



COMMONWEALTH OF VIRGINIA

Department of the Treasury

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October 1, 2026

Ms. Laura Wilborn
Division of Legislative Automated Systems
General Assembly Building
Richmond, VA 23219

Via Email

Dear Ms. Wilborn:

In accordance with the provisions of Chapter 1, Item 265 (H) (Virginia Acts of Assembly, 2026 Special Session I), which directs the Department of the Treasury to report on the Virginia Energy Leasing Program and the report be submitted by October 1, 2026.

The Virginia Energy Leasing Program report has been prepared by the Department of the Treasury, whose management is responsible for the integrity and objectivity. We believe the data presented is accurate in all material respects to enable the reader to obtain a thorough understanding of the Virginia Energy Leasing Program.

Sincerely,

Bradley L. Jones
Director of Debt Management

BLJ:lme
Enclosures

VIRGINIA ENERGY LEASING PROGRAM (“VELP”)

Chapter 1 2026 Special Session I, Item 265 (H)

Item 265 (H) directs the Department of the Treasury to review the current Virginia Energy Leasing Program (“VELP”) to determine its effectiveness in promoting and financing energy efficiency improvements in state agencies. The report is required to include: (i) an historical review of projects financed through the program including projected and actual energy savings, operational savings, and facility performance improvements associated with financed projects; (ii) project payback periods and cost-effectiveness metrics; (iii) as part of its review, Treasury is required to consider alternative financing arrangements that may further facilitate and encourage state agencies to pursue energy efficiency projects; (iv) any recommendations for improving program efficiency and participation. The report must be submitted by October 1, 2026, to the Governor and the Chairs of the House Appropriations and Senate Finance and Appropriations Committees.

Virginia Energy Leasing Program

Legislation enacted by the Virginia General Assembly in 1994 added a provision for financing energy efficiency projects of state agencies and institutions. In response to this legislation, the Treasury Board created the Virginia Energy Leasing Program ("VELP"). Prior to 1994, energy improvements in state agencies and institutions were financed through the Commonwealth's Master Equipment Leasing Program (“MELP”). MELP is limited in its ability to finance projects with a longer useful life because MELP's maximum financing term is limited by legislation to ten (10) years.

At its 2001 Session, the Virginia General Assembly enacted the Energy and Operational Efficiency Performance-Based Contracting Act which permits any public body to enter into an energy performance contract with an energy performance contractor to significantly reduce energy operating costs of a facility through one or more energy conservation or operational efficiency measures.

On July 23, 2003, Governor Warner issued Executive Order 54 that directed the Governor's Secretaries and all executive branch agencies to reduce energy costs and consumption in state government operations at least seven percent by 2004, when compared to a 2002 baseline and by at least ten percent by 2006 relative to a 2002 baseline, with a long-term goal of reducing energy consumption by the maximum amount feasible.

In September 2005, in response to Executive Order 54, the Treasury Board issued a Request for Proposal and subsequently enhanced VELP for financing energy efficiency performance-based projects.

Under §2.2-2417 of the Code of Virginia, the Treasury Board's role is to review and approve financial terms of all contracts for the purchase of personal property by agencies, institutions, boards and authorities which receive appropriations from the Commonwealth, where payment of the purchase price is deferred through installment payments, includes the payment of interest or is otherwise financed by the seller, lessor or third party.

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The Treasury Board is responsible for the operation and administration of VELP. The program enables Commonwealth agencies to obtain consistent and competitive credit terms for financing energy efficiency performance-based improvements. VELP provides a financing vehicle for qualifying energy projects that state entities have evaluated and determined to be appropriate and cost effective. Under the program, the Treasury Board procures a line of credit from financing companies through the terms of a Master Lease Agreement under which individual state entities can finance energy efficiency projects over twelve (12) and fifteen (15) year lease terms. Energy projects financed through the program must be for governmental use and the term of the lease may not exceed the aggregate useful life of the energy project. Energy projects less than \$100,000 are not eligible for financing through VELP. The creditworthiness of the Commonwealth as a whole is considered and helps to reduce the interest rates available through the program, resulting in lower interest costs for state entities than would otherwise be possible if the state entities individually entered into leasing arrangements.

All administrative units of the Commonwealth of Virginia, including agencies, departments, institutions, commissions, boards, councils or authorities that receive appropriation from the General Assembly of the Commonwealth are eligible to participate in VELP to finance energy equipment and energy efficiency performance-based improvements. VELP participants are responsible for evaluating the merits, cost effectiveness and procurement of any energy project prior to seeking financing through the program. VELP participants work directly with Virginia Energy to ensure that energy projects significantly reduce energy operating costs for their facility through energy conservation or operational efficiency measures with a long-term goal of reducing energy consumption by the maximum amount feasible. Virginia Energy conducts an initial energy audit to determine the feasibility of pursuing an Energy Saving Performance Contracting (“ESPC”) project at their facility. The ESPC project is delivered by the Energy Service Company (“ESCO”) and the ESCO provides a project savings guarantee evidenced by a performance and payment bond that the savings produced by the project will be sufficient to cover the cost of the project financing. VELP participants are responsible for lease payments to the finance company from their biennial appropriations. Payment of the purchase price of the project is deferred through installment payments and includes interest payments.

Appendix A provides a historical review of energy efficiency projects financed through VELP.

Statutory Requirements for Energy Efficiency Projects

Pursuant to §4-4.01 of the Appropriations Act, improvements to state-owned properties for the purpose of energy-efficiency shall be considered an operating expense, provided that:

- The scope of the project meets or exceeds the applicable energy-efficiency standards set forth in the American Society of Heating, Refrigerating, and Air Conditioning Engineers (“ASHRAE”), the Illuminating Engineering Society (“IES”) standard 90.1-1989, Virginia Energy Conservation and Environmental Standards, LEED Silver or Green Globes two-globe standards, and is limited to measures listed in guidelines issued by the Department of General Services.

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- The project is financed consistent with the provisions of § 2.2-2417, Code of Virginia, which requires Treasury Board approval and is executed through a nonprofessional services contract with a vendor approved by the Division of Purchases and Supply of the Department of General Services or through the Public-Private Educational Facilities and Infrastructure Act.
- The scope of work has been reviewed and recommended by Virginia Energy.
- The agency director submits written notification to the Director of the Department of Planning and Budget (“DPB”), verifying that the project meets the conditions described and that the agency is entering into a performance contract that exceeds \$250,000. DPB is required to review the proposed energy project if the total cost to the agency exceeds \$3 million but does not exceed \$7 million and the energy savings do not offset the total cost to the agency. If the total cost to the agency exceeds \$7 million, the project also requires approval by the Governor’s Office.

Findings and Alternatives

While the Master Lease Agreement and legislation govern the structure of VELP, the program remains an efficient financing mechanism and benefits from the additional project oversight provided by Virginia Energy. VELP can, however, be limited in its ability to finance multiple large dollar energy projects within a short timeframe due to credit line amounts awarded pursuant to the Master Lease Agreement; currently \$60 million, with an option to increase by an additional \$20 million on an annual renewal date. However, this has not presented a significant issue in the past and communication with potential users and Virginia Energy regarding possible projects can assist with the planning of future credit line contracts. VELP is not structured to finance energy projects with a longer aggregate useful life which may require a term of twenty (20) years or greater because VELP’s maximum financing term is limited by legislation to fifteen years. These longer-term projects must currently be paid for or financed another way such as the project being authorized by the Virginia General Assembly to be included in a capital project pool through a bond issuance of the Virginia College Building Authority (“VCBA”) or the Virginia Public Building Authority (“VPBA”).

The Department of the Treasury staff identified the following potential alternative mechanisms for financing energy efficiency projects.

- Bond Authorization through the VCBA 21st Century Capital and Equipment Program or VPBA:
 - For any significant energy related project(s), the project(s) could be authorized by the Virginia General Assembly as part of a capital project pool. This method would provide efficient financing of the project by the Commonwealth rather than by the agency or institution, with debt service to be paid by general fund appropriations of debt service to the Treasury Board. However, this method loses the oversight of Virginia Energy and the energy performance guarantees provided through VELP. This method might be suitable for certain large projects that the Commonwealth would like to support in the same manner as other capital projects. If the Commonwealth would like to support numerous energy projects, however, another mechanism would be best suited.

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- Expansion of Programs offered through the VCBA and VPBA:
 - In addition to financing capital projects, the VCBA also finances projects through the Higher Education Equipment Trust Fund (“HEETF”). This program was established in 1986 by the Virginia General Assembly to provide supplemental funding through bonds to upgrade equipment needed for instruction and research. The VCBA issues these appropriation-backed bonds with a seven-year amortization so that the term of the bonds closely matches the useful life of most of the eligible equipment. Higher education institutions receive these funds as grant-like reimbursements of their eligible expenditures with each higher education institution set to receive an amount designated in the Appropriations Act. This type of program could serve as a model to set up an energy project funding mechanism through the VPBA and/or the VCBA for which the Virginia General Assembly provides annual authorization. Given that every agency and/or higher education institution would receive an allotment of funds, it would likely encourage Commonwealth entities to pursue energy efficient projects. On the other hand, this type of set-funding program will not take into consideration the most prudent use of resources compared to the benefit of energy efficiency. This may cause certain projects with potentially significant benefits to remain unfunded due to funding limitations for that agency or higher education institution while certain other projects with more limited benefits for another agency or higher education institution may be advanced simply because funding was made available.
- Creation of an Energy Bond Program/Energy Grant Program:
 - The General Assembly could also create a new financing program through the VCBA and/or VPBA whereby Virginia Energy collects applications for project financing and makes recommendations to the Governor and the General Assembly for inclusion in the Appropriations Act, whereby the projects are then financed through a distinct bond series amortized for the appropriate period with debt service to be provided by general fund appropriations to the Treasury Board. This method would better align any funding authorized by the General Assembly with the most beneficial projects as determined and recommended by Virginia Energy. It is possible, however, that the requirement for General Assembly approval of each project could result in delays or timing problems for certain needed projects.

Conclusion and Recommendation

Staff from the Department of the Treasury and Virginia Energy met to discuss the effectiveness of VELP. Virginia Energy confirmed their commitment to promoting energy efficiency improvements in state agencies and higher education institutions with the goal of facilitating and encouraging state agencies and higher education institutions to pursue energy efficiency projects and the financing of those projects through VELP. Virginia Energy informed the Department of the Treasury that there has been continued interest from state agencies and higher education institutions to utilize VELP to finance their energy efficiency projects and provided an update of the multiple higher education institutions that plan to pursue financing of their energy efficiency projects through VELP over the upcoming eighteen months. While the projects are not guaranteed to move forward, the interest in pursuit of projects through VELP is significant and Treasury Board is planning for such interest as it structures future lines of credit.

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Given the oversight of projects by Virginia Energy, the consolidated and efficient financing provided by Treasury Board, and the stated upcoming interest in participation in the program, despite a recent lapse in projects, VELP remains positioned to be an effective financing tool for agencies and higher education institutions and another alternative may not be as efficient as the current program.

APPENDIX A

Historical Review of Energy Efficiency Projects Financed through the Virginia Energy Leasing Program (VELP)

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ENERGY LEASING PROGRAM (VELP)
APPENDIX A: HISTORICAL REVIEW OF ENERGY EFFICIENCY PROJECTS FINANCED THROUGH VELP

Lease #	Agency	Agency Abbrev	Agy #	Lease Date	Term	Rate	Par Amount	Final Payment Date	Bank/Lease Vendor	Energy Services Company (ESCO)	Facilities Performance Improvements	Projected Savings	Actual Savings	NPV Savings	Operational Savings
2006-01	Old Dominion University	ODU	221	6/9/2006	15 Years	4.2309%	2,351,500.00	8/1/2021	Banc of America Public Capital Corp.	NORESCO	Lighting Upgrades, Water Conservation, Boiler/Chiller Upgrades and HVAC Modifications	\$162,146	\$162,710	\$2,327,438	-
2006-02	Virginia State University	VSU	212	8/4/2006	15 Years	4.3217%	2,729,129.00	10/1/2021	First Municipal Credit Corporation	Johnson Controls	Upgrades (Lighting, Temperature Control, Water fixtures, mechanical systems)	\$2,729,129	See Notes	\$654,991	-
2006-03	VCCS (Danville Community College)	VCCS	260	9/21/2006	15 Years	4.0131%	877,772.79	11/1/2021	Banc of America Public Capital Corp.	TAC Americas	Mechanical Improvements, BAS, Lighting Retrofits, Water Retrofits, Building Envelope Improvements, Re-Commissioning	\$91,955	\$84,383	\$561,571	-
2006-04	Catawba Hospital	CH	724	2/2/2007	15 Years	3.9963%	2,814,669.00	4/1/2022	Banc of America Public Capital Corp.	Trane	Upgraded Lighting System	\$218,465	\$236,178	\$654,811	\$29,115
2006-05	VCCS (Blue Ridge Community College)	VCCS	260	4/13/2007	15 Years	3.8790%	934,620.00	6/1/2022	Banc of America Public Capital Corp.	TAC Americas	AHU Replacements; Electric boilers; Electrical Infrastructure Improvements; BAS; Building Envelope Improvements; Water conservation	\$97,024	\$150,575	\$812,064	-
2006-06	VCCS (Lord Fairfax Community College)	VCCS	260	4/13/2007	15 Years	3.8790%	266,782.00	6/1/2022	Banc of America Public Capital Corp.	TAC Americas	Mechanical replacements; Water conservation; BAS; Thermal Storage modifications; CHW plant modifications	\$27,096	\$50,384	\$183,623	-
2006-07	VCCS (Northern Virginia Community College)	VCCS	260	4/13/2007	15 Years	3.8790%	3,473,112.00	6/1/2022	Banc of America Public Capital Corp.	TAC Americas	Central Plant Improvements; Mechanical replacements - HVAC, Boilers, Chillers; BAS; Thermal Storage modifications; Lighting; Water Conservation	\$263,970	\$230,054	\$1,241,341	-
2006-08	VCCS (Thomas Nelson Community College)	VCCS	260	4/13/2007	15 Years	3.8790%	1,078,896.00	6/1/2022	Banc of America Public Capital Corp.	TAC Americas	Mechanical System Improvements; BAS; Lighting retrofits; Water Conservation; Electrical Infrastructure Improvements;	\$119,311	\$151,438	\$1,250,259	-
2006-09	Southwestern Virginia Training Center	SWVTC	738	6/8/2007	12 Years	4.1355%	1,208,080.00	8/1/2019	First Municipal Credit Corporation	PEPCO Energy Services	Lighting, Water conservation and Controls				
2006-10	Department of Corrections	DOC	756	6/8/2007	15 Years	4.0550%	9,429,332.00	8/1/2022	Banc of America Public Capital Corp.	Johnson Controls	Hillsville Va. Mechanical System Improvements; BAS; Lighting retrofits; Water Conservation; Electrical Infrastructure Improvements;	\$17,198,337	\$19,324,440	\$2,418,669	\$2,687,188
2006-11	VCCS (Paul D. Camp Community College)	VCCS	260	9/24/2007	15 Years	3.7031%	348,841.00	11/1/2022	Banc of America Public Capital Corp.	TAC Americas		\$36,940	\$57,127	\$353,158	-
2006-12	VCCS (Rappahannock Community College)	VCCS	260	1/4/2008	15 Years	3.7889%	331,239.00	3/1/2023	Banc of America Public Capital Corp.	TAC Americas	BAS; Boiler Replacements; Chiller Replacement; Lighting	\$35,589	\$39,070	\$291,417	-
2006-13	Science Museum of Virginia	SMV	146	9/29/2008	15 Years	3.3659%	1,101,532.00	11/1/2023	Banc of America Public Capital Corp.	Siemens	Replace Chillers/Cooling Towers, Avoided Capital Replacement Savings, Demand Lighting, Cooling Tower Water Metering, Occ. Sensing, Vending Machine Controls, Coil Cleaning, Refurbish AC-1, IMAX Chiller Modifications, Lighting Retrofit, Envelope Improvement, Demand Control Ventilation, Replace 7 FCU's. Replace 4 AHU's (IMAX)	\$1,481,105	\$758,187	\$408,368	\$990,562
2006-14	Southwest Virginia Higher Education Center	SWVHEC	948	9/29/2008	15 Years	3.3659%	837,331.00	11/1/2023	Banc of America Public Capital Corp.	Trane	Occupant sensors in all rooms to control the light and HVAC. All lighting will be changed from t-12 to more emergency efficient lighting T-8 lamps, Low flow on all water consuming fixtures, Variable drives on the circulating water pumps in the HVAC system	\$49,298	\$56,220	\$213,103	\$6,000
2006-15	VCCS - Central Virginia Community College	VCCS	260	10/14/2008	15 Years	3.5314%	544,628.00	12/1/2023	Banc of America Public Capital Corp.	TAC Americas	Electrical infrastructure improvements; Boiler replacement; BAS; Lighting; Water Conservation	\$56,786	\$116,893	\$1,580,902	-
2006-16	VCCS - Germanna Community College	VCCS	260	10/14/2008	15 Years	3.5314%	817,039.00	12/1/2023	Banc of America Public Capital Corp.	TAC Americas	Chiller and Boiler replacements; Mechanical upgrades; BAS; Lighting; Window replacement	\$87,862	\$84,722	\$360,992	-
2006-17	VCCS - J Sargeant Reynolds Community Colleg	VCCS	260	10/14/2008	15 Years	3.5314%	1,008,288.00	12/1/2023	Banc of America Public Capital Corp.	TAC Americas	Central Plant Improvements; HVAC Improvements and Controls Upgrades; Electrical Distribution Improvements; Lighting Improvements; Water Conservation	\$88,296	\$93,248	\$1,039,989	-
2006-18	Virginia Museum of Fine Arts	VMFA	238	10/28/2008	12 Years	3.3441%	2,803,828.00	12/1/2020	Banc of America Public Capital Corp.	Siemens	Replacement two Cooling Towers with four VSD Fan Towers, Install four 500-ton chillers, Install VSD New Condenser Water Pumps, Install Steam Boiler Control Upgrades, Implement Demand Flow Control of the Cooling Plant, Lighting Retrofits, Water Conservation Measures, Coil and Pipe Cleaning	\$6,195,403	\$2,388,845	\$1,392,919	-
2006-19	Department of Corrections	DOC	756	10/30/2008	15 Years	3.3935%	13,979,432.00	12/1/2023	Banc of America Public Capital Corp.	Johnson Controls	Upgrades (Lighting, Water fixtures, BAS, Building Envelope) Replacements (Steam trap and absorption chiller)	\$21,680,139	\$24,915,964	3,524,984	\$907,406
2006-20	Richard Bland College	RBC	241	10/30/2008	15 Years	3.6970%	1,896,336.80	12/1/2023	Banc of America Public Capital Corp.	Siemens	Install new heat pump HVAC, install natural gas distribution, heater natural gas conversion, boiler replacement, boiler natural gas conversion, central heating/cooling system replacement, conditioning / coil cleaning, MUA Unit Modification, water heater time clocks, tankless water heaters, envelope improvements, lighting improvements, water conservation program, vending Machine Controls, Building Automation, building electrical submetering, re-commissioning, solar photovoltaic sign and road lighting,	\$2,557,573	\$736,333	\$479,075	-
							48,832,387.59								

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2009-01	George Mason University	GMU	247	9/9/2009	15 Years	5.0000%	6,590,302.00	11/1/2024	GreenCampusCorp LLC	Siemens	Install new heat pump HVAC, install natural gas distribution, heater natural gas conversion, boiler replacement, boiler natural gas conversion, central heating/cooling system replacement, conditioning / coil cleaning, MUA Unit Modification, water heater time clocks, tankless water heaters, envelope improvements, lighting improvements, water conservation program, vending Machine Controls, Building Automation, building electrical submetering, re-commissioning, solar photovoltaic sign and road lighting,	\$60,549,598	\$23,992,708	-	-
2009-02	Virginia Department of Blind Vision Impaired	DBVI	702	12/3/2009	15 Years	5.0000%	1,414,264.00	2/1/2025	GreenCampusCorp LLC	Trane	Energy retrofits and system upgrades to Department facilities. Major buildings will receive lighting upgrades, water conservation, mechanical upgrades, and controls work as part of the project.	\$103,105	\$102,664	\$412,309	\$17,547
2009-03	Department of Forensic Science	DFS	778	2/5/2010	15 Years	5.0000%	<u>11,063,199.00</u> 19,067,765.00	4/1/2025	GreenCampusCorp LLC	Trane	Water Retrofit, Facility Management System, Cooling Plant Upgrades, Heating Plant Upgrades, Airside System Upgrades, and Power Generating Systems	\$821,031	\$1,012,517	\$2,655,168	\$239,518
2010-01	Roanoke Higher Education Authority	RHEA	935	9/1/2010	15 Year	3.3012%	1,100,967.00	11/1/2025	Chase Equipment Finance, Inc.	Trane	Lighting Renovation, Direct Digital Controls Upgrades, Airside System Upgrades, Heating Plant Upgrades, Domestic Water Upgrades, Cooling Plant Upgrades and Maintenance	\$112,671	\$147,366	\$264,232	\$10,878
2010-02	VCCS - New River Community College	VCCS-NRCC	260	10/7/2010	15 Year	3.3019%	552,586.00	12/1/2025	Chase Equipment Finance, Inc.	Schneider Electric	HVAC Improvements and Controls Upgrades; Electrical Distribution Improvements; Lighting Improvements; Water Conservation	\$70,905	\$156,152	\$1,142,664	-
2010-03	Virginia Department of Corrections	DOC	701	2/8/2011	15 Year	3.9509%	18,205,734.00	4/1/2026	Chase Equipment Finance, Inc.	Johnsons Control	Upgrades (Lighting, Water fixtures, BAS, Mechanical) Replacements (Steam trap and chiller) Installations (Hot water controller, Kitchen hood controls, Instantaneous HW heater, insulation on pipes and valve jackets) Re-commissioning	\$27,562,669	\$30,329,428	4,369,376	\$9,034,713
2010-04	VCCS- J. Sargeant Reynolds Community College	VCCS-JSRCC	260	2/11/2011	15 Year	4.1131%	1,202,178.00	4/1/2026	Chase Equipment Finance, Inc.	Schneider Electric	Central Plant Improvements; HVAC Improvements and Controls Upgrades; Electrical Distribution Improvements; Lighting Improvements; Water Conservation	\$88,296	\$93,248	\$1,438,051	-
2010-05	CWM/Virginia Institute of Marine Science	VIMS	268	4/19/2011	15 Year	3.9387%	<u>2,169,821.00</u> 23,231,286.00	6/1/2026	Chase Equipment Finance, Inc.	Siemens	Lighting Upgrades, Building Automation Equipment Scheduling, Temperature Setback, Cooling Discharge Temperature Reset, Fume Hoods, Chiller and Heat Amplifier Replacement, EE Motor Replacement, Electric Boiler Replacement, Cooling Tower Treatment, Reduce Air Infiltration, AHU Condensate Re-use, Boiler Burner Modifications,	\$3,996,119	\$3,561,240	\$676,758	\$62,870
2011-01	Department of General Services	DGS	194	8/11/2011	15 Year	2.7572%	3,904,030.00	10/1/2026	JPMorgan Chase Bank, N.A.	NORESCO	Lighting Replacement, Cooling Tower Water Upgrades, Heating Pumps and Upgrades, Weatherization, Window Replacements, Upgrades to Elevator Rooms Exterior & interior heat pumps, Building Automation, Fan VFDs, HX Cleaning, Lighting Retrofits, domestic water conservation, Cooling Tower Submetering, Condenser Pump VFD	\$239,232	\$252,758	\$3,550,549	\$131,270.00
2011-02	Department of General Services	DGS	194	8/12/2011	15 Year	2.5891%	7,590,909.00	10/1/2026	JPMorgan Chase Bank, N.A.	Siemens	Lighting Replacement, Cooling Tower Water Upgrades, Heating Pumps and Upgrades, Weatherization, Window Replacements, Upgrades to Elevator Rooms	\$11,667,600	-	\$1,821,818	\$4,860,449
2011-03	Department of General Services	DGS	194	12/22/2011	15 Year	2.3392%	5,890,291.00	2/1/2027	JPMorgan Chase Bank, N.A.	Trane	Retrofit Lighting, HVAC Upgrades, Airside, Replace Boilers, Heat Pump Upgrades, Window Replacement, Replace Air Conditioning, Chiller Replacement	\$447,974	\$927,822	\$1,413,670	\$29,359
2011-04	Department Of Juvenile Justice	DGS	777	5/7/2012	12 Year	2.1418%	2,824,725.00	6/1/2024	JPMorgan Chase Bank, N.A	Trane	Center piece of project is renovation of the existing power plant; including replacement of existing 400HP fuel oil boiler with hybrid biomass boiler and the refurbishment of the existing 200HP sawdust-fueled boiler. Upgrades to the power plant all allow for utilization of different local biomass fuel sources, including native warm season grasses (NWSG). Campus lighting retrofits, De-commissioning of 1 00% outside air heating systems/conversion to biomass-produced steam space heating system (B 15 abandoned kitchen). Direct Digital Controls upgrades in power plant and administration offices, Electrical demand limiting with existing backup generators and controls interface, Optimization of controls in VCBR facility	\$244,323	\$253,559	\$1,678,254	\$70,000
2011-05	Piedmont Geriatric Hospital	PGH	729	6/18/2012	15 Year	2.1505%	5,202,480.00	7/1/2027	JPMorgan Chase Bank, N.A.	Trane	Center piece of project is renovation of the existing power plant; including replacement of existing 400HP fuel oil boiler with hybrid biomass boiler and the refurbishment of the existing 200HP sawdust-fueled boiler. Upgrades to the power plant all allow for utilization of different local biomass fuel sources, including native warm season grasses (NWSG). Campus lighting retrofits, De-commissioning of 1 00% outside air heating systems/conversion to biomass-produced steam space heating system (B 15 abandoned kitchen). Direct Digital Controls upgrades in power plant and administration offices, Electrical demand limiting with existing backup generators and controls interface, Optimization of controls in VCBR facility	\$420,230	\$420,230	\$1,656,595	\$444
2011-06	Department of Motor Vehicle	DMV	154	10/12/2012	15 Year	2.1759%	4,468,014.00	12/1/2027	JPMorgan Chase Bank, N.A.	Trane	Retrofit Lighting, Water Upgrades, HVAC Equipment and Controls Upgrade .	\$284,130	\$308,127	\$1,624,564	\$10,878

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2011-07	VCCS (Paul D. Camp)	VCCS PDC	260	10/12/2012	15 Year	2.2459%	103,000.00	12/1/2027	JPMorgan Chase Bank, N.A.	Schneider Electric	HVAC System Upgrade	\$11,311	See Notes	\$695,029	-
2011-08	Virginia School for the Deaf and Blind	VSDB	218	4/3/2013	15 Year	2.3353%	933,000.00	5/1/2028	JPMorgan Chase Bank, N.A.	Siemens	Convert to Central Plant HVAC-AHU, BAS HVAC AHU, Insulate Attic, Renovate Windows, Lighting Retrofit, Water Conservation Measures, Calk Seal & Paint Windows, BAS Operation Optimization, Roof Insulation, Natural Gas Rate Switch, Building Standby Mode	\$1,496,438	\$296,343	\$223,920	\$164,835
2011-09	The University of Virginia at Wise	UVA-Wise	246	7/10/2013	15 Year	2.9007%	<u>3,003,715.00</u> 33,920,164.00	8/1/2028	JPMorgan Chase Bank, N.A.	Trane	Lighting Upgrades, Chilled Water Upgrades, Water Upgrades, HVAC Upgrades, Cooling Plant Upgrades, Heating Plant Upgrades, Boiler Plant Upgrades, Controls,	\$215,193	\$237,028	\$720,892	\$29,359
2013-01	Virginia Department of Corrections	DOC	701	5/1/2014	15 Year	2.9471%	12,288,254.00	7/1/2029	Pinnacle Public Finance, Inc.	Johnsons Control	Upgrades (Lighting, Building, Water, HVAC, Windows, fire alarm system) Installations (Building Controls, Kitchen hood controls, DHW Loop controls, Double wall heat exchangers) Central steam line repairs/metering, rebuilding Rinnai water heaters, replace the sump pump	\$7,668,931	\$11,471,043	\$3,806,821	\$803,066
2013-02	Department of Forensic Science	DFS	778	10/22/2014	15 Year	2.5488%	2,902,630.00	12/1/2029	Pinnacle Public Finance, Inc	Trane	Lighting renovations, chiller lant renovations to include enhanced controls, variable primary pumping conversion, and AFD, HVAC controls programming, air balancing and decommission fume hoods not currently in use. Replace problematic Chillers.	\$202,256	\$270,731	\$696,631	\$47,500
2013-03	DBHDS-Eastern State Hospital	ESH	704	11/5/2014	15 Year	2.4300%	<u>4,018,529.00</u> 19,209,413.00	1/1/2030	Pinnacle Public Finance, Inc.	Trane	Decentralization of steam plant, energy efficient HVAC Equipment, lighting Upgrades, Water and Controls Optimization	\$261,034	\$275,634	\$1,324,447	\$25,993
2015-01	Department of State Police	VSP	156	1/27/2016	15 Years	2.1500%	3,335,716.00	2/1/2031	Banc of America Public Capital Corp.	Trane	Lighting, boiler & automation system improvements.	\$252,986	\$273,672	\$800,572	\$40,860
2015-02	Southern Virginia Higher Education Center	SVHEC	937	9/29/2017	15 Years	2.2716%	<u>294,039.00</u> 3,629,755.00	11/1/2032	Banc of America Public Capital Corp.	Johnsons Control	Lighting Upgrades, replaced water source heat pumps, install duct distribution, and optimized BAS setpoints	\$82,032	\$90,531	\$158,073	\$8,412
2018-01	Department of General Services	DGS	194	3/19/2018	15 Year	2.7697%	2,812,940.00	4/1/2033	Banc of America Public Capital Corp.	Schneider Electric	Lighting Upgrades; Water Conservation;	\$245,309	\$242,933	\$675,105	\$23,918
2018-02	Department of Corrections	DOC	701	7/19/2018	15 Year	2.8352%	14,489,720.00	9/1/2033	Banc of America Public Capital Corp.	Johnsons Control	Upgrades (Lighting, Central Boilers, BAS) Installation (New Gas Service, VFD drives on pumps, Emergency Generators outside the security fence)	\$4,486,411	\$4,637,084	\$3,475,441	\$708,056
2018-02	Department of Corrections	DOC	701	7/19/2018	15 Year	4.3610%	2,060,000.00	9/1/2033	Banc of America Public Capital Corp.	Johnsons Control	Upgrades (Lighting, Water, HVAC, BAS) and retrofitted the waste water treatment plant	\$13,381,627	\$17,767,199	\$496,492	\$1,602,906
2018-03	Dept. of Military Affairs	DMA	123	9/12/2019	15 Years	2.2020%	<u>735,411.00</u> 20,098,071.00	11/1/2034	Banc of America Public Capital Corp.	Trane	Lighting Upgrades, Water Conservation Measures, HVAC Upgrades, cleaning and coating.	\$51,305	\$51,305	\$213,398	\$11,720
2020-01	Virginia Department of Transportation	VDOT	501	3/26/2020	15 Year	1.6770%	10,837,680.00	5/1/2035	Banc of America Public Capital Corp.	Trane	Phase I: Replace 9,627 existing HPS light fixtures with LED light fixtures on interstate/limited access highways, ramps, VDOT-owned Park and Rides, and rest areas/welcome centers. The project will also include a lighting control system to monitor energy consumption as well as control light intensity and power.	\$574,401	\$594,765	\$2,600,708	\$376,407
2020-02	Virginia Department of Transportation	VDOT	501	3/4/2021	15 Year	1.9140%	<u>8,561,320.00</u> 19,399,000.00	5/1/2036	Banc of America Public Capital Corp.	Trane	Phase II: Replace 9,627 existing HPS light fixtures with LED light fixtures on interstate/limited access highways, ramps, VDOT-owned Park and Rides, and rest areas/welcome centers. The project will also include a lighting control system to monitor energy consumption as well as control light intensity and power.	\$453,988	\$470,168	\$2,055,052	\$297,553
A152-94795	Virginia Museum of Natural History	VMNH	942	12/22/2021	15 Year	1.7645%	1,474,325.00	2/1/2037	Banc of America Public Capital Corp.	Siemens Industry, Inc.	Lighting Retrofit, Insulation & Weatherization, HVAC/BAS Recommissioning, Refrigerant Catalyst, Generator Heat Pump, EV Chargers, Solar Array	\$1,984,160	\$455,340	\$366,712	\$190,939
A152-94795	Department of General Services	DGS	194	9/29/2022	15 Year	3.3387%	<u>1,192,387.00</u> 2,666,712.00 190,054,553.59	10/1/2037	Banc of America Public Capital Corp.	Schneider Electric	Lighting Upgrades; Solar Recommissioning; Solar PV Installation; Building Envelope Improvements; HVAC Controls; BESS; Mechanical Insulation; Vending Misers	\$59,130	See Notes	\$286,173	\$1,821
												\$191,210,817	\$148,328,364	\$61,049,148	\$23,421,542

COMMONWEALH OF VIRGINIA
ENERGY LEASING PROGRAM (VELP)
APPENDIX A: HISTORICAL REVIEW OF ENERGY EFFICIENCY PROJECTS FINANCED THROUGH VELP

Lease #	Agency	Agency Abbrev	Agy #	Lease Date	Term	Rate	Par Amount	Final Payment Date	Project Payback Periods	Cost Effectiveness Metrics	kWH Avoided	kWH (in \$)	CO2 Reduction (tons)	CO2 Reductions (in \$)	Notes	
2006-01	Old Dominion University	ODU	221	6/9/2006	15 Years	4.2309%	2,351,500.00	8/1/2021	15	103.43%	3,108,723	\$69,014	\$932	\$18,635.20		
2006-02	Virginia State University	VSU	212	8/4/2006	15 Years	4.3217%	2,729,129.00	10/1/2021	15	100.00%	70,503	\$5,986	\$1,082	\$22,714	Per Johnson Controls, Virginia State University (VSU) discontinued the annual Measurement and Verification for the energy project, and Year 1 was not completed, therefore, Johnson Controls was unable to provide accurate savings for the VSU's energy efficiency project.	
2006-03	VCCS (Danville Community College)	VCCS	260	9/21/2006	15 Years	4.0131%	877,772.79	11/1/2021	15	157.14%	3,953,641	\$261,870	\$60,632	\$1,273,273	Per TAC Americas, the actual savings are average from Year 1 through Year 5 and total kWH avoided is calculated through Year 5.	
2006-04	Catawba Hospital	CH	724	2/2/2007	15 Years	3.9963%	2,814,669.00	4/1/2022	11.37	131.94%	741,170	\$70,115	\$11,371	\$238,793		
2006-05	VCCS (Blue Ridge Community College)	VCCS	260	4/13/2007	15 Years	3.8790%	934,620.00	6/1/2022	15	155.72%	6,437,121	\$62,563	(\$105,383)	\$2,213,041	Per TAC Americas, the actual savings are average from Year 1 through Year 15.Total kWH dollar amount for Y1-Y15 due to fuel switch to electric and the positive electric savings overall is due to demand savings.	
2006-06	VCCS (Lord Fairfax Community College)	VCCS	260	4/13/2007	15 Years	3.8790%	266,782.00	6/1/2022	15	152.35%	4,901,618	\$269,042	\$75,142	\$1,577,991	Per TAC Americas, the actual savings are average from Year 1 through Year 8. Total kWH Avoided for Year 1 through Year 8.	
2006-07	VCCS (Northern Virginia Community College)	VCCS	260	4/13/2007	15 Years	3.8790%	3,473,112.00	6/1/2022	15	114.01%	8,857,616	\$676,881	\$135,830	\$2,852,439	The actual savings includes two shortfall payments and are average savings for Year 1 through Year 6. Total kWH Avoided through Year 6.	
2006-08	VCCS (Thomas Nelson Community College)	VCCS	260	4/13/2007	15 Years	3.8790%	1,078,896.00	6/1/2022	15	165.88%	2,892,326	\$104,586	\$44,360	\$931,555	Per TAC Americas, the actual savings are average from Year 1 through Year 3. Total kWH Avoided through Year 3. PEPCO Energy Services is no longer a part of the Commonwealth's Pooled ESCOs and currently does not provide ESCO services, therefore, Virginia Energy was unable to obtain energy efficiency data for SWVTC project.	
2006-09	Southwestern Virginia Training Center	SWVTC	738	6/8/2007	12 Years	4.1355%	1,208,080.00	8/1/2019								
2006-10	Department of Corrections	DOC	756	6/8/2007	15 Years	4.0550%	9,429,332.00	8/1/2022	15	210.89%	61,411,695	\$4,478,298	\$942,178	\$19,785,866		
2006-11	VCCS (Paul D. Camp Community College)	VCCS	260	9/24/2007	15 Years	3.7031%	348,841.00	11/1/2022	15	158.84%	3,603,779	\$347,013	\$55,269	\$1,160,653	Per TAC Americas, the actual savings are average from Year 1 through Year 8. Total kWH Avoided through Year 8.	
2006-12	VCCS (Rappahannock Community College)	VCCS	260	1/4/2008	15 Years	3.7889%	331,239.00	3/1/2023	15	161.16%	95,563	(\$26,970)	\$1,465	\$30,773	Per TAC Americas, the total kWH Avoided for through Year 5. The kWH dollar amount includes impact of demand - which had negative savings.	
2006-13	Science Museum of Virginia	SMV	146	9/29/2008	15 Years	3.3659%	1,101,532.00	11/1/2023	15	224.38%	43,956	\$3,732	\$674	\$14,162		
2006-14	Southwest Virginia Higher Education Center	SWVHEC	948	9/29/2008	15 Years	3.3659%	837,331.00	11/1/2023	15.14	99.06%	374,915	\$35,467	\$5,752	\$120,792		
2006-15	VCCS - Central Virginia Community College	VCCS	260	10/14/2008	15 Years	3.5314%	544,628.00	12/1/2023	15	156.40%	-	-	-	-	Per TAC Americas, the actual savings are average from Year 1 through Year 3.The total kWH Avoided had no measured electric savings.	
2006-16	VCCS - Germanna Community College	VCCS	260	10/14/2008	15 Years	3.5314%	817,039.00	12/1/2023	15	161.31%	3,190,125	\$360,171	\$48,931	\$1,027,552	Actual savings includes two shortfall payments and are average savings for Year 1 through Year 7. The total kWH Avoided for Y1 through Year 6.	
2006-17	VCCS - J Sargeant Reynolds Community Colleg	VCCS	260	10/14/2008	15 Years	3.5314%	1,008,288.00	12/1/2023	15	131.36%	17,686,179	\$1,075,453	\$271,273	\$5,696,743		
2006-18	Virginia Museum of Fine Arts	VMFA	238	10/28/2008	12 Years	3.3441%	2,803,828.00	12/1/2020	12	220.96%	149,932	\$12,729	\$2,300	\$48,306		
2006-19	Department of Corrections	DOC	756	10/30/2008	15 Years	3.3935%	13,979,432.00	12/1/2023	15	161.58%	83,265,435	\$5,525,226	\$1,277,458	\$26,826,791		
2006-20	Richard Bland College	RBC	241	10/30/2008	15 Years	3.6970%	1,896,336.80	12/1/2023	15	134.87%	51,567	\$4,378	\$791	\$16,614		
							48,832,387.59									

Lease #	Agency	Agency Abbrev	Agy #	Lease Date	Term	Rate	Par Amount	Final Payment Date	Project Payback Periods	Cost Effectiveness Metrics	kWH Avoided	kWH (in \$)	CO2 Reduction (tons)	CO2 Reductions (in \$)	Notes
2009-01	George Mason University	GMU	247	9/9/2009	15 Years	5.0000%	6,590,302.00	11/1/2024	15	918.77%	646,719	\$57,752	\$9,922	\$208,362	
2009-02	Virginia Department of Blind Vision Impaired	DBVI	702	12/3/2009	15 Years	5.0000%	1,414,264.00	2/1/2025	11.72	127.97%	598,666	\$53,461	\$9,185	\$192,881	
2009-03	Department of Forensic Science	DFS	778	2/5/2010	15 Years	5.0000%	<u>11,063,199.00</u> 19,067,765.00	4/1/2025	10.43	143.79%	5,864,285	\$523,681	\$89,970	\$1,889,378	
2010-01	Roanoke Higher Education Authority	RHEA	935	9/1/2010	15 Year	3.3012%	1,100,967.00	11/1/2025	8.91	168.33%	871,482	\$91,070	\$13,370	\$280,777	
2010-02	VCCS - New River Community College	VCCS-NRCC	260	10/7/2010	15 Year	3.3019%	552,586.00	12/1/2025	15	192.47%	1,101,102	\$94,194	\$16,893	\$354,757	Per Schneider Electric, the projected savings are annual savings and the actual savings are calculated for Year 1 only.
2010-03	Virginia Department of Corrections	DOC	701	2/8/2011	15 Year	3.9509%	18,205,734.00	4/1/2026	15	151.40%	69,030,189	\$6,186,494	\$1,058,716	\$21,174,182	
2010-04	VCCS- J. Sargeant Reynolds Community College	VCCS-JSRCC	260	2/11/2011	15 Year	4.1131%	1,202,178.00	4/1/2026	15	110.17%	17,686,179	\$1,075,453	\$271,251	\$5,425,026	Per Siemens, the actual savings are average annual savings from Year 1 through Year 15.
2010-05	CWM/Virginia Institute of Marine Science	VIMS	268	4/19/2011	15 Year	3.9387%	<u>2,169,821.00</u> 23,231,286.00	6/1/2026	15	187.07%	72,845	\$7,612	\$1,118	\$23,469	
2011-01	Department of General Services	DGS	194	8/11/2011	15 Year	2.7572%	3,904,030.00	10/1/2026	15	142.35%	1,164,315	\$112,939	\$846	\$17,766	
2011-02	Department of General Services	DGS	194	8/12/2011	15 Year	2.5891%	7,590,909.00	10/1/2026	15	217.73%	196,098	\$20,492	\$3,008	\$60,151	
2011-03	Department of General Services	DGS	194	12/22/2011	15 Year	2.3392%	5,890,291.00	2/1/2027	12.34	121.56%	3,774,699	\$401,628	\$57,892	\$1,157,844	
2011-04	Department Of Juvenile Justice	DGS	777	5/7/2012	12 Year	2.1418%	2,824,725.00	6/1/2024	8.99	166.91%	2,047,062	\$217,807	\$31,396	\$627,912	
2011-05	Piedmont Geriatric Hospital	PGH	729	6/18/2012	15 Year	2.1505%	5,202,480.00	7/1/2027	12.37	121.29%	409,941	\$43,618	\$6,287	\$125,745	
2011-06	Department of Motor Vehicle	DMV	154	10/12/2012	15 Year	2.1759%	4,468,014.00	12/1/2027	15.15	99.04%	3,346,483	\$356,066	\$51,325	\$1,026,494	

Lease #	Agency	Agency Abbrev	Agy #	Lease Date	Term	Rate	Par Amount	Final Payment Date	Project Payback Periods	Cost Effectiveness Metrics	kWH Avoided	kWH (in \$)	CO2 Reduction (tons)	CO2 Reductions (in \$)	Notes
2011-07	VCCS (Paul D. Camp)	VCCS PDC	260	10/12/2012	15 Year	2.2459%	103,000.00	12/1/2027	15	164.72%	74,812	\$5,835	\$1,148	\$4,018	Per Schneider Electric, actual savings in Year 1 has not been calculated/completed. The kWH savings are reported with Phase 1 for VCCS (Paul D. Camp) Lease #2006-11 financed on 9/24/07 and cannot be broken out for Phase 2 of the project.
2011-08	Virginia School for the Deaf and Blind	VSDB	218	4/3/2013	15 Year	2.3353%	933,000.00	5/1/2028	15	178.06%	24,103	\$2,565	\$370	\$7,393	
2011-09	The University of Virginia at Wise	UVA-Wise	246	7/10/2013	15 Year	2.9007%	<u>3,003,715.00</u> 33,920,164.00	8/1/2028	12.28	122.12%	1,981,381	\$210,819	\$30,388	\$607,765	
2013-01	Virginia Department of Corrections	DOC	701	5/1/2014	15 Year	2.9471%	12,288,254.00	7/1/2029	15	68.94%	27,634,248	\$1,934,053	\$424,048	\$8,476,474	
2013-02	Department of Forensic Science	DFS	778	10/22/2014	15 Year	2.5488%	2,902,630.00	12/1/2029	11.62	129.07%	1,650,094	\$181,180	\$25,321	\$88,623	
2013-03	DBHDS-Eastern State Hospital	ESH	704	11/5/2014	15 Year	2.4300%	<u>4,018,529.00</u> 19,209,413.00	1/1/2030	14	107.14%	1,063,975	\$116,824	\$16,327	\$57,144	
2015-01	Department of State Police	VSP	156	1/27/2016	15 Years	2.1500%	3,335,716.00	2/1/2031	11.35	132.14%	2,285,259	\$260,520	\$35,068	\$122,737	
2015-02	Southern Virginia Higher Education Center	SVHEC	937	9/29/2017	15 Years	2.2716%	<u>294,039.00</u> 3,629,755.00	11/1/2032	15	30.76%	985,257	\$72,057	\$15,118	\$105,823	
2018-01	Department of General Services	DGS	194	3/19/2018	15 Year	2.7697%	2,812,940.00	4/1/2033	15	143.57%	2,670,877	\$177,793	\$40,981	\$286,869	Per Schneider Electric, the actual savings and the total kWH Avoided savings are calculated for Year 1 Only. Schneider Electric was unable to confirm the original numbers, therefore, they updated the data using the same factors that the original file used to calculated savings.
2018-02	Department of Corrections	DOC	701	7/19/2018	15 Year	2.8352%	14,489,720.00	9/1/2033	15	35.85%	5,496,165	\$255,365	\$843,332	\$590,321	
2018-02	Department of Corrections	DOC	701	7/19/2018	15 Year	4.3610%	2,060,000.00	9/1/2033	15	649.59%	35,813,403	\$2,432,080	\$549,521	\$3,846,574	
2018-03	Dept. of Military Affairs	DMA	123	9/12/2019	15 Years	2.2020%	<u>735,411.00</u> 20,098,071.00	11/1/2034	11.67	128.55%	477,880	\$56,246	\$7,332	\$51,327	
2020-01	Virginia Department of Transportation	VDOT	501	3/26/2020	15 Year	1.6770%	10,837,680.00	5/1/2035	11.40	131.60%	6,371,162	\$768,999	\$97,626	\$4,988,951	
2020-02	Virginia Department of Transportation	VDOT	501	3/4/2021	15 Year	1.9140%	<u>8,561,320.00</u> 19,399,000.00	5/1/2036	11.39	131.68%	5,036,470	\$607,902	\$77,175	\$3,935,912	
A152-94795	Virginia Museum of Natural History	VMNH	942	12/22/2021	15 Year	1.7645%	1,474,325.00	2/1/2037	15	147.53%	39,473	\$5,447	\$605	\$30,847	
A152-94795	Department of General Services	DGS	194	9/29/2022	15 Year	3.3387%	<u>1,192,387.00</u> 2,666,712.00 190,054,553.59	10/1/2037	15	76.68%	11,847,765	\$812,757	\$181,545	\$9,258,819	Per Schneider Electric, unable to provide actual savings as Year 1 savings have not been calculated/completed.