JLARC
JOINT LEGISLATIVE AUDIT AND REVIEW COMMISSION

June 2019

Data Center and Manufacturing Incentives

Commission Briefing

JLARC evaluation of economic development incentives

- Appropriation Act directs JLARC to evaluate economic development incentives on ongoing basis
  - Spending and business activity
  - Economic benefits
  - Effectiveness
- JLARC contracting with Weldon Cooper Center to assist with evaluations

2019 Appropriation Act, Item 31(F).

Data center and manufacturing incentives

- Data centers - sales tax exemption for computer equipment and special tax apportionment formula
- Semiconductor manufacturers – two custom grants and two sales tax exemptions
- Manufacturers
  - Special tax apportionment formula
  - Sales tax exemption and three tax credits to encourage environment-friendly practices

Data center and manufacturing incentives

Incentive	Amount spent FY10-FY17	Included in presentation
Data Center Exemption	$417.5 M	✓
Manufacturers Single Sales Apportionment	67.8	
Semiconductor Custom Grants (2)	27.0	✓
Pollution Control Equipment and Facilities Exemption	26.6	
Recyclable Materials Processing Equipment Tax Credit	10.7	
Semiconductor Exemptions (2)	9.2	
Biodiesel and green jobs tax credits	<0.1	
Data Center Single Sales Apportionment	0.0	

In brief

Because of its size, the data center exemption is an influential factor in data center growth. The exemption generates moderate economic benefits.

Semiconductor custom grants did not lead to industry growth in Virginia, but the grants generated moderate economic benefits.

In this presentation

Data Center Exemption

Semiconductor Custom Grants

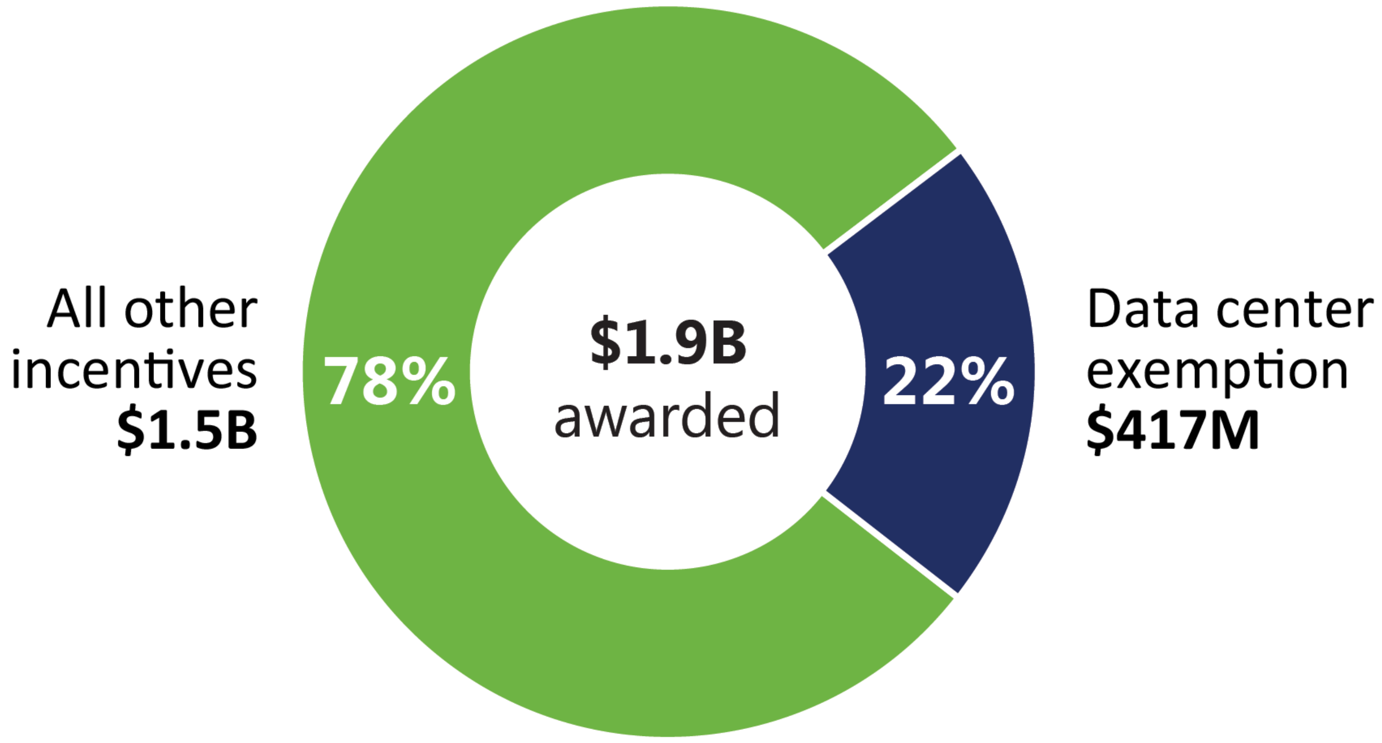
Addendum

Virginia offers data center exemption to promote the establishment of large-scale data centers

- Reduces costs of purchasing computer equipment and related hardware through 2035
- Available to data centers making capital investment of $150 million and creating 50 or more jobs
  - Job creation requirement is lower (25 jobs) for distressed areas and enterprise zones
- Many states offer favorable sales tax treatment to data centers: exemption (28); no sales tax (5)

Administered by the Virginia Economic Development Partnership and Department of Taxation.

Data center exemption estimated to be more than one-fifth of Virginia's incentive spending FY10–F17



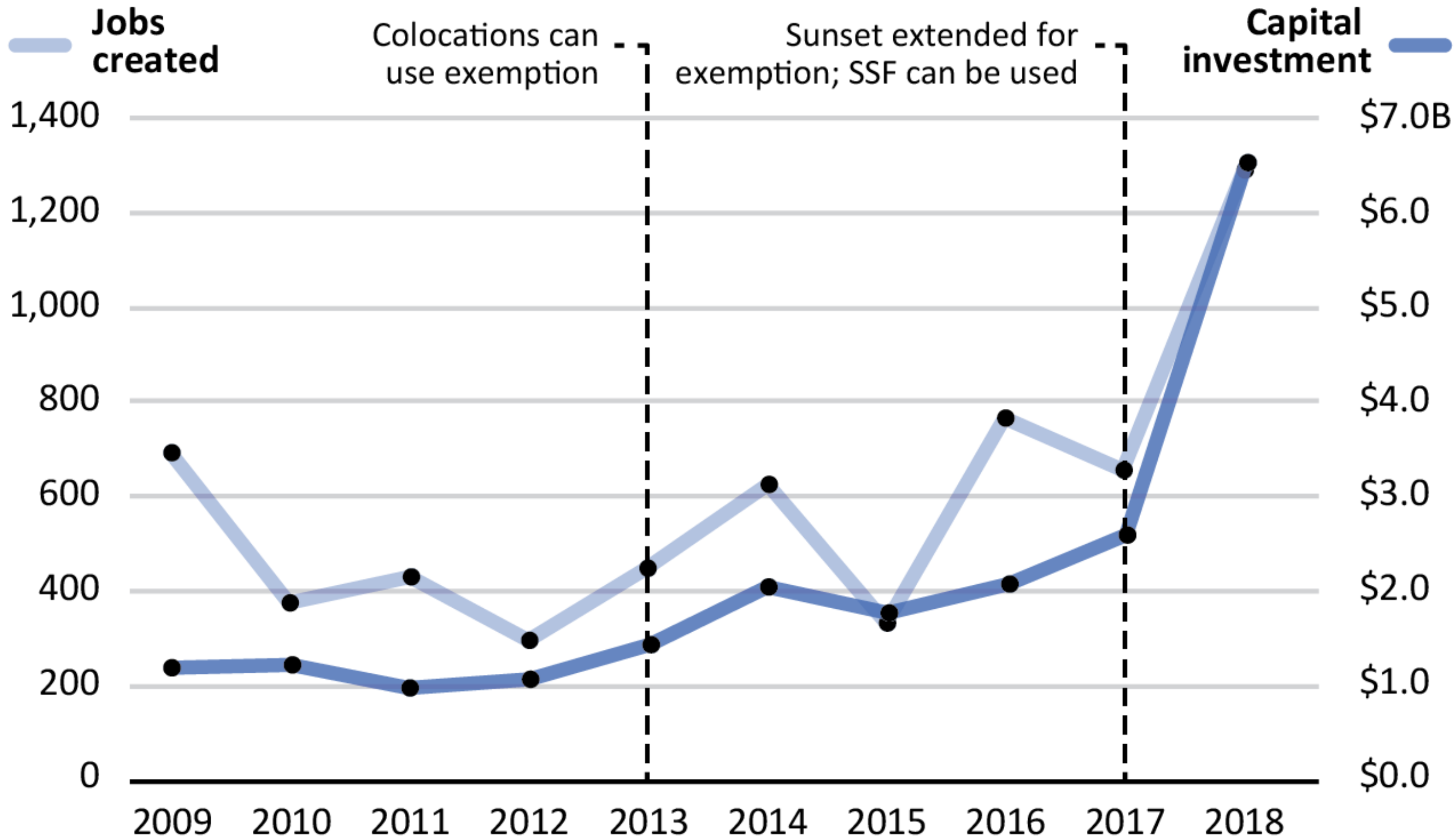
Data center is largest state incentive for several reasons

- Initial capital investment for exempt computer and other equipment is substantial
- Exempt equipment is replaced every 3-5 years
- Virginia is largest data center market in U.S.
  - 159 data centers with signed MOUs to use the exemption

Finding

The data center exemption has been an influential factor in the industry’s growth in the state.

Data center employment and investment increased as incentives broadened



SSF, single sales factor apportionment.
Based on VEDP announcement database. Jobs and investment are assigned to year announced.

Virginia data center representatives rated exemption among top location factors

- Four top factors
  - Infrastructure and power costs
  - Availability of skilled labor for construction & operations
  - Business-friendliness of jurisdiction
  - State and local business taxes / incentives
- Virginia's exemption very competitive relative to other states' exemptions

Exemption size makes it influential factor in data center growth

- Exemption amount = 20% of estimated data center operating costs over 20-year period, on average
- An incentive of this size is estimated to induce up to 90% of economic activity
  - Based solely on analysis of operating costs
  - Does not account for extensive telecommunication infrastructure and workforce in Northern Virginia

Estimates based on cost sensitivity analysis by Tim Bartik, a leading researcher of incentives; does not account for other site location factors or incentive features that may affect location decisions.

Finding

Data center exemption is estimated to have a moderate economic benefit per $1 million in spending and a moderate return in revenue for the state relative to other incentives.

Data center exemption has moderate economic benefit and return in state revenue (FY10–FY17)

Moderate economic benefit
per $1M of incentive

155 jobs

$26.5M
state GDP

$14.6M
personal income

Moderate return in revenue

72¢
per $1 spent

Assumes exemption influenced 90% of data center economic activity.

Finding

Continuation of data center exemption appears reasonable, but several actions should be taken.

Considerations related to state's use of exemption

- Exemption is mostly used by data centers in Northern Virginia, where strong industry cluster is well-developed
- Exemption is state's largest incentive (~$52 million per year) and has increased over time
- Many states broadening their data center exemptions and adopting aggressive infrastructure policies to attract data centers

Further reducing job creation threshold in distressed areas could increase growth in these areas

- Current job creation threshold is 50 jobs, or 25 jobs in distressed area or enterprise zone
- Data center representatives indicated it is hard to meet job requirement in distressed areas
  - Only one major data center has located in distressed area
- Distressed areas could benefit from substantial local property tax revenue

Recommendation

The General Assembly may wish to consider amending the Code of Virginia to reduce or remove the minimum job creation requirement for data centers locating in a distressed area or enterprise zone.

State study could assess how to maintain competitive position for attracting data centers

- Assess infrastructure, workforce, and other challenges to attracting data centers outside of Northern Virginia
- Assess energy, local taxation, and regulatory policies affecting data center industry
- Given the size of the exemption, assess whether opportunity exists to reduce the level of the exemption yet maintain state's competitive position

Recommendation

The General Assembly may wish to include language in the Appropriation Act directing the Secretary of Finance to convene a work group to conduct a data center industry study to examine

- actions to maintain the state's competitive position and
- whether opportunity exists to reduce the level of the exemption without adversely affecting industry growth.

Better tracking of data center investments would improve fiscal and economic impact estimates

- Some data centers do not report all of their jobs created and capital investment, showing only that minimum requirements are met
- Data centers do not report employment and capital investment after minimum requirements met
- Results in underestimate of tax benefit data centers receive from exemption

Recommendation

The General Assembly may wish to amend the Code of Virginia to require

- all data centers using the exemption to submit an annual report of their actual employment level, capital investment, and tax benefit to VEDP
- TAX to publish an annual report of the forgone revenue from the data center exemption

In this presentation

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Addendum

Virginia periodically offers custom grants to attract large companies

- Large awards ($30 million to $550 million)
- Benefit a specific company
- Funding paid after performance milestone reached
- Must be approved by the MEI Project Approval Commission and the General Assembly

MEI, Major Employment and Investment.
Administered by the Virginia Economic Development Partnership.

Virginia spent $93M on custom grants for semiconductor manufacturers (FY96–FY17)

Custom grant project	Expected job creation	Expected capital investment	Maximum award	Amount paid
Dominion Semiconductor (Manassas 1996)	4,000	$4.0B	$38.4M	$18.6M
White Oak Semiconductor (Henrico 1997)	1,500	1.5	15.0	15.0
Micron (Manassas 2005)	860	1.2	27.0	27.0
Infineon (Henrico 2005)	1,200	1.2	55.0	32.8
All projects	**7,560**	**$7.9B**	**$135.4M**	**$93.4M**

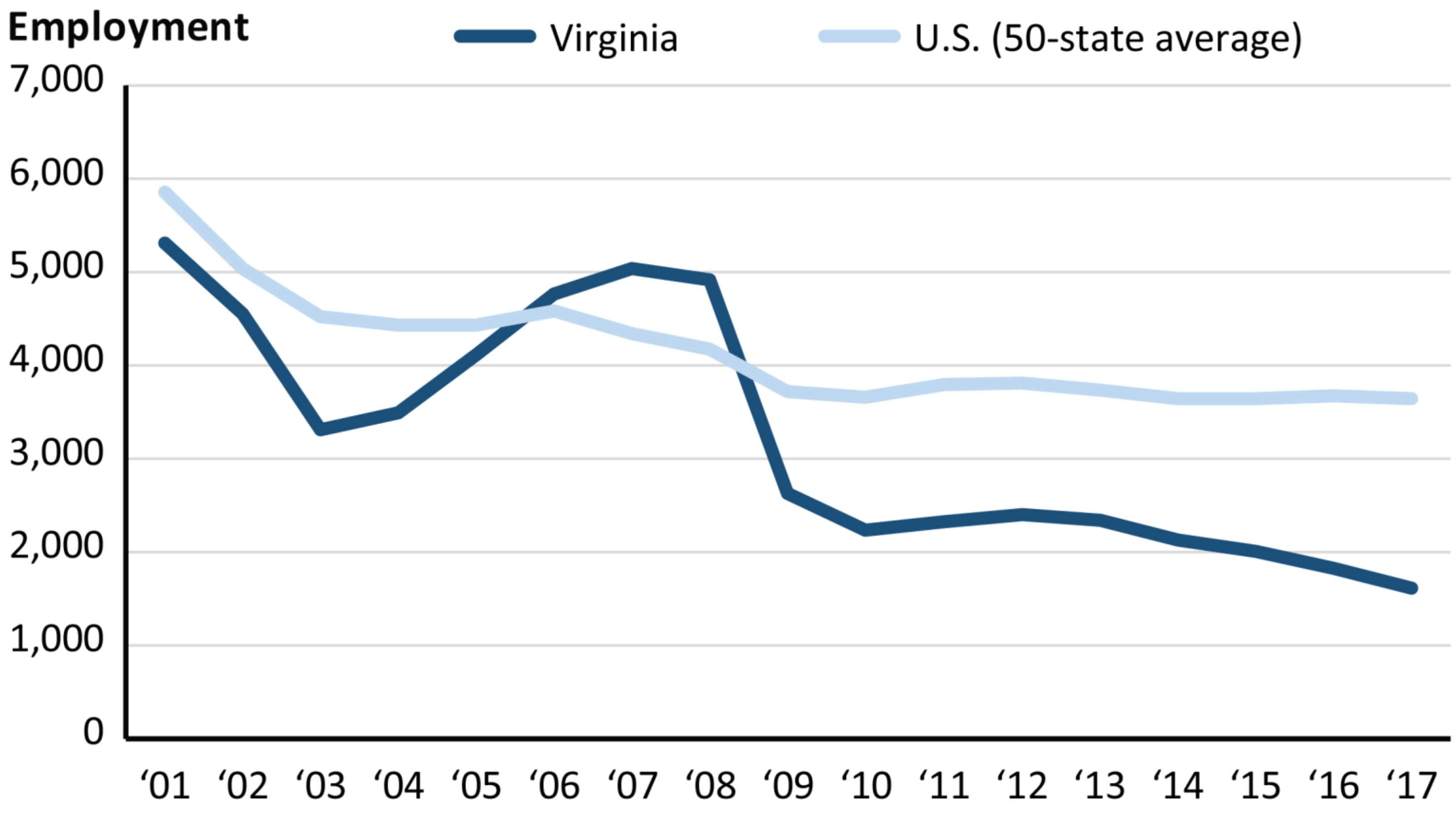
Job and capital investment are minimum amounts required to receive full grant. Custom grant was also approved for Motorola to locate in Goochland County but was never paid out.

Findings

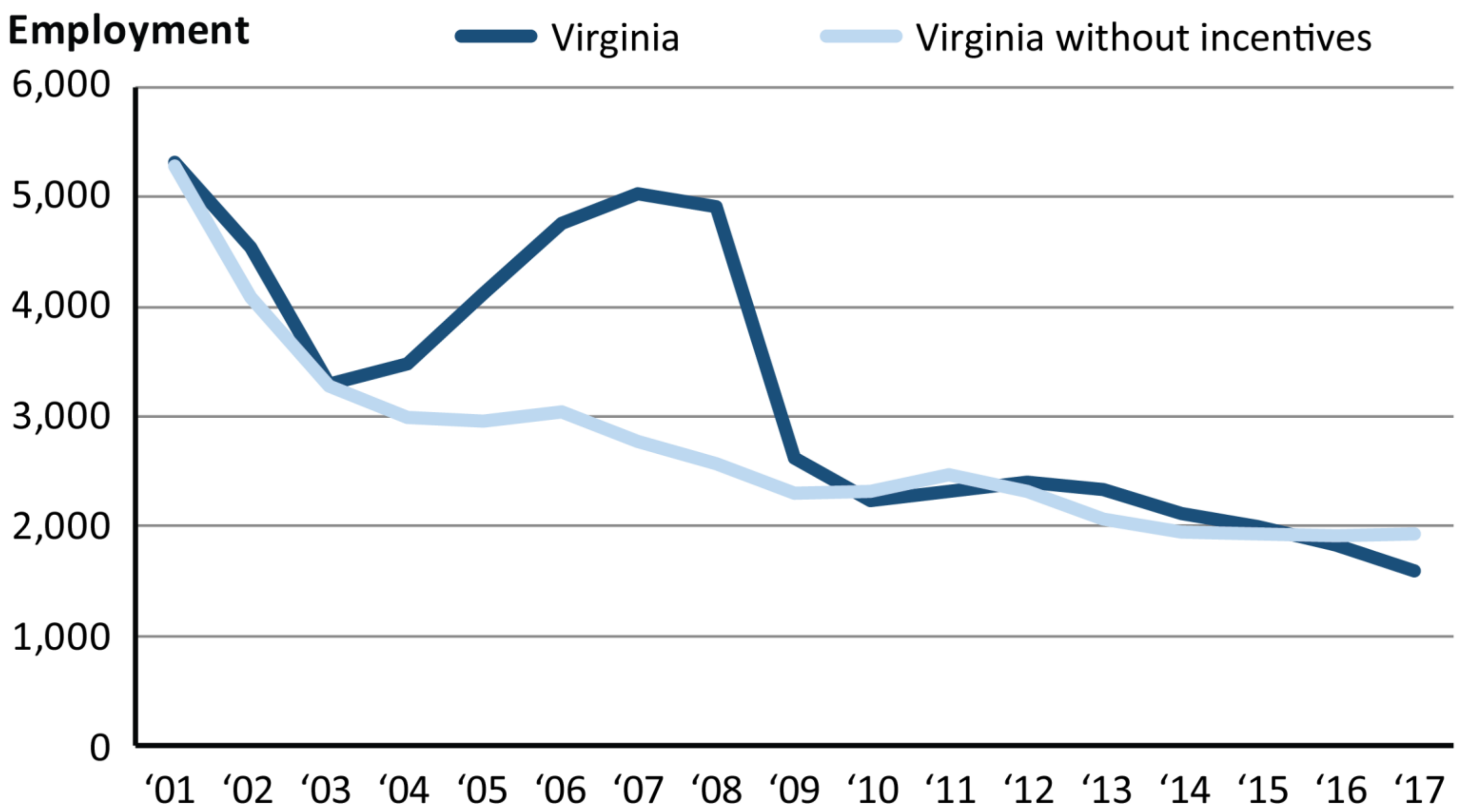
Virginia's custom grants for semiconductor manufacturers had limited effects on employment.

Virginia's custom grants may not have been large enough to sway site location decisions.

Semiconductor manufacturing employment in Virginia declined more than the national average



Custom grants may have provided short-term boost to Virginia semiconductor employment



Relatively small portion of economic activity likely attributable to custom grants

- Grants are <1% of Micron’s and Qimonda’s operating costs over 20-year period
- Incentives of this size are estimated to induce <10% of economic activity
  - Based solely on analysis of operating costs
- Custom grants may not be big enough to compete with less expensive labor and capital overseas

Estimates based on cost sensitivity analysis by Tim Bartik, a leading researcher of incentives; does not account for other site location factors or incentive features that may affect location decisions.

Findings

The custom grants for semiconductor manufacturers have a moderate economic benefit and a moderate return in revenue relative to other incentives.

Semiconductor grants have moderate economic benefit and return in revenue (FY98–FY17)

	Moderate economic benefit per $1M of grant			Moderate return in revenue
	Jobs	State GDP	Personal income	Revenue per $1 spent
Total	67	$21.9M	$13.3M	72¢
Micron	73	$30.0M	$17.8M	97¢
Qimonda	62	$14.0M	$8.9M	49¢

Assumes custom grants influenced <10% of companies' economic activity.

Finding

Virginia should ensure custom grants generally align with state or regional targeted industries and goals.

Custom grants should generally align with state or regionally targeted industries and goals

- Incentives are most effective when leveraging investment in industries targeted by a region
- Unclear if alignment between custom grants and Virginia's targeted industries is deliberate

Recommendations

VEDP should report to the MEI Project Approval Commission how each custom grant it considers aligns with state and regional targeted industries and strategic plans or provide other justification for awarding the grants.

The General Assembly may wish to require this information be included in the annual report of the MEI Commission for approved custom grants.

In this presentation

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Additional incentives

Pollution Control Equipment Sales Tax Exemption

Green Job Creation and Biodiesel Tax Credits

Businesses saved $27 million from pollution control equipment sales tax exemption (FY10–FY17)

- Reduces financial burden of complying with environmental regulations
- Exempts certified equipment, facilities, devices primarily used to abate or prevent pollution
- Available for manufacturers and contractors that install the pollution control equipment
- Studies indicate exemptions to reduce costs of regulatory requirements are ineffective

Savings are an estimate. Administered by Department of Taxation. Certified by Department of Environmental Quality and Department of Mines, Minerals, and Energy.

Finding

Pollution Control Equipment and Facilities Sales Tax Exemption is estimated to have a negligible economic benefit and return in state revenue relative to other incentives.

Pollution control equipment exemption has negligible economic benefit and return in state revenue (FY10–FY17)

Negligible economic benefit

per $1M of incentive

24 jobs

$1.1M
state GDP

$1.3M
personal income

Negligible return in revenue

6¢
per $1 spent

Finding

Pollution Control Equipment and Facilities Sales Tax Exemption could be continued but changes should be made to increase transparency and reduce compliance burden.

Pollution Control Equipment and Facilities Sales Tax Exemption could be continued

- Primarily designed to reduce regulatory burden rather than to encourage economic activity
- Repealing it could place Virginia at competitive disadvantage with other states*

*All states provide some type of pollution control equipment incentive.

Certification process for pollution control equipment exemption needs improvement

- Lack of information provided by certifying agencies
- Businesses report lengthy DEQ certification process
  - Reviews applications on a case-by-case basis
  - Equipment and facilities must be in place before certification*
- Businesses often must apply for refund after certification

*Statutory requirement for local property tax exemption.

Recommendation

DEQ and DMME should develop guidance documents on the types of pollution control equipment and facilities that are exempt and make them available online.

DEQ should develop a list of pre-approved equipment and facilities that generally are exempt and develop an expedited certification process.

Additional incentives

Pollution Control Equipment Sales Tax Exemption

Green Job Creation and Biodiesel Tax Credits

Virginia spent $4,362 on Green Job Creation Tax Credit (FY10–FY17)

- Intended to encourage creation and retention of green energy jobs
- Credit valued at $500 per green job per year (up to 5 years or $2,500 per job total); up to 350 jobs per employer
- Credit has not encouraged creation of green energy jobs in state

Expires in 2021.

Virginia spent $11,212 on Biodiesel and Green Diesel Fuels Producers Tax Credit (FY10–FY17)

- Intended to promote production of biodiesel and green diesel products
- Available for smaller biodiesel and green diesel producers (up to 2 million gallons per year) in first 3 years of production
- Credit valued at 1¢ per gallon of fuel produced; maximum annual credit of $5,000
- Credit has not encouraged biodiesel production in state

No expiration.

Green job creation and biodiesel credits have negligible economic benefits and return in revenue

	Negligible economic benefit per $1M of tax credit			Negligible return in revenue
	Jobs	State GDP	Personal income	Revenue per $1 spent
Green Job Creation Tax Credit	13	$0.6M	$1.0M	5¢
Biodiesel & Green Diesel Fuels Producer Tax Credit	4	$0.7M	$0.4M	13¢

Time periods: FY10–FY17.

Recommendation

The General Assembly may wish to eliminate the Green Job Creation Tax Credit and the Biodiesel and Green Diesel Fuels Producer Tax Credit.

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Economic impact analysis

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