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Economic Development Incentives 2023
Spending and Performance

JLARC
JOINT LEGISLATIVE AUDIT
AND REVIEW COMMISSION

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WHAT WE FOUND

- Virginia spent $3.0 billion on 92 economic development incentive programs from FY13 to FY22. This amounts to 1.4 percent of total general fund spending during this time. Total spending on incentives was $323 million in FY22.
- Total incentive spending increased between FY16 and FY21. Micron received its final custom grant payment in FY21 ($50 million), which resulted in a decline in incentive spending in FY22.
- A majority of the incentive programs that have been adopted since 2017 have been custom grants. These grants are relatively large and account for a larger share of incentive program funding; therefore, annual changes in custom grants' payouts are likely to account for fluctuations in incentive spending in the future.
- Seventy-nine percent of incentive spending was for tax incentives such as sales and use tax exemptions ($1.3 billion), tax credits, and single sales apportionment for manufacturers and data centers ($669 million). The remaining 30 percent was spent on grants ($897 million) and other incentives such as loans and gap financing programs ($39 million).
- Collectively, grant programs awarded $2.0 billion to 5,000 projects between FY13 and FY22. There was a substantial one-year increase in grant awards in FY19, primarily because of the $750 million custom grant award for Amazon HQ2.
- Completed projects receiving grant funds created approximate 66,000 jobs and over $16.5 billion in capital investment or other spending. The majority of these projects met their capital investment goals, but just over one-quarter met their job creation goals.
- Business savings from tax incentives have decreased since FY20. This is partially because of the repeal of the coal tax credits in 2021 and a decline in use of the data centers exemption since FY20 because eligible capital expenditures of newly qualifying data centers decreased. The negative impact of the

WHY WE DID THIS STUDY

Through language in the Appropriation Act, the General Assembly directed 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 seventh in the series of overall spending and business activity and focuses on incentives that were provided between FY13 and FY22.

COVID-19 pandemic on businesses and the economy also likely led to the decline in business tax savings in FY21.

Economic Development Incentives 2023

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 seventh in a series of annual reports about Virginia's economic development incentives, trends in state spending on incentives, and 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. This information will be included again in next year's report.

This report provides summary information on 92 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 FY13 and FY22, 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, **incentives 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.

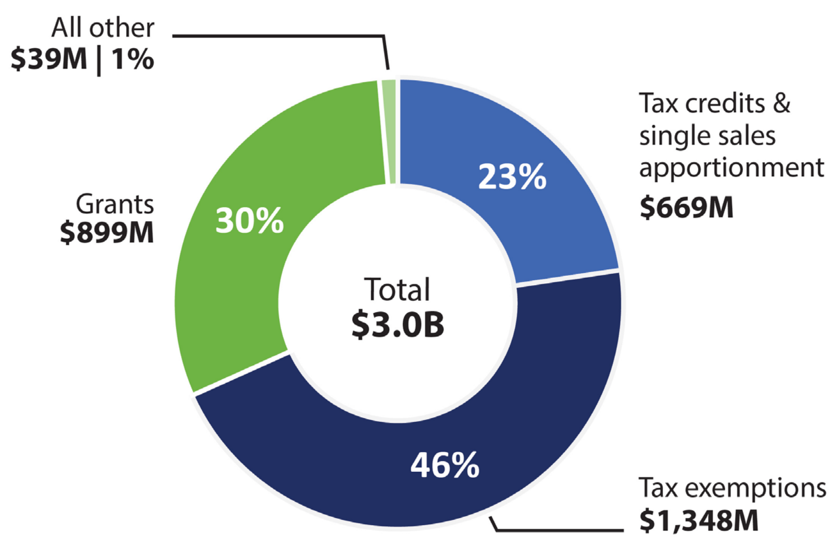
See Appendix B for more information on methods used to estimate spending for each program.

State spent $3 billion on incentives FY13–FY22

Virginia spent $3.0 billion on 92 economic development incentive programs over the past 10 fiscal years (Figure 1), for an average of $295 million per year. Nearly all incentives are funded by the state general fund, with the exception of incentives provided by the Tobacco Region Revitalization Commission and several transportation infrastructure incentives. Spending on incentives represented approximately 1.4 percent of total general fund spending between FY13 and FY22. As in past reports in this series, the majority of spending on incentives was forgone revenue from tax incentives. Sales and use tax exemptions make up 46 percent of spending, and tax credits and single sales apportionment for manufacturers together make up 23 percent of spending. Almost all the remaining spending was for grants.

Spending is concentrated in a small number of incentives. Ten incentives accounted for 63 percent of the spending on incentives between FY13 and FY22 (Table 1). The largest incentive during the 10-year period—the Data Center Exemption—accounts for almost one-quarter of spending on incentives and is over three times larger than the next-largest incentive, the Railroad Common Carriers Exemption. Together, these two exemptions provided more than $900 million in retail sales and use tax exemptions to businesses in capital-intensive sectors that make large purchases of equipment. Two of the 10 largest incentives are coal-related tax credits for coal mining companies and electricity producers that use Virginia-mined coal. Together, these two credits provided $254 million in income tax savings to these businesses during the 10-year period. Savings from these credits will decline in future years and eventually cease because the 2021 General Assembly eliminated both credits effective January 1, 2022. The "custom" Semiconductor Manufacturing Grant for Micron ($70 million in total spending for FY20 and FY21) replaced the Tobacco Region Megasite grant as the 10th largest incentive reported in last year's annual report. (See Appendix D for more information on spending on each incentive by year.)

FIGURE 1
More than two-thirds of spending on incentives was for tax incentives (FY13–FY22)



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.

TABLE 1
Ten incentives are responsible for nearly two-thirds of spending (FY13–FY22)

	10-year period (FY13–FY22)	
Incentive	**Spending**	**% of spending**
Data Centers Exemption	$710M	24%
Railroad Common Carriers Exemption	199	7
Manufacturers Single Sales Factor Apportionment	190	6
Coalfield Employment Enhancement Tax Credit	163	6
Commonwealth's Opportunity Fund	148	5
Real Property Improvement Grant (Enterprise Zone)	108	4
Airline Common Carriers Exemption	97	3
Virginia Coal Employment and Production Incentive Tax Credit	91	3
Tobacco Region Opportunity Fund	72	2
Semiconductor Manufacturing Grant (Micron custom grant)	70	2
Subtotal	**$1,848M**	**63%**
All others	$1,106M	37%
TOTAL	**$2,955M**	**100%**

SOURCE: Weldon Cooper Center analysis of economic development incentives.
NOTE: Excludes several tax preferences for which data was not available. For custom grants, payments are allocated to the fiscal year when they were paid. Adjusted for canceled projects, recaptures, and award reductions. 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.)

Spending estimates for the **data center exemption** are lower than previously estimated because of a change in the methodology in response to a 2022 survey conducted by VEDP of data center usage of the exemption. See Appendix B for more information about the change in methodology.

Custom grants are not typical and 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 $183,000 per project between FY13 and FY22, compared with custom grants, which were an average of $82M per project (or $26M per project excluding the outsized custom grant for Amazon HQ2).

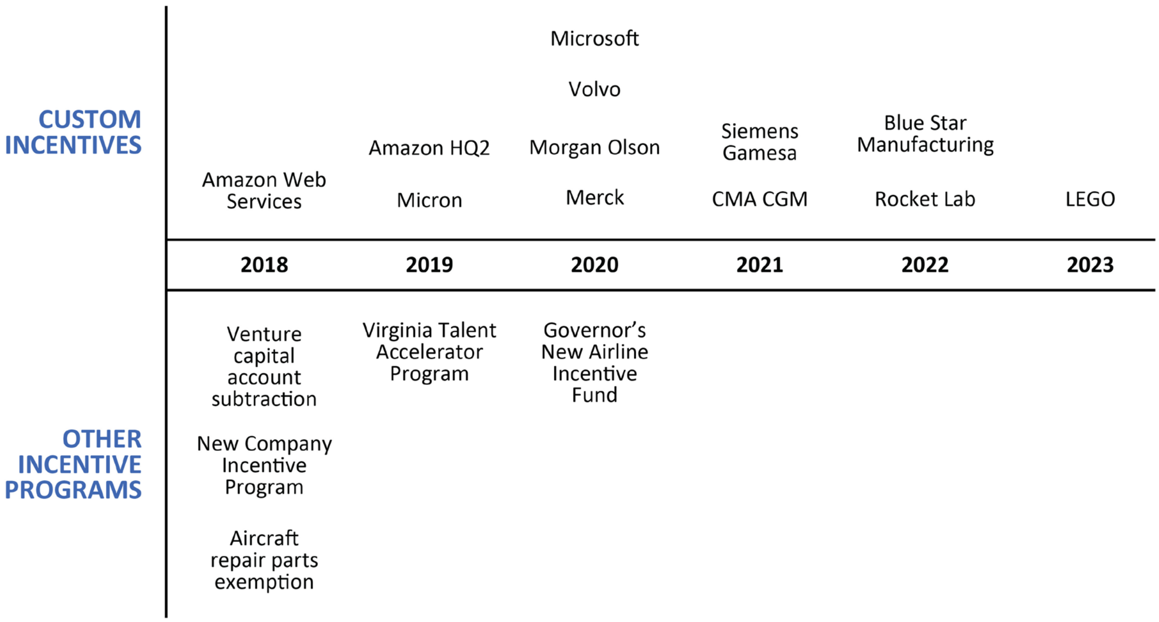
Six of these incentives were also among the top incentives for spending in FY22, with the Data Center Exemption being the largest incentive that year ($81 million in spending or 25 percent of spending). The railroad and airline common carrier exemptions, manufacturers single sales factor apportionment, Commonwealth's Opportunity Fund, and the Real Property Improvement Grant programs were also among the top incentives for spending in both FY22 and for the entire 10-year period.

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 77 incentives, and almost 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. Seventy-one percent of the incentive programs that have been adopted since 2017 have been customized performance grants or other incentives (Figure 2).

Figure 2
Majority of new economic development incentives since 2017 have been custom grants



SOURCE: Weldon Cooper analysis of economic development incentive programs.
NOTE: Incentives are grouped by calendar year they were adopted by the General Assembly, or for custom grants or other incentives, the calendar year the memorandum of understanding was signed. Siemens Gamesa is part of a bond authorization for onsite improvements at the Port of Virginia.

Total spending on economic development incentives fluctuated during the 10-year period, and total spending increased only 7 percent since FY13. Spending levels fluctuated earlier in the time period before steadily increasing between FY16 and FY21 (Figure 3). Then total spending decreased 9 percent in FY22, primarily because Micron had received both custom grant payments ($20 million in FY20 and $50 million in FY21), and because coal tax credits claims have declined since the credits expired. Although $21 million in custom grant payouts were made to Newport News Shipbuilding, Merck, and Amazon Web Services in FY22, these payouts were more than offset by the large final payment to Micron in FY21. Since custom grants are relatively large and account for a larger share of incentive program funding, annual changes in custom grants' performance-based payouts are likely to account for incentive spending fluctuations in the future.

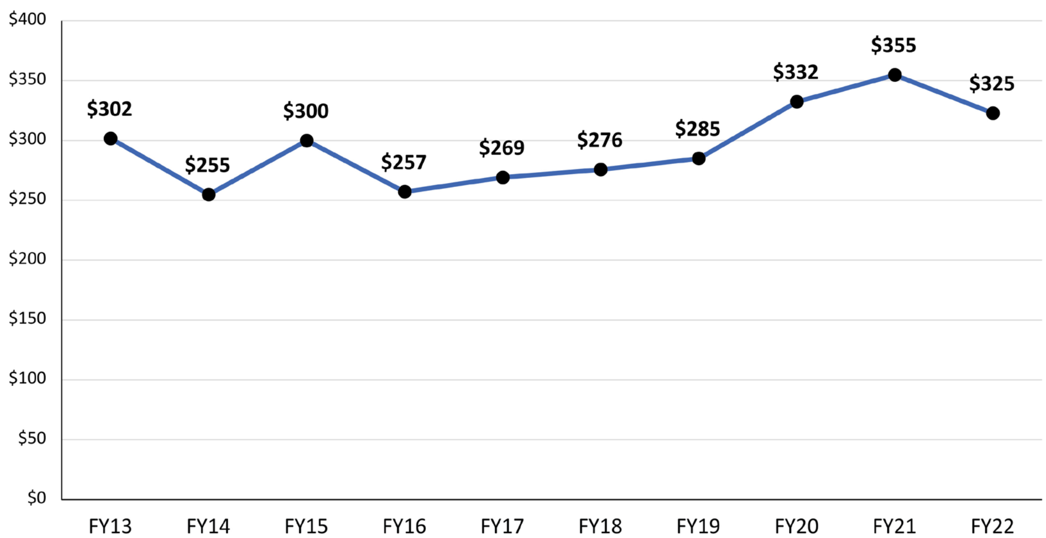
Approximately 5,000 projects were awarded $2 billion in grants FY13–FY22

Even though sales and use tax incentives—particularly exemptions—have historically had a larger overall impact on the state budget, Virginia's grant programs are the most 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 fall 2018 and early 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.

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 as long as 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 Research Commercialization Fund and Virginia Leaders in Export Trade (VALET) Program.

FIGURE 3
Spending on incentives fluctuated annually before FY16 but has generally increased since then ($M)



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 when they were paid. Not adjusted for inflation. The trend is similar if adjusted for inflation.

Collectively, Virginia's economic development incentive grant programs—which are typically funded with general funds with some exceptions—awarded almost $2.0 billion to 4,990 projects between FY13 and FY22 (Table 2). Thirteen of the 37 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, less than half of the $2.0 billion in grant awards was paid out or "spent" between FY13 and FY22, because nearly $1.1 billion in custom awards for 10 companies (including Amazon HQ2, Newport News Shipbuilding, and Morgan Olson) are not scheduled to be paid out until after FY22. Spending on grants, and thus total incentives, will increase substantially in the future as these custom grant awards are paid.

TABLE 2
Grant programs made approximately 5,000 awards totaling nearly $2 billion (FY13–FY22)

Program	Total FY13–FY22		Annual average	
	Award amount	# of awards	Award amount	# of awards
Major Headquarters Workforce Grant (Amazon HQII) [a]	$750.0M	1	n.a.	n.a.
Commonwealth's Opportunity Fund	195.1	320	$19.5	32
Tobacco Region Opportunity Fund	136.4	251	13.6	25
Real Property Investment Grant (Enterprise zone)	108.4	1,553	10.8	155
Virginia Jobs Investment Program	78.7	755	7.9	76
Precision Plastic Manufacturing Grant (LEGO Group) [a b]	75.0	1	n.a.	n.a.
Virginia Investment Partnership Grant	71.9	82	7.2	8
Semiconductor Manufacturing Grant Fund (Micron) [a]	70.0	1	n.a.	n.a.
Tobacco Commission Megasite Grant	56.8	19	5.7	2
Advanced Shipbuilding Production Facility Grant (Newport News) [a]	46.0	1	n.a.	n.a.
Governor's Motion Picture Opportunity Fund	44.0	44	4.4	4
Transportation Partnership Opportunity Fund	36.1	12	3.6	1
Virginia Economic Development Incentive Grant	31.3	9	3.1	1
Job Creation Grant (Enterprise zone)	25.6	559	2.6	56
Technology Development Grant (Microsoft) [a]	22.5	1	n.a.	n.a.
Economic Development Access Program	20.1	34	2.0	3
Commonwealth Research Commercialization Fund [c]	17.7	282	1.8	28
Offshore Wind Component Grant (Siemens Gamesa) [a d]	17.1	1	n.a.	n.a.
Truck Manufacturing Grant Fund (Volvo) [a]	16.5	1	n.a.	n.a.
Virginia Talent Accelerator Program [e]	15.9	34	5.3	11
Space Flight Operations Facilitation Program (Rocket Lab) [a]	15.0	1	n.a.	n.a.
Nitrile Glove Manufacturing Training Program (Blue Star) [a]	13.1	1	n.a.	n.a.
GO Virginia	12.9	16	2.1	3
Rail Industrial Access Program	11.3	30	1.1	3
Special Workforce Grant Fund (Amazon Web Services) [a]	10.5	1	n.a.	n.a.
Agriculture and Forestry Industries Devel. Grant	10.4	113	1.0	11
Shipping and Logistics Headquarters Grant (CMA CGM) [a]	9.5	1	n.a.	n.a
Virginia Business Ready Sites Program	8.6	27	1.4	5
Pharmaceutical Manufacturing Grant Program (Merck) [a]	7.5	1	n.a	n.a
Advanced Production Grant Program (Morgan Olson) [a]	7.0	1	n.a	n.a

Program	Total FY13–FY22		Annual average	
	Award amount	# of awards	Award amount	# of awards
Port of Virginia Economic and Infrastructure Grant	6.5	22	0.7	2
Small Business Jobs Grant Fund Program	5.9	96	0.7	11
VALET Program	5.9	246	0.6	25
Small Business Investment Grant	5.3	104	0.6	12
Trade Show Assistance Program	3.3	366	0.5	61
New Company Incentive Program	1.3	2	0.7	1
Governor's New Airline Service Incentive Fund	0.3	1	0.0	1
All programs	**$1,969.4M**	**4,990**	**$97.3M**	**537**

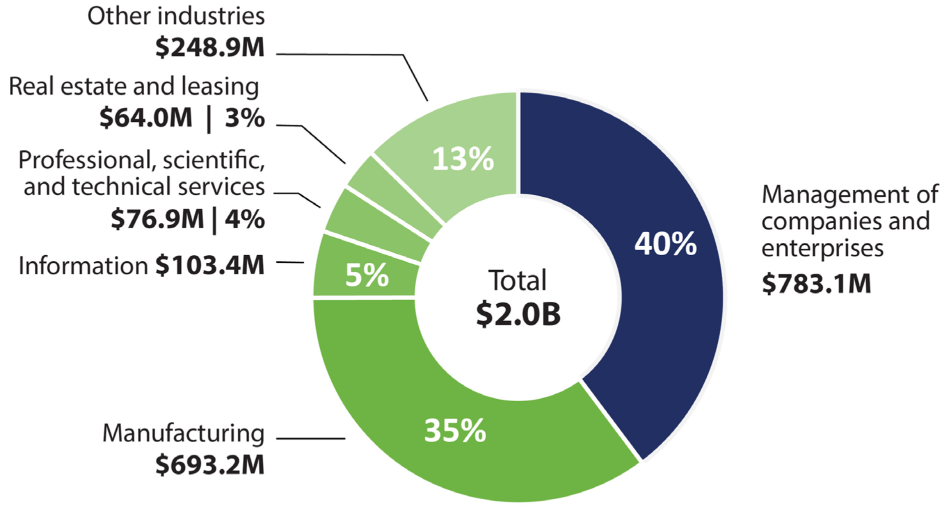
SOURCE: Weldon Cooper Center analysis of economic development incentive grants.
NOTE: Includes all awards and amounts *prior* to recaptures, cancelations, or reductions. For this reason, amounts for the Tobacco Region Opportunity Fund, Commonwealth's Opportunity Fund, and Virginia Jobs Investment Program 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 $32.5 million Advanced Shipbuilding Training Facility Grant (Newport News), $10.5 million Special Workforce Grant (Amazon Web Services), and $70.0 million Semiconductor Manufacturing Grant (Micron) have been fully paid. [b] Nineteen million of the $75 million in grant funding for the Precision Plastic Manufacturing Grant (LEGO Group) is from the Virginia Business Ready Sites Program funding. [c] In 2020, the Commonwealth Research Commercialization Fund was combined with other programs to become the Commonwealth Commercialization Fund. [d] The Offshore Wind Component Grant (Siemens Gamesa) is not a custom grant because it is financed through a bond authorization but it is included here as a grant because it is more like a grant than a tax incentive or loan program and to keep it with the other custom incentives, which are grants. [e] The Virginia Talent Accelerator Program was created in 2019 and began making awards in FY20. Its value is estimated and represents the internal cost of the accelerator services at the time of announcement.

Grant awards targeted corporate headquarters and manufacturing sectors and urban localities

Three-quarters of grant award amounts were directed to corporate headquarters or manufacturers between FY13 and FY22 (Figure 4). Forty percent of grant awards were directed to businesses in the corporate headquarters sector, almost all of which was the sizable custom grant award for Amazon HQ2. Another 35 percent was directed to businesses in the manufacturing sector. The manufacturing sector is commonly represented because grant programs generally target companies in "basic," or traded industry sectors, which export at least half their goods or services outside the state. Targeting these businesses is desirable because they bring new revenue into the state. Corporate headquarters is also a traded industry sector, but until FY20, the state generally provided fewer and smaller grants for headquarters locations or expansions.

Some Virginia economic development incentives target "basic" or **traded industry sectors**. These sectors are also referred to as export-base industry sectors. Reports in this series will begin using the term "traded sectors" because it is the term generally used now by Virginia agencies administering economic development programs.

FIGURE 4
Three-quarters of grant award amounts were directed to corporate headquarters and manufacturers (FY13–FY22)



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.

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

TABLE 3
Businesses in 10 localities received 68 percent of grant awards (FY13–FY22)

Locality	Amount awarded	% of total amount	# awards	% of total awards
Arlington County	$791	40.2%	93	1.9%
Chesterfield County	95	4.8	78	1.6
Newport News City	89	4.5	262	5.3
Fairfax County	74	3.8	276	5.5
Manassas City	71	3.6	17	0.3
Richmond City	69	3.5	462	9.3
Pittsylvania County	37	1.9	85	1.7
Henrico County	37	1.9	216	4.3
Accomack County	37	1.9	30	0.6
Danville city	34	1.8	139	0.2
Subtotal	**$1,336M**	**67.8%**	**1,658**	**33.2%**
All others	$633M	32.2%	3,517	66.8%
TOTAL	**$1,969M**	**100.0%**	**4,990**	**100.0%**

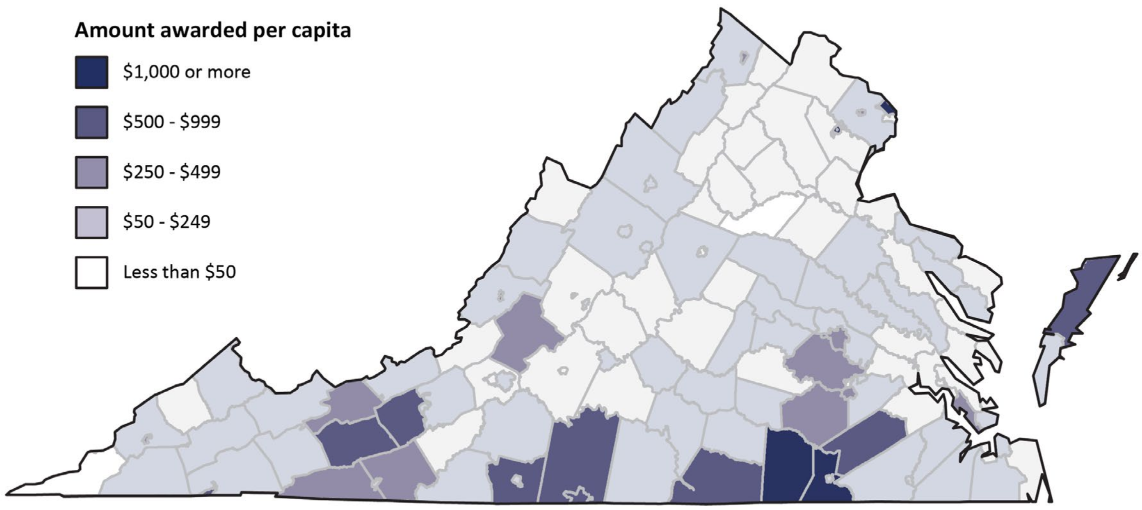
SOURCE: Weldon Cooper Center analysis of economic development incentive grants.
NOTE: Localities were not assigned to 12 Governor's Motion Picture Opportunity Fund (GMPOF), six GO Virginia, one Virginia Business Ready Sites Program (VBRSP), and one Governor's New Airline Incentive Fund projects because the grants benefited more than one locality.

Businesses in urban localities in Northern Virginia and rural localities in the southern and eastern part of the state received a large proportion of grant funding, relative to population size (Figure 5). 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 49 percent of all economic development incentive grant awards. Businesses in Tobacco Region localities received approximately 17 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. The highest per capita award amounts were in

- Arlington County ($3,295) for the location of Amazon HQ2;
- Greensville County ($2,435) for development of the Mid-Atlantic Advanced Manufacturing Center;
- Brunswick County ($2,141) for the location of a Dominion Power gas power plant that received $30 million in financial assistance;
- Manassas City ($1,746) for the Micron expansion; and
- Accomack County ($1,149) for the location of Rocket Lab and funding for Northrop Grumman launching facilities at the Mid-Atlantic Regional Spaceport.

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

FIGURE 5
Awards per capita are concentrated in Arlington, Manassas City, and rural localities in Southern and Eastern Virginia (FY13–FY22)



SOURCE: Weldon Cooper Center analysis of economic development incentive grants.

The award amounts per capita have a moderately positive correlation with the local unemployment rate (which increases when the uniquely large Amazon HQ2 custom grant in Arlington is excluded), indicating that more funds are generally provided to businesses in localities that are economically disadvantaged. The number of awards per capita has an even higher positive correlation with the local unemployment rate.

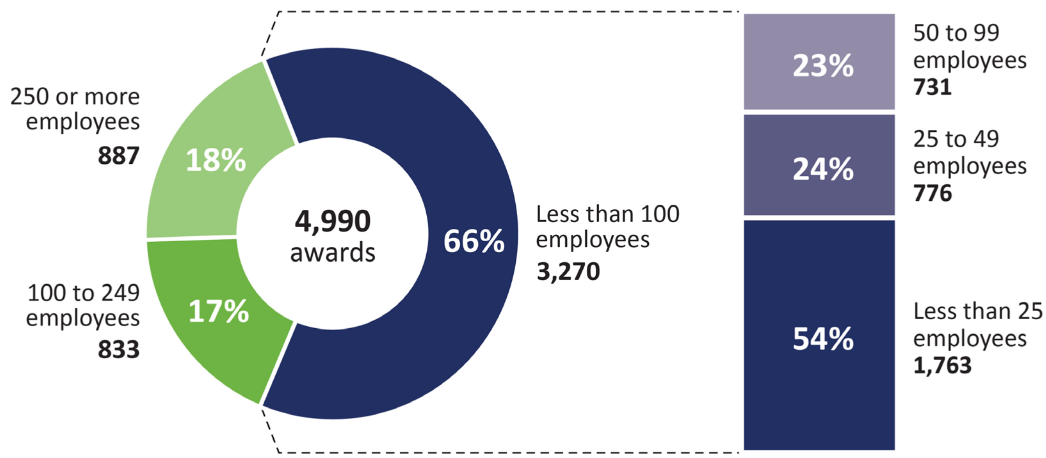
Majority of grant projects were for business locations that had fewer than 100 employees at the time of the award

Two-thirds of the grant awards between FY13 and FY22 went to business locations that had fewer than 100 employees at the time the awards were made (Figure 6). Of this group, 54 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 Research and Commercialization Fund (now Commonwealth Commercialization Fund), which typically make awards to start-up businesses with 10 or fewer employees, on average. These projects, however, represented only 16 percent of grant award amounts.

In contrast, 18 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 six other grant programs—the Transportation Partnership Opportunity Fund, Virginia Talent Accelerator Program, Virginia Investment Partnership Grant, Virginia Economic Development Incentive Grant, Commonwealth's Opportunity Fund, and Port of Virginia Economic and Infrastructure

Grant—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.)

FIGURE 6
Majority of grant recipients were for business locations with fewer than 100 employees (FY13–FY22)



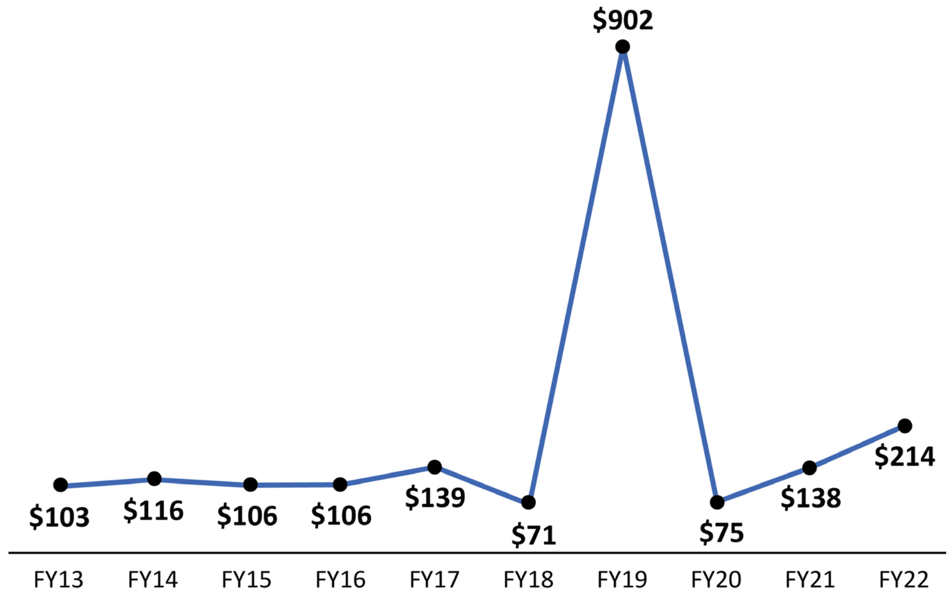
SOURCE: Weldon Cooper Center analysis of economic incentive grant awards.
NOTE: Employment records were matched with 2,928 of the 4,990 awards (59 percent) and $1.3 billion of $2.0 billion (67 percent) in total awards. The numbers and percentages shown in the figure reflect a weighted distribution of awards and amounts using information from the matched records.

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

Grant awards trended upwards recently because of large custom grant awards

Grant awards had generally been stable over time, until a substantial increase in FY19 because of large custom grant awards for Amazon HQ2, Amazon Web Services, and Micron that totaled $830.5 million (92 percent of total grant awards) (Figure 7). Awards increased in FY21 because of custom grants for CMA-CGM, Microsoft, and Volvo totaling $48.5 million. They increased again in FY22 because of custom grants or other incentives for Blue Star Manufacturing, LEGO Group, Rocket Lab, and Siemens Gamesa, totaling $120.2 million. (See Appendix D for grant awards by program.)

FIGURE 7
Grant awards spiked in FY19 and have trended upward since FY21 because of large custom grant awards



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. Not adjusted for inflation. (The trend is the same if adjusted for inflation.) Offshore Wind Component Grant (Siemens Gamesa) is included here with other grants to keep it with other custom incentives, which are grants, and because it is more like a grant program than a tax incentive or loan.

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 an average high of $3.5 million to a low of $8,955 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 $6,917 between FY13 and FY22, but it ranged from a high of $63,291 per job (custom grant for Micron) to a low of less than $1,000 (Virginia Jobs Investment Program and Small Business Jobs Grant Fund). The average grant award for capital investment or additional spending was $36 per $1,000 spent and ranged from a high of $3,516 (custom grant for Amazon HQ2) to a low of $5 (Agriculture and Forestry Industries Development Grant).

TABLE 4
Average grant awards by program varied widely (FY12–FY21)

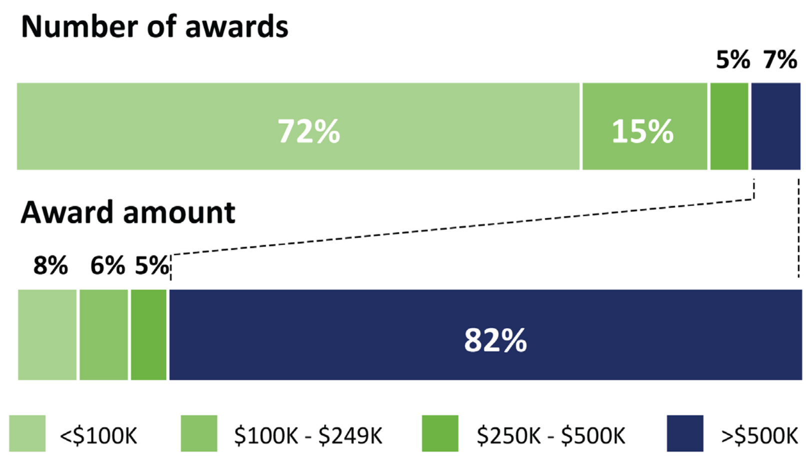
	Average award amount per		
	Project	$1,000 in spending or investment in Virginia (expected)	Job created in Virginia (expected)
Custom grants			
Semiconductor Manufacturing Grant Fund (Micron)	$70,000,000	23	$63,291
Space Flight Operations Facilitation Program (Rocket Lab)	15,000,000	146	60,976
Offshore Wind Component Grant (Siemens Gamesa) [a]	17,100,000	204	55,161
Pharmaceutical Manufacturing Grant (Merck)	7,500,000	8	49,342
Advanced Shipbuilding Production Facility Grant (Newport News)	46,000,000	61	46,000
Precision Plastic Manufacturing Grant (LEGO Group)	75,000,000	72	42,589
Shipping and Logistics Headquarters Grant (CMA CGM)	9,500,000	264	22,892
Truck Manufacturing Grant Fund (Volvo)	16,500,000	42	21,236
Major Headquarters Workforce Grant Fund (Amazon HQII)	750,000,000	375	19,815
Technology Development Grant Fund (Microsoft)	22,500,000	3,516	15,000
Advanced Production Grant (Morgan Olson)	7,000,000	121	9,957
SWGF (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	**$81,515,462**	**$115**	**$21,286**
All other grants			
Transportation Partnership Opportunity Fund	3,010,493	78	17,893
Economic Development Access Program	590,489	214	9,355
Virginia Investment Partnership Grant	876,829	13	8,971
Small Business Investment Grant Fund	50,634	218	7,480
Virginia Economic Development Incentive Grant	3,477,778	60	5,493
Tobacco Region Opportunity Fund	543,277	17	4,661
GO Virginia (site development)	803,336	129	4,384
Commonwealth's Opportunity Fund	609,722	14	3,857
Rail Industrial Access Program	375,692	10	3,094
New Company Incentive Program	656,500	254	2,951
Agriculture and Forestry Industries Devel. Grant	92,388	5	2,830
Port of Virginia Economic and Infrastructure Grant	295,045	n.a.	2,116

	Project	Average award amount per $1,000 in spending or investment in Virginia (expected)	Average award amount per Job created in Virginia (expected)
Job Creation Grant (Enterprise zone)	45,859	n.a.	1,948
Virginia Talent Accelerator Program	469,022	n.a.	1,509
Virginia Jobs Investment Program	104,233	8	856
Small Business Jobs Grant Fund Program	61,441	27	$837
Commonwealth Research Commercialization Fund	62,796	242	n.a.
Governor's Motion Picture Opportunity Fund	1,000,940	n.a.	n.a.
Governor's New Airline Service Incentive Fund	250,000	n.a.	n.a.
Real Property Investment Grant (Enterprise zone)	69,822	42	n.a.
Tobacco Commission Megasite Grant	2,988,774	n.a.	n.a.
Trade Show Assistance Program	8,955	n.a.	n.a.
VALET Program	23,902	n.a.	n.a.
Virginia Business Ready Sites Program	319,583	n.a.	n.a.
Average, non custom projects	**$182,779**	**$20**	**$3,872**
Average, all projects	**$394,668**	**$36**	**$6,917**

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.
[a] The Offshore Wind Component Grant (Siemens Gamesa) is included here with other grants to keep it with other custom incentives, which are grants, and because it is more like a grant program than a tax incentive or loan.

From FY13 to FY22, only 7 percent of awards were more than $500,000. However, these larger awards accounted for 82 percent of the grant funding (Figure 8). In fact, the 13 custom grant awards alone accounted for 54 percent of the grant funding.

FIGURE 8
Seven percent of grant awards accounted for over 80 percent of total grant funding (FY13–FY22)



SOURCE: Weldon Cooper Center analysis of economic development incentive grants.
NOTE: Number of grants awarded is 4,990. Total amount awarded is $2.0 billion (not adjusted for cancelations, recaptures, and refunds).

Completed projects created over 66,000 jobs and $16 billion in business investment and spending

Projects that received grant awards between FY13 and FY22 and completed their location or expansion project (including those that did not perform) collectively created an estimated 66,000 jobs and $16.5 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 (41,490) and capital investment and other spending ($6.3 billion). Projects funded through the Commonwealth's Opportunity Fund ranked second in job creation (14,262 jobs) and business spending ($5.7 billion).

The **66,000 jobs and $16.5 billion in capital investment or other spending** are unduplicated amounts, because many projects receive more than one grant. For example, Navy Federal Credit Union received a Commonwealth's 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.

TABLE 5
Completed projects created over 66,000 jobs and $16.5 billion in business spending or investment (FY13–FY22)

Program	# of projects	Spending or investment ($M)	Jobs created
Virginia Jobs Investment Program	609	6,275	41,490
Commonwealth's Opportunity Fund	180	5,712	14,262
Job Creation Grant (Enterprise Zone)	559	0	13,157
Tobacco Region Opportunity Fund	170	3,030	5,102
Port of Virginia Economic and Infrastructure Grant	22	0	3,067
Small Business Jobs Grant Fund Program	90	1	2,377
Special Workforce Grant Fund (Amazon Web Services)	1	113	1,682
Transportation Partnership Opportunity Fund	8	124	1,050

Program	# of projects	Spending or investment ($M)	Jobs created
Virginia Investment Partnership Grant	23	770	781
Agriculture and Forestry Industries Devel. Grant	44	665	684
Rail Industrial Access Program	20	263	138
Commonwealth Research Commercialization Fund	220	63	n.a.
Economic Development Access Program	19	69	n.a.
Governor's Motion Picture Opportunity Fund	41	443	n.a.
Real Property Investment Grant (Enterprise Zone)	1,553	2,611	n.a.
Small Business Investment Grant Fund	1	0	0
Tobacco Commission Megasite Grant	10	0	n.a.
Total (duplicated):	**3,570**	**20,139**	**83,807**
Total (unduplicated):		**16,462**	**66,415**

SOURCE: Weldon Cooper Center analysis of economic development incentive grants.
NOTE: Completed projects represented about $470 million in total awards across programs. Some grant programs, such as the Major Eligible Employer 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 (198 and 366 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 one completed Small Business Investment Grant project did not perform and funding was recaptured.
n.a. indicates that job creation or investment is not one of the criteria for receiving the grant.

Completed projects include those whose grant performance period ended during the time period analyzed, including projects that did not perform. Not all projects that received a grant award between FY13 and FY22 had completed their performance at the end of FY22. Completed projects represent 3,576 projects and $463 million in awards.

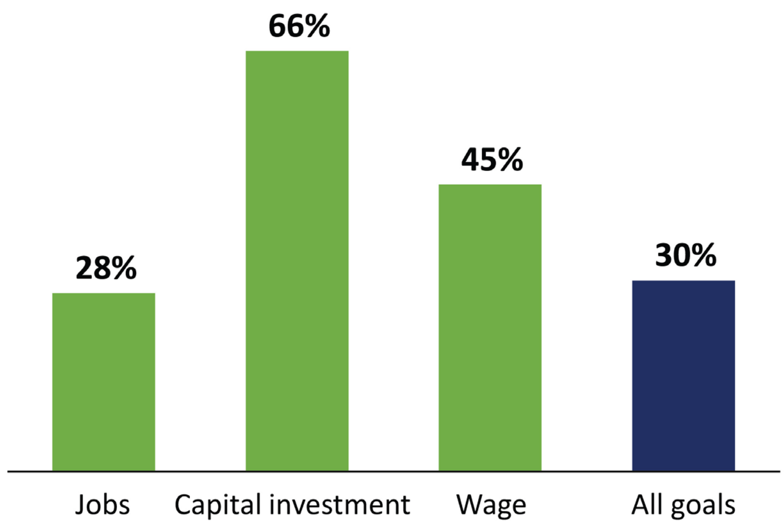
It is likely that the majority of the jobs and business investment or spending by completed projects would have occurred without incentives. Trying to determine the effect of incentives with precision is difficult because site selection decisions are based on a variety of factors. The success in swaying business decisions varies by program. Research on incentives nationally suggests that between 75 percent and 98 percent of projects would have occurred anyway without incentives (Bartik 2018).

Majority of completed projects met capital investment goals, and 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.)

Sixty-six percent of completed projects met or exceeded their project-specific goals for capital investment or other spending (Figure 9). Forty-five percent met their average wage goals, and 28 percent met their job creation goals.

FIGURE 9
Majority of completed projects met their capital investment goals (FY13–FY22)



SOURCE: Weldon Cooper Center analysis of economic development incentive grants.
NOTE: N=1,407 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 Program is the only program with multiple projects where all projects attained project-specific goals. Goal achievement was especially low for some programs.

TABLE 6
Attainment of project-specific goals varied by program (FY13–FY22)

Program	# of projects	Job creation	Capital investment	Average wage	All goals
Special Workforce Grant (Amazon Web Services)	1	100%	100%	100%	100%
Port of Virginia Economic and Infrastructure Grant	22	100	n.a.	n.a.	100
Commonwealth Research Commercialization Fund	220	n.a.	n.a.	n.a.	86
Economic Development Access Program	19	n.a.	63	n.a.	63
Rail Industrial Access Program	20	n.a.	60	n.a.	60
Virginia Jobs Investment Program-Retraining	115	n.a.	95	44	30
Commonwealth's Opportunity Fund	180	30	48	56	27
Tobacco Region Opportunity Fund	170	34	41	41	19
Virginia Investment Partnership Grant	23	22	22	17	13

Program	# of projects	Job creation	Capital investment	Average wage	All goals
Virginia Jobs Investment Program-Job Creation	494	23%	78%	41%	12%
Agriculture and Forestry Industries Development Grant	44	45	57	64	18
Small Business Jobs Grant Fund	90	10	**	56	0
Transportation Partnership Opportunity Fund	8	13	0	n.a.	0
Small Business Investment Grant	1	0	0	**	0
Total	**1,407**	**28%**	**66%**	**45%**	**30%**

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 73 percent of the participants met or exceeded their goal for increased international sales.
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 program.

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 48 percent of completed projects that received a Commonwealth's 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 79 percent of the total capital investment that was expected (Table 7). The Commonwealth's Opportunity Fund also achieved 56 percent of its job creation and 136 percent of average wage goals collectively. Most grant programs had overall success in achieving average wage goals even if they did not have overall success in achieving other goals.

TABLE 7
Projects for most grant programs collectively met their average wage goals (FY13–FY22)

Program	Job creation	Spending or investment	Average wage
Special Workforce Grant Fund (Amazon Web Services)	112%	135%	173%
Commonwealth's Opportunity Fund	56	79	136
Agriculture and Forestry Industries Devel. Grant	37	76	118
Small Business Jobs Grant Fund	35	0	100
Tobacco Region Opportunity Fund	23	47	95
Virginia Jobs Investment Program	59	90	94
Virginia Investment Partnership Grant	25	43	68
Port of Virginia Economic and Infrastructure Grant	100	n.a.	n.a.

Program	Job creation	Spending or investment	Average wage
Transportation Partnership Opportunity Fund	68	35	n.a.
Rail Industrial Access Program	19	99	n.a.
Small Business Investment Grant Fund	0	0	n.a.
Economic Development Access Program	n.a.	136	n.a.
Commonwealth Research Commercialization Fund	n.a.	104	n.a.

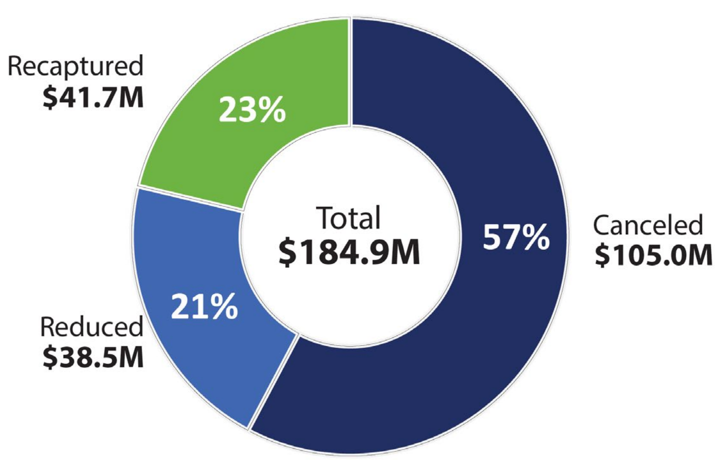
SOURCE: Weldon Cooper Center analysis of economic incentive grants.
NOTE: Not all projects collect average wage levels upon completion of the project to calculate the percentage of projects that attained wage goals. The VALET program is excluded from the table because its goal is to increase international sales. Collectively, program participants increased international sales by 109 percent of the expected goal.
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 program.

Agencies administering grants reported **recapturing** $41.7 million in grant awards. In some cases, this may be less than the full amount that should have been recaptured according to grant guidelines. The upcoming in-depth reports on these incentives will provide more information about agency efforts to recapture funding when projects do not achieve their goals.

Grant awards totaling $185 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 $185 million (or 9 percent of the total paid or committed between FY13 and FY22) were canceled, reduced, or recaptured because the projects did not go forward or meet their goals (Figure 10). Nearly 57 percent of the $185 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 10
Grant awards totaling $185 million were canceled, reduced, or recaptured (FY13–FY22)



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

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, and Patrick (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.

Approximately $42 million was recaptured between FY13 and FY22 from 163 projects that failed to meet their performance goals. Grant programs that make upfront award payments include recaptures. Each of these programs recaptured small percentages of the funds they awarded:

- Commonwealth's Opportunity Fund: 22 percent;
- Agriculture and Forestry Industries Development grant: 14 percent;
- Tobacco Region Opportunity Fund: 9 percent;
- Small Business Investment Grant: 1 percent; and
- Commonwealth Research Commercialization Fund: 1 percent.

Through tax incentives, businesses saved $2 billion FY13–FY22

Virginia's economic development tax incentives, which include exemptions, credits, and single sales apportionment, resulted in $2 billion in tax savings to businesses between FY13 and FY22. Most ($1.3 billion or 65 percent) of this amount was from sales and use tax exemptions that provide savings to businesses on their purchases of equipment and supplies that qualify for the exemption. Eleven of the 19 sales and use tax exemptions each provided more than $20 million in incentives to businesses between FY13 and FY22 (Table 8). Some of these exemptions are provided to capital-intensive industries, such as data centers and airlines, which make substantial equipment purchases to start or upgrade their operations.

TABLE 8
Sales and use tax exemptions provided an estimated $1.3 billion in tax savings to businesses (FY13–FY22)

Exemption	Total savings ($M)	Average savings per year ($M)
Data Center Exemption	$709.8	$71.0
Railroad Common Carriers Exemption	198.7	19.9
Airline Common Carriers Exemption	97.2	9.7
Ships and Vessels Exemption	66.8	6.7
Research & Development Exemption	47.1	4.7
Media Provider Equipment Exemption	46.7	4.7
Certain Printed Materials for Out-of-State Distribution Exemption	42.0	4.2
Pollution Control Equipment & Facilities Exemption	33.9	3.4
Railroad Rolling Stock Exemption	23.6	2.4
Film, Television, & Audio Production Inputs Exemption	23.0	2.3
Aircraft Parts, Engines, and Supplies Exemption	22.8	2.3
Virginia Spaceport Users Exemption	8.8	0.9
Uniform Rental & Laundry Businesses Exemption	8.8	0.9
Semiconductor Manufacturers Exemption	7.0	0.7

Out-of-state Nuclear Facility Repair Exemption	5.8	0.6
Taxi Parts & Radios Exemption	3.5	0.3
Contractor Temporary Storage Exemption	1.1	0.1
Semiconductor Wafers Exemption	1.1	0.1
Electrostatic Duplicators Exemption	0.1	0.0
Total	**$1,347.7**	**$134.8**

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.)

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

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

Tax incentives' performance will be included in upcoming reports detailing the findings of in-depth evaluations of individual incentives. As part of this effort, JLARC staff will collect performance data—which is either not currently collected or not readily available—on tax incentives.

Economic development tax credits provided $478 million in savings to businesses between FY13 and FY22 (Table 9), accounting for about 26 percent of spending on tax incentives. Two coal tax credits account for 53 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. These credits will account for lower amounts of business tax savings in future years because both credits expired effective January 1, 2022. Five other credits awarded more than $20 million in credits during this period. While many of the older tax credits are designed to encourage businesses such as manufacturers to locate or expand in Virginia, the credits adopted more recently are designed to incentivize businesses in other industries (film, wineries, and transportation or distribution companies).

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 be $190 million between FY14 and FY22, or about $20 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 $0.2 million in FY22.

Apportionment formulas are used to ensure that states do not tax more than their fair share of income from multistate companies. Virginia's standard formula uses three factors (property, payroll, and sales) and double-weights the sales factor.

Manufacturers and data centers can use **single sales apportionment** to calculate their taxable income in Virginia based solely on their proportion of total sales that are in Virginia.

TABLE 9
Tax credits provided nearly $478 million in tax savings to businesses (FY13–FY22)

Tax credit	Total savings ($M)
Coalfield Employment Enhancement Tax Credit	$162.8
Virginia Coal Production and Employment Incentive Tax Credit	91.1
Major Research and Development Tax Credit	50.0
Motion Picture Production Tax Credit	45.8
Research and Development Expenses Tax Credit	36.8
Major Business Facility Job Tax Credit	28.2
Qualified Equity and Subordinated Debt Investment Tax Credit	28.2
Recyclable Materials Processing Equipment Tax Credit	16.9
Virginia Port Volume Increase Tax Credit	11.5
International Trade Facility Tax Credit	2.5
Farm Wineries and Vineyards Tax Credit	1.6
Worker Retraining/Worker Training Tax Credit	1.5
Barge and Rail Usage Tax Credit	0.8
Telework Expenses Tax Credit	0.4
Green Job Creation Tax Credit	0.2
Biodiesel and Green Diesel Fuels Producers Tax Credit	0.0
Total, all tax credits	**$478.4M**

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.

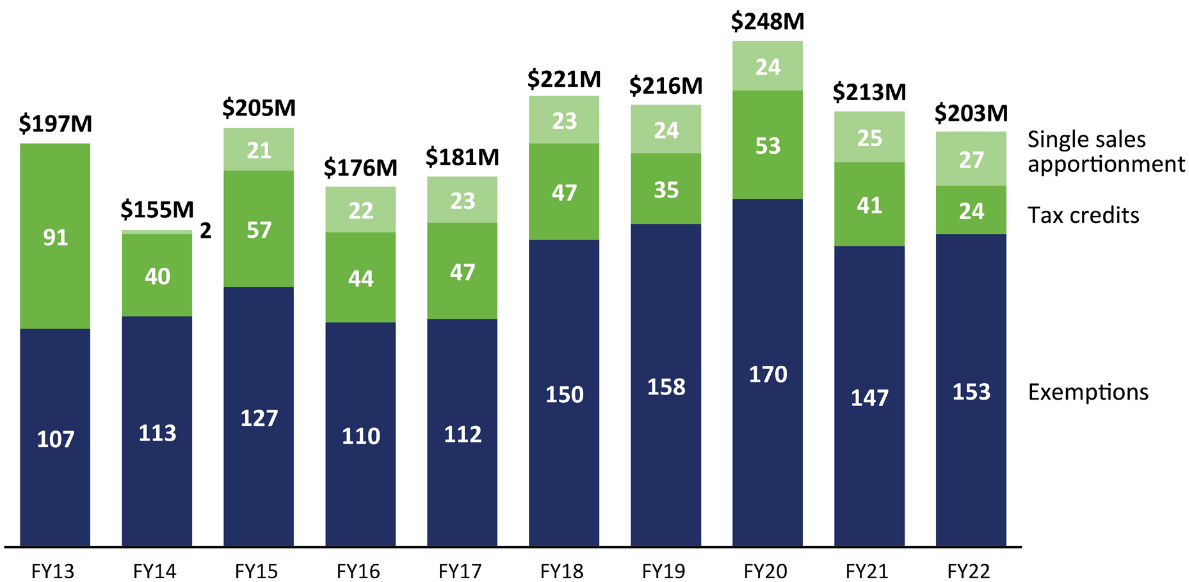
Business savings from tax incentives have decreased since FY20

Annual tax savings realized by businesses from economic development tax exemptions and credits changed little in FY22 from the FY13 base year, though savings fluctuated over the 10-year period (Figure 11). Similar tax savings between these two years is partially explained because new or expanded tax incentive programs offset reduced tax savings from repealed programs. Increased business savings resulted from the introduction of manufacturer single sales apportionment in 2014 and the Major Research and Development Tax Credit in 2018. The tax expenditures for the two programs increased to $36.3 million in FY22. On the other hand, the Virginia coal tax credits were repealed in 2021. Thus, coal tax credit usage decreased from $81.29 million in FY13 to just $0.35 million in FY22.

Tax incentive spending is related to general economic conditions. Gradual improvements in the economy through FY20 led to a recovery in business spending and investment. This recovery likely resulted in overall increases in spending on sales and use tax exemptions that target capital-intensive industries, such as rail, air, and water transportation companies. Likewise, the negative impact of the COVID-19 pandemic on businesses and the economy is one possible reason why businesses' tax savings declined in FY21.

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. In addition, usage of the data centers exemption is estimated to have peaked at tax savings of $103.3 million in FY20, falling to approximately $80 million in FY21 and FY22, because the eligible capital expenditures of newly qualifying data centers decreased.

FIGURE 11
Business savings from tax incentives changed little in FY22 from the FY13 base year, though savings fluctuated over the 10-year period (FY13–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. Not adjusted for inflation. The trend is nearly identical if adjusted for inflation.

Businesses obtained $54 million in loans and gap funding through financing programs FY13–FY22

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
- SWaM Loan Fund provides small loans to small businesses to use for working capital, financing accounts receivable and inventory, and other short-term financing needs.

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

Virginia also offers two gap financing programs. The Virginia Innovation Partnership Corporation, formerly the Center for Innovative Technology, offers gap funding through its Growth Acceleration Program (GAP) Fund, which enables 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 76 percent of VSBFA assistance was provided to small businesses in services and trade industries between FY13 and FY22. Seventy-three percent of 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, 75 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 more recently grant programs have also been more concentrated in urban localities. Seventy-nine percent of VSBFA loans and 99 percent of GAP Fund awards went to projects in metropolitan areas between FY13 and FY22. Over sixty-two percent of GAP Fund assistance went to firms in Northern Virginia, with 42 percent to Fairfax County companies alone. A large portion of the remaining award amounts were made to firms in three localities that are home to the state's major research universities. In contrast, the percentage of grant funding that went to projects in metropolitan areas has historically been lower (around 65 percent), but climbed to 83 percent in FY22, because custom grant awards have been significantly higher for metro areas (95 percent of all custom grants awarded during the period).

Higher amounts of total loan assistance and GAP Fund awards were provided to areas with lower levels of disadvantage or economic distress. Loans and loan assistance were negatively associated with the poverty rate (-.0938), the unemployment rate (-0.1662) and the percentage of the locality's population that is Black/African American (-.0658) and positively associated with median household income (0.3380). GAP Fund awards were also negatively associated with the poverty rate (-.0835), the unemployment rate (-0.2415) and the percentage of the locality's population that is Black/African American (-.1550) and positively associated with median household income (0.3380).

VSBFA programs helped businesses obtain nearly $25 million in loans and loan enhancements

Small businesses aided by the four VSBFA programs obtained nearly $25 million in loan and loan enhancement financing between FY13 and FY22 (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 $84,977, but the average varied among the four programs. The Economic Development Loan Fund provided the greatest amount of average loan assistance per project at $713,341. The SWaM Loan Fund provided the least, at $20,245 per project.

TABLE 10
VSBFA programs helped businesses secure nearly $25 million in loans or equity financing (FY13–FY22)

Program	Amount awarded	# of projects	Average award	# of jobs	Loan/loan enhancement per job
Economic Development Loan Fund	$2,853,362	4	$713,341	33	$86,466
Loan Guaranty Program	15,669,180	71	220,693	435	36,021
State Cash Collateral Program	1,930,000	8	241,250	56	34,464
SWaM Loan Fund	4,190,682	207	20,245	564	7,430
Total	**$24,643,225**	**290**	**$84,977**	**1,088**	**$22,650**

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.

The four programs collectively were expected to add 1,088 jobs. The average loan or loan enhancement assistance per job was $22,650. This figure is not directly comparable to the average grant award per job ($6,917), 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 the financial guarantee to secure a loan provided by a private bank on behalf of an eligible business. The program would be required to obligate funds only if an eligible business were to default on its loan. The SWaM loan 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.

GAP Fund program provided businesses a total of $29 million in financing

Recipients of GAP Fund financing received $29.4 million between FY13 and FY22 to attract venture capital investment. This program made awards to 358 projects, for an average award of $82,059. Program investments were $3.3 million in FY20 through FY22, which were the highest award amounts since $3.5 million in FY14. Most (108) of the 123 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 $15 million in financing

The Tourism Development Financing Program was created in 2011 and provides 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. Nine projects have received $15.1 million in state funding through FY22. Projects that are receiving financing from the project include The Main Hilton Hotel in Norfolk and the historic Hotel Weyanoke in Farmville.

Appendix A: Study mandate

2022–2024 Appropriation Act
Passed as Chapter 1 of the Acts Assembly, September 14, 2023

§ 1-11 Item 36 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
Dept. of Housing and Community Development	Business identifiers (name, federal tax ID number)
Department of Rail and Public Transportation	Industry
Tobacco Region Revitalization Commission	Location (locality) of project
Virginia Department of Agriculture and Consumer Services	Amount of incentive approved and paid
Virginia Department of Aviation	Number of jobs promised and created and timing
Virginia Department of Taxation	Capital investment promised and delivered and timing
Virginia Department of Transportation	Average wages promised and delivered and timing
Virginia Economic Development Partnership	Other performance metrics as specified
Virginia Film Office	
Virginia Innovation Partnership Corporation	
Virginia Port Authority	
Virginia Small Business Financing Authority	
Virginia Tourism Corporation	

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 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. Program expenditures by fiscal year were computed as the funds paid for completed projects and grant funds still committed toward active but unfinished projects.

For the grant award analysis, awards for all grant awards and amounts were assigned to the year in which the award was approved. Grant program awards and amounts 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 Virginia Employment Commission (VEC) or other sources. Several agencies did not provide NAICS codes for each project.

For many grant projects, project awards were matched with VEC unit-level Quarterly Census of Employment and Wages (QCEW) records obtained under a confidentiality agreement with VEC. 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 primary. 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 grants were not assigned to localities. Twelve Governor's Motion Picture Opportunity Fund awards for a total award amount of $9.45 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. Six GO Virginia ($6.27 million) and one Virginia Business Ready Sites Program grant ($300,000) for site improvements benefitted several multijurisdictional industrial parks. Lastly, one New Airline Incentive Fund grant benefitted an airline (Breeze Airways) that provided new airline service to several airports ($250,000).

Grant project records do not systematically include the employment of businesses receiving awards across programs. Estimation of the employment size of the business that received the grant was conducted by matching grant records with VEC 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 FY13 through FY22 were matched by fiscal year of award with the corresponding VEC employment data by calendar year between 2012 and 2021 (i.e., FY22 project records were matched to calendar year 2021 VEC employment records). Using this process, 59 percent of the total number of awards and 67 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 SWaM Loan Fund—there were no state appropriations for the programs for the FY13–FY22 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. The average default rate (1.3 percent) for these loans was also applied to awarded loans to estimate the "cost" of the loan portion of Tobacco Region Opportunity Fund (TROF) awards. In the last four years, the Tobacco Region Revitalization Commission has begun to issue a larger portion of its TROF awards in the form of revolving loans.

Analysis of GAP Funds

The GAP Funds program, administered by the Virginia Innovation Partnership Corporation, generates a return on its investments in early-stage firms. Gross realized returns derive from merger and acquisition activity, to include escrows, dividends, and milestone payments, along with secondary sale of assets (GAP Funds' equity positions) and convertible note repayments. 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, for the purposes of estimating program expenditures in this report, 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 period of analysis (FY13–FY22) 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 FY10, 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 FY13 and FY22. These grants include:

- Aerospace Engine Manufacturing Performance Grant Program (Rolls-Royce),
- Semiconductor Grant Program (custom grant for Micron awarded in 2005), and
- SRI custom grant.

The award analysis does not include these three custom grants, but the spending analysis includes payments made to Rolls-Royce, Micron, and SRI.

This report includes five economic development incentive programs that were not included in the 2022 report. All five incentives are new custom grants, including: Nitrile Glove Manufacturing Training Program (Blue Star Manufacturing), Offshore Wind Component Grant Program (Siemens Gamesa), Plastic Manufacturing Grant Program (LEGO Group), Shipping and Logistics Headquarters Grant Program (CMA CGM), and Space Flight Operations Facilitation Program (Rocket Lab). No expenditures for these programs have been made to date because grant funds are paid only after performance milestones are met.

Estimation of business savings from sales and use tax exemptions

Sales and use 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.

For quantifying forgone revenue because of 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 made 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 purchase for each industry. The intermediate input purchase estimates for Virginia formed the basis of the relevant sales tax base for sales and use tax revenue impact calculations. Spending on durable and leased good inputs is 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 Employment Commission, 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 performed by 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	Virginia Tax (Sales and use tax study 1991)
Contractor Temporary Storage Exemption	Virginia Tax (Sales and use tax study 1995)
Data Centers Exemption	Weldon Cooper Center based on VEDP MOU data
Electrostatic Duplicators Exemption	IMPLAN, Lightcast™
Film, Television, & Audio Production Inputs Exemption	IMPLAN, Lightcast™
Media Provider Equipment Exemption	Virginia Tax estimate (updated) for legislative proposal
Out-of-State Nuclear Facility Repair Exemption	IMPLAN, VEC, 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
Taxi Parts & Radios Exemption	Virginia Tax fiscal impact, HB1488 (2004)
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.
NOTE: The Data Center Exemption estimate methodology used for this report is different than the methodology used by Virginia Tax, and therefore the estimates differ. See Appendix B of *Data Center and Manufacturing Incentives*, JLARC, 2019 for the assumptions made by the Weldon Cooper Center for the estimates used in these incentive evaluation reports.

For the current report, the Data Center Exemption methodology was revised to bring it into conformity with the methodology used by Virginia Tax and VEDP. Whereas previous estimates assumed that 77.7 percent of qualified data center expenditures were on sales and use tax exemption eligible tools and equipment, the current report assumes that 50 percent were (See Appendix B of *Data Center and Manufacturing Incentives*, JLARC, 2019 for the original assumptions made by the Weldon

Cooper Center for the estimates used in previous incentive evaluation reports). This change was made in response to a new survey conducted by VEDP in 2022 of data center usage of the exemption, which showed that 48.4 percent of spending was on eligible items. The methodology used in the tax exemption revenue impact calculations is otherwise the same.

The sectors targeted vary by sales and use tax 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 Virginia manufacturing firms an exemption on purchases of rolling stock. The tax base is determined by aggregating purchases of rolling stock across all Virginia manufacturing industries.

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., FY15 is the average of CY14 and CY15). The last calendar year of data available from IMPLAN is 2021. Therefore, FY22 revenue estimates were calculated by inflating the FY21 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 in selecting award recipients and amounts, and data availability and quality for tracking program performance. Additional interviews are only performed 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-two economic development incentive programs are subject to this review. These include 44 grant programs, 16 tax credits, 19 tax exemptions, and 13 other programs.

Grant programs

Twelve state agencies administer 44 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 and Small Business Jobs Grant).

Programs also target particular 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 industries (Port of Virginia Economic and Infrastructure Development 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 (Special Workforce Grant Fund),
- Blue Star Manufacturing (Nitrile Glove Manufacturing Training Grant),
- CMA CGM (Shipping and Logistics Headquarters Grant),
- LEGO Group (Precision Plastic Manufacturing Grant),
- Merck (Pharmaceutical Manufacturing Grant),
- Micron (Semiconductor Manufacturing Grant),
- Morgan Olson (Advanced Production Grant),
- Microsoft (Technology Development Grant Fund),
- Newport News Shipbuilding (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),
- Siemens Gamesa (Offshore Wind Component Grant), and
- Volvo (Truck Manufacturing 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.

Seventy-one percent of total spending on economic incentive grants over the FY13 to FY22 period was administered by two state agencies, the Virginia Economic Development Partnership (55 percent) and the Department of Housing and Community Development (16 percent). The Tobacco Region

Revitalization Commission and Virginia Film Office also awarded large portions of total grant funding at 13 percent and 5 percent of the total, respectively.

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

State agency/program *(year enacted)*	Purpose	Description
Virginia Innovation Partnership Corporation (formerly Center for Innovative Technology)		
Commonwealth Research Commercialization Fund (now Commonwealth Commercialization Fund) *(2011)*	Promote high technology economic development through commercialization of promising research and development.	Grants are made on the basis of 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 forestral products that derive at least 30% of agricultural or forestry product inputs from Virginia. Incentive grants requests are made by the host political jurisdiction and must be locally matched.
Department of Small Business and Supplier Diversity		
Small Business Jobs Grant Fund Program *(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.
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

State agency/program *(year enacted)*	Purpose	Description
		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 the VEDP 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 limited to 15% of the business capital investment with a cap of $450,000. 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 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 on 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 Opportunity Fund or Virginia Investment Partnership 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 launch of new air passenger service at Virginia airports.	Grants are available for the first 12 months of service. Grant amounts vary from $5,000 to $25,000 for one route based on whether service is year-round or seasonal and daily or less than daily. Applicant airlines may qualify for multiple routes throughout the state and received combined grants of up to $250,000.

State agency/program *(year enacted)*	Purpose	Description
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 in order 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 employer and investment projects.	Megasite funding is only available 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.	Funds are allocated by locality. 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 the identified as important for economic development including infrastructure improvements, workforce training, regional tourism, building industry clusters, and entrepreneurial development.
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 community. Grant criteria include a minimum private capital investment of $1 million and 10 jobs created within 36 months. Applications are evaluated using a ROI model with award amounts based on that analysis.

State agency/program *(year enacted)*	Purpose	Description
Virginia Economic Development Partnership		
Advanced Production Grant Program and Fund (Morgan Olson) *(2020)*	Promote the location of business truck manufacturing facility in the Commonwealth. This customized performance-based grant is 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 and capital investment.
Advanced Shipbuilding Training Facility Grant Program (Newport News) *(2011)*	Promote the expansion of advanced shipbuilding in the Commonwealth. This customized performance-based grant was used to support the growth of Newport News 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 (Newport News) *(2016)*	Promote the expansion of advanced shipbuilding in the Commonwealth. This customized performance-based grant is used to support the expansion of Newport News 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)*	Attract an aerospace engine manufacturer to locate in the Commonwealth. This customized performance-based grant was used to support the growth of the recently established 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, capital investment, and number of trainees.
Business Ready Sites Program *(2016)*	Encourage the development of sites and associated infrastructure for industrial and commercial uses as tools for business attraction, retention, and expansion.	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.
Commonwealth's Opportunity Fund *(1996)*	Attract new businesses and support existing business expansion.	Grant program is discretionary deal closing fund for firms exporting at least half of output outside state. Funds must be matched by host locality and are used for site acquisition and improvement, infrastructure, building construction, and employee training.
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.

State agency/program *(year enacted)*	Purpose	Description
Major Headquarters Workforce Grant Fund (Amazon HQII) *(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 Commonwealth and the company. Performance measures include employment, capital investment, and average annual wages.
Nitrile Glove Manufacturing Training Program (Blue Star) *(2022)*	Support location, recruitment and training for nitrile glove manufacturing company. This customized performance-based grant is 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 Commonwealth 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 is 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 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 Commonwealth and the company. Performance measures include employment, capital investment, and average annual wages.
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.	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)*	Promote and expand semiconductor product manufacturing and research. 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 Commonwealth and the company. Performance measures include employment, capital investment, and average annual wages.
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 Commonwealth and the company. Performance measures include employment, capital investment, and average annual wages.

State agency/program *(year enacted)*	**Purpose**	**Description**
Space Flight Operations Facilitation Program (Rocket Lab) *(2022)*	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.	Incentive payments are based on attainment of performance milestones specified in a performance agreement between the Commonwealth and the company. Performance measures include employment, capital investment, and average annual wages.
Special Workforce Grant Fund (Amazon Web Services) *(2019)*	Attract an eservices 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 Commonwealth and the company. Performance measures include employment, capital investment, and average annual wages.
SRI custom grant *(2006)*	Promote public-private R&D and commercialization activities to facilitate economic growth. This customized grant was used to support SRI Shenandoah Valley in the establishment of the Center for Advanced Drug Research 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 and capital investment.
Technology Development Grant Fund (Microsoft) *(2021)*	Promote location of technology company. This customized is used to support attraction of 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 Commonwealth and the company. Performance measures include employment, capital investment, and average annual wages.
Truck Manufacturing Grant Fund (Volvo) *(2021)*	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 Commonwealth 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 companies based on ROI analysis, subject to the Governor's approval. Companies must agree to create a minimum of 400 jobs that pay 1.5times 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 Partnership Grant *(1999)*	Encourage Virginia manufacturer retention and expansion though new capital investment and R&D.	Grant is targeted to manufacturers that have operated in the state for at least 3 years, will make a capital investment of at least $25 million, and face high risk of relocating elsewhere. New job creation is not required, but current employment levels must be maintained.
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. Job creation awardees must create at least 25 new jobs and make a capital investment of at least $1 million. Retraining awardees must retrain 10 full-time awarded and make a capital investment of $500,000.
Virginia Leaders in Export Trade Program *(2002)*	Assist companies to expand their markets and encourage the export of products and services to international markets.	The VALET 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 tradeable 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.
Virginia Trade Show Assistance Program *(2016)*	Assist companies to 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.

State agency/program *(year enacted)*	Purpose	Description
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		
Offshore Wind Component Grant Program (Siemens Gamesa) *(2021)*	Fund capital projects for infrastructure improvements necessary to improve the Portsmouth Marine Terminal to handle loading in and out of large, heavy offshore wind components and serve as an offshore wind hub. This customized performance incentive (bond authorization) is used to support the location of Siemens Gamesa in the City of Portsmouth.	Incentive payments are based on attainment of performance milestones specified in a performance agreement between the Commonwealth and the company. Performance measures include employment, capital investment, and average annual wages.
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.

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.

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

Program	Purpose	Description
Barge and Rail Usage Tax Credit *(2011)*	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 on basis of 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 the 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 Job Creation Tax Credit *(2010)*	Promote creation of jobs in renewable and alternative energy industries.	Tax credit for creating green job 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 least one year and for each of the four succeeding taxable years. "
International Trade Facility Tax Credit *(2011)*	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. Employee 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)*	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 in excess of threshold of 50 jobs or 25 jobs for enterprise zone/economically distressed areas.

Program	Purpose	Description
Major Research and Development Tax Credit *(2016)*	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 bonuses rates for Virginia resident payroll and production in economically distressed areas.
Qualified Equity and Subordinated Debt Investment Tax Credit *(1999)*	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.
Research and Development Expenses Tax Credit *(2011)*	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.

Program	Purpose	Description
Virginia Port Volume Increase Tax Credit *(2011)*	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 twenty-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)*	Encourage worker training to improve productivity and employment retention.	Tax credit in an amount 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

Nineteen 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 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 demonstrate the actual capital investment and job creation that was made. 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
Nineteen 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 the Virginia and distributed outside the state.
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 communication 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.

Exemption	Purpose	Description
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 of 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.
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 in process of 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.

Exemption	Purpose	Description
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 leasing 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 (formerly the Center for Innovative Technology) 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
VIPC Gap Fund (now Virginia Venture Partners) *(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.
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 a 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 assists small businesses obtain loans by reducing bank credit risk. The maximum guarantee is the lessor of $750,000 or 75% of the loan amount. The program does not have job creation requirements but considers job creation in financing decisions.
State Cash Collateral Program *(2013)*	Promote small business capital investment.	This program assists small businesses obtain loans by reducing bank credit risk. The maximum guarantee is the lessor of $500,000 or 40% of the loan amount. The program does not have job creation requirements but considers job creation in financing decisions.

Program	Purpose	Description
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)*	Promote economic development in 51 qualified economically distressed counties	Program offers modified corporate income tax apportionment factor and consideration for grant from Commonwealth's Opportunity Fund for new traded sector companies creating minimum of 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 received less than $3 million in equity or debt investments.
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.
Tourism Development Financing Program *(2012)*	Promote tourism and economic development in Virginia.	The program provides gap financing for tourism development projects otherwise unable to access capital. The locality must make application, demonstrate a tourism deficiency, and provide tax incentives or regulatory flexibility for a designated tourism zone where the project occurs.

Program	Purpose	Description
Venture Capital Account Subtraction *(2018)*	Promote investment in Virginia early stage companies	Income tax subtraction or 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.
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 entered into 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	FY13	FY14	FY15	FY16	FY17	FY18	FY19	FY20	FY21	FY22	Total
Advanced Production Grant Program and Fund (Morgan Olson)	--	--	--	--	--	--	--	--	0.5	0.0	$0.5
Advanced Shipbuilding Training Facility Grant Program (Newport News)	5.00	5.00	8.03	7.59	7.16	--	--	--	--	--	32.8
Advanced Shipbuilding Production Facility Grant Program (Newport News)	--	--	--	--	--	--	6.0	0.0	8.0	8.0	22.0
Aerospace Engine Manufacturing Performance Grant Program (Rolls Royce)	0.0	0.0	0.0	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	0.3	0.4	0.6	0.8	1.7	1.0	1.3	0.6	1.0	1.4	9.0
Virginia Business Ready Site Program	--	--	--	--	0.9	0.0	0.4	0.0	0.0	7.0	8.3
Commonwealth’s Opportunity Fund	6.1	9.4	15.8	14.7	24.6	10.7	11.4	12.9	18.5	23.8	148.1
Commonwealth Research Commercialization Fund	2.6	0.9	1.0	1.5	1.3	0.9	1.3	1.9	3.3	2.8	17.6
Economic Development Access Program	1.1	1.4	0.7	0.7	3.6	3.1	1.5	1.9	2.3	0.7	17.0
GO Virginia (site development projects)	--	--	--	--	0.0	0.2	2.8	0.0	7.6	2.1	12.7
Governor's Motion Picture Opportunity Fund	0.6	1.7	2.9	12.1	0.8	5.8	1.4	3.0	5.5	7.9	41.6
Governor's New Airline Service Incentive Fund	--	--	--	--	--	--	--	--	--	0.3	0.3
Job Creation Grant (Enterprise Zone)	2.9	2.9	3.1	2.7	1.8	2.2	2.7	2.9	1.9	2.5	25.6
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 HQII)	--	--	--	--	--	--	--	0.0	0.0	0.0	0.0
Tobacco Commission Megasite Grant	21.0	12.8	6.2	0.0	0.0	4.9	0.0	0.0	0.0	0.0	44.8
New Company Incentive Program (grant portion)	--	--	--	--	--	0.0	0.0	0.0	0.6	0.7	1.3
Nitrile Glove Manufacturing Training Program (Blue Star)	--	--	--	--	--	--	--	--	--	0.0	0.0

Incentive	FY13	FY14	FY15	FY16	FY17	FY18	FY19	FY20	FY21	FY22	Total
Offshore Wind Component Grant Program (Siemens Gamesa)	--	--	--	--	--	--	--	--	--	0.0	0.0
Pharmaceutical Manufacturing Grant Program (Merck)	--	--	--	--	--	--	--	--	0.0	2.5	2.5
Port of Virginia Economic and Infrastructure Grant	--	0.5	0.0	0.3	2.2	0.5	0.1	1.3	0.7	1.0	6.5
Precision Plastic Manufacturing Grant Program (LEGO Group)	--	--	--	--	--	--	--	--	--	0.0	0.0
Rail Industrial Access Program	0.5	2.1	0.3	0.9	0.0	1.3	0.7	0.6	1.2	2.3	10.0
Real Property Improvement Grant (Enterprise Zone)	11.2	11.3	9.1	9.3	10.9	10.7	10.8	11.6	12.6	11.1	108.4
Space Flight Operations Facilitation Program (Rocket Lab)	--	--	--	--	--	--	--	--	--	0.0	0.0
Semiconductor Custom Grant (Micron)	5.4	5.4	5.4	3.8	--	--	--	--	--	--	20.0
Semiconductor Manufacturing Grant Fund (Micron II)	--	--	--	--	--	--	--	20.0	50.0	0.0	70.0
Shipping and Logistics Headquarters Grant Program (CMA CGM)	--	--	--	--	--	--	--	--	--	0.0	0.0
Small Business Investment Grant Fund	--	0.0	0.1	0.1	1.2	0.5	0.8	0.8	0.8	0.8	5.2
Small Business Jobs Grant Fund Program	0.8	1.2	0.3	0.0	0.3	0.0	0.0	--	--	--	2.6
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
Special Workforce Grant Fund (Amazon Web Services)	--	--	--	--	--	--	--	0.00	0.0	10.5	10.5
SRI custom grant	1.00	--	--	--	--	--	--	--	--	--	1.0
Technology Development Grant Fund (Microsoft)	--	--	--	--	--	--	--	--	0.0	0.0	0.0
Tobacco Region Opportunity Fund	14.5	27.0	5.5	9.1	2.9	3.2	3.5	3.4	1.1	1.8	72.0
Transportation Partnership Opportunity Fund	10.2	0.7	6.0	0.0	0.0	0.0	11.2	0.0	1.0	0.0	29.1
Truck Manufacturing Grant Fund (Volvo)	--	--	--	--	--	--	--	--	2.0	2.0	4.0
Virginia Economic Development Incentive Grant	0.0	5.0	6.0	0.0	13.3	0.0	1.5	0.0	3.5	2.0	31.3
Virginia Investment Partnership Grant	12.7	0.8	5.5	5.7	1.6	1.0	3.7	4.3	8.4	10.7	54.1
Virginia Jobs Investment Program	5.6	7.7	5.9	9.1	8.8	4.9	2.4	3.4	4.6	2.4	54.8
VALET Program	0.3	0.3	0.3	0.3	0.6	0.7	0.5	0.7	0.6	0.8	5.1
Virginia Talent Accelerator Program	--	--	--	--	--	--	--	1.5	3.3	11.2	15.9

Incentive	FY13	FY14	FY15	FY16	FY17	FY18	FY19	FY20	FY21	FY22	Total
Virginia Trade Show Assistance Program	--	--	--	--	0.6	0.5	0.6	0.7	0.4	0.5	3.3
Total	**101.8**	**96.7**	**82.6**	**78.7**	**84.2**	**52.1**	**64.6**	**82.5**	**139.3**	**114.6**	**$899.1**

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 add because of rounding. Spending on the New Company Incentive Program is included here because the incentive payments were in the form of grants.
-- 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	FY13	FY14	FY15	FY16	FY17	FY18	FY19	FY20	FY21	FY22	Total
Barge and Rail Usage Tax Credit	0.0	0.0	0.0	0.6	0.0	0.0	0.0	0.0	0.0	0.1	$0.8
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	21.8	21.5	28.4	23.4	18.9	15.2	16.1	7.9	9.3	0.3	162.8
Farm Wineries and Vineyards Tax Credit	0.1	0.2	0.2	0.2	0.1	0.1	0.2	0.1	0.1	0.2	1.6
Green Job Creation Tax Credit	0.0	0.0	0.0	0.0	0.0	0.1	0.0	0.0	0.0	0.0	0.2
International Trade Facility Tax Credit	0.2	0.2	0.1	0.3	0.3	0.3	0.9	0.1	0.1	0.0	2.5
Major Business Facility Job Tax Credit	2.8	1.3	4.1	0.8	6.8	1.8	1.3	6.3	2.2	0.8	28.2
Major Research and Development Tax Credit	--	--	--	--	--	6.1	4.8	17.2	12.0	9.9	50.0
Motion Picture Production Tax Credit	0.0	3.0	7.2	5.5	6.6	6.1	0.0	7.2	5.8	4.5	45.8
Qualified Equity and Subordinated Debt Investment Tax Credit	1.9	2.4	2.1	2.4	2.2	2.8	3.2	3.9	4.2	3.2	28.2
Recyclable Materials Processing Equipment Tax Credit	2.7	1.2	0.6	2.1	1.7	1.4	1.5	2.2	2.2	1.3	16.9
Research and Development Expenses Tax Credit	1.5	3.4	4.2	4.7	4.2	4.2	4.1	5.2	2.6	2.7	36.8
Telework Expenses Tax Credit	0.0	0.1	0.1	0.1	0.0	0.1	0.0	0.1	0.0	0.0	0.4
Virginia Coal Employment and Production Incentive Tax Credit	59.4	6.7	8.9	3.1	3.7	6.8	0.5	1.3	0.6	0.1	91.1
Virginia Port Volume Increase Tax Credit	0.1	0.4	0.7	0.9	2.2	1.8	1.8	1.4	1.8	0.3	11.5
Worker Retraining Tax Credit	0.1	0.2	0.2	0.2	0.2	0.3	0.0	0.2	0.0	0.0	1.4

Incentive	FY13	FY14	FY15	FY16	FY17	FY18	FY19	FY20	FY21	FY22	Total
Worker Training Tax Credit	--	--	--	--	--	--	--	0.0	0.1	0.0	0.1
Total	**90.7**	**40.3**	**56.9**	**44.1**	**47.0**	**47.1**	**34.5**	**53.0**	**41.1**	**23.6**	**$478.4**

SOURCE: Weldon Cooper Center analysis of Virginia Tax's Annual Reports for Fiscal Years 2013–2022.
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 add because of rounding.
-- indicates no credits were claimed in that year because they had not been adopted yet.

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

Incentive	FY13	FY14	FY15	FY16	FY17	FY18	FY19	FY20	FY21	FY22	Total
Airline Common Carriers Exemption	7.6	8.5	10.5	11.4	11.0	9.8	9.9	8.7	9.6	10.3	$97.2
Aircraft Parts, Engines, and Supplies Exemption	--	--	--	--	--	--	5.4	5.7	5.8	5.8	22.8
Certain Printed Materials for Out-of-State Distribution Exemption	3.7	4.0	4.0	4.0	4.1	4.2	4.3	4.4	4.5	4.8	42.0
Contractor Temporary Storage Exemption	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	1.1
Data Centers (Broad) Exemption	51.9	51.9	61.8	46.5	54.6	91.2	87.8	103.3	79.4	81.4	709.8
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	0.9	0.7	0.8	1.0	1.0	2.2	3.8	4.2	4.1	4.4	23.0
Media Provider Equipment Exemption	4.1	4.4	4.5	4.5	4.6	4.7	4.8	4.9	5.0	5.3	46.7
Out-of-state Nuclear Facility Repair Exemption	0.4	0.5	0.5	0.6	0.6	0.6	0.7	0.6	0.6	0.6	5.8
Pollution Control Equipment & Facilities Exemption	3.1	2.3	4.2	4.1	3.2	3.2	3.3	3.4	3.4	3.7	33.9
Railroad Common Carriers Exemption	21.3	24.6	25.7	24.2	17.7	17.5	20.3	16.4	14.9	16.0	198.7
Railroad Rolling Stock Exemption	1.9	2.1	2.1	2.3	2.4	2.4	2.5	2.6	2.6	2.8	23.6
Research & Development Exemption	3.1	3.7	3.5	2.9	3.4	5.1	5.4	6.4	6.6	7.0	47.1
Semiconductor Manufacturers Exemption	1.3	1.2	0.8	0.6	0.6	0.5	0.4	0.5	0.5	0.6	7.0
Semiconductor Wafers Exemption	0.2	0.2	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	1.1
Ships and Vessels Exemption	5.7	6.2	6.3	6.3	6.5	6.4	7.0	7.1	7.3	7.8	66.8

Incentive	FY13	FY14	FY15	FY16	FY17	FY18	FY19	FY20	FY21	FY22	Total
Taxi Parts & Radios Exemption	0.3	0.3	0.3	0.3	0.3	0.3	0.3	0.4	0.4	0.5	3.5
Uniform Rental & Laundry Businesses Exemption	0.7	0.8	0.9	1.0	1.0	1.0	0.9	0.8	0.8	0.8	8.8
Virginia Spaceport Users Exemption	0.6	1.2	0.9	0.0	0.5	1.0	1.0	1.0	1.6	1.1	8.8
Total	**106.8**	**112.9**	**127.3**	**109.9**	**111.6**	**150.4**	**158.1**	**170.4**	**147.2**	**153.2**	**$1,347.7**

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 add because of rounding.
-- indicates exemption had not been adopted yet.

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

Incentive	FY13	FY14	FY15	FY16	FY17	FY18	FY19	FY20	FY21	FY22	Total
VIPC GAP Fund (now Virginia Venture Partners)	0.8	1.3	0.6	0.6	0.8	0.8	1.0	1.2	1.3	2.7	$11.2
Data Center Single Sales Factor Apportionment	--	--	--	--	--	--	0.1	0.1	0.1	0.2	0.6
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	--	1.9	20.9	22.3	22.7	23.3	23.7	24.1	24.7	26.4	190.0
New Company Incentive Program (Corporate Apportionment Portion)	--	--	--	--	--	0.0	0.0	0.0	0.0	0.0	0.0
Qualified Business Long-Term Capital Gain Subtraction	0.2	1.7	3.0	1.5	1.9	1.2	0.8	0.9	0.9	**	11.9
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
SWaM Loan Fund	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.2
Tobacco Region Opportunity Fund (Loan Portion)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.1
Tourism Development Financing Program	1.3	0.0	8.4	0.0	0.9	0.6	1.8	0.0	0.0	2.0	15.1
Venture Capital Account Subtraction	--	--	--	--	--	0.0	0.0	0.0	0.0	**	0.0
Zero G Zero Tax Act (Part I) Subtraction	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0

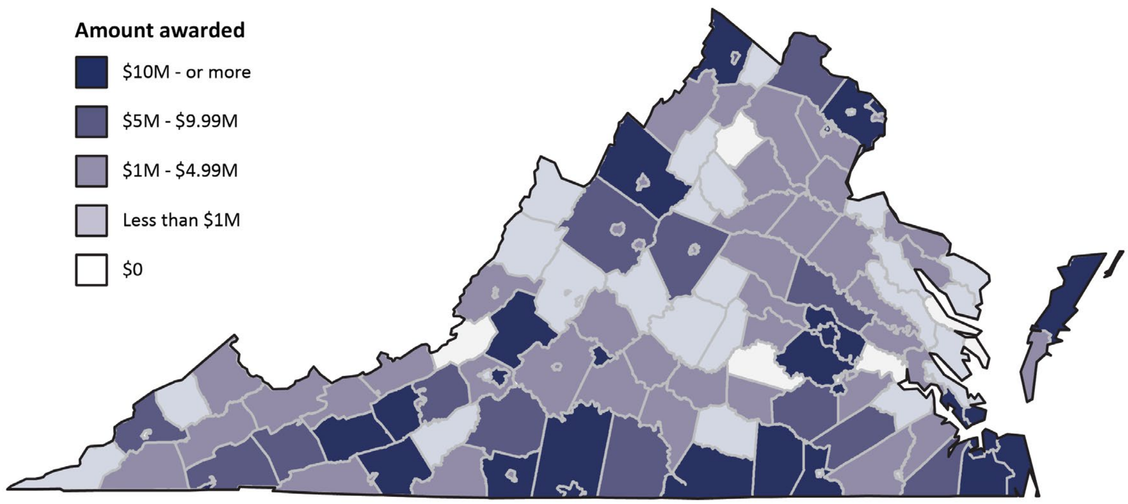
Incentive	FY13	FY14	FY15	FY16	FY17	FY18	FY19	FY20	FY21	FY22	Total
Zero G Zero Tax Act (Part II) Subtraction	0.1	0.1	0.1	0.0	0.0	0.1	0.1	0.1	0.1	0.1	0.7
Total	**2.3**	**5.0**	**33.0**	**24.4**	**26.4**	**26.0**	**27.7**	**26.5**	**27.1**	**31.5**	**229.8**

SOURCE: Weldon Cooper Center analysis of economic development incentives.
NOTE: Not adjusted for inflation. Virginia Small Business Financing Authority loan program amounts listed are legislative appropriations since these revolving loan program costs are not equal to the loan award amount.
-- indicates incentive had not been adopted yet.
** indicates data was not provided for the program.

Appendix E: Regional distribution of grant awards

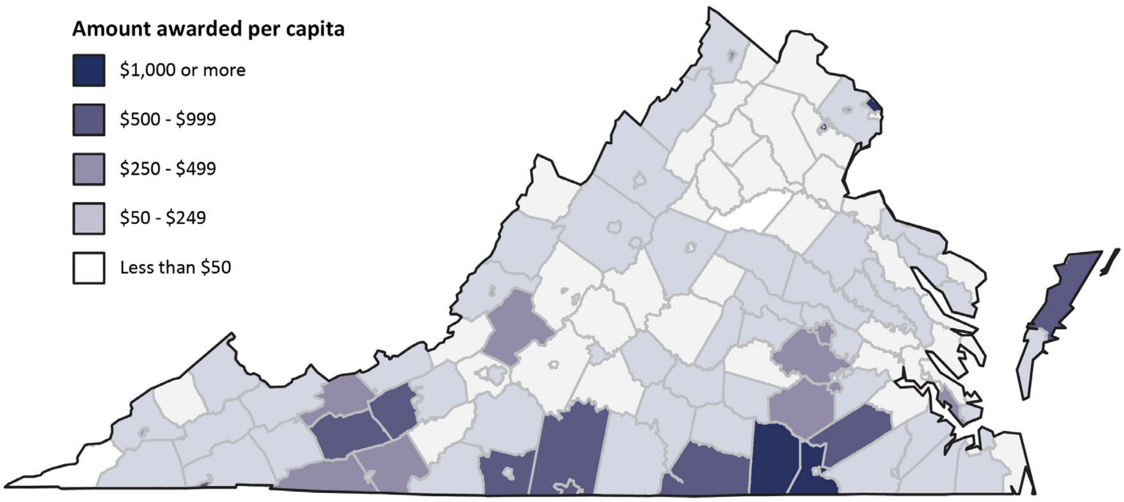
The largest amount of grant awards went to businesses in highly populated localities such as Arlington County, Newport News City, Fairfax County, and Richmond City and to rural localities in the tobacco region and on the Eastern Shore (Figure E-1). Adjusted for population size, awards are concentrated 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 (FY13–FY22)



SOURCE: Weldon Cooper Center analysis of economic development incentives.
NOTE: Localities were not assigned to 12 Governor's Motion Picture Opportunity Fund (GMPOF) projects, 6 Go Virginia site development projects, one Virginia Business Ready Sites Program project, and one Governor's New Airline Incentive Fund project because the grants benefited more than one locality.

FIGURE E-2
Awards are concentrated in urban areas in Northern Virginia and in rural southern and eastern shore localities, adjusted for population size (FY13–FY22)

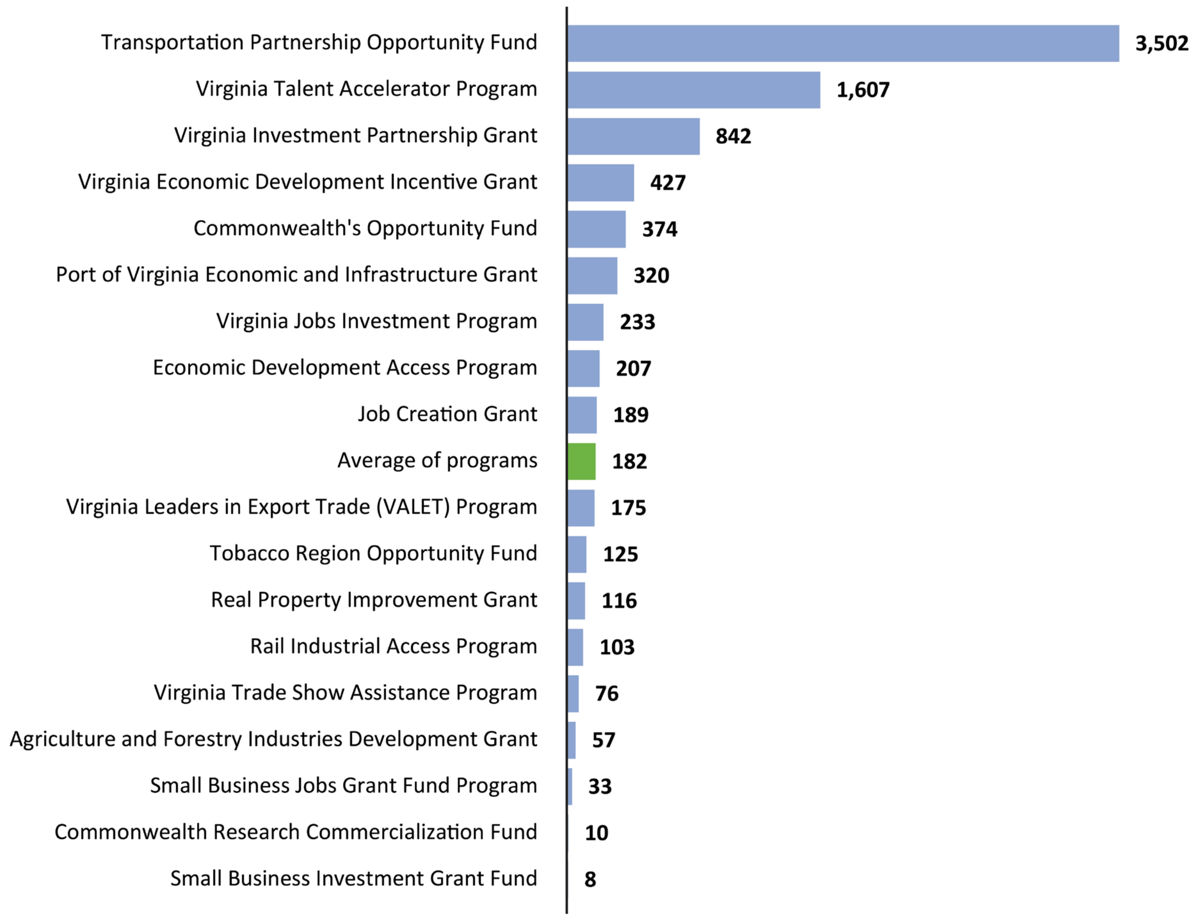


SOURCE: Weldon Cooper Center analysis of economic development incentives.
NOTE: Localities were not assigned to 12 Governor's Motion Picture Opportunity Fund (GMPOF) projects, 6 Go Virginia site development projects, one Virginia Business Ready Sites Program project, and one Governor's New Airline Incentive Fund project because the grants benefited more than one locality.

Appendix F: Average employment size of grant recipients by program

The average establishment size of a grant recipient was 182 employees across all programs. However, the average size varied widely by program (Figure F-1). The largest average sizes were for the Transportation Partnership Opportunity Fund (3,502 employees), Virginia Talent Accelerator Program (1,607), the Virginia Investment Partnership Grant (842), and the Virginia Economic Development Incentive Grant (427). The smallest average employee sizes were for finance programs for startups—the Small Business Investment Grant Fund (8 employees) and Commonwealth Research Commercialization Fund (10).

Figure F-1
Average employment size of business location at time of award varies widely by program (FY13– FY22)



SOURCE: Weldon Cooper Center analysis of economic development incentive grants and VEC data.
NOTE: Employment records were matched with 2.928 of the 4,969 awards (59%) and $1.317M of $1.969B in total awards (67%).

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 are more aligned with the purpose of the program (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 (Newport News)	X	X	X	Number of apprentices, training expenses
Advanced Shipbuilding Production Facility Grant (Newport News)	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
Commonwealth’s Opportunity Fund	X	X	X	
Commonwealth Research Commercialization Fund				Capital attracted from other sources
Economic Development Access Program			X	
VIPC 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
Job Creation Grant	X			
Major Eligible Employer Grant	X	X	X	
Major Headquarters Workforce Grant (Amazon HQII)	X	X	X	
Nitrile Glove Manufacturing Training Program (Blue Star)	X	X	X	
Offshore Wind Component Grant (Siemens Gamesa)	X	X	X	
Pharmaceutical Manufacturing Grant (Merck)	X	X	X	

Grant program	Job creation	Wages	Capital expenditures	Other
Port of Virginia Economic and Infrastructure Grant	X			Port user
Precision Plastic Manufacturing Grant (LEGO Group)	X	X	X	
Rail Industrial Access Program			X	Carloads
Real Property Improvement 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 (RocketLab)	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 Partnership Grant	X	X	X	
Virginia Jobs Investment Program	X	X	X	Job retrainings
Virginia Leaders in Export Trade (VALET) Program				International sales
Virginia Talent Accelerator Program	X	X		
Virginia Trade Show Assistance Program				International sales

SOURCE: Weldon Cooper Center analysis of agency documents.

Appendix H: 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, and secretary of finance.

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

COMMONWEALTH of VIRGINIA

Department of Taxation

November 1, 2023

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

Hal
Dear ~~Mr. Greer~~:

Thank you for the opportunity to review and comment on the exposure draft report: *Economic Development Incentives, 2023*. We believe the report is very well done and will be useful to the members of the General Assembly going forward. We also appreciate you incorporating our comments and suggestions into the final report.

Thank you again for the opportunity to review the draft report. Should you have any additional questions, please feel free to contact me.

Sincerely,

Craig M. Burns
Tax Commissioner

c: The Honorable Stephen E. Cummings, Secretary of Finance

VEDP Virginia Economic Development Partnership

November 1, 2023

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 2023: 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 2023: Spending and Performance.

The report provides a helpful overview of economic development incentive spending and performance in the Commonwealth. Among other things, we appreciate your analysis showing that projects that received grant awards between FY13 and FY22 and completed their location or expansion project collectively created an estimated 66,000 jobs and $16.5 billion in capital investment and other spending in Virginia.

Your report demonstrates the impact of VEDP's most important economic development incentive programs. Notably, completed projects that received Virginia Jobs Investment Program (VJIP) grants accounted for the largest share of jobs (41,490) and capital investment and other spending ($6.3 billion) associated with Virginia's economic development grant programs during this time. Similarly, projects funded through the Commonwealth's Development Opportunity Fund (COF) ranked second in job creation (14,262 jobs) and business spending ($5.7 billion). In addition, 66 percent of completed projects met or exceeded their project-specific goals for capital investment or other spending and COF recipients exceeded wage goals by 136 percent. Your report also highlights the effectiveness of VEDP's VALET program with 74 percent of program participants meeting or exceeding goals for increased international sales.

We understand that the goal of the report is to review and evaluate the effectiveness of economic development initiatives, and we appreciate the level of analysis that goes into this report each year. However, as noted in our response to previous reports, the sidebar on page 16 makes a generalization about the effectiveness of economic development incentive programs that may be misleading for readers when not provided proper context. While useful, the academic research cited in the report remains hindered by the inability of simplistic economic models to capture the complexity and nuance of the competitive deal-making process. VEDP agrees with the use of state-of-the-art research and modelling in the evaluation of the effectiveness of incentives, but it is important to keep in mind the limitations of these methodologies and how they may be predisposed to underestimate the economic impact of VEDP's incentive programs.

Regarding the data center sales and use tax exemption, we would like to highlight that, as noted in your 2019 report, available information is insufficient to accurately estimate the full fiscal impact and the economic benefits of this exemption. The General Assembly amended § 58.1-609.3 of the Code of Virginia in 2021 to enhance reporting requirements and require VEDP and the Virginia Department of Taxation to report on a biennial basis. VEDP believes that the economic impact of this exemption is understated due to incomplete information in the past. With the information available through new reporting requirements going forward, we hope the full impact of this critical incentive program can be shown.

As usual, we appreciated the professionalism and engagement of JLARC staff during the project and compliment your team on its insightful analysis and reporting.

Sincerely,

Jason El Koubi
President & CEO

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