Effectiveness of Economic Development Incentive Grant Programs Administered by the Commonwealth of Virginia

In accordance with Chapter 817 of the 2014 Acts of Assembly

November 15, 2014

Table of Contents

Executive Summary

In accordance with HB1191[1], Virginia Economic Development Partnership (VEDP) served as the aggregator of data on seventeen different incentive programs across six separate and distinct entities[2]. The intent of the legislation is clear: entities, legislators, and the public at-large both need and deserve a way to easily assess the effectiveness of taxpayer monies expended across incentive programs.

The legislation calls for submitted data to cover three years (calendar or fiscal) prior to the report, and calls for data on projects awarded in that period as well as projects that completed (or reached a performance milestone) in that period. As many incentive programs are structured differently by statute, not all projects that were awarded in the covered period were also completed in the covered period. VEDP requested data on a fiscal year (FY) basis as this is the basis on which incentive programs are funded. The scope of data requested covered FY2012, FY2013, and FY2014. For projects that completed five years prior to the report, data requested covered FY2010. While individual incentive program results may be affected by duplicate projects (i.e. more than one entity provided an incentive to a single project and therefore is counted in both programs), whenever possible such duplicates were removed when conducting the estimated economic impact so as to not overstate estimated benefits to the Commonwealth.

The results suggest that of the seventeen different incentive programs, projects that completed in FY2012 directly created 11,590 jobs with $1.4 billion in capital investment; in FY2013 directly created 9,253 jobs with $774.7 million in capital investment; and in FY2014 directly created 6,279 jobs with $864.3 million in capital investment. For all projects that completed in the covered period, this results in a total of 27,122 jobs and $3.0 billion in capital investment.

For estimates of tax revenue, the results suggest that projects that completed in FY2012 generated $443.2 million in state tax revenue and $412.6 million in local tax revenue; in FY2013 generated $311.6 million in state tax revenue and $303.1 million in local tax revenue; and in FY2014 generated $133.9 million in state

[1] For the purposes of this text, HB1191 is used interchangeably with Chapter 817 of the 2014 Acts of Assembly.
[2] For the purposes of this text, an entity may be an agency, authority, or other unit that is authorized to use state funds in conjunction with an incentive program.

tax revenue and $100.8 million in local tax revenue. For all projects that completed in the covered period, this results in total estimated tax revenue of $888.7 million to the state and $816.5 million to localities.

The report makes great effort to explicitly state limitations of data received, and consequently, limitations on interpreting reported results herein. With this in mind, we are exploring ways to enhance the process involving improvements in data collection, data analysis, and economic impact methodology and technology. These ongoing discussions may reveal potential adjustments to the legislation that may require consideration to achieve our objectives.

Results

The following pages contain the results from each affected entity and its respective incentive program(s). A brief text accompanies the results describing the program and goals.

As many incentive programs and projects under such programs span multiple years, projects grouped in the categories of Grants Awarded, Grants Approved (where applicable), Completed Projects, and 5-Year Comparison are not always the same. For some incentive programs, a single project may receive multiple incentive awards both within and across fiscal years. This makes it possible for a program to incent a single project, but show multiple grants awarded within and across fiscal years. This can also have an effect on computing the average grant approved per job; footnotes are provided when this occurs and contain an additional way to compute the figure. This effect occurs in the VJIP program (on the whole), and when occurring in other incentive programs is noted in the program narrative.

For a more detailed description of each program, see Appendix A: Additional Program Explanations.

Note: Under Virginia Economic Development Partnership, the Advanced Shipbuilding Training Facility Performance Grant Program[3], Investment Partnership Grant subfund (VIP), Major Eligible Employer Grant subfund (MEE), Semiconductor Memory or Logic Wafer Manufacturing Performance Grant Program, and Economic Development Incentive Grant subfund (VEDIG) are each affected by two completion dates.

The first completion date occurs when the requirements in the executed performance agreement are met, then maintained for the period specified in the executed performance agreement; once triggered, the incentive payment(s) may begin. The second completion date is the date that projects have received all payments and are closed out from a VEDP perspective. For this analysis, the completion date is considered to be equal to the fiscal year that the first payment is

[3] Note: While this program does have two completion dates, it is unique in that the only project incented in it is *not* treated as a complete when the first incentive payment is made. Per the project performance agreement, the new jobs are still ramping up and expected to be completed by the end of CY2015. To this end, the project is on-track to the goals and create 1,000 jobs by this date, but is *not* considered complete.

due, indicating the project met, then maintained the legal obligation(s) as specified in the performance agreement.

These programs have a significant lag between when the incentive is approved by the Governor, and when the incentive is first awarded (typically five years). The legislation calls for summary information on grants (incentives) awarded. In going beyond the requirements of the legislation, both data on awarded *and* approved incentives (where applicable) in the above programs is included. While some project incentives are approved and never awarded (or experience a reduction in award from failing to fully comply with the performance agreement), including data on the approved projects in the previous three fiscal years may be more informative than viewing awarded data on these projects in five years' time.

There are five phrases used in the tables in the Results section when variables are not populated with numeric figures. The phrases are:

Data Not Applicable – these data could be collected, but are either not provided or not currently collected by the entity administering the incentive program as the statutory requirement of the program either does not measure the program by these variables or does not specify these variables should be collected

Data Not Computed – these data cannot be computed or calculated, often resulting from non-applicability of dependent data[4], the program not existing, or no projects being incented in the program during the covered period

No Project(s) Completed – these data cannot be reported as there were no project(s) that completed or hit a performance milestone in the specified timeframe

No Project(s) Occurred – these data cannot be reported as there were no project(s) occurred in the specified timeframe

Program Nonexistent – the program did not exist in the specified fiscal year

[4] For example, the Benefit-Cost Ratio needs both cost data and revenue data; if no estimates to revenue (projected, actual, or both) exist, then the ratio cannot be computed.

The legislation also specifies projects which reached completion five years prior to the year of the report, a comparison between actual jobs at the time of completion and jobs at the end of the most recent calendar year. These data are triggered for projects which reached completion[5] in FY2010. These data are provided for Governor's Development Opportunity Fund (GOF). No other VEDP programs met the five year comparison criterion[6]. For non-VEDP programs, entities were not able to gain access and query Virginia Employment Commission (VEC) Quarterly Census of Employment and Wage (QCEW) data in time for the suspense date of the report. The supplement distributed to affected entities strongly recommended access to QCEW data for either this or future reports. For more information, see "What are QCEW data?" under "Q&A or FAQ re: HB1191" in Appendix B: HB1191 Supplement, Text.

[5] Note: per the legislation, this *only* applies to projects which reached completion five calendar or fiscal years prior to the report. Other parts of the legislation allow for projects that reach completion *or* a performance milestone – this requirement does not.
[6] There are some programs where the projects are affected by two completion dates (as noted earlier in the report). The first completion date is *not* used here, because that is the trigger for the first of what (typically) is a five year payout. That means if the first completion date is used then the five year comparison results would be very close to the results at the time of the first completion date. The intent of this requirement seems to be to quantify or measure project presence *after* the project is completed and all performance agreement requirements satisfied; if so, then the current interpretation should be correct.

Virginia Economic Development Partnership:

Advanced Shipbuilding Training Facility Performance Grant Program

The Advanced Shipbuilding Training Facility Grant is awarded to promote and expand advanced shipbuilding in the Commonwealth. The use of this tailored performance-based grant is influenced by the potential transformative effect of the project on Virginia or the region, the large amount of capital investment and job creation, and market penetration in the strategic sector for Virginia. The Advanced Shipbuilding Training Facility Grant is available to a qualified shipbuilder which, among other things,

- makes through December 31, 2011 and retains at least $300 million of capital expenditures related to advanced shipbuilding,
- creates and maintains through December 31, 2015 at least 1,000 new jobs in advanced shipbuilding and ancillary or support activities paying at least the prevailing average wage,
- maintains a steady or growing level of training expenditures, and
- develops and maintains an apprentice program for at least 750 apprentices and a new training facility.

Under this program, no projects were completed in each of the three previous calendar or fiscal years. Per § 59.1-284.23 of the Code of Virginia, the average wage requirement for this program is equal to the prevailing average wage in the City of Newport News.

To date, there is a single project that has been incented under the Advanced Shipbuilding Training Facility Grant Program. The project completed the capital expenditure requirement in FY2012, is on-track to complete the employment requirement by FY2016, and had an average of 803 apprentices during CY2013.

Grants Awarded	FY2012	FY2013	FY2014
Grant Funding Made Available	*No Project(s) Occurred*	$5,000,000	$5,000,000
Amount of Grants Awarded		1	1
Number of Grants Awarded		1	1
Average Grant Approved per Job*		$32,778	$32,778
Average Wage Expected		*Data Not Applicable*	
Grants Repaid		$0	$0
Completed Projects†			
Expected Jobs Created	*No Project(s) Completed*		
Expected Average Wage (Weighted)			
Expected Capital Investment	$300,000,000		
Actual Jobs Created			
Actual Average Wage (Weighted)			
Actual Capital Investment	$357,960,000		
Proportion Which Met Goals			
Benefit-Cost Ratio			

* This amount is based on the total approved incentive amount of $32,777,745 divided by 1,000 jobs. To calculate the average grant approved per job on a yearly basis rather than in totality, and presuming the 1,000 jobs were created evenly over the five-year period which the incentive covers, the average grant approved per job would shift to $25,000 for FY2013 and FY2014.

† As noted in the beginning of the Results section, the single project incented under the program is *not* considered complete as the performance agreement has *both* a new job and capital expenditure requirement. Data for FY2012 represent a performance milestone as the capital expenditure portion is complete, although the job requirement is not yet complete (per statute).

Virginia Economic Development Partnership:

Aerospace Engine Manufacturing Performance Grant Program

The Aerospace Engine Manufacturing Performance Grant Program is awarded as an incentive for an aerospace engine manufacturer to locate in the Commonwealth. The use of this tailored performance-based grant is influenced by the potential transformative effect of the project on Virginia or the region, the large amount of capital investment and job creation, the potential for supply chain investment and new jobs, and market penetration in the strategic sector for Virginia. The Aerospace Engine Manufacturing Performance Grant Program is made up of, among other things, several different grants*.

Under this program, no projects were completed in each of the three previous calendar or fiscal years. Per §59.1-284.20 of the Code of Virginia, the average wage requirement for this program is equal to the prevailing average wage in Prince George County.

To date, there is a single project that has been incented under the Aerospace Engine Manufacturing Performance Grant Program. As of 05/31/2014 the project has invested over $195,000,000 in Prince George County and has created 240 jobs incentivized by VJIP†.

Grants Awarded	FY2012	FY2013	FY2014
Grant Funding Made Available	$417,000	$1,173,000	$3,300,000
Amount of Grants Awarded†	$417,000	$1,173,000	$3,300,000
Number of Grants Awarded‡	2	2	2
Average Grant Approved per Job§	$93,511	$93,511	$93,511
Average Wage Expected	*Data Not Applicable*		
Grants Repaid	$0	$0	$0
Completed Projects			
Expected Jobs Created	*No Project(s) Completed*		
Expected Average Wage (Weighted)			
Expected Capital Investment			
Actual Jobs Created			
Actual Average Wage (Weighted)			
Actual Capital Investment			
Proportion Which Met Goals			
Benefit-Cost Ratio			

* A description of the different grants are included in the Appendix A: Additional Program Explanations section of this report.
† Note: one or more of the grants cited here are paid by VJIP as pass-through funds, and are included in the VJIP amount awarded. While this could constitute double-counting of dollars awarded, the amounts are included here to give a complete representation of the program. Per VJIP data, the pass-through funds are for an on-going project that is not yet completed.
‡ Formally or informally, there are five separate and distinct grants broken out within the program. Based on the programs affected by HB1191, this is the only VEDP-program that has such subsets. The number of grants awarded reflects a single project that received two grants in each of FY2012, FY2013, and FY2014, rather than six projects that each received one grant.
§ This amount is based on the total approved incentive amount of $50,683,000 divided by 542 jobs. To calculate the average grant approved per job on a yearly basis rather than in totality, and presuming the 542 jobs were created evenly over the fifteen-year period which the incentives cover (from first year an incentive was paid to last year an incentive is anticipated to be paid), the average grant approved per job would shift to $11,541 for FY2012, $32,463 for FY2013, and $91,328 for FY2014. This is due to the five aforementioned grants starting and stopping at different times; and varying amounts and payouts of each grant, in some cases within themselves over the course of the actual or scheduled payouts.

Virginia Economic Development Partnership:

Clean Energy Manufacturing Incentive Grant Program

The CEMIG may be awarded as an incentive for eligible companies engaged in the manufacture of equipment, systems or products used to produce clean energy, or for products used for energy conservation, storage or grid efficiency purposes to locate or expand in the Commonwealth, rather than another state or country. The CEMIG is based on certain capital investment and job creation and retention, the required levels of which depend upon what sector the project is in and where it locates, as well as the generation of new or additional state revenue and addition to the gross state product. Consideration is given to projects that are located in fiscally stressed areas and those with significant state or regional interest.

The Clean Energy Manufacturing Incentive Grant Program has a capacity of $36,000,000.

To date, no projects were incented or completed under the Clean Energy Manufacturing Incentive Grant Program in each of the three previous calendar or fiscal years.

Grants Awarded	FY2012	FY2013	FY2014
Grant Funding Made Available*	$0	$0	$0
Amount of Grants Awarded	$0	$0	$0
Number of Grants Awarded	0	0	0
Average Grant Approved per Job	*No Project(s) Occurred*		
Average Wage Expected			
Grants Repaid			
Completed Projects			
Expected Jobs Created	*No Project(s) Completed*		
Expected Average Wage (Weighted)			
Expected Capital Investment			
Actual Jobs Created			
Actual Average Wage (Weighted)			
Actual Capital Investment			
Proportion Which Met Goals			
Benefit-Cost Ratio			

* While CEMIG has a capacity – or can award up to – $36,000,000, in FY2012, FY2013, or FY2014, none of this amount was made available as no projects were approved or awarded grants under the program.

Virginia Economic Development Partnership:

Governor's Development Opportunity Fund

The GOF Program may be used to attract economic development prospects and secure the expansion of existing business and industry in the Commonwealth. The award is typically a GOF Grant, but may be in the form of a loan, to localities for projects based on the investment of a specific level of capital, the creation and maintenance of a specific number of new jobs, and the generation of new or additional state revenue and addition to the gross state product. Special consideration is given to projects that are located in fiscally stressed areas, link commercial development along existing transportation/transit corridors within regions, and are located near existing public infrastructure.

Grants Awarded	FY2012	FY2013	FY2014
Grant Funding Made Available	$41,213,153	$37,521,262	$27,015,546
Amount of Grants Awarded	$15,525,000	$7,395,000	$19,205,000
Number of Grants Awarded	26	24	34
Average Grant Approved per Job	$2,949	$2,785	$3,396
Average Wage Expected	$51,953	$55,353	$55,184
Grants Repaid	$2,772,055	$1,778,228	$1,862,305
Completed Projects*			
Expected Jobs Created	1,781	1,276	175
Expected Average Wage (Weighted)	$58,024	$74,589	$29,692
Expected Capital Investment	$370,280,000	$844,300,000	$41,108,350
Actual Jobs Created	2,136	1,369	231
Actual Average Wage (Weighted)	$74,137	$70,387	$38,109
Actual Capital Investment	$452,265,717	$743,300,000	$43,927,111
Proportion Which Met Goals†			
Job Goal	75%	80%	100%
Investment Goal	88%	80%	100%
Wage Goal	88%	60%	100%
Expected Benefit-Cost Ratio	6.8	3.9	2.0
Actual Benefit-Cost Ratio	8.9	4.6	2.5

5-Year Comparison of Projects Completed in FY2010			
	Projected at Start	*Upon Completion*	*5-Years Later*
Jobs	852	1,031	878
Cumulative Benefit-Cost Ratio	5.2	6.2	7.2

* The data reported for Completed Projects uses the date of completion as a cutoff for both expected (projected) and actual data, including the Benefit-Cost Ratio. A vast majority of projects complete in 36-months, however, the benefits of the projects continue for many years after. VEDP typically talks about projects from a 10-year view (using the date the GOF was paid for the FY start date), rather than a snapshot at completion. As a result, these data may appear lower than what is typically reported.

† Caution must be exercised when reading these percentages. HB1191 specifies the proportion of *projects* that met or exceeded goals, not whether or not the total figures met or exceeded goals for the *program*. For instance: in FY2013 the total number of actual jobs across all projects was greater than the total number of projected jobs across all projects. However, on a *project level*, only 80% of the projects met or exceeded their job goal. The projects that did exceed, did so by an amount large enough to cause the total number of actual jobs in FY2013 to be greater than the total number of projected jobs in FY2013.

Virginia Economic Development Partnership:

Investment Partnership Grant subfund

The VIP Grant may be used to encourage continued capital investment by existing Virginia manufacturers or research and development services that support manufacturing in the Commonwealth. The VIP Grant is awarded for projects based on a certain required amount of capital investment. While no new job creation is required, existing employment levels must be maintained for a certain time period. New job creation that is associated with the capital investment may result in an increased VIP Grant*.

Grants Awarded	FY2012	FY2013	FY2014
Grant Funding Made Available†	$2,367,329	$2,592,329	$2,662,539
Amount of Grants Awarded	$2,367,329	$2,592,329	$2,662,539
Number of Grants Awarded	20	23	24
Average Grant Approved per Job‡	$4,680	$4,993	$5,959
Average Wage Expected§	$36,626	$36,599	$39,407
Grants Repaid	$0	$0	$0
Grants Approved			
Amount of Grants Approved**	$2,550,000	$9,400,000	$3,850,000
Number of Grants Approved	6	10	6
Expected Jobs Created and/or Saved	319	552	480
Expected Average Wage (Weighted)	$52,489	$46,277	$52,174
Expected Capital Investment per Job	$302,962	$1,189,651	$507,694
Completed Projects			
Expected Jobs Created	919	12	173
Expected Average Wage (Weighted)	$43,472	$50,000	$56,230
Expected Capital Investment	$506,700,000	$229,000,000	$214,400,000
Actual Jobs Created	1,208	15	123
Actual Average Wage (Weighted)	$49,453	$48,500	$71,613
Actual Capital Investment	$581,300,000	$333,000,000	$302,700,000
Proportion Which Met Goals††			
Investment Goal	100%	100%	100%
Expected Benefit-Cost Ratio	1.9	2.9	4.7
Actual Benefit-Cost Ratio	2.3	10.6	4.0

* Narrative truncated to include grants approved; additional information, see Appendix A: Additional Program Explanations.
† While VIP has a capacity – or can award up to – $6,000,000 in each of FY2012, FY2013, or FY2014, the values here reflect the amount authorized and made available to award.
‡ Amount of grants awarded is the amount of grants awarded *in the specified fiscal year*. VIP pays out over multiple years, and it would be misleading to compute the average grant approved per job based on the total jobs for the project and a *single fiscal year award amount*. This figure is based on the total incentive to be awarded (not just a single year) and the total jobs projected to occur for each project that received a VIP payment in the specified fiscal year. To calculate the average grant approved per job on a yearly basis rather than in totality, presuming the jobs were created evenly over the five-year period which the incentive covers, the average grant approved per job would still be $4,680 for FY2012, $4,993 for FY2013, and $5,959 for FY2014.
§ Weighted average wage expected for each project that received a VIP payment in the specified fiscal year.
** Amount of grants approved reflects the *total amount approved* for the project(s) approved in the specified fiscal year. This is a different view than amount of grants awarded. Totals for the project were used as anticipated payout years are not covered here.
†† Although actual jobs created may be lower than the expected jobs created, VIP is structured so a project meets then maintains investment and/or jobs in accordance with the performance agreement *before* receiving payment. In the event these figures are not met and maintained, the VIP payout can either be eliminated (project cancelled) or reduced. Since new job creation is not required, the VIP payout is reduced to an amount the project would have received if only capital investment occurred. That is why 100% of the projects are considered to have met goals for FY2014 despite actual job creation being lower than expected. The number of completed projects in the above that received reduced awards were 2 in FY2012, 0 in FY2013, and 1 in FY2014.

Virginia Economic Development Partnership:

Major Eligible Employer Grant subfund

The MEE Grant may be used to encourage major eligible employers to invest in the Commonwealth and to provide a number of stable employment opportunities by either making a significant expansion to existing operations or constructing new ones. The focus is on projects involving a significant capital investment and creating a significant number of new jobs. The MEE Grant is available to existing Virginia manufacturers and other nonmanufacturing basic employers that make a minimum capital investment and create a minimum number of new jobs. The job creation threshold may be lowered for exceptionally high-paying new jobs.

To date, there is a single project that has been incented under the Major Eligible Employer Grant subfund. The incented project satisfied the capital investment goal, and has continued to maintain the job and wage goal thereby warranting the continued awards in FY2013 and FY2014 under the MEE Grant program.

Grants Awarded	FY2012	FY2013	FY2014
Grant Funding Made Available	$5,000,000	$5,000,000	$5,000,000
Amount of Grants Awarded	$5,000,000	$5,000,000	$5,000,000
Number of Grants Awarded	1	1	1
Average Grant Approved per Job*	$55,556	$55,556	$55,556
Average Wage Expected†	$133,333	$133,333	$133,333
Grants Repaid	$0	$0	$0
Completed Projects			
Expected Jobs Created	450	*No Project(s) Completed*	
Expected Average Wage (Weighted)	$133,333		
Expected Capital Investment	$300,000,000		
Actual Jobs Created	855		
Actual Average Wage (Weighted)	$156,596		
Actual Capital Investment	$425,600,000		
Proportion Which Met Goals			
Job Goal	100%	*No Project(s) Completed*	
Investment Goal	100%		
Wage Goal	100%		
Expected Benefit-Cost Ratio	1.5		
Actual Benefit-Cost Ratio	4.4		

* This amount is based on the total approved incentive amount of $25,000,000 divided by 450 jobs. To calculate the average grant approved per job on a yearly basis rather than in totality, and presuming the 450 jobs were created evenly over the five-year period which the incentive covers, the average grant approved per job would still be $55,556 for FY2012, FY2013, and FY2014.

† The average annual wage promised to be paid for each of the jobs created by this grantee over the course of this project for the grantee is $133,333. To calculate the average annual wage per job on a yearly basis rather than in totality, and presuming the 450 jobs were created evenly over the five-year period which the incentive covers, the average annual wage per job would still be $133,333 for FY2012, FY2013, and FY2014.

Virginia Economic Development Partnership:

Semiconductor Memory or Logic Wafer Manufacturing Performance Grant Program

The Semiconductor Memory or Logic Wafer Manufacturing Performance Grant is awarded to promote and expand semiconductor product manufacturing in the Commonwealth. The use of this tailored performance-based grant is influenced by the potential transformative effect of the project on Virginia or the region, the large amount of capital investment and job creation, and market penetration in the strategic sector for Virginia, the potential for a significant supply chain investment and new jobs, and market penetration in this strategic sector for Virginia. The Semiconductor Memory or Logic Wafer Manufacturing Performance Grant is available to a qualified manufacturer of semiconductor memory or logic wafers which, among other things, has made a certain amount of capital investment, manufactures and sells semiconductor memory or logic wafers, and creates and substantially retains a certain number of new jobs.

Under this program, no projects were completed in each of the three previous calendar or fiscal years. Per § 59.1-284.14 of the Code of Virginia, there is no average wage requirement for this program.

To date, there are two projects that have been incented under the Semiconductor Memory or Logic Wafer Manufacturing Performance Grant Program, and only one project that is captured by the timeframe specified in HB1191 (these data are reflected in the table below).

Grants Awarded	FY2012	FY2013	FY2014
Grant Funding Made Available	$5,400,000	$5,400,000	$5,400,000
Amount of Grants Awarded	$5,400,000	$5,400,000	$5,400,000
Number of Grants Awarded	1	1	1
Average Grant Approved per Job*	$31,395	$31,395	$31,395
Average Wage Expected†	$52,000	$52,000	$52,000
Grants Repaid	$0	$0	$0
Completed Projects			
Expected Jobs Created	*No Project(s) Completed*		
Expected Average Wage (Weighted)			
Expected Capital Investment			
Actual Jobs Created			
Actual Average Wage (Weighted)			
Actual Capital Investment			
Proportion Which Met Goals			
Benefit-Cost Ratio			

* Although there is no average wage requirement for this program, for the single project captured in the above, VEDP estimated the new jobs to be 860 resulting in an average grant approved per job of $31,395, based on the total approved incentive amount of $27,000,000. To calculate the average grant approved per job on a yearly basis rather than in totality, and presuming the 860 jobs were created evenly over the five-year period which the incentive covers, the average grant approved per job would still be $31,395 for FY2012, FY2013, and FY2014.

† Although there is no average wage requirement for this program, for the single project captured in the above, VEDP estimated the average wage expected to be $52,000. To calculate the average wage expected on a yearly basis rather than in totality, and presuming the 860 jobs were created evenly over the five-year period which the incentive covers, the average wage expected per job would still be $52,000 for FY2012, FY2013, and FY2014.

Virginia Economic Development Partnership:

Specialized Biotechnology Research Performance Grant Program

Two years ago the Commonwealth of Virginia provided $5.0 million of initial funding ($2.5 million in FY2013 and FY2014), to test and validate a unique bioscience strategy for Virginia. Moreover, each participating VBHRC research university (5 in FY2013; 6 in FY2014) is required to pay $50 thousand in cash per year*.

The goals of this strategy are as follows:

- Create high impact collaborative relationships that give Virginia the critical mass necessary to compete nationally and globally. Any grant considered must have a minimum of two of the participating VBHRC research universities meaningfully involved (collaboration mandate).
- Increase funding for our research universities by stimulating industrial partnerships and increased corporate sponsored-research.
- Propel economic development by being a "catalyst" for industry partnerships, innovation, job creation, new company formation and company expansion.
- Create clinical cooperation around patient oriented studies.
- Develop high value patents.
- Raise Virginia's national rank in Life Sciences and healthcare delivery through a focused strategy.

<table>
<tr><th>Grants Awarded</th><th>FY2012</th><th>FY2013</th><th>FY2014</th></tr>
<tr><td>Grant Funding Made Available</td><td rowspan="13">Program Nonexistent</td><td>$2,500,000</td><td>$2,500,000</td></tr>
<tr><td>Amount of Grants Awarded†‡</td><td>$0</td><td>$3,039,479</td></tr>
<tr><td>Number of Grants Awarded</td><td>0</td><td>9</td></tr>
<tr><td>Average Grant Approved per Job</td><td rowspan="2">No Project(s) Occurred</td><td>Data Not Applicable</td></tr>
<tr><td>Average Wage Expected</td></tr>
<tr><td>Grants Repaid</td><td>$0</td></tr>
<tr><td>Completed Projects</td><td colspan="2"></td></tr>
<tr><td>Expected Jobs Created</td><td colspan="2" rowspan="9">No Project(s) Completed</td></tr>
<tr><td>Expected Average Wage (Weighted)</td></tr>
<tr><td>Expected Capital Investment</td></tr>
<tr><td>Actual Jobs Created</td></tr>
<tr><td>Actual Average Wage (Weighted)</td></tr>
<tr><td>Actual Capital Investment</td></tr>
<tr><td>Proportion Which Met Goals</td></tr>
<tr><td>Benefit-Cost Ratio</td></tr>
</table>

* Program is not housed under VEDP and is managed by a separate 501(c)(3) non-profit corporation, Virginia Biosciences Health Research Corporation (VBHRC). Program is included here and shown under VEDP per HB1191.

† Amount awarded in FY2014 exceeds grant funding made available in FY2014 due to carryover of grant funding made available in FY2013 when no grants were awarded. As a result, the FY2014 grant funding made available could be shown as $5,000,000 with FY2013 grant funding made available either remaining at $2,500,000 or being reduced to $0. This was not done in the former as the reader may be inclined to add the $2,500,000 shown in FY2013 and $5,000,000 shown in FY2014 and incorrectly conclude that in total, $7,500,000 was made available; this was not done in the latter as the reader may incorrectly conclude grant funding was *only* made available in FY2014, and in the amount of $5,000,000 – contradicting the program narrative herein.

‡ As of August 29, 2014 (FY2015) the current dollar amount of grants awarded is $4,430,479 out of a total available $5,000,000.

Virginia Economic Development Partnership:

Economic Development Incentive Grant subfund

The VEDIG may be used to assist and encourage companies to invest and to provide new employment opportunities by locating significant headquarters, administrative, research and development and/or similar service and basic sector operations in the Commonwealth. The focus is on high wage employment projects. The VEDIG is based on the location of the project, number of new jobs, average annual salaries of the jobs compared to the local prevailing annual wage, and certain levels of capital investment per job.

To date, there is a single project that has completed under the Economic Development Incentive subfund.

Grants Awarded	FY2012	FY2013	FY2014
Grant Funding Made Available*	$0	$800,000	$1,300,000
Amount of Grants Awarded	$0	$800,000	$1,300,000
Number of Grants Awarded	0	1	2
Average Grant Approved per Job†	*No Project(s) Occurred*	$10,000	$8,966
Average Wage Expected		$90,000	$110,704
Grants Repaid		$0	$0
Grants Approved			
Amount of Grants Approved‡	$5,000,000	*No Project(s) Occurred*	$5,000,000
Number of Grants Approved	1		1
Expected Jobs Created and/or Saved	625		734
Expected Average Wage (Weighted)	$134,200		$102,256
Expected Capital Investment per Job	$33,600		$47,411
Completed Projects			
Expected Jobs Created	*No Project(s) Completed*	400	*No Project(s) Completed*
Expected Average Wage (Weighted)		$90,000	
Expected Capital Investment		$30,000,000	
Actual Jobs Created		604	
Actual Average Wage (Weighted)		$112,356	
Actual Capital Investment		$111,200,000	
Proportion Which Met Goals			
Job Goal	*No Project(s) Completed*	100%	*No Project(s) Completed*
Investment Goal		100%	
Wage Goal		100%	
Expected Benefit-Cost Ratio§		10.3	
Actual Benefit-Cost Ratio		16.0	

* While VEDIG has a capacity – or can award up to – $6,000,000 in each of FY2012, FY2013, or FY2014, the values here reflect the amount authorized and made available to award.

† Amount of grants awarded is the amount of grants awarded *in the specified fiscal year*. VEDIG pays out over multiple years, and it would be misleading to compute the average grant approved per job based on the total jobs for the project and *a single fiscal year award amount*. As a result, this figure is based on the total incentive to be awarded (not just a single year) and the total jobs projected to occur for each project that received a VEDIG payment in the specified fiscal year. To calculate the average grant approved per job on a yearly basis rather than in totality, and presuming the jobs were created evenly over the five-year period which the incentive covers, the average grant approved per job would still be $10,000 for FY2013 and $8,966 for FY2014.

‡ Amount of grants approved reflects the *total amount approved* for the project(s) approved in the specified fiscal year. This is a different view than amount of grants awarded. Totals for the project were used as anticipated payout years are not covered here.

§ The Benefit-Cost Ratios are *not* displayed as a proportion but rather reflect the Benefit-Cost Ratio *at the time of completion* for project(s) that received the VEDIG incentive.

Virginia Economic Development Partnership:

Customized Incentive Grants

To date, there is a single project that received a customized incentive grant not captured by any other incentive program covered earlier in this report. The project may be considered complete, however, the Completed Project variables in the table below are not applicable based on what the project goals were and what the project was incented to do. The narrative below contains project achievements.

The grantee has developed a center of excellence focusing on biomedical research and providing the kinds of high technology jobs that are key to continuing economic development in the Shenandoah Valley. The grantee is one of very few labs in the world focused on the proteomics of host-vector-pathogen interactions to discover new ways to detect, prevent, and treat infectious diseases. Through these unique capabilities, combined with the grantee's expertise in drug discovery, computational biology, and preclinical development, the grantee is developing cures for the emerging and neglected infectious diseases that ravage a significant portion of the world's population.

This grant has catalyzed the development of a state-of-the-art research and development facility in the Valley, leased by the grantee from Augusta County. In the last year, the grantee has spun-out two new ventures. Approximately 35 new jobs have been created through this grant, with average wages well in excess of $85,000. Many more new jobs are expected as R&D results in new products and spin-out companies. The grantee has been active in submitting grant requests with major grant-making entities, with many of these requests being submitted in collaboration with researchers from Virginia higher education institutions.

Grants Awarded	FY2012	FY2013	FY2014
Grant Funding Made Available	$1,000,000	$1,000,000	*No Project(s) Occurred*
Amount of Grants Awarded	$1,000,000	$1,000,000	
Number of Grants Awarded	1	1	
Average Grant Approved per Job*	$220,000	$220,000	
Average Wage Expected	$85,000	$85,000	
Grants Repaid	$0	$0	
Completed Projects			
Expected Jobs Created	*Data Not Applicable*		
Expected Average Wage (Weighted)			
Expected Capital Investment			
Actual Jobs Created			
Actual Average Wage (Weighted)			
Actual Capital Investment			
Proportion Which Met Goals			
Benefit-Cost Ratio			

* This amount is based on the total approved incentive amount of $22,000,000 divided by 100 jobs. To calculate the average grant approved per job on a yearly basis rather than in totality, and presuming the 100 jobs were created evenly over the seven-year period which the incentive covers, the average grant approved per job would shift to $70,000 for both FY2012 and FY2013.

Virginia Economic Development Partnership:

Virginia Jobs Investment Program

The Virginia Jobs Investment Program* (VJIP), is committed to helping new and expanding Virginia businesses find qualified workers and develop their employees into a first-class, globally competitive workforce. VJIP continues to offer three component services: a New Jobs Program which includes new to Virginia as well as existing business expansion, a Retraining Program for companies updating facilities with new technology and processes, and a Small Business New Jobs Program which shows the Commonwealth's dedication to the entrepreneurial spirit.

Grants Awarded †	FY2012	FY2013	FY2014
Grant Funding Made Available‡	$5,580,288	$5,509,870	$7,470,686
Amount of Grants Awarded	$7,035,857	$7,012,006	$6,348,979
Number of Grants Awarded§	198	177	132
Average Grant Approved per Job**	$646	$603	$623
Average Wage Expected††	*Data Not Applicable*		$52,077
Grants Repaid	*Not Applicable Due To Program Structure*		
Completed Projects†			
Expected Jobs Created	10,403	12,389	8,058
Expected Average Wage (Weighted)	$43,301	$55,529	$58,579
Expected Capital Investment	$983,611,223	$595,430,294	$340,772,689
Actual Jobs Created‡‡	5,347	7,412	4,915
Actual Average Wage (Weighted)	$40,329	$58,153	$54,074
Actual Capital Investment§§	*Data Not Applicable*		
Proportion Which Met Goals			
Job Goal***	100%	100%	100%
Benefit-Cost Ratio†††	*Data Not Computed*		

* Formerly under Department of Small Business and Supplier Diversity; under VEDP as of July 1, 2014.

† The Grant Awards dataset is different than the Completed Projects dataset. The biggest difference is that the Grant Awards dataset *includes* SBJGF while the Completed Projects dataset does not. To keep the data represented equal, SBJGF projects were removed from the Grant Awards dataset and are *not* included in the referenced data above.

‡ Excluding operating expenses, VJIP was assigned an effective budget of $6,376,417 in FY2012, $6,296,592 in FY2013, and $6,299,814 in FY2014. To keep the data represented equal, SBJGF funds were excluded from grant funding made available. For FY2014, a rollover amount of $1,942,236 was included in grant funding made available (note: per VJIP only FY2014 had a rollover). Grant funding made available may be less than the amount of grants awarded due to transfers during each fiscal year.

§ Number of grants awarded based on projects that were budgeted *and* received funding under the program. If only counting projects that were budgeted (approved), the totals would be 431 in FY2012, 364 in FY2013, and 251 in FY2014.

** Average grant approved per job based on projects that were budgeted *and* received funding under the program. If only counting projects that were budgeted (approved), the totals would be $724 in FY2012, $713 in FY2013, and $758 in FY2014.

†† Except for FY2014, average wage expected was not included in data made available. Contact VJIP for additional information.

‡‡ Particularly with VJIP, while the expected jobs created may differ from actual jobs created, VJIP only pays out *after* the jobs are created or workers retrained. This eliminates any clawback mechanism (grants repaid), as any jobs that are not created receive no funding. The reimbursement rate, or amount to be paid per-job, should not differ. Therefore, if actual jobs created are lower than projected jobs created, the actual total cost is proportionately lower than the projected total cost.

§§ Actual capital investment data are not available.

*** Similar to VIP, the proportion of completed projects which met goals is 100%, even if the actuals are less than the expected amounts. This is because VJIP only pays out *after* the jobs are created or workers retrained.

††† Benefit-Cost Ratio cannot be calculated. While actual total costs are captured, actual total revenue (or estimated total revenue from completed projects) data are not collected.

Department of Housing and Community Development:

Enterprise Zone Job Creation Grant (JCG)

The Enterprise Zone Program has the goal of offering distressed communities (rural and urban) a tool to increase their attractiveness as a place for job creation and private investment. The intent is to spur overall community economic growth and expansion by the use of two stand-alone but complementary incentives: job creation grant and real property investment grant. The availability of both grants provides benefits to the wide spectrum of activities that constitute economic development in Virginia's diverse distressed communities.

Since companies apply for JCGs only after they have created the jobs that qualify them for the JCGs, 100% of the projects met their job creation goals. In effect, so long as the statutory minimum number of jobs have been created, the number of jobs created by the grantee becomes the performance goal.

Grants Awarded	FY2011	FY2012	FY2013
Grant Funding Made Available*	$2,988,134	$2,904,269	$2,893,705
Amount of Grants Awarded*	$2,988,134	$2,904,269	$2,893,705
Number of Grants Awarded*	57	60	62
Average Grant Approved per Job†	$1,775	$1,656	$2,711
Average Wage Expected‡	*Data Not Applicable*		
Grants Repaid	*Not Applicable Due To Program Structure*		
Completed Projects			
Expected Jobs Created‡	*Data Not Applicable*		
Expected Average Wage (Weighted)‡			
Expected Capital Investment‡			
Actual Jobs Created	1,684	1,754	1,067
Actual Average Wage (Weighted)‡	*Data Not Applicable*		
Actual Capital Investment‡			
Proportion Which Met Goals			
Job Goal	100%	100%	100%
Benefit-Cost Ratio‡	*Data Not Computed*		

* Values are based on all projects receiving incentives, not just completed projects.

† The incentive amount per job varies according to the wages and benefits offered. This column is an average of the total incentive paid as compared to the total jobs created between the first year and the grant year. Also, values are based on all projects receiving incentives, not just completed projects.

‡ Per statute, all EZ grants are performance-based and by-right, so only the number of jobs created is tracked and no estimate of benefit is created.

Department of Housing and Community Development:

Enterprise Zone Real Property Investment Grant (RPIG)

The Enterprise Zone Program has the goal of offering distressed communities (rural and urban) a tool to increase their attractiveness as a place for job creation and private investment. The intent is to spur overall community economic growth and expansion by the use of two stand-alone but complementary incentives: job creation grant and real property investment grant. The availability of both grants provides benefits to the wide spectrum of activities that constitute economic development in Virginia's diverse distressed communities.

Since companies apply for RPIGs only after they have invested the capital that qualifies them for the RPIGs, 100% of the projects met their capital investment goals. In effect, so long as the statutory minimum amount of capital has been invested, the capital invested by the grantee becomes the performance goal.

Grants Awarded	FY2012	FY2013	FY2014
Grant Funding Made Available	$11,205,301	$11,245,731	$11,256,295
Amount of Grants Awarded	$11,205,301	$11,245,731	$11,256,295
Number of Grants Awarded	142	143	158
Average Grant Approved per Job*	*Data Not Applicable*		
Average Wage Expected*			
Grants Repaid	*Not Applicable Due To Program Structure*		
Completed Projects			
Expected Jobs Created*	*Data Not Applicable*		
Expected Average Wage (Weighted)*			
Expected Capital Investment*			
Actual Jobs Created*			
Actual Average Wage (Weighted)*			
Actual Capital Investment*			
Proportion Which Met Goals			
Investment Goal	100%	100%	100%
Benefit-Cost Ratio*	*Data Not Computed*		

* Per statute, all EZ grants are performance-based and by-right, so no estimate of benefit is created. The RPIG is based solely on private investment and does not include any requirement of job creation; therefore data on wages is not collected.

Virginia Tobacco Indemnification and Community Revitalization Commission:

Tobacco Region Opportunity Fund (TROF)

Purpose of the TROF program is to provide performance-based monetary grants to localities in Virginia's tobacco producing region (as defined by the Commission) to assist in the creation of new jobs and investments, whether through new business attraction or existing business expansion.

Goal: To revitalize the economies of tobacco dependent regions and communities, measured by job creation, workforce participation rate, wealth, diversity of economy, and taxable assets. All measurements listed are increased when a new or expanding business in the tobacco region creates new jobs that pay more than prevailing wage and adds taxable assets to the local tax rolls.

Grants Awarded	FY2012	FY2013	FY2014
Grant Funding Made Available	$7,292,400	$5,035,000	$11,630,000
Amount of Grants Awarded	$7,292,400	$5,035,000	$11,630,000
Number of Grants Awarded	27	18	15
Average Grant Approved per Job	$1,961	$3,167	$10,009
Grants Repaid	$1,012,109	$683,300	$172,750
Completed Projects			
Expected Jobs Created	3,718	1,590	1,162
Expected Average Wage (Weighted)*	*Data Not Applicable*		
Expected Capital Investment	$413,411,500	$106,897,000	$405,495,520
Actual Jobs Created	2,473	978	953
Actual Average Wage (Weighted)*	*Data Not Applicable*		
Actual Capital Investment	$368,417,152	$72,880,762	$400,230,220
Proportion Which Met Goals			
Job Goal	48%	50%	73%
Investment Goal	63%	72%	87%
Benefit-Cost Ratio†	*Data Not Computed*		

* Average wage data are not available.

† Benefit-Cost Ratio cannot be calculated. While actual total costs are captured, actual total revenue (or estimated total revenue from completed projects) is not collected.

Virginia Tourism Authority:

Governor's Motion Picture Opportunity Fund (GMPOF)

The Governor's Motion Picture Opportunity Fund (GMPOF) has a primary goal of working to increase Virginia's share of the motion picture industry, thereby providing income for local businesses, jobs and career opportunities for Virginia residents, and state and local tax revenue. It does this by recruiting projects from outside the state, and by supporting production within the state. The fund also includes provisions for workforce development, bringing work to distressed areas of the state, and utilizing certain projects to promote travel and tourism.

As the primary goal of the program is to increase Virginia's share of the motion picture industry, most jobs created under the GMPOF are temporary in nature as they are generally created and exist only during the time the movie is being filmed or produced in the state. GMPOF funds are not disbursed until the project is concluded and proof is submitted of qualified spending in the state.

Grants Awarded	FY2012	FY2013	FY2014
Grant Funding Made Available	$2,970,330	$3,155,809	$3,145,968
Amount of Grants Awarded	$1,600,000	$750,000	$1,478,236
Number of Grants Awarded	2	2	5
Average Grant Approved per Job	$489	$2,941	$1,610
Grants Repaid	$0	$0	$171,764
Completed Projects			
Expected Jobs Created	3,270	255	1,025
Expected Average Wage (Weighted)*	*Data Not Applicable*		
Expected Capital Investment	$47,000,000	$3,350,000	$15,800,000
Actual Jobs Created	1,865	502	1,334
Actual Average Wage (Weighted)*	*Data Not Applicable*		
Actual Capital Investment	$41,211,140	$4,766,161	$13,706,904
Proportion Which Met Goals			
Spending Goal	100%	100%	80%
Job Goal	50%	100%	80%
Ancillary Goal†	100%	100%	100%
Benefit-Cost Ratio‡	0.7	-2.0	-3.5

* Average wage data are not available.

† Reported where applicable; count of projects which had an ancillary goal: 1 in FY2012, 1 in FY2013, 3 in FY2014

‡ Based on analysis by Mangum Economic Consulting, the Benefit-Cost Ratio associated with major film and television productions could be evaluated by other perspectives in addition to estimated tax revenue. For instance, GMPOF could be compared to the labor income and economic output that these productions are estimated to have generated. For the productions covered by HB1191 this would mean that $0.10 in subsidies was expended for every $1.00 in labor income generated (equivalent to a 10.4 Benefit-Cost Ratio) and $0.03 in subsidies was expended for every $1.00 of economic output created (equivalent to a 36.6 Benefit-Cost Ratio).

Virginia Port Authority:

Port of Virginia Economic and Infrastructure Development Zone Grant Program

The Port of Virginia Economic and Infrastructure Development Zone Grant Program (POV Zone Grant) provides a grant to certain Qualified Companies to incentivize companies to locate new maritime-related employment centers or expand existing centers in Virginia in order to encourage and facilitate the growth of the Port of Virginia in accordance with criteria established by legislation.

Under this program, no projects were completed in each of the three previous calendar or fiscal years. To date, there is a single project that has been incented under the Port of Virginia Economic and Infrastructure Development Zone Grant. The project was incented in FY2014 and is expected to complete in FY2017.

Grants Awarded	FY2012	FY2013	FY2014
Grant Funding Made Available	*Program Nonexistent*	*Program Nonexistent*	$1,000,000
Amount of Grants Awarded			$500,000
Number of Grants Awarded			1
Average Grant Approved per Job			$3,000
Amount of Grants Repaid			$0
Completed Projects			
Expected Jobs Created			*No Project(s) Completed*
Expected Average Wage (Weighted)*			
Expected Capital Investment			
Actual Jobs Created			
Actual Average Wage (Weighted)*			
Actual Capital Investment			
Proportion Which Met Goals			
Benefit-Cost Ratio			

* Average wage data are not available.

Innovation and Entrepreneurship Investment Authority:

Growth Acceleration Program

The GAP Fund Program investments are governed by the goal of developing the next generation of Virginia's science and technology economy and the entrepreneurial ecosystem required to support that economy. To this end, the GAP Fund Program places equity and convertible debt investments in tech, cleantech and life science companies at the earliest stages of company formation, in a manner conducive to stimulating significant private investment or "leverage cash" as a result of CIT's deployment of public dollars. Fundamental to CIT's ability to successfully deliver private capital is that, unlike grant programs, CIT holds an ownership position in the investee company and maintains that ownership for a multi-year holding period of indeterminate length while the company grows in scope of operations and value. CIT recovers GAP Program investments only upon the sale of the company.

Over the 10-year life of the program, CIT has found that the following metrics most closely align with program objectives:

- Venture and Angel Capital Attracted – Venture and angel capital dollars invested in the GAP Fund Program's portfolio companies as a result of CIT investing dollars appropriated to IEIA. CIT calculates its annual leverage factor by dividing the total of venture and angel capital by all GAP Fund Program portfolio companies in a given year by the dollars deployed in new investments in that year.
- Annual Leverage Factor – The ratio of capital returned or anticipated to return to CIT, as a result of portfolio companies being acquired, divided by total GAP Fund Program dollars deployed.

Grants Awarded	FY2012	FY2013	FY2014
Grant Funding Made Available	$5,000,000	$4,200,000	$4,200,000
Amount of Grants Awarded	$2,100,000	$2,100,000	$3,600,000
Number of Companies Invested*	28	26	41
Average Grant Approved per Job*	*Data Not Applicable*		
Average Wage Expected*			
Grants Repaid†			
Completed Projects			
Expected Jobs Created	*Data Not Applicable*		
Expected Average Wage (Weighted)			
Expected Capital Investment			
Actual Jobs Created			
Actual Average Wage (Weighted)			
Actual Capital Investment			
Proportion Which Met Goals			
Benefit-Cost Ratio			
Additional Metrics			
GAP Funds Invested	$2,100,000	$2,100,000	$3,600,000
Venture & Angel Capital Attracted‡	$24,600,000	$37,500,000	$102,800,000
Annual Leverage Factor	11.7	17.9	28.5

* Number of grants awarded is not applicable and is neither reported nor tracked. Instead, the number of companies invested in is reported here.

† CIT recovers GAP Program investments only upon the sale of the company.

‡ Figures are for the specified fiscal year and also includes pre-existing investments as applicable.

Estimated Economic Impact

VEDP conducted an economic impact analysis of the incented economic development projects which completed (or in some cases, met a performance milestone) in each of FY2012, FY2013, and FY2014. VEDP used data submitted from entities affected by HB1191 in conjunction with IMPLAN V3.1 economic modeling software. IMPLAN is a commercially available input-output modeling program. In reviewing the results it is important to keep in mind that the outputs are estimates based on direct employment inputs.

The impact of economic development projects extends beyond the direct employment and capital investment resulting from the projects. There are three effects: direct, indirect, and induced, which sum to a total effect. IMPLAN estimates the indirect and induced effects from a direct effect. In estimating the economic impact (economic output), the number of jobs created by projects that completed in FY2012, FY2013, or FY2013 served as the input to the direct effect employment. For this analysis, IMPLAN estimates economic output[7] and value added[8] based on direct, indirect, and induced effects to employment.

Looking at a jar of apple sauce, economic output adds up the costs of the farmer to grow the apples, the manufacturer that makes then sells the apple sauce, and the retailer selling the apple sauce. Value added sums the increased value of the good at each of those stages. The resulting estimates of value added can be compared to Gross Domestic Product (GDP) data, but estimates of economic output should not be compared to GDP since the estimated total effect is a cumulative process that involves double counting.

The estimated number of indirect or induced jobs vary by industry and geographic region. Each industry in each geographic region has a different multiplier, or ripple effect that results from the direct effect. The indirect and induced effects are calculated by IMPLAN's analysis of the industry and associated multiplier effects. Using the same direct effect employment number, an industry with a larger multiplier will estimate more indirect and induced jobs than an industry with a smaller multiplier[9].

[7] Economic output is used interchangeably here with economic impact. The total effect economic output represents the value of annual industry production from direct, indirect, and induced effects in producer prices. In computing this value, IMPLAN does not treat all industries the same: for manufacturers production value is equal to sales plus or minus the change in inventory; for service sectors production value is equal to sales; and for retail and wholesale trade production value is equal to gross margin.
[8] Value added is the summation of employee compensation, indirect business taxes (taxes on production and imports less subsides), and business income in the specified industries.
[9] This depends on the multiplier being used. Some clarity: for IMPLAN there are a total of six different multipliers. The Type I multiplier factors in the direct effect and indirect effect, while the Type SAM (Social Accounting Matrix) multiplier factors in the

Total employment effects result from the direct effect employment and associated multipliers. For these employment effects (indirect and induced), thinking in terms of job creation is generally accepted, but it is more accurate to think in terms of additional labor hours demanded, where 1x job = 2,080 hours of labor per year. For instance: rather than an entirely new job being created, a part-time employee might instead move to full-time hours. Whether an additional part-time job is created (e.g. from 1x part-time job at 20-hours/week to 2x part-time jobs at 20 hours/week) or a part-time employee increases hours (e.g. from 1x part-time job at 20-hours/week to 1x full-time job at 40 hours/week) the total hours of additional labor demanded to support the first direct job are the same[10].

Another way to think about this is that the direct effect is the known or predicted change in the geographic area(s) to be studied. The indirect effects are any business to business transactions to support, or as a result of, the direct effects. Induced effects are changes in consumption and spending from those affected by the direct and indirect effects.

For example: suppose a new call center opens in Virginia and creates 80 jobs. The direct effect employment is 80 jobs. A call center needs to purchase office supplies. A local business begins to sell office supplies to the call center. This transaction is an indirect effect. The workers at the call center have additional income from the new job (either from no previous job, or as a difference between previous and what current disposable income[11]). As a result of the increased demand for goods, the office supply company may hire additional workers, or increase the hours of current workers; both generate additional

direct effect, indirect effect, and induced effect. Both Type I and Type SAM are the result of employment – meaning jobs per direct job (direct effect employment). There are also direct, indirect, induced, and total effects multipliers – these are the result of number of jobs per million dollars of output. For this analysis, Type SAM multipliers were used.

[10] From a tax revenue standpoint alone, the policy implications of this should not be discounted, and this is why it is important to measure new jobs from a project, particularly for wages closer to the legal floor. Take for example:
(1) 2x part-time workers being paid $10/hour at 20-hours/week with no adjustments to AGI are estimated to owe Virginia $390.00 each or $780.00 in total; whereas 1x full-time worker being paid $10/hour at 40-hours/week with no adjustments to AGI is estimated to owe Virginia $938.50 – a difference of $158.50, or approximately 20% more.
(2): 2x part-time workers being paid $20/hour at 20-hours/week with no adjustments to AGI are estimated to owe Virginia $938.50 each or $1,877 in total; whereas 1x full-time worker being paid $20/hour at 40-hours/week with no adjustments to AGI is estimated to owe Virginia $2,134.50 – a difference of $257.50, or approximately 14% more.
(3): 2x part-time workers being paid $30/hour at 20-hours/week with no adjustments to AGI are estimated to owe Virginia $1,536.50 each or $3,073 in total; whereas 1x full-time worker being paid $30/hour at 40-hours/week with no adjustments to AGI is estimated to owe Virginia $3,330.50 – a difference of $257.50 or approximately 8% more.

[11] If instead, the call center already existed and expanded, another option could be that some or all of the current workers receive additional hours to work, which also results in increased disposable income – this is possible since a single job is held to be equivalent to 2,080 additional labor hours demanded (per year).

income. Both the direct and indirect workers spend some portion of this income. This creates additional demand for the goods or services they spend that income on, and creates an induced effect[12].

Results[13]

	Virginia Tax Revenue	Local Tax Revenue	Economic Output	Value Added	Unique Projects	Jobs	Capital Investment
FY2012	$443.2m	$412.6m	$19.8b	$10.0b	265	11,590	$1,393.3m
FY2013	$311.6m	$303.1m	$12.1b	$6.5b	258	9,253	$774.7m
FY2014	$133.9m	$100.8m	$6.6b	$3.6b	234	6,279	$864.3m

	Type	Direct Effect	Indirect Effect	Induced Effect	Total Effect
FY2012	Economic Output	$12.5b	$3.9b	$3.3b	$19.8b
	Value Added	$5.4b	$2.4b	$2.2b	$10.0b
FY2013	Economic Output	$7.6b	$2.3b	$2.1b	$12.1b
	Value Added	$3.7b	$1.4b	$1.4b	$6.5b
FY2014	Economic Output	$3.9b	$1.3b	$1.4b	$6.6b
	Value Added	$1.9b	$0.8b	$0.9b	$3.6b
Note: Numbers may not sum due to rounding.					

The entities covered by HB1191 reported 265 unique projects which completed in FY2012. Six of those projects received incentives from multiple agencies. The 265 projects supported the creation of 11,590 direct jobs and $1.4 billion in capital investment over the time it took for the projects to complete. Over the life of the projects, they generated an estimated $443.2 million in state tax revenue and $412.6 million in local tax revenue, as well as an estimated $19.8 billion in economic output (impact) and $10.0 billion in value added. The projects took between 1- and 10-years to complete. On average (mean), the projects completed in 2.7-years with a midpoint (median) completion time of 3-years. The top five industries for employment accounted for 58% of all employment, and consisted of Professional and Technical Services; Management of Companies and Enterprises; Machinery Manufacturing; Food Products Manufacturing; and

[12] Direct, indirect, and induced effects work both ways. If a worker takes a pay cut, or is laid off from an employer, their disposable income should decrease, and their consumption and spending pattern should also change, resulting in a negative induced effect.

[13] Whenever possible, VEDP backed out duplicate projects to avoid double-counting and overestimating the results. However, some double-counting does occur when a single project has multiple incentives from multiple agencies with multiple completion dates (more on this limitation is included at the end of this section and expanded in the Limitations section of the report).

Insurance Carriers and Related Activities. In total, all manufacturing industries accounted for 54% of employment.

For FY2013, there were 258 unique projects which completed. Six of those projects received incentives from multiple agencies. The 258 projects supported the creation of 9,253 direct jobs and $774.7 million in capital investment over the time it took for the projects to complete. Over the life of the projects, they generated an estimated $311.6 million in state tax revenue and $303.1 million in local tax revenue, as well as an estimated $12.1 billion in economic output (impact) and $6.5 billion in value added. The projects took between 1- and 9-years to complete. On average (mean), the projects completed in 2.9-years with a midpoint (median) of 3-years. The top five industries for employment accounted for 66% of all employment, and consisted of Management of Companies and Enterprises; Professional and Technical Services; Computer and Electronic Product Manufacturing; Furniture and Related Product Manufacturing; and Food Products Manufacturing. In total, all manufacturing industries accounted for 39% of employment.

For FY2014, there were 234 unique projects which completed. Four of those projects received incentives from multiple agencies. The 234 projects supported the creation of 6,279 direct jobs and $864.3 million in capital investment over the time it took for the projects to complete. Over the life of the projects, they generated an estimated $133.9 million in state tax revenue and $100.8 million in local tax revenue, as well as an estimated $6.6 billion in economic output (impact) and $3.6 billion in value added. The projects took between 1- and 10-years to complete. On average (mean), the projects completed in 3-years with a midpoint (median) of 3-years. The top five industries for employment accounted for 75% of all employment, and consisted of Management of Companies and Enterprises; Administrative and Support Services; Professional and Technical Services; Furniture and Related Product Manufacturing; and Transportation Equipment Manufacturing. In total, all manufacturing industries accounted for 31% of employment.

The annual results show a decline in tax revenues over the three years in terms of total value and revenue per job. Another trend is an increasing concentration in the share of jobs accountable to the top five industries. The IMPLAN model is based on industry and household data from numerous federal government sources. The differences between industries produce different results, so changes in the industry mix affect IMPLAN's results.

For instance, FY2012 only saw two manufacturing industries in the top five sectors, but all manufacturing sectors accounted for 58% of jobs. Manufacturing typically has a larger multiplier and therefore is estimated to support more jobs and additional economic activity than the service sector. This helped contribute to the size of the tax revenue estimate for FY2012. Manufacturing accounted for a smaller percentage of total jobs in FY2013, but had three of the top five sectors, which contributed to its similar job-to-tax ratio in FY2012. In FY2014, manufacturing accounted for an even smaller share of total employment. No manufacturing industry recorded more than 500 jobs in FY2014, while FY2013 recorded three industries and FY2012 recorded six industries by this measure. The top three industries in FY2014 were all services, and accounted for 64% of jobs; more than twice the 31% for all manufacturing industries.

The mix of industries incented can be as important as the number of jobs incented. Just as a good investor diversifies a portfolio between equities, bonds, or cash and further by the industries or sectors of each of those holdings, a good economic developer attempts to diversify the local economy through the use of different incentive programs. If only one program receives the majority or all of the funding, the ability to diversify is hampered.

Assumptions & Limitations

The economic output or economic impact analysis produced in the report is based on estimates of expected change in the size of an industry resulting from a direct effect change. The impact of that change is based on the existing relationships between industry spending patterns and household spending patterns. This assumes the new or expanding companies will behave like the existing companies, and new workers will behave like existing workers. Given the magnitude of data involved, VEDP modeled industries using the three-digit NAICS aggregation for industries (the most specific aggregation available in IMPLAN) and assumed the industry average wage for all projects.

Projects only generated benefits during the years they were active. A 1-year project generated tax revenues, value added, and economic output for 1-year, while a 10-year project generated benefits for 10-years. For multi-year projects, employment was assumed to occur evenly over each year of the project.

The text of HB1191 specified the economic impact analysis to be run by year completed. Since different entities offer different incentives with different requirements, those entities also track projects differently –

so the same project can end up in a different “year completed” depending on the entity (an additional explanation is included in the Limitations section). VEDP chose not to group projects which reported with different “year completed” because doing so would mix projects from different time periods from the entity perspective and distort these data.

The economic impact analysis was produced using data from multiple entities. In aggregating these data, VEDP did a basic quality assurance / quality check (QA/QC) to ensure the project-level data submitted summed to the program-level data. As stated, such a check is basic and not comprehensive. For the report, VEDP served as the aggregator of these data, which severely limits the ability to conduct comprehensive QA/QC. Other than what was captured by the summation flag, VEDP assumed all data submitted were correct, as each reporting entity owns these data and is responsible for conducting internal QA/QC. IMPLAN is an input-output model, so the input of incorrect data results in incorrect output.

Lastly, the economic impact analysis was conducted using current (not inflation adjusted) dollars because the underlying data were collected by different agencies at different times. Event years used were reflective of the project data submitted by entities.

Limitations

Understanding the limitations of data requested and reported is crucial, and extends beyond HB1191. Data limitations are important to consider before reviewing results, and important to keep in mind during analysis of results. Limitations are present in almost every study, analysis, or report; and are not limited to HB1191. As a result, this section is absolutely not intended to be a critique of HB1191. The intent of this section is to educate any persons reviewing this report on some limitations of the data, and therefore, the results.

Intent

The intent of the legislation is spot-on. Entities, legislators, and the public at-large both need and deserve a way to easily and clearly assess the effectiveness of different incentive programs. One way to do this is to create a level playing field through a single set of definitions and reporting requirements. A limitation of this approach is that in doing so, all incentive programs are treated equally. Suggesting *not* to treat all incentive programs equally may sound counterintuitive. However, it is important to be mindful that not all incentive programs are created equally.

Statutory requirements detailed in the Code of Virginia may not define incentive program effectiveness or success in the same manner that the HB1191 legislation does through the "shall include" verbiage. For instance, if the goal of an incentive program is *not* to measure success by the number of jobs created per taxpayer dollar, then judging that incentive program on that basis is neither fair nor a representative measurement of effectiveness or success. As a result, some of the variables in the Results section are not populated but included in the table due to the "shall include" stipulation.

Data Definitions & Duplications

By statute in the Code of Virginia, not all incentive programs have the same or similar goals or measures of effectiveness or success. A very large limitation of the data in this report is that many of the entities affected by HB1191, through no fault of their own, have failed to track or examine incentive programs by the definitions or measures specified as "shall include" in this legislation. As a result, many incentive programs have incomplete data when viewed through the requirements of this legislation. This is not to say that an affected entity does not track or measure an incentive program, but simply that it has not tracked data on the incentive program in the manner this legislation specifies.

Even if all affected entities historically tracked or measured incentive programs in a way that aligned with this legislation, it is likely that data definitions of variables would still present an issue. A single project may have multiple incentives from multiple entities over multiple periods of time. For example: suppose a single project receives three incentives from two different entities (in reality, this is fairly common). The first entity pays two incentives. The first incentive is paid in FY2012, and, based on the statutory requirements, gives the company 36-months to meet the agreed goals, at which time the project *for that incentive* is considered complete. The second incentive is paid beginning in FY2017 and carries through FY2022, and if the company meets the agreed goals, then *that incentive* is considered complete. The second entity pays one incentive, it is paid in FY2013, and gives the company 12-months to meet the agreed goals, at which time *that incentive* is considered complete.

For this project, which date should be used as the completed date? If we say *each date* is a completed date to track the project by, then the issue of double-counting becomes present. How is the economic impact of this project calculated? If each date is a completed date, then the project would be included in FY2012 *and separately* in FY2013 inputs (and eventually, FY2022), which means this single project would be included in the FY2012 and FY2013 outputs that estimate the economic impact to Virginia. In reality, this was a single project that, at a given snapshot in time, created a certain number of jobs, with estimates to tax revenue, economic impact, and indirect / induced jobs. Since this single project is considered to be completed in *both* FY2012 and FY2013, this also means the project is included in the estimates of economic impact *twice*. Keeping historic recommendations from JLARC on state incentive programs in mind, the goal is to *not* double-count or overestimate jobs, tax revenue, or economic impact. To this end, data duplication is an issue present in the inputs, and therefore, the results.

Program Funding

While the report provides a single number for benefit-to-cost ratio for each program required by HB1191, for reasons above, caution should be exercised in using this number to determine program funding. Having a single number that can easily and clearly represent the return per taxpayer dollar of an incentive program is ideal. However, the reality is that all incentive programs are created differently, and the benefit-to-cost ratio may not accurately portray the effectiveness of funding a specified program, or be quantified at all.

Even if all programs are created equally and the statutory measurements or definitions align, caution should still be used in determining funding amounts for incentive programs. For example: suppose one goal of HB1191 is to allocate the most funding to the program with the highest return per taxpayer dollar. Further suppose the Governor's Development Opportunity Fund has a return per taxpayer dollar three times higher than any other program. Since, in this example, all programs are created equally, and the statutory measurements or definitions align, one might be inclined to *only* fund the Governor's Development Opportunity Fund. A very real limitation of this approach is that different programs are designed to attract or expand different *types* of businesses. By only evaluating a program on the basis of return per taxpayer dollar, the value of business diversity – achieved through different designs, structures, and goals of incentive programs – can be greatly diminished, if not eliminated altogether.

Just as a good investor diversifies a portfolio between equities, bonds, or cash and further by the industries or sectors of each of those holdings, a good economic developer attempts to diversify the local economy through the use of different incentive programs. If only one program receives the majority or all of the funding, the ability to diversify is hampered.

Cost of Business

Building on the previous thoughts from Intent and Program Funding, when evaluating incentive programs, it is important to understand and keep in mind the true cost of doing business. While there is ongoing research and discussion regarding how much incentive programs truly help in landing or expanding a project, there is no current method to gain perfect information during the deal-making process that identifies whether or not a project would have landed or expanded on its own. While this information may become available after the fact, during the time that the deal is being negotiated, the information is asymmetric: one party (the prospect) has more knowledge than the other (the entity or entities involved in the deal). Additionally, states are often competing against each other for the project.

Keeping this in mind, it seems reasonable to presume that any agreed deal between the prospect and the entity awarding the incentive is representative of a best and final offer. If that offer is declined, the prospect either will not locate in the state, or not expand in the state. Of course, reality may be different and the prospect may have expanded without any incentive. But, such information is asymmetric in nature, and if ever discovered or known, is done so *ex-post*.

The entity or entities, on behalf of and with approval from the Commonwealth, make a best and final offer to a prospect: the prospect either accepts and proceeds with the project, or rejects and the project does not occur. To accept that statement also means that the true cost of doing business is the cost of *not* landing the project or expansion. For example: suppose an incentive program appears to have a lower return per taxpayer dollar than others. Further suppose this same incentive program was negotiated with the prospect and a best and final offer was made. The entity will pay a $100,000 incentive to the prospect to enter a legally binding agreement to create 100 jobs and either land or expand in a locality that has a high unemployment rate. The entity, being mindful of being judged on return per taxpayer dollar, does not want to increase the incentive offering – hence the amount representing a best and final offer.

There are two scenarios that might play out:

Scenario 1: The company agrees on this amount and enters a legally binding agreement to create 100 jobs at a specified average wage in the locality. The cost of the incentive program is $100,000 (plus any administrative costs).

Scenario 2: Unbeknownst to the entity, the prospect is willing to create 100 jobs at a specified average wage in the locality, but only if the incentive is at least $120,000. As mentioned, the entity is being mindful of being judged on the return per taxpayer dollar and does not want to increase the incentive offer beyond $100,000 (as it would increase cost and therefore lower the return per taxpayer dollar). The entity offer of $100,000 represents a best and final offer. The prospect rejects the offer and the project does not occur.

What are the costs? In the first scenario, the cost seems pretty clear. In the second scenario, the cost is not so clear. The inclination is to say the cost *would* have been $120,000 (plus any administrative costs). What is present in both scenarios, but clearer in the second, is that the true cost of doing business is the cost of *not* landing the project at all. The cost is the 100 jobs that are not created. The cost is the forgone state revenue resulting from those jobs. The cost is the dollar amount of state unemployment benefits being paid out to workers that otherwise would have had a job. The cost is a local economy that continues to have a high unemployment rate and/or a low labor force participation rate. The cost is not just $100,000 or

$120,000 (plus any administrative costs) if the offer is accepted, or $0 if the offer is not accepted – the pendulum swings much further than that.

Time Periods: Actuals

The HB1191 legislation specifies that affected entities report projected and actual jobs, wages, and capital investment for projects that reached completion or a performance milestone in the last three calendar or fiscal years. Data were requested from affected entities on a fiscal year basis (as this is the basis on which programs are funded).

For projects that completed five calendar or fiscal years ago, affected entities are required to report jobs at the time of completion and jobs at the end of the most recent calendar year. This presents a small issue (attempted to be rectified in instructions to entities, see Appendix B: HB1191 Supplement, Text) where a company may complete the incented project in June, yet be measured on the number of jobs five-and-half-years later in December (the end of the calendar year). Seasonal distortions also come into effect, as reporting the number of jobs and average wage as of the end of a calendar year (as a snapshot) can be higher than the average during the calendar year due to seasonal hiring or bonuses.

Additionally, affected entities are required to provide a final comparison of projects' rate of return at the time of completion and a five-year rate of return based on the most recent job levels. The latter would require either an additional survey, or an affected entity to have access to Virginia Employment Commission (VEC) Quarterly Census of Employment and Wages (QCEW) data.

One limitation of reporting in this manner is that a project is discounted as "the gift that keeps on giving". While a project may meet the statutory requirement for a given incentive, and be considered completed, more often than not the company and resulting jobs, remain and continue to offer an economic benefit to the Commonwealth even if no additional jobs are created and no additional capital investment occurs. Many entities view projected jobs, wages, capital investment along with projected costs and projected revenue beyond the completion date in making a decision on a project (depending on the incentive). Although reporting at five-years helps paint this picture, a significant time inconsistency problem may present itself. For example: projects that completed in FY2014 would report five-year data in FY2018. Some projects may not meet or exceed the benefit-to-cost ratio projected at the time of completion, but do

so in the years after. However, if this does occur for projects in FY2014, the earliest it could be seen or recognized is when FY2018 is captured by the reporting requirements.

Time Periods: Completions

Some projects actually complete *first* then receive payouts under an incentive program *ex-post*. This essentially creates two completion dates. The first is the date the project does complete, or meets the legally binding requirements as laid out in the signed performance agreement. The second is the date the project completes from an entity perspective (e.g. when a final payment – resulting from the project completing – is mailed). Footnotes have been added in cases where this occurs.

This creates an issue from a reporting perspective. For example: if a project meets the legally binding requirements as laid out in the signed performance agreement in FY2010, and as a result, payments under the incentive program begin in FY2012 and continue through FY2016, when or where are the completed results reported? How are the results reported? Are they reported the first year the payment is made? Are they reported beginning the first year the payment is made, and continued until the last payment is made? Are the project totals reported *each* FY, or are the totals reported as a proportion of the payment made in each year?

Appendix A: Additional Program Explanations

Additional information detailing affected entity programs is included in this appendix.

Although this information is relegated to the appendix, the text herein is important to understand the statutory requirements and goals of affected entity programs.

Not all entities submitted additional program explanations – such instances are noted where applicable.

Virginia Economic Development Partnership:

Advanced Shipbuilding Training Facility Performance Grant Program

Program Explanation

No additional program explanation provided.

Virginia Economic Development Partnership:

Aerospace Engine Manufacturing Performance Grant Program

Program Explanation

The Aerospace Engine Manufacturing Performance Grant Program is awarded as an incentive for an aerospace engine manufacturer to locate in the Commonwealth. The use of this tailored performance-based grant generally is influenced by the potential transformative effect of the project on Virginia or the region, the large amount of capital investment and job creation, the potential for supply chain investment and new jobs, and market penetration in the strategic sector for Virginia. The Aerospace Engine Manufacturing Performance Grant Program is made up of, among other things, several different grants:

- The Base Performance Grant is based on the achievement of specific capital investment and new job creation requirements by the qualified manufacturer.
- The Special Training Grant is for new qualified employees hired and trained by the qualified manufacturer.
- The Supplemental Training Grant is based on the achievement of specific capital investment and new job creation requirements by the qualified manufacturer.
- The Supplier Cluster Grant is based on the qualified manufacturer attracting qualified suppliers to locate or expand in the Commonwealth.
- The Project Executive Grant is based on an agreement to provide one FTE to work directly and continuously with the qualified manufacturer. The FTE assisted and guided the qualified manufacturer for items such as coordinating with the higher education institution(s); assistance in the grant process; and advising on location in consideration of available labor, skills of the available labor, and cost of the available labor.

Virginia Economic Development Partnership:

Clean Energy Manufacturing Incentive Grant Program

Program Explanation

The Clean Energy Manufacturing Incentive Grant Program ("CEMIG") may be used to provide an incentive for a clean energy manufacturer to grow in the Commonwealth of Virginia. This is a discretionary program in which grants are negotiated and offered to eligible entities as an economic development incentive to encourage these eligible entities to locate or expand in Virginia instead of another state or country. CEMIG awards may only be awarded to competitive projects and are awarded at the Governor's discretion.

Guiding Principles

CEMIGs are intended to be performance grants and are not intended to serve as front-end funding or financing to assist with initial infrastructure costs. Flexibility with respect to the timing of the payment of the grants is intended to take the variable job creation and capital investment timelines of eligible entities into consideration.

CEMIGs will only be awarded for basic sector projects—projects for companies or functions that provide new or additional income into Virginia and add to the gross state product, by providing goods or services at least one-half of which will be sold outside of the Commonwealth or will be paid for with funds from outside the Commonwealth.

Statutory Eligibility

There are different criteria for eligibility for a CEMIG depending on where the project locates and its sector:

- In general, the clean energy manufacturer must make capital investments of at least $50 million AND must create and maintain at least 200 new full-time jobs that pay at least the prevailing average annual wage in the chosen locality.
- If the clean energy manufacturer is locating to or expanding in a fiscally stressed locality, the above thresholds may be reduced at the discretion of the Governor.
- Clean energy manufacturers that are wind energy suppliers must make capital investments of at least $10 million AND must create and maintain at least 30 new full-time jobs that pay at least the prevailing average wage in the chosen locality. These thresholds may not be reduced. Further, a

wind energy supplier may only be eligible for a CEMIG if it will support a new or existing clean energy manufacturer in the wind energy industry located in Virginia.

Size of CEMIGs; Payouts

No more than $36 million of CEMIGs may be awarded and outstanding at any given time:

- It is expected that no single CEMIG will exceed $9 million.
- It is expected that each CEMIG will be paid in at least two annual installments, but no more than six. It is expected that a four-year payout will be the norm.
- It is expected that the CEMIG annual installments will begin to be paid no earlier than the fiscal year following the end of the calendar year in which the grantee entity has met its performance targets under the performance agreement.

For projects with significant state or regional interest, the Governor may approve CEMIGs in excess of $9 million, payable in less than two annual installments and/or payable as early as the date that the performance agreement is executed.

Virginia Economic Development Partnership:

Governor's Development Opportunity Fund

Program Explanation

The Governor's Development Opportunity Fund (GOF) is the premier discretionary economic development incentive in the Commonwealth. It is the Governor's tool for encouraging a project to come to or grow in the Commonwealth, rather than another state or county. The GOF provides either grants or loans to localities to assist in the creation of new jobs and capital investment in accordance with criteria established by legislation. The statutory provisions for the GOF can be found at Section 2.2-115 of the Code of Virginia of 1950, as amended (the GOF Act).

Guiding Principles

GOF grants are made at the discretion of the Governor with the expectation that grants awarded to a locality or authority will result in a favorable decision for Virginia. Grants are only awarded for basic sector projects—i.e. projects for companies or functions that provide new or additional income into Virginia and add to the gross state product, by providing goods or services at least one-half of which will be sold outside of the Commonwealth or will be paid for with funds from outside the Commonwealth.

Although the GOF may be used to make loans, the practice has been to use the GOF to make grants. GOF grants are intended to be performance grants and are not intended to serve as front-end funding or financing for an economic development project.

Statutory Eligibility

The GOF has several levels of qualification based on such measures as a locality's unemployment rate and poverty rate.

- General Eligibility Thresholds:
    - 50 new jobs / $5 million capital investment; or
    - 25 new jobs / $100 million capital investment
    - The average annual wage for the new jobs must be at least equal to the prevailing average annual wage in the locality, excluding fringe benefits

    - If the average annual wage is twice the prevailing average annual wage, the Governor may reduce the new jobs threshold to as low as 25
- Eligibility Thresholds in Localities with Above-Average Unemployment or Above-Average Poverty:
    - For a locality with an unemployment rate for the most recent calendar year for which such data is available above the average statewide unemployment rate for that calendar year or with a poverty rate for the most recent calendar year for which such data is available above the statewide average poverty rate for that calendar year
    - 25 new jobs / $2.5 million capital investment
    - Jobs may pay below the prevailing average annual wage in the locality, but must pay at least 85% of such prevailing average annual wage
    - If the average annual wage of the new jobs is less than 85% of the prevailing average annual wage, but the customary employee benefits are offered, the Governor may still award a grant or loan, but the Secretary of Commerce and Trade must furnish a written explanation to the Chairmen of the Senate Finance and House Appropriations Committees setting forth the urgent need to provide a grant or loan to that project
- Eligibility Thresholds in Localities with Above-Average Unemployment and Above-Average Poverty:
    - For a locality with an unemployment rate for the most recent calendar year for which such data is available above the average statewide unemployment rate for that calendar year and with a poverty rate for the most recent calendar year for which such data is available above the statewide average poverty rate for that calendar year
    - 15 new jobs / $1.5 million capital investment
    - Jobs may pay below the prevailing average annual wage in the locality, but must pay at least 85% of such prevailing average annual wage
    - If the average annual wage of the new jobs is less than 85% of the prevailing average annual wage, but the customary employee benefits are offered, the Governor may still award a grant or loan, but the Secretary of Commerce and Trade must furnish a written explanation to the Chairmen of the Senate Finance and House Appropriations Committees setting forth the urgent need to provide a grant or loan to that project

Size of GOF Grant; Payouts

The maximum amount of a GOF grant through June 30, 2015 is $1,500,000. The Governor may waive this limit for projects that the Governor has determined are of statewide or regional interest.

GOF Grants are typically paid up-front. As an up-front cash grant, the performance agreement for a GOF grant will require the grantee to repay some or all of the GOF grant if the performance metrics (typically, capital investment and new jobs) are not achieved by the performance date. Generally, the performance date will be three years after the GOF grant has been paid.

Virginia Economic Development Partnership:

Investment Partnership Grant subfund

Program Explanation

The Virginia Investment Partnership Grant Program (VIP) is used to encourage existing Virginia manufacturers or research and development services to continue to invest in Virginia and to provide stable employment opportunities by adding production capacity, utilizing state-of-the-art technology, and modernizing assembly processes. This is a discretionary program in which grants are negotiated and offered to qualified applicants as an economic development incentive.

Guiding Principles

VIP grants are available only to existing Virginia businesses to help them upgrade and modernize their facilities. It is not a "jobs" incentive. Indeed, the modernization of a manufacturing line may well mean a reduction in the number of jobs. That modernization, however, will protect the remaining jobs into the future, by making that facility more efficient and profitable.

VIP grants will only be awarded for basic sector projects—i.e. projects for companies or functions that provide new or additional income into Virginia and add to the gross state product, by providing goods or services at least one-half of which will be sold outside of the Commonwealth or will be paid for with funds from outside the Commonwealth.

Statutory Eligibility

To be eligible for a VIP grant, a minimum of $25 million in capital investment is required by an eligible existing Virginia manufacturer or research and development service. Although no minimum job creation is required for a VIP grant, the investment must not result in any net reduction in employment from the date of the completion of the capital investment through one year from the date of completion. New job creation associated with the capital investment may, however, result in an increased negotiated VIP grant benefit under the program.

Size of VIP Grants; Payouts

Except as provided in the next paragraph, no one VIP grant may exceed $3,000,000. In the aggregate, no more than $6 million in total VIP grants may be paid-out in any one year. The total aggregate amount of outstanding VIP grants outstanding since July 1, 2009 cannot exceed $30 million.

Although each VIP grant generally cannot exceed $3,000,000, the Governor may determine to award a VIP grant for as much as $5,000,000 for a project that meets more than one of the criteria set forth below:

- Desirable workforce characteristics (e.g. significant job numbers, especially high wage levels, or sophisticated skill sets)
- Strategic industry sector
- Significant impact on or transformation of the local/regional economy
- Significant R&D component, especially if in concert with Virginia's public higher educational institutions
- Considerable capital investment
- Likelihood of attracting a significant supply chain or other significant follow-on opportunities

Beginning with the fiscal year in which the grantee's notification of completion of the project has been on file at VEDP for three years (or two years, as described below), the VIP grant will be paid in five equal annual grant payments to the grantee. Although payouts of VIP grants generally will begin in the third year following the grantee's notification, in fiscally stressed areas, payouts can begin in the second year after the notification has been submitted and verified.

Virginia Economic Development Partnership:

Major Eligible Employer Grant subfund

Program Explanation

The Major Eligible Employer Grant Program (MEE) is used to encourage major basic employers to invest in Virginia and to provide a significant number of stable employment opportunities by either making a significant expansion to existing operations or constructing new ones. This is a discretionary program in which grants are negotiated and offered to qualified applicants as an economic development incentive.

Guiding Principles

The MEE grant program is a major discretionary economic development incentive meant to assist with the attraction of major economic development projects. It is available to existing Virginia manufacturers expanding their presence in the Commonwealth and to non-Virginia companies bringing their facilities to Virginia.

The MEE grant program is only open to basic sector employers – those employers that bring new or additional income into Virginia and add to the gross state product, by providing goods or services at least one-half of which will be sold outside of the Commonwealth or will be paid for with funds from outside the Commonwealth.

Statutory Eligibility

To be eligible for an MEE grant, a minimum capital investment of $100 million and the creation of at least 1,000 new full-time jobs are required. The job creation threshold can be lowered to 400 new full-time jobs, however, if the jobs pay at least twice the prevailing average wage in the locality in which the facility is located.

Size of MEE Grants; Payouts

An MEE grant may provide up to $25 million per project.

Beginning with the fiscal year in which the grantee's notification of completion of the project has been on file at VEDP for six years (or four years, as described below), the MEE grant will be paid in five-to-seven

equal annual grant payments to the grantee. Although payouts of MEE grants generally will begin in the sixth year following the grantee's notification, in fiscally stressed areas, payouts can begin in the fourth year after the notification has been submitted and verified.

Virginia Economic Development Partnership:

Semiconductor Memory or Logic Wafer Manufacturing Performance Grant Program

Program Explanation

No additional program explanation provided.

Virginia Economic Development Partnership:

Specialized Biotechnology Research Performance Grant Program*

Program Explanation

Two years ago the Commonwealth of Virginia provided $5.0 million of initial funding ($2.5 million in FY2013 and FY2014), to test and validate a unique bioscience strategy for Virginia. The pillars to this strategy were based on focusing Virginia's considerable assets in the biosciences at a few targeted markets and establishing critical mass by creating a next generation collaboration system among our major research universities and industry. Aggressive, but disciplined, execution of this strategy would give Virginia the critical mass that heretofore has only occurred in highly concentrated geographic centers (Boston, San Francisco, San Diego and Austin).

Initially, there were five Virginia research universities which formed the VBHRC participating universities. In January 2014, a sixth Virginia university (Old Dominion University) was added to this list. A precondition of the state's funding was that each of the VBHRC participating universities contributes $50,000 per year in cash funds tied to state funding. Moreover, per VBHRC bylaws, it will not consider any grant application unless at least two of the participating universities have substantive research involvement, matching cash funds are committed, and an appropriate industry partner is contractually bound in the collaborative, translational research undertaking.

Unprecedented levels of collaboration between our research universities and industry have resulted in twelve innovative bioscience projects being funded by VBHRC (nine in FY2014 and three to-date in FY2015). The total targeted investment by VBHRC for these 12 projects is $4.6 million and this equates to over $10.0 million when combined with matching fund commitments from major pharmaceutical companies, the National Institute of Health, angel investors and venture capitalists. They have co-invested with "the catalyst" to develop and commercialize these technologies. These projects address large unmet needs in neuroscience diseases including Alzheimer's, Parkinson's and brain cancer; metabolic diseases including diabetes, obesity and cardiovascular disease and in cancer including diagnostics and therapeutics. These all are multi-billion dollar markets. The short and intermediate term economic impact of these collaborations

* Program is not housed under VEDP and is managed by a separate 501(c)(3) non-profit corporation, Virginia Biosciences Health Research Corporation.

is considerable. The companies leading these projects forecast that over 350 jobs will be created, several new companies will be established and that big pharma will increase substantially its focus and corporate sponsored commitments in the Commonwealth.

Virginia Economic Development Partnership:

Economic Development Incentive Grant subfund

Program Explanation

The Virginia Economic Development Incentive Grant Program (VEDIG) assists and encourages companies to invest and to provide new employment opportunities by locating significant headquarters, administrative, research and development and/or similar service and basic sector operations in Virginia. This is a discretionary program in which grants are negotiated and offered to qualified applicants as an economic development incentive.

Guiding Principles

The VEDIG program is often deployed for significant corporate headquarters and operations facilities, in which a large number of high-paying jobs are created.

VEDIGs will only be awarded for basic sector projects—projects for companies or functions that provide new or additional income into Virginia and add to the gross state product, by providing goods or services at least one-half of which will be sold outside of the Commonwealth or will be paid for with funds from outside the Commonwealth.

Statutory Eligibility

The VEDIG program has two separate eligibility requirements. Companies located in a Metropolitan Statistical Area with a population of 300,000 or more in the most recently preceding decennial census, must:

- Create or cause to be created and maintained (i) at least 400 jobs with average salaries at least 50% greater than the prevailing average wage, or (ii) at least 300 jobs with average salaries at least 100% greater than the prevailing average wage; and
- Make a capital investment of at least $5 million or $6,500 per job, whichever is greater.

For all companies located elsewhere in Virginia, the company must create or cause to be created and maintained at least 200 jobs with average salaries at least 50% greater than the prevailing average wage, and make a capital investment of at least $6,500 per job.

Size of VEDIGs; Payouts

There is no limit on the size of a single VEDIG, other than the available size of the program. For VEDIGs awarded on or after July 1, 2010, in the aggregate, no more than $6 million in VEDIGs may be awarded for pay-out in any one year and the total aggregate amount of outstanding VEDIGs at any one time cannot exceed $30 million.

Beginning with the fiscal year in which the grantee's notification of completion of the project has been on file at VEDP for three years, the VEDIG will be paid in no fewer than five equal annual grant payments to the grantee.

Virginia Economic Development Partnership:

Customized Incentive Grants

Program Explanation

No additional program explanation provided.

Virginia Economic Development Partnership:

Virginia Jobs Investment Program*

Program Explanation

The Virginia Jobs Investment Program (VJIP), is committed to helping new and expanding Virginia businesses find qualified workers and develop their employees into a first-class, globally competitive workforce.

For 50 years, VJIP has been an integral part of Virginia's economic development effort, and is one of the most frequently utilized incentives for encouraging the expansion of existing companies and the attraction of new businesses to the Commonwealth. This critical incentive reduces the human resource development costs of new and expanding companies that are creating jobs, and is offered in some form by all of Virginia's competitor states.

VJIP continues to offer three component services:

- A New Jobs Program which includes new to Virginia as well as existing business expansion,
- A Retraining Program for companies updating facilities with new technology and processes, and,
- A Small Business New Jobs Program which shows the Commonwealths dedication to the entrepreneurial spirit.

In 2014, the program was moved from the Department of Business Assistance to the Virginia Economic Development Partnership to provide alignment with other Commonwealth incentive programs. Currently, the program supports 176 active economic development projects and 151 potential projects not currently carrying a program application or approved budget.

* Formerly under Department of Small Business and Supplier Diversity; under VEDP as of July 1, 2014.

Department of Housing and Community Development:

Enterprise Zone Job Creation Grant (JCG)

Program Explanation

The Enterprise Zone Program has the goal of offering distressed communities (rural and urban) a tool to increase their attractiveness as a place for job creation and private investment. The intent is to spur overall community economic growth and expansion by the use of two stand-alone but complementary incentives: job creation grant and real property investment grant. The availability of both grants provides benefits to the wide spectrum of activities that constitute economic development in Virginia's diverse distressed communities.

Per statute, all EZ grants are performance-based and by-right. Businesses apply for EZ incentives upon *completion* of a project. Companies do not provide up-front projections. Revenue and cost/ benefit based on revenue are not part of the qualification considerations. DHCD receives the actual number of jobs created. Firms use CPAs to attest to meeting the incentive's qualification requirement prior to submission of the application. Claw backs are based on staff monitoring company records after the grant has been received and discovering a CPA mistake. To date, no claw backs have been required for the JCG.

Department of Housing and Community Development:

Enterprise Zone Real Property Investment Grant (RPIG)

Program Explanation

The Enterprise Zone Program has the goal of offering distressed communities (rural and urban) a tool to increase their attractiveness as a place for job creation and private investment. The intent is to spur overall community economic growth and expansion by the use of two stand-alone but complementary incentives: job creation grant and real property investment grant. The availability of both grants provides benefits to the wide spectrum of activities that constitute economic development in Virginia's diverse distressed communities.

Per statute, the RPIG is based solely on private investment and does not include any requirement of job creation. This allows companies' maximum flexibility as the physical investment is not necessarily concurrent with the job creation. In addition, some RPIG projects may create jobs that are not eligible for the EZ-Job Creation Grant and it would be difficult to obtain that information from a company when it is not being incentivized. DHCD receives the actual amount of qualified real property investment a company has made. In addition, revenue and cost/ benefit based on revenue are not part of the qualification considerations. Because there are dollar caps on the amount of incentive received and there is sometimes pro-ration of the grants awarded, the RPIG grants show considerable leverage.

Per statute, all EZ grants are performance-based and by-right. Businesses apply for EZ incentives upon completion of project. Except for provision of technical assistance, DHCD does not work with companies ahead of application for incentives, so there are no up-front projections. DHCD receives the actual number of jobs created and/or the actual amount of qualified real property investment a company is made. Firms use CPAs to attest to meeting the incentive's qualification requirement prior to submission of the application. Claw backs are based on staff monitoring company records after the grant has been received and discovering a CPA mistake. To date, no claw backs have been required for the RPIG.

Virginia Tobacco Indemnification and Community Revitalization Commission:

Tobacco Region Opportunity Fund (TROF)

Program Explanation

Purpose of the TROF program is to provide performance-based monetary grants to localities in Virginia's tobacco producing region (as defined by the Commission) to assist in the creation of new jobs and investments, whether through new business attraction or existing business expansion.

TROF grants are evaluated in a manner consistent with the goals of the Commission and amounts are awarded commensurate with the project's impact on the community and/or region in which the project is locating.

Evaluation of award amounts is consistent throughout the region and is based on the following criteria: local unemployment rates, prevailing wage rates, number of new jobs to be created, capital investment levels, industry type, and the possibility of related economic multiplier effect.

The Commission monitors performance of each grant and requires repayment of the full or pro-rated grant amount if the agreed-upon performance is not met.

Goal: To revitalize the economies of tobacco dependent regions and communities, measured by job creation, workforce participation rate, wealth, diversity of economy, and taxable assets. All measurements listed are increased when a new or expanding business in the tobacco region creates new jobs that pay more than prevailing wage and adds taxable assets to the local tax rolls.

Virginia Tourism Authority:

Governor's Motion Picture Opportunity Fund (GMPOF)

Overview

The Motion Picture Association of America has reported that the film production industry in the United States supports 1.9 million workers in all 50 states. It contributes $41 billion to over 300,000 businesses yearly, along with more than $16 billion annually to federal and state taxes. The industry is one of the most highly competitive around the world, one of the few that consistently generates a positive balance of trade in virtually every county in which it does business. Because of its prominent east coast location, and its wealth of resources that are valuable for film production, Virginia is a prime place for the development of a vibrant industry in the production of film, television, documentaries, commercials, digital media and educational videos. Thirty-eight states, Washington, DC and Puerto Rico in addition to many countries worldwide have film incentive programs in order to take advantage of the potential of such a dynamic growth industry.

Virginia's incentive plan is dedicated to growing the film industry in Virginia. In a typical economic development scenario, growing a particular industry would involve recruiting new companies or expanding existing ones. However, the film industry tends to be project driven, with employees going from job to job. Film industry jobs tend to be higher paying than the average in Virginia, so established workers make a good living and contribute to the state's economy. Because of the nature of the industry, it's necessary to recruit individual film, television, commercial and documentary projects. The end result is the same. People are living in the state, raising families, and paying taxes. In addition, the state has many businesses including production companies, studios, equipment houses and postproduction companies that are a part of the industry, and these all have full-time, year round workers. Further, there are many other businesses indirectly impacted, many of which are small or local businesses , including restaurants, groceries, rental companies, hotels and motels, department stores and hardware stores to name just a few. The impact of the film industry is far-reaching. Therefore, it is important to look at the impact provided by incentives through a wider lens than just jobs created or tax revenue received.

Program Explanation

The Governor's Motion Picture Opportunity Fund (GMPOF) has a primary goal of working to increase Virginia's share of the motion picture industry, thereby providing income for local businesses, jobs and career opportunities for Virginia residents, and state and local tax revenue. It does this by recruiting projects from outside the state, and by supporting production within the state. The fund also includes provisions for workforce development, bringing work to distressed areas of the state, and utilizing certain projects to promote travel and tourism. GMPOF funds are not disbursed until the project is concluded and proof is submitted of qualified spending in the state. In summary, the goals of the GMPOF are: (1) project will meet or exceed its spending requirements for qualified Virginia expenses as stipulated in the performance agreement, where applicable (criteria will vary by project, and, if spending requirements are not met, the incentive amount may be prorated); (2) project will meet or exceed its projected number of Virginia hires; and (3) projects with significant advertising potential will provide ancillary deliverables that offer promotional value to the Commonwealth. Examples of these deliverables include television commercials, promotional videos, press conferences, and news releases.

The total awarded to nine projects for FY12, FY13 and FY14 was $3,828,236.00. This resulted in direct spending, by production companies in Virginia only, of $59,684,205.00 and total economic impact of $140,131,765.00. The labor income from these projects resulted in a direct impact of $11,648,902.00 and a total impact of $39,956,584.00 with 524 direct FTE jobs; 1,112, total. As a result, nine projects provided a total economic activity of $140 million in spending and almost $40 million in labor income in Virginia. According to the Virginia Employment Commission, the average weekly wages of these jobs were $1175 and $1131 for Motion Picture and Video Production (NAICS 51211) and Postproduction Services and Other Picture and Video Production (NAICS 51219), higher than the Virginia average weekly wage in 2013.

Return on Investment*

Unlike a financial instrument that pays a specified rate of interest over a specified period of time, determining the return on investment associated with a public policy can be difficult. The reasons for that difficulty are largely attributable to three issues. The first is opportunity cost. The "cost" of a tax credit to the state is foregone tax revenue that would never actually have been collected because the film production would never have come to the state without public subsidy, it is not clear that that "cost" is real. The

* Note: this conceptualization is based on a report created by Mangum Economic Consulting; Fletcher Mangum

second, has to do with the question – return on investment to whom? For example, from the perspective of the state, return on investment is simply a function of tax revenue out vs. tax revenue in. However, from the perspective of the citizens of the Commonwealth, from whom those tax revenues actually came, return on investment is more likely to be a function of taxes paid vs. labor income or overall economic activity generated. Finally, many of the "returns" associated with a public policy, such as increased tourism, may be difficult to quantify. However, an inability to measure them does not mean that they are not there. It is for these reasons, that a recent report by Ernst and Young entitled "Evaluating the effectiveness of state film tax credit programs" highlighted the following quote from a study conducted by the state of Massachusetts:

As we have pointed out in previous studies, it is important to place film tax incentives in the context of tax incentives generally. Most studies of tax incentives show that increases in economic activity induced by the tax incentives produce tax revenue that is lower than the amount of the tax expenditures themselves. ... Whether a tax incentive program is desirable is not solely a function of how much revenue it generates, but also whether the economic activity it causes is judged to be favorable for the Commonwealth.

To better account for these issues, the return on investment associated with major film and television productions should be evaluated from multiple perspectives. The aggregate state subsidy associated with these productions in Virginia, GMPOF, needs to be compared to the labor income and economic output that these productions ultimately generated. What these data show is that: 1) $0.10 in subsidies was expended for every $1.00 in labor income generated (this is equivalent to a 10.44 benefit to cost ratio); and 2) $0.03 in subsidies was expended for every $1.00 of economic output created (this is equivalent to a 36.60 benefit to cost ratio).

Note: graphic results on next page.

Title	GMPOF Amount	Labor Income	Spending in VA
Big Stone Gap	$600,000	$1,561,599	$5,378,805
Captain Phillips	$300,000	$1,943,456	$6,670,352
Cold Case aka Catch My Killer	$128,236	$459,773	$1,578,042
Killing Kennedy	$250,000	$3,299,315	$11,323,952
TURN - AMC pilot	$200,000	$3,082,459	$10,579,661
A Haunting	$500,000	$1,534,185	$5,265,654
Killing Lincoln	$250,000	$2,075,655	$7,123,397
Lincoln	$1,000,000	$19,083,303	$68,556,096
To Have and To Hold	$600,000	$6,916,839	$23,655,806
Total	**$3,828,236**	**$39,956,584**	**$140,131,765**

Public Subsidy per Outcome	GMPOF Amount	Incentives per Labor Income	Incentive Per Spending in Virginia
Big Stone Gap	$600,000	$ 0.38	$ 0.11
Captain Phillips	$300,000	$ 0.15	$ 0.04
Cold Case aka Catch My Killer	$128,236	$ 0.28	$ 0.08
Killing Kennedy	$250,000	$ 0.08	$ 0.02
TURN - AMC pilot	$200,000	$ 0.06	$ 0.02
A Haunting	$500,000	$ 0.33	$ 0.09
Killing Lincoln	$250,000	$ 0.12	$ 0.04
Lincoln	$1,000,000	$ 0.05	$ 0.01
To Have and To Hold	$600,000	$ 0.09	$ 0.03
Total	**$3,828,236**	**$ 0.10**	**$ 0.03**

Benefit/Cost	GMPOF Amount	Labor Income Benefit/Incentive	Spending in Virginia Benefit/Incentive
Big Stone Gap	$600,000	2.60	8.96
Captain Phillips	$300,000	6.48	22.23
Cold Case aka Catch My Killer	$128,236	3.59	12.31
Killing Kennedy	$250,000	13.20	45.30
TURN - AMC pilot	$200,000	15.41	52.90
A Haunting	$500,000	3.07	10.53
Killing Lincoln	$250,000	8.30	28.49
Lincoln	$1,000,000	19.08	68.56
To Have and To Hold	$600,000	11.53	39.43
Total	**$3,828,236**	**10.44**	**36.60**

Awareness and the ever-changing Tourism Product

Today, Destination Management Organizations (DMOs) have a significant role in promoting and enhancing the image of destinations from a neutral lens. Several DMOs have engaged in film & movie projects in order to achieve their regions' maximum appearance in films since film and television productions can increase awareness of a state and its attractions and can create a loyal following of fans. In the case of Virginia, several movies have impacted the tourism product beyond the box-office sales – such as the recent movie, Lincoln, by Steven Spielberg throughout the Richmond and Petersburg areas. These movies are still being promoted throughout the state through tours – Lincoln Movie Tour, Movie and Historic Tour, Lincoln in Richmond Tour and Walk in Lincoln's Final Footsteps are some examples to the ever-evolving tourism product. Similarly, a national poll conducted in July 2013 indicated that almost 1 in 4 of the general public were aware that the movie Lincoln was filmed in Virginia (TNS Omnibus Survey, July 2013)

Advertising Impact

When a film has a strong connection to the area in which it is shot, there are great opportunities to cross-promote both the locality and the film. Virginia has been at the forefront of working with production companies and studios to use films to promote travel and tourism. This technique was successfully accomplished in a comprehensive marketing plan that used the feature film The New World to promote the 400th anniversary of the founding of Jamestown. In the case of Lincoln, the state realized more than $800 million of promotional value for Virginia tourism as a result of the film. More than 6000 news articles appeared that mentioned Lincoln and Virginia. The estimated earned media value of this free PR was $64 million. In addition, the studio produced a 3-minute promotional video about Virginia which was included on every Blu-ray version of the film which had a media equivalency of $738 million. The National Geographic television movie Killing Lincoln, produced and broadcast a Virginia travel commercial each time the film was shown. If VTC had purchased these commercials, the cost would have exceeded $400,000 with an additional $100,000 in ad production costs. Similarly, the 15 – second ad which was broadcast during every episode of season one of the AMC series had an ad value of $500,000.

Virginia Port Authority:

Port of Virginia Economic and Infrastructure Development Zone Grant

Program Explanation

No additional program explanation provided.

Innovation and Entrepreneurship Investment Authority:

Growth Acceleration Program

Program Explanation

The Growth Acceleration Program (GAP Fund Program) was established to meet the early stage capital demands challenging the Commonwealth's most promising science- and technology-based start-ups whose funding requirements could not be met by traditional financing means. The GAP Fund Program places convertible debt and equity investments in Virginia's high-growth potential science and technology-based companies. As a technology investor, the GAP Fund Program invests in companies whose technology provides a significant blocking factor against competition. The GAP Fund Program typically deploys $200K in two tranches in early stage transactions with limited follow-on investment capacity, realizing substantial leverage from concurrent and downstream private angel and venture investors. CIT GAP Funds utilizes a two-level approach to investment actions with all deal sourcing and initial due diligence performed by CIT's internal Investment Team and final investment decisions made by leading regional venture capitalists, angel investors and entrepreneurs on the GAP Fund Program's Investment Advisory Board (IAB). Post-close, CIT plays an active role in portfolio company development as a board of observer and advisor and maintains a rigorous portfolio reporting process, rolling up key accomplishments and risk areas of all companies on a quarterly basis. Since 2005, the GAP Fund Program has received acknowledgement by Entrepreneur Magazine as a "Top 100 Venture Fund." In 2012, CIT GAP Funds received a Northern Virginia Technology Council "Entrepreneur Navigator Award" for its work in support of the entrepreneurial community.

The GAP Fund Program Investment Team consists of six (6) individuals whose backgrounds encompass operating roles in start-ups and established tech companies, management consulting, angel financing and corporate and institutionally-backed venture investing and the three major disciplines in which CIT commonly invests – technology, cleantech and the life sciences. In order to provide continuous outreach to science and technology-based start-ups across the Commonwealth, Investment Team member have been assigned specific responsibility for seven (7) major regions of the state including Northern Virginia, Richmond, Hampton Roads, Roanoke-Blacksburg, Charlottesville, Southside Virginia and Far Southwest Virginia.

Complementing the GAP Fund Program is the GAP Fund Investment Advisory Board (IAB), an umbrella group consisting of dedicated Investment Committees aligning with CIT GAP Funds' three major investment themes – technology, cleantech and life sciences. These committees provide outside validation the CIT GAP Funds investment process requisite to concurrent and downstream participation in CIT GAP Funds portfolio companies by the private investment community. Membership on CIT's IAB consists of leading regional entrepreneurs, angel and strategic investors and venture capital firms including: New Enterprise Associates, Grotech Ventures, Valhalla Partners, Revolution Ventures, Harbert Venture Partners, HIG Ventures, Edison Ventures, In-Q-Tel, Intersouth Partners, SJF Ventures, Carilion Clinic, Johnson & Johnson, General electric and Alpha Natural Resources.

Underwritten by an annual appropriation from the Virginia General Assembly, the GAP Fund Program functions as a double-bottom-line investment fund focused on creating significant economic outcomes for the Commonwealth, entrepreneurs and co-investors, with the goal of recovering investment capital for redeployment. Since inception, the GAP Fund Program has considered investing in over 3,000 companies and has invested $14.4M in 114 seed and early stage technology, life science, and energy companies across the Commonwealth of Virginia.

Overall Goals of the Program

The GAP Fund Program investments are governed by the goal of developing the next generation of Virginia's science and technology economy and the entrepreneurial ecosystem required to support that economy. To this end, the GAP Fund Program places equity and convertible debt investments in tech, cleantech and life science companies at the earliest stages of company formation, in a manner conducive to stimulating significant private investment or "leverage cash" as a result of CIT's deployment of public dollars. Fundamental to CIT's ability to successfully deliver private capital is that, unlike grant programs, CIT holds an ownership position in the investee company and maintains that ownership for a multi-year holding period of indeterminate length while the company grows in scope of operations and value. CIT recovers GAP Program investments only upon the sale of the company.

Over the 10-year life of the program, CIT has found that the following metrics most closely align with program objectives:

- *Venture and Angel Capital Attracted* – Venture and angel capital dollars invested in the GAP Fund Program's portfolio companies as a result of CIT investing dollars appropriated to IEIA. CIT calculates its annual leverage factor by dividing the total of venture and angel capital by all GAP Fund Program portfolio companies in a given year by the dollars deployed in new investments in that year.
- *Annual Leverage Factor* – Represents the GAP Fund Program Return; the ratio of capital returned or anticipated to return to CIT, as a result of portfolio companies being acquired, divided by total GAP Fund Program dollars deployed.

Appropriation and Performance Against Program Metrics

CIT was appropriated $13.4M from FY12 to FY14 (FY12 – $5M, FY13 – $4.2M, FY14 - $4.2M) to fund equity investment in selected companies and direct costs of the program. Of this $13.4, CIT spent $3.9M on direct costs, invested $7.8M invested into seed and early stage companies, and reserved $1.7M for second tranche and follow-on investment in companies that met their performance metrics.

Venture and Angel Capital Attracted. For the period FY12-FY14, the GAP Fund Program achieved the following annual leverage cash totals:

- FY12 – In FY12, the GAP Funds Program invested $2.1M. In FY12, CIT attracted $24.6M in angel and venture dollars – from both FY12 and pre-existing investments, for an annual leverage factor of 11.7.
- FY13 - In FY13, the GAP Funds Program invested $2.1M. In FY13, CIT attracted $37.5M in angel and venture dollars – from both FY13 and pre-existing investments, for an annual leverage factor of 17.9.
- FY14 - In FY14, CIT GAP Funds invested $3.6M. In FY14, CIT had attracted $102.8M in angel and venture dollars – from both FY14 and pre-existing investments, for an annual leverage factor of 28.5.

GAP Fund Program Return. By the end of FY14, CIT had invested a total of $14,378,710.25, program inception-to-date and had a projected capital return of $18,436,026.97 on invested funds, resulting in a capital return factor of 1.3. This number indicates that CIT is managing Virginia's GAP Funds Program

appropriation consistent with its goal to return funds to preserve the base of funds for future investment in Virginia's early stage companies.

Appendix B: HB1191 Supplement, Text

Virginia Economic Development Partnership (VEDP) authored a supplement to HB1191 that was distributed by the Secretary of Commerce and Trade to affected entities on July 1, 2014.

The goals of the supplement were:

- To offer the signed version of HB1191 text in an easily digestible format,
- To standardize content requirements across affected entities,
- To standardize data definitions across affected entities,
- To offer a short “FAQ” or list of anticipated questions resulting from the legislation, along with explanations, and,
- To be proactive in communicating about the signed legislation.

The full text of the supplement is included in the following pages.

Data Requirements for Compliance with HB1191:
Assessing Effectiveness of Economic Development Incentive Programs
June 30, 2014

Virginia Economic Development Partnership (VEDP) has been tasked with assembling a report on the economic impact of all projects that fall within the scope and timeframe as specified by HB1191, passed during the 2014 session. Agencies, programs, and subsequent projects affected by HB1191 may be found in the text of the legislation. To make understanding the reporting requirements of HB1191 easier, an edited version is below. The edited version maintains the content of HB1191 but breaks requirements into sections and sub-sections. References to these sections are contained herein. Finally, VEDP met with the Joint Legislative Audit and Review Commission (JLARC) on June 18, 2014 to gain a better insight and understanding of the technical terms and definitions used throughout HB1191, as well as the intent of some of the requirements.

Goal: The intent of HB1191 is to improve and quantify return on incentives (ROI). Affected agencies, programs, time periods covered, and suspense dates are specified in the legislation. An edited version of HB1191, which breaks requirements of the legislation into sections for easier digestion, is below. The role of VEDP in this process is to aggregate data provided by agencies by program, and to conduct an economic impact analysis based on these data.

VEDP has created a data entry form (Excel) to standardize data provided by agencies. Agencies may find that data requested based on the legislation might not be captured, computed, or even apply to affected programs. VEDP understands such an outcome is likely. Part of the outcome from this process is to suggest improvements, whether that be ways to improve the legislation itself (does intent of legislation match legislation), ways to improve data quality, or ways to improve data capture and reporting. To this end, VEDP will work closely with agencies to incorporate any suggestions into the report.

The following page includes the edited version of HB1191. Following this is a short Q&A or FAQ that may help answer or resolve initial questions. This is by no means exhaustive, and are reflective of initial questions VEDP had. Agencies with different programs and data may have questions that, by design, VEDP did not think of. If an agency has questions, VEDP will assist in any way possible and if unable to, may reach out to JLARC.

Questions

If you have any questions, please contact Michael Gilbert at (804) 545-5773 or mgilbert@yesvirginia.org. Data quality is crucial; garbage in is garbage out. Poor data lead to poor conclusions which lead to poor policy decisions.

VIRGINIA ACTS OF ASSEMBLY -- CHAPTER

An Act to amend the Code of Virginia by adding a section numbered 2.2-206.1, relating to annual report; evaluation of the effectiveness of economic development incentive grants.

[H 1191]

Approved

Be it enacted by the General Assembly of Virginia:

1. That the Code of Virginia is amended by adding a section numbered 2.2-206.1 as follows:

§ 2.2-206.1. Economic incentive grant programs; responsibilities of the Secretary.

A. By July 15 of each year, the agencies listed in subdivisions B 1 through 7 shall report the information outlined in subsection C to the Secretary of Commerce and Trade for the three prior calendar or fiscal years, as applicable, so that the Secretary may develop and issue a report on the effectiveness of economic development incentive grant programs administered by the Commonwealth in meeting performance goals and stimulating economic activity.

By September 15 of each year, the Secretary shall submit the draft report to the Joint Legislative Audit and Review Commission for its review of the accuracy of the information contained in the report and the effectiveness of the evaluation methods.

The Joint Legislative Audit and Review Commission shall provide its comments on the content of the report and the Secretary's analysis to the Secretary, and such comments shall be included as an appendix to the final report, which shall be submitted to the Chairmen of the House Appropriations and Senate Finance Committees by November 15 of each year.

B. The report shall include a review of allocations from the following economic development incentive programs and funds for the previous three calendar or fiscal years, as applicable, as follows:

1. Virginia Economic Development Partnership:
    a. Advanced Shipbuilding Training Facility Grant Program,
    b. Aerospace Engine Manufacturing Performance Grant Program,
    c. Clean Energy Manufacturing Incentive Grant Program,
    d. Governor's Development Opportunity Fund,
    e. Investment Partnership Grant subfund,
    f. Major Eligible Employer Grant subfund,
    g. Semiconductor Memory or Logic Wafer Manufacturing Performance Grant Program,
    h. Specialized Biotechnology Research Performance Grant Program,
    i. Economic Development Incentive Grant subfund, and
    j. any customized incentive grants;

2. Department of Small Business and Supplier Diversity: Virginia Jobs Investment Program;

3. Department of Housing and Community Development:
    a. Enterprise Zone Job Creation and
    b. Real Property Investment Grant Programs;

4. Tobacco Indemnification and Community Revitalization Commission: Tobacco Region Opportunity Fund;

5. Virginia Tourism Authority: Governor's Motion Picture Opportunity Fund;

6. Virginia Port Authority: Port of Virginia Economic and Infrastructure Development Zone Grant Program; and

7. Innovation and Entrepreneurship Investment Authority: Growth Acceleration Program.

C. The report shall assess the effectiveness of allocations made for each program listed in subsection B. Each agency administering programs outlined in subsection B shall submit the applicable data regarding jobs, wages, capital investment, and any other related information requested by the Secretary of Commerce and Trade for purposes of evaluating economic development incentive programs in meeting their performance goals and stimulating economic activity.

For each program, the report shall include

(i) an explanation of
    a. the overall goals of the program,
    b. describing whether the program
        i. is focused on job creation and capital investment or
        ii. investments are governed by ancillary goals of community development and revitalization or the development of a particular industry sector in the Commonwealth;

(ii) for each of the previous three calendar or fiscal years, as applicable, summary information, including
    a. the total amount of grant funding made available for the program,
    b. the total dollar amount of the grants awarded,
    c. the total number of grants awarded,
    d. the average dollar amount approved per job and average wage expected, where applicable, and
    e. any grant amounts repaid;

(iii) for each of the three previous calendar or fiscal years, as applicable, for projects that have reached completion or a performance milestone, an aggregate comparison of the projects' performance measures, including
    a. the actual number of jobs created,
    b. the actual average wages paid, and
    c. the actual amount of capital investment, with the
    d. expected number of jobs,
    e. assumed average wage, and
    f. planned capital investment when the grant awards were made, and
    g. the proportion of projects that met or exceeded the project-specific goals relevant to the program;

(iv) for each of the three previous calendar or fiscal years, as applicable, for all projects that have reached completion or a performance milestone, an aggregate assessment of the projects' actual rate of return on the Commonwealth's investment compared with the expected rate of return when the grant awards were made;

(v) for each of the three previous calendar or fiscal years, as applicable, for all projects that have reached completion or a performance milestone, an aggregate estimate of the projects' total economic impact measured by the Virginia Economic Development Partnership Authority on the basis of estimated state tax revenues generated directly or indirectly by the projects, where applicable; and

(vi) for all projects that reached completion five calendar or fiscal years, as applicable, prior to the year of the report, an aggregate final comparison of

a. jobs reported by companies at the time of completion and jobs at the end of the most recent calendar year, and

b. an aggregate final comparison of the projects' rate of return at the time of completion and a five-year rate of return based on the most recent job levels.

Q&A or FAQ re: HB1191

What is the data entry form?

The data entry form is an Excel workbook with multiple worksheets. The data entry form is a standard form that all agencies receive. There are a number of variables in the data entry form, and accordingly, some of these may not be applicable. A number of these variables capture the same data but at different periods of time. These variables include (but are not limited to) total cost, total revenue, net revenue, benefit-cost-ratio, jobs, average annual wage, and capital investment. These variables repeat over three required time periods: original projection (values at the time of approval), actuals (values at the time of completion), and 5-years (values 5-years from the time of completion). Though a fourth period is not required, a possible suggestion for future improvement could be to capture a "to-date" value, which would reflect the values of the variables today.

For example:

- Project ABC was approved on July 23, 2012 and completed on January 23, 2014:
    - What were the projected amounts for variables above at time of approval? (variables affected end in _proj)
    - What were the actual amounts for variables above at time of completion? (variables affected end in _act)
    - What were the actual amounts for variables above 5-years after completion? (variables affected end in _5yr)
    - NOT REQUIRED BUT POSSIBLE SUGGESTION FOR FUTURE ITERATIONS: What were the actual amounts for variables to-date (that is, through today)? (variables affected end in _td)

Note in the example above, the actual amounts for variables 5-years after completion cannot be computed, since 5-years has not passed since completion (for data like this, please enter #N/A in the data entry form in the respective field). A to-date value could shed light on projects that have completed but have not hit 5-years OR that have completed, have hit 5-years, and continue to expand and generate revenue for the Commonwealth.

The data entry form should be used on a program-by-program basis. If the responding agency has multiple programs affected by HB1191, then a separate data entry form should be submitted for each program.

The data entry form may appear a bit overwhelming at first. VEDP is here to help. Many questions can be resolved by consulting the included data dictionary, particularly questions on variable definitions.

What are the incentive goals within the data entry form?

HB1191 measures each program on the number of projects that have met or exceeded the goals of the program. In the typed explanation of the program, these goals should be clearly identified. The data entry form is designed to correspond to these goals (and their order). As a default, the data entry form allows up to five goals. If your program has more than five goals, please contact Michael Gilbert at VEDP.

For example:
Project Cornucopia (Butterball Turkey) received an incentive under an affected program. The goals of the affected program (as detailed in the typed explanation of the program) are jobs (Goal 1), average wage (Goal 2), and capital investment (Goal 3). Based on these goals, Project Cornucopia stated they would

create 50 jobs at an average wage of $45,000 and spend $2,000,000 in capital investment. At completion, Project Cornucopia created 55 jobs at an average wage of $46,785 and spent $1,500,000 in capital investment. Therefore, Project Cornucopia met or exceeded Goal 1, met or exceed Goal 2, and *did not* meet or exceeded Goal 3. This example corresponds to the first example in the data entry form – since there was not a fourth or fifth goal for the program, #N/A is entered in these fields.

What is the data dictionary?

The data dictionary is a worksheet within the data entry form. The purpose of the data dictionary is to provide a more detailed explanation of a specific variable. Data dictionaries may appear to be overwhelming, but they can be very useful. A data dictionary also helps to standardize definitions but this may not be wholly achieved. If an agency has a question about a variable that the data dictionary does not address, please reach out to VEDP.

What are QCEW data?

Quarterly Census on Earnings and Wages (QCEW) data provide a summary view on employees, establishments, total wages, average weekly wage, and average annual pay at the state and local level. While QCEW are published by the Bureau of Labor Statistics (BLS), detailed data at the company level may be obtained from the Virginia Employment Commission (VEC). In order to receive these data from the VEC, a confidentiality agreement must be signed and on file with the VEC for each user accessing and querying data. An individual at an agency affected by HB1191 must have such agreement on file with the VEC. If one does not exist, that individual cannot access or query QCEW data, and any data VEDP accesses or queries cannot be shared with that individual at the agency.

Agencies may wish to use QCEW data provided by the VEC in the absence of data obtained on a project directly from the company. If agencies do not have access to QCEW data, VEDP strongly recommends such access be set up sooner than later. QCEW *should not* be used in lieu of primary data obtained directly from the company. This is because QCEW data are reflective of individuals the company pays unemployment insurance on. Additionally, a company may have multiple locations throughout the Commonwealth, but only report data from one location – such an aggregation would have an effect on employment figures and average wages among others.

What level of detail should we report and provide to VEDP?

HB1191 requires agencies to report data on a program-level. However, since a given project could (and often does) receive incentives from more than one agency, data must be reported at the project-level to avoid double-counting (e.g. costs, revenues, jobs, and others). An agency can set the program data worksheet so that it sums from the project-level (project data worksheet) and auto-fill many of the requested variables.

When entering detail, it is crucial that the agency and VEDP have the same understanding of the variable and definition. If an agency has any question about a variable or definition, please contact VEDP, we are here to help.

Data reported using different definitions will interfere with any process that removes double-counting to measure overall economic impact of all projects across all programs. With this in mind, it should not matter whether costs, revenues, and jobs (among others) are reported as totals across all programs or as an amount proportionate to the respective program *so long as* all agencies use the same method and definition. In conducting a survey, a company likely reports totals across all programs rather than as an

amount proportionate to the respective program. For this reason, VEDP asks that data agencies report represent totals across all programs.

For example:

- Project ABC receives two incentives from two agencies:
    - The first agency reports total cost of the entire project across all programs, while the second agency reports total cost of the project across each program;
    - The first agency reports total revenue of the entire project across all programs, while the second agency reports total revenue of the project across each program.

The discrepancy in definition(s), and therefore, what values data entered in the data entry form are representing, would cause a negative chain-reaction as VEDP aggregates data to estimate total economic impact. If agencies understand and report data on the same definitions, data quality is greatly improved.

What calendar should we use to provide data?

HB1191 allows agencies to report on a fiscal year or calendar year basis. Since incentive programs are funded on a fiscal year basis, VEDP requests agencies report data on a fiscal year basis.

What are program explanations?

HB1191 (Section C, subsection i) requires program explanations and should be completed by the agency responsible for the respective program. The agency should attach a Word or Word-compatible file with content that meets these requirements exactly how the agency wishes it to appear in the final report. As the aggregator of content, VEDP will simply copy and paste the content into the final report, only making modifications to the style of the text and not to the content itself.

VEDP intends to include a couple of sentences describing a program with the agency "snapshot" of summary data on the program. Each snapshot is intended to be 1-page. Since describing programs and their explicit goals can be complex, an agency may wish to provide an explanation longer than a couple of sentences. This is perfectly acceptable, and such "detailed" program explanations will be included in the report after the program snapshots.

Essentially, an at-length program explanation will be included (and in some ways is required by HB1191, see legislation). In addition, VEDP also requests agencies provide a couple of terse sentences summarizing the program and the performance goals of that program. If more length is required to explain the specific performance goals of the program, the agency should feel free to do so in the at-length explanation.

What is "rate of return of investment" and how is that calculated?

HB1191 (Section C, subsection iii) specifies "… an aggregate assessment of the projects' actual rate of return on the Commonwealth's investment compared with the expected rate of return when the grant awards were made." VEDP expresses "rate of return" on "investment" as a benefit-to-cost ratio (where the benefit-to-cost ratio = total estimated revenue / total cost). This shows that for each $1 of incentive grant (cost) the Commonwealth is estimated to receive $X (revenue). For example: if the total cost of the project was $100,000 and the total estimated revenue of the project was $500,000 then the benefit-to-cost ratio would be $500,000 / $100,000 = 5.0, or for each $1 the Commonwealth provided as an incentive grant, the Commonwealth is estimated to receive $5.

The cost of the program should be equal to the amount of the incentive awarded at each time interval. If a company breaks the contractual obligation of any of the performance goals, and triggers a clawback of some or all of the incentive, a field is included in the data entry form to specify this action. However, this should not affect the initial cost of the program or amount of incentive awarded (i.e. do not subtract the clawback from the initial cost and enter that amount in cost field). Revenue should be equal to the total amount of revenue estimated to have been received by the Commonwealth as a result of the program at each time interval.

The data entry form is configured so that as long as the agency enters estimated cost and estimated revenue (at any specified time period) the benefit-to-cost ratio will automatically be calculated.

Should I consider seasonal effects and if so, how should I handle them?

HB1191 (Section C, subsection v) specifies "… and aggregate final comparison of jobs reported by the companies at the time of completion and jobs at the end of the most recent calendar year." Seasonal factors can distort data reported at the end of the most recent calendar year.

For example:

- The ABC Widget Factory project was completed in June 2010. At the time of completion, ABC Widget Factory employed 150 people. ABC Widget Factory sells Christmas widgets, and during the fourth quarter of a calendar year adds 500 seasonal workers to fulfill orders.

If a comparison is made from 150 people to 500 people, any percent change or average annual growth rate will be distorted by the seasonal employment. Likewise, any project that completes in December, but relies on seasonal employment during the summer (e.g. a pool manufacturer, amusement park operator) will also be distorted. QCEW data do not make seasonal distinctions.

Therefore, VEDP recommends the following:

- If employment data from the project are obtained through a survey or other primary research, repeat this process as of 5-years later using the same methodology.
- If employment data from the project are obtained through QCEW, repeat this process as of 5-years later using the same methodology.
- If employment data from the project were first obtained through a survey, but unable to be obtained from a survey 5-years later, use QCEW data. Note the limitations of QCEW data as specified earlier.
- For either method, a company may provide employment data as a snapshot in time, or as a four-quarter moving average – either are acceptable so long as the 5-year employment data reflect that same measure or calculation. Year-over-year snapshots price-in any seasonal distortion since only the year changes and the point in time (month or quarter) being compared is the same. A four-quarter moving average will eliminate any seasonal distortion since it is an average across all seasons.

I still have additional questions, who should I contact?

Please contact Michael Gilbert at (804) 545-5773 or mgilbert@yesvirginia.org

Appendix B: HB1191 Supplement, Data Requested

Virginia Economic Development Partnership (VEDP) created an Excel workbook with multiple worksheets to capture data required by HB1191 that was distributed by the Secretary of Commerce and Trade to affected agencies on July 1, 2014.

The goals of the data request were:

- To satisfy the data requirements of HB1191,
- To provide a data dictionary to standardize data definitions across affected agencies,
- To capture data on a program basis to provide results as required by HB1191,
- To capture data on a project basis to identify projects that received multiple incentives from one or more agencies and eliminate double-counting when estimating economic impact, and,
- To be proactive in communicating about the signed legislation.

The design of the Excel workbook and multiple worksheets should not be interpreted as any type of comprehensive database. At best, it is a primitive and rudimentary one. A comprehensive database would require months to design, build, test, and implement. Items such as entity relationship diagrams (ERD) and data flow diagrams (DFD) would be necessary. Before any of that could occur, an established, documented, and repeatable process would need to be created.

The variables and definitions requested from agencies are included in the following pages.

Project Table	
Variable	Description
ID_proj#	Primary key for a given project - LEAVE BLANK
ID_ui#	Foreign key from QCEW table
agy_name	Name of agency responsible for incentive (program)
proj_name	Project name (if applicable)
legal	Company name from QCEW table
proj_yearstart	Fiscal year project started
proj_datestart	Typically equal to variable incent_datepd
proj_yearcomp	Fiscal year project completed
proj_datecomp	Date of project completion
id_incent#	Foreign key from Program Table
incent_name	Name of incentive (program) awarded
incent_amt	Amount of incentive (program) awarded
incent_perjob	Incentive amount per job
incent_datepd	Date incentive paid
incent_amtclaw	Amount of incentive clawedback due to company not meeting contractual obligation of performance
incent_flag_claw	Flag if a company experienced a clawback, 1 = yes, 0 = no
incent_flag_goal1	Did project meet or exceed project-specific goals relevant to the program? 1 = yes, 0 = no
incent_flag_goal2	Did project meet or exceed project-specific goals relevant to the program? 1 = yes, 0 = no
incent_flag_goal3	Did project meet or exceed project-specific goals relevant to the program? 1 = yes, 0 = no
incent_flag_goal4	Did project meet or exceed project-specific goals relevant to the program? 1 = yes, 0 = no
incent_flag_goal5	Did project meet or exceed project-specific goals relevant to the program? 1 = yes, 0 = no
incent_flag_mult	Did this project receive multiple incentives from multiple agencies? 1 = yes, 0 = no
totcost_proj	Original projected total cost for the project in specified program
totrev_proj	Original projected total revenue for the project in specified program
netrev_proj	Original projected net revenue for the project in specified program
bcr_proj	Original benefit-cost ratio projected for the project in specified program
jobs_proj	Original number of jobs projected at time of approval for the project in specified program
avganwg_proj	Original average annual wage projected at time of approval for the project in specified program
totwage_proj	Original total wage projected at time of approval for the project in specified program
capex_proj	Original capital investment projected at time of approval for the project in specified program
totcost_act	Actual total cost for the project in specified program at time of completion
totrev_act	Actual total revenue for the project in specified program at time of completion
netrev_act	Actual net revenue for the project in specified program at time of completion
bcr_act	Actual benefit-cost ratio for the project in specified program at time of completion
bcr_flag	Did actual benefit-cost ratio of the project at time of completion exceed original benefit-cost-ratio projected at time of approval? 1 = yes, 0 = no
jobs_act	Actual number of jobs created for the project in specified program at time of completion
avganwg_act	Actual average annual wage for the project in specified program at time of completion
capex_act	Actual capital investment for the project in specified program at time of completion
totcost_5yr	Actual total cost for the project in specified program 5-years after completion
totrev_5yr	Actual total revenue for the project in specified program 5-years after completion
netrev_5yr	Net revenue for the project in specified program 5-years after completion
bcr_5yr	Benefit-cost ratio for the project in specified program 5-years after date incentive paid
jobs_5yr	Jobs for the project in specified program 5-years after completion (note: either a four quarter moving average or year-over-year (YOY) snapshot is ok so long as it matches metric used to calculate jobs at time of completion)
avganwg_5yr	Average annual wage for the project in specified program 5-years after completion
capex_5yr	Capital investment for the project in specified program 5-years after completion

Program Table	
Variable	Description
ID_incent#	Primary key for a given program - LEAVE BLANK
agy_name	Name of agency responsible for incentive (program)
incent_name	Name of incentive (program)
incent_year	Calendar year data represent
incent_totavail	Total amount of grant funding made availablein specified program
incent_totaward	Total amount of grants awarded in specified program
incent_countaward	Number of grants awarded in specified program
incent_totclawback	Total amount of grants returned in specified program
incent_countclawback	Number of grants returned in specified program
incent_perjob	Incentive amount per job for all projects in specified program at time of completion
incent_wtavganwg	Weighted average wage for program
incent_flag_countmult	Count of incentive flags for projects that receive multiple incentives
incent_flag_countgoal1	Count of incentive flags for projects that exceeded project-specific goals relative to the program
incent_flag_countgoal2	Count of incentive flags for projects that exceeded project-specific goals relative to the program
incent_flag_countgoal3	Count of incentive flags for projects that exceeded project-specific goals relative to the program
incent_flag_countgoal4	Count of incentive flags for projects that exceeded project-specific goals relative to the program
incent_flag_countgoal5	Count of incentive flags for projects that exceeded project-specific goals relative to the program
totcost_proj	Original projected total cost for all projects in specified program
totrev_proj	Original projected total revenue for all projects in specified program
netrev_proj	Original projected net revenue for all projects in specified program
bcr_proj	Original benefit-cost ratio projected for all projects in specified program
jobs_proj	Original jobs projected for all projects in specified program
capex_proj	Original capital investment projected for all projects specified program
totcost_act	Actual total cost for all projects in specified program at time of completion
totrev_act	Actual total revenue for all projects in specified program at time of completion
netrev_act	Actual net revenue for all projects in specified program at time of completion
bcr_act	Actual benefit-cost ratio for all projects in specified program at time of completion
jobs_act	Actual jobs created for all projects in specified program at time of completion
capex_act	Actual capital investment for all projects in specified program at time of completion
totcost_td	Actual total cost for all projects in specified program to-date
totrev_td	Actual total revenue for all projects in specified program to-date
netrev_td	Net revenue for all projects in specified program to-date
bcr_td	Benefit-cost ratio for all projects in specified program to-date
jobs_td	Total jobs for all projects in specified program to-date
capex_td	Total capital investment for all projects in specified program to-date
totcost_5yr	Actual total cost for all projects in specified program 5-years after completion
totrev_5yr	Actual total revenue for all projects in specified program 5-years after completion
netrev_5yr	Net revenue for all projects in specified program 5-years after completion
bcr_5yr	Benefit-cost ratio for all projects in specified program 5-years after completion
jobs_5yr	Total jobs for all projects in specified program 5-years after completion
capex_5yr	Total capital investment for all projects in specified program 5-years after completion
jobs_aag_raw	Number of jobs added or lost on an average annual basis over the period, expressed in raw number
jobs_aag_pc	Number of jobs added or lost on an average annual basis over the period, expressed as a percent

QCEW Table	
Variable	Description
ID_ui#	Primary key for QCEW, concatenate vars uiacct and uirun
uiacct	1:1 from QCEW data
uirun	1:1 from QCEW data
legal	1:1 from QCEW data
pladdr1	1:1 from QCEW data
plcity	1:1 from QCEW data
plzip	1:1 from QCEW data
cntycode	1:1 from QCEW data
cntyname	1:1 from QCEW data
naics	1:1 from QCEW data
aaw_4qma	Average annual wage using a four-quarter moving average (average across four most recent quarters)
aaj_4qma	Average annual jobs using a four-quarter moving average (average across four most recent quarters)
qcew_year	Most recent year used in aaw_4qma and aaj_4qma
qcew_quarter	Most recent quarter used in aaw_4qma and aaj_4qma

Appendix C: Comments from Joint Legislative Audit and Review Commission (JLARC)

Comments on the content of the report and the Secretary's analysis by JLARC are included as an appendix to the final report.

COMMONWEALTH of VIRGINIA

Joint Legislative Audit and Review Commission
201 North 9th Street, General Assembly Building, Suite 1100
Richmond, Virginia 23219

Hal E. Greer
Director

(804) 786-1258

November 14, 2014

The Honorable Maurice A. Jones
Secretary of Commerce and Trade
Patrick Henry Building
1111 East Broad Street
Richmond, VA 23219

Dear Secretary Jones:

Pursuant to § 2.2-206.2 of the Code of Virginia, I am submitting comments on the content and analysis contained in the draft of the report *Effectiveness of Economic Development Incentive Grant Programs Administered by the Commonwealth of Virginia*, which my office received on October 1, 2014, with subsequent revisions on November 12, 2014. My staff has reviewed the report for completeness and accuracy and has shared technical comments and corrections with staff of the Virginia Economic Development Partnership (VEDP). As of the latest draft of the report, the information presented appears to be accurate based on the underlying information available to us.

This report is a significant step in improving transparency in the performance of incentive grant programs in Virginia, which collectively receive a substantial amount of public funding. For the first time, Virginia's largest incentive grant programs can be reviewed in a single document that focuses on performance metrics rather than descriptive statistics, which provide little insight into the impact of incentives on the economy.

It is evident that this report represents a great deal of effort by the agencies that contributed to its first issue. In addition to implementing a new data collection and aggregation process, new analyses have been performed for this report, such as five-year cost to benefit ratios and an economic impact analysis. It is no surprise that some of the analysis contemplated in statute was not achievable in the first installment of the report. The report highlights important gaps in information and creates a useful baseline upon which future reports can improve.

In our judgment, this report needs to be strengthened to meet the intent of the legislation. The most notable impediment is the unnecessarily narrow and rigid way in which the statute has been interpreted and operationalized in this report. The overarching intent of the statute is to provide the General Assembly and Virginians with a coherent, common-sense evaluation of the performance and economic impact of incentive grant programs.

Most useful and relevant measures are not provided

The General Assembly clearly articulated its intention for the report to "evaluate incentive grant programs in meeting *their performance goals* and stimulating the economy." Such assessments would involve laying out the unique goals of each incentive grant program and then measuring the performance of each program against its goals. Instead, the report uses the same measures for every program, even where measures are not suitable. Much of the information presented is labeled "not applicable," while information that would be more relevant to each program is not presented.

For example, the Enterprise Zone Real Property Investment Grant program awards incentives based on the amount of qualified real property investment made by a company. This report does not show how much was invested in qualified real property but instead lists irrelevant measures of job creation, capital investment, and average wages and then indicates that they are "not applicable." In future installments, this report should present an assessment for each program using measures that are not only applicable but insightful.

Certain information required by statute is not reported

For certain programs, this report does not fully comply with statute, which calls for information on projects that are completed or have reached a performance milestone. Certain projects, such as those that receive customized incentive grants, may not be completed for several years but may receive interim awards when they achieve certain milestones. This report offers very limited and strictly descriptive information about performance against these milestones, despite the fact that significant payments have been made.

For example, the Advanced Shipbuilding Training Facility Performance Grant program, which was approved for $32.8 million in 2011 and had paid out $10 million as of 2014, has annual performance milestones for job creation culminating with 1,000 jobs by 2015. For this project, neither the milestones nor the actual performance against them is reported, perpetuating the problem that the statute intended to address: the significant gap in knowledge about the performance of projects that have received some of the largest incentive grants in Virginia. Future reports should present this information as required by statute.

Certain relevant information is not currently collected

It appears that some agencies do not collect the information necessary to determine whether projects are meeting performance goals and are therefore entitled to the grants for which they were approved. Two examples follow.

The Virginia Tobacco Indemnification and Community Revitalization Commission administers Tobacco Region Opportunity Fund, which awards grants based in part on the average wages that companies expect to pay. For these projects, the report should present data in two important areas: expected wages for each project and actual wages paid by the companies that received awards, but it appears that the Tobacco Commission does not collect this information for all projects.

The Virginia Economic Development Partnership recently began to administer the Virginia Jobs Investment Program, which grants incentives for projects that meet a certain threshold of capital investment. For these projects, the report should present information on the actual amount of capital investment made by completed projects, but it appears that this information is not collected. Part of preparing this report should include following up with

agencies that do not provide complete information or indicate that data is unavailable. Future reports should identify these and other relevant issues so that the General Assembly can take steps, if necessary, to ensure that agencies collect the necessary data to evaluate performance. This is important for holding recipients accountable as well as for completing the report.

Certain analyses may take time to implement

Some of the analyses required by statute are not currently performed for certain programs and, due to their complexity, will require some time to implement. With the exception of programs administered by VEDP, most programs have not calculated the "return on investment" they expect from each project they approve, nor have they tracked the actual return generated once the projects are completed. Similarly, most programs have not tracked the longer-term, five-year performance of completed projects. Agencies should develop the analytical capacity to provide the necessary information, such as the expected, actual, and five-year "return on investment" of completed projects and the number of jobs five years after completion for those programs where job creation is a relevant goal.

The economic impact analysis in this report provides new insight into the effect of incentive grant programs on the Virginia economy. As noted in the report, one serious limitation is that some projects may be double-counted. This can happen when a project receives grants from multiple programs with different completion dates. If the economic impact of a project is counted in more than one year, the cumulative effect of the project will be overstated. In future installments of this report, the economic impact analysis should include each project only once, after completion of all grant programs relevant to that project.

Suggested improvements could enhance user-friendliness

A few changes could be made to improve the user-friendliness of future report installments. The current format simply displays data rather than conveying information that readers can easily understand. Greater use of table formatting and graphics may be solutions to consider. For certain programs, the "summary information" section is also confusing because a single grant is shown as being awarded in multiple years. Reporting the number and amount of grants *approved* in a given year would eliminate confusion.

I wish to thank VEDP staff who prepared this report for their cooperation and responsiveness. While this report is certainly a good first step toward providing transparency regarding the performance of incentive grant programs, future installments can be strengthened by fully complying with the intent of the legislation and addressing the opportunities for improvement laid out in this letter.

Sincerely,

Hal E Greer
Director

cc: The Honorable John C. Watkins
The Honorable Robert D. Orrock, Sr.
Martin J. Briley
Robert W. McClintock