives										
Total employment	495	1,728	2,612	4,619	5,467	16,210	17,108	26,014	32,674	52,851
Private employment	476	1,623	2,432	4,303	5,038	15,359	15,927	24,321	30,427	49,554
Virginia GDP	(3,968,131)	194,153,140	373,302,112	745,398,451	1,001,552,204	2,872,501,565	3,475,048,268	5,300,208,180	7,044,736,502	11,432,696,011
Personal income	29,828,474	124,056,844	213,223,692	404,856,170	544,495,664	1,546,752,220	1,789,133,580	2,794,952,799	3,693,806,382	6,035,666,097

TABLE H-14

Revenue collections from all economic development incentives and their return in revenue

Impact	FY16	FY17	FY18	FY19	FY20	FY21	FY22	FY23	FY24	FY25
Revenue tax collections induced by all incentives										
General sales tax	$1,137,234	$3,383,665	$5,217,351	$10,125,040	$14,566,243	$34,424,717	$39,475,787	$56,968,674	$71,240,262	$105,122,104
Selective sales tax	$852,751	$2,510,786	$4,622,274	$7,360,001	$11,067,769	$27,381,208	$32,449,122	$50,635,474	$66,677,825	$102,914,178
License taxes	$115,459	$351,902	$557,833	$843,198	$1,147,876	$2,538,734	$3,123,271	$5,300,966	$5,875,354	$7,776,897
Individual income tax	$3,924,555	$8,154,227	$11,968,071	$18,669,499	$23,499,664	$72,983,665	$85,457,003	$102,877,579	$136,078,227	$222,463,535
Corporate income tax	$207,473	$633,230	$1,281,376	$2,127,977	$2,961,488	$9,180,148	$12,134,180	$37,651,406	$41,452,107	$72,480,582
Other taxes	$141,640	$302,864	$352,015	$613,233	$904,115	$3,501,470	$3,685,925	$3,663,361	$4,251,303	$6,958,401
Total revenue	$6,379,112	$15,336,674	$23,998,920	$39,738,948	$54,147,155	$150,009,942	$176,325,289	$257,097,461	$325,575,079	$517,715,697
Program cost	$140,036,457	$155,480,793	$157,777,870	$155,769,820	$185,133,659	$782,246,733	$589,553,164	$885,266,400	$1,178,988,427	$1,683,631,069
Net revenue	-$133,657,345	-$140,144,119	-$133,778,950	-$116,030,872	-$130,986,505	-$632,236,791	-$413,227,876	-$628,168,938	-$853,413,348	-$1,165,915,372
Return on investment										
Return per $1 spent	$0.05	$0.10	$0.15	$0.26	$0.29	$0.19	$0.30	$0.29	$0.28	$0.31

Appendix I: Agency responses

As part of an extensive validation process, the state agencies and other entities that are subject to a JLARC assessment are given the opportunity to comment on an exposure draft of the report. JLARC staff sent an exposure draft of this report to the Virginia Economic Development Partnership, Virginia Tax, secretary of commerce and trade, secretary of finance, and secretary of transportation.

Appropriate corrections resulting from technical and substantive comments are incorporated in this version of the report. This appendix includes a response letter from the Virginia Economic Development Partnership and Virginia Tax.

VEDP | Virginia Economic Development Partnership

October 28, 2026

Mr. Hal E. Greer
Director
Joint Legislative Audit & Review Commission
919 East Main Street, Suite 2101
Richmond, VA 23219

Re: VEDP response to the draft JLARC report, *Economic Development Incentives 2026: Spending and Performance*

Dear Mr. Greer:

Thank you for providing an opportunity for us to comment on the Joint Legislative Audit & Review Commission's (JLARC's) draft report, *Economic Development Incentives 2026: Spending and Performance*.

The report provides a valuable and comprehensive overview of Virginia's economic development incentive spending and performance between FY16 and FY25. We appreciate JLARC's continued oversight and its recognition that carefully designed incentives remain an important component of the Commonwealth's economic development strategy.

The report documents substantial business activity associated with Virginia's grant programs. Completed projects that received grant awards collectively created an estimated 59,543 jobs and generated $19.4 billion in capital investment or other business spending. We are pleased with the report's findings that projects supported by the Virginia Jobs Investment Program accounted for the largest share of job creation, with 31,884 jobs, while projects supported by the Commonwealth's Development Opportunity Fund generated 16,940 jobs and $6.6 billion in investment and other spending.

We also appreciate the report's finding that grants generate the highest economic benefit and state revenue returns among the incentive types evaluated. JLARC estimates that every $1 million spent on grants supports an additional 131 jobs, $30 million in Virginia GDP, and $16 million in personal income. The report further estimates that the Commonwealth receives $1.29 in state revenue for every $1 spent on grants. These findings reinforce the value of performance-based incentive programs that target traded-sector projects and require companies to commit to job creation, capital investment, and wage benchmarks.

The report also highlights the accountability mechanisms embedded in Virginia's incentive programs. Between FY16 and FY25, $226 million in grant awards were canceled, reduced, or recaptured when projects did not proceed or failed to achieve performance goals, including approximately $69 million recaptured from 137 projects. These outcomes demonstrate that Virginia's performance agreements and clawback provisions protect public resources when commitments are not fulfilled.

VEDP appreciates the report's attention to the geographic and business-size distribution of grant awards. JLARC found that awards per capita are concentrated not only in Northern Virginia, but also in rural localities in Southern Virginia and on the Eastern Shore. The report further notes that more than two-thirds of grant awards went to business locations with fewer than 100 employees at the time of award. These findings reflect the scale of Virginia's economic development efforts across regions and business sizes.

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Regarding the data center retail sales and use tax exemption, we appreciate the improved transparency resulting from the annual reporting requirements administered by VEDP. We also recognize JLARC's effort to incorporate emerging empirical research into its economic impact analysis. At the same time, the report's revised assumption that 50.2 percent of data center activity is attributable to the exemption, compared with 90 percent or more in prior reports, materially impacts the reported estimates. Because the competitive influence of incentives varies by project, location, infrastructure availability, and market conditions, we encourage JLARC to communicate the sensitivity of its findings to this assumption and to continue evaluating the methodology as additional Virginia-specific evidence becomes available.

Even under the revised methodology, the report finds that the data center exemption generates the next-highest economic benefits after grants and accounts for more than half of the net additional jobs and nearly half of the Virginia GDP and personal income attributed to all incentives. The analysis estimates that the exemption supported an annual average of 18,130 private-sector jobs, $3.9 billion in Virginia GDP, and $2.0 billion in personal income during the period reviewed.

As always, we appreciate the professionalism and engagement of JLARC staff throughout this review and commend the team for its thoughtful analysis and reporting. VEDP remains committed to working with JLARC and other Commonwealth partners to strengthen transparency, accountability, and the effectiveness of Virginia's economic development programs.

Sincerely,



Jason El Koubi
President & CEO

COMMONWEALTH of VIRGINIA

Department of Taxation

October 30, 2026

Mr. Hal E. Greer, Director
Joint Legislative Audit and Review Commission
919 East Main Street, Suite 2101
Richmond, Virginia 23219

Dear Mr. Greer:

Thank you for the opportunity to review and comment on the exposure draft report: *Economic Development Incentives, 2026*. We believe the report is well done and will be useful to the members of the General Assembly going forward.

Please contact me if you have any questions.

Sincerely,

Kristin Collins

Kristin Collins
Tax Commissioner
Commonwealth of Virginia

c: The Honorable Mark D. Sickles, Secretary of Finance
Charles Kennington, Assistant Commissioner, Tax Policy



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