Virginia Energy Plan
Goals, Recommendations, and Results
December 3, 2009
Virginia Commission on Coal and Energy

Legislative Energy Policy and Objective Statements

Title 67, Chapter 1: Energy Policy of the Commonwealth

§ 67-100. Legislative findings.

The General Assembly hereby finds that:

1. Energy is essential to the health, safety, and welfare of the people of this Commonwealth and to the Commonwealth's economy;
2. The state government should facilitate the availability and delivery of reliable and adequate supplies of energy to industrial, commercial, and residential users at reasonable costs such that these users and the Commonwealth's economy are able to be productive; and
3. The Commonwealth would benefit from articulating clear objectives pertaining to energy issues, adopting an energy policy that advances these objectives, and establishing a procedure for measuring the implementation of these policies.

§ 67-101. Energy objectives.

The Commonwealth recognizes each of the following objectives pertaining to energy issues will advance the health, welfare, and safety of the residents of the Commonwealth:

1. Ensuring the availability of reliable energy at costs that are reasonable and in quantities that will support the Commonwealth's economy;
2. Managing the rate of consumption of existing energy resources in relation to economic growth;
3. Establishing sufficient supply and delivery infrastructure to maintain reliable energy availability in the event of a disruption occurring to a portion of the Commonwealth's energy matrix;
4. Using energy resources more efficiently;
5. Facilitating conservation;
6. Optimizing intrastate and interstate use of energy supply and delivery to maximize energy availability, reliability, and price opportunities to the benefit of all user classes and the Commonwealth's economy as stated in subdivision 2 of § 67-100;
7. Increasing Virginia's reliance on sources of energy that, compared to traditional energy resources, are less polluting of the Commonwealth's air and waters;
8. Researching the efficacy, cost, and benefits of reducing, avoiding, or sequestering the emissions of greenhouse gases produced in connection with the generation of energy;
9. Removing impediments to the use of abundant low-cost energy resources located within and outside the Commonwealth and ensuring the economic viability of the producers, especially those in the Commonwealth, of such resources;

10. Developing energy resources and facilities in a manner that does not impose a disproportionate adverse impact on economically disadvantaged or minority communities;

11. Recognizing the need to foster those economically developable alternative sources of energy that can be provided at market prices as vital components of a diversified portfolio of energy resources; and

12. Increasing Virginia's reliance on and production of sustainably produced biofuels made from traditional agricultural crops and other feedstocks, such as winter cover crops, warm season grasses, fast-growing trees, algae or other suitable feedstocks grown in the Commonwealth that will create jobs and income, produce clean-burning fuels that will help to improve air quality, and provide the new markets for Virginia's silvicultural and agricultural products needed to preserve farm employment, conserve farmland and forestland, and increase implementation of silvicultural and agricultural best management practices to protect water quality.

Nothing in this section shall be deemed to abrogate or modify in any way the provisions of the Virginia Electric Utility Regulation Act (§ 56-576 et seq.).

§ 67-102. Commonwealth Energy Policy.

A. To achieve the objectives enumerated in § 67-101, it shall be the policy of the Commonwealth to:

1. Support research and development of, and promote the use of, renewable energy sources;

2. Ensure that the combination of energy supplies and energy-saving systems are sufficient to support the demands of economic growth;

3. Promote research and development of clean coal technologies, including but not limited to integrated gasification combined cycle systems;

4. Promote cost-effective conservation of energy and fuel supplies;

5. Ensure the availability of affordable natural gas throughout the Commonwealth by expanding Virginia's natural gas distribution and transmission pipeline infrastructure; developing coalbed methane gas resources and methane hydrate resources; encouraging the productive use of landfill gas; and siting one or more liquefied natural gas terminals;

6. Promote the generation of electricity through technologies that do not contribute to greenhouse gases and global warming;

7. Facilitate the development of new, and the expansion of existing, petroleum refining facilities within the Commonwealth;

8. Promote the use of motor vehicles that utilize alternate fuels and are highly energy efficient;

9. Support efforts to reduce the demand for imported petroleum by developing alternative technologies, including but not limited to the production of synthetic and hydrogen-based fuels, and the infrastructure required for the widespread implementation of such technologies;

10. Promote the sustainable production and use of biofuels produced from silvicultural and agricultural crops grown in the Commonwealth, and support the delivery infrastructure needed for statewide distribution to consumers;

11. Ensure that development of new, or expansion of existing, energy resources or facilities does not have a disproportionate adverse impact on economically disadvantaged or minority communities; and

12. Ensure that energy generation and delivery systems that may be approved for development in the Commonwealth, including liquefied natural gas and related delivery and storage systems, should be located so as to minimize impacts to pristine natural areas and other significant onshore natural resources, and as near to compatible development as possible.

B. The elements of the policy set forth in subsection A shall be referred to collectively in this title as the Commonwealth Energy Policy.

C. All agencies and political subdivisions of the Commonwealth, in taking discretionary action with regard to energy issues, shall recognize the elements of the Commonwealth Energy Policy and where appropriate, shall act in a manner consistent therewith.

D. The Commonwealth Energy Policy is intended to provide guidance to the agencies and political subdivisions of the Commonwealth in taking discretionary action with regard to energy issues, and shall not be construed to amend, repeal, or override any contrary provision of applicable law. The failure or refusal of any person to recognize the elements of the Commonwealth Energy Policy, to act in a manner consistent with the Commonwealth Energy Policy, or to take any other action whatsoever, shall not create any right, action, or cause of action or provide standing for any person to challenge the action of the Commonwealth or any of its agencies or political subdivisions.

Title 67, Chapter 2: Virginia Energy Plan

§ 67-200. Definitions.

As used in this title:

"Division" means the Division of Energy of the Department of Mines, Minerals and Energy.

"Plan" means the Virginia Energy Plan prepared pursuant to this chapter, including any updates thereto.

§ 67-201. Development of the Virginia Energy Plan.

A. The Division, in consultation with the State Corporation Commission, the Department of Environmental Quality, and the Center for Coal and Energy Research, shall prepare a comprehensive Virginia Energy Plan covering a 10-year period. The Plan shall propose actions, consistent with the objectives enumerated in § 67-101, that will implement the Commonwealth Energy Policy set forth in § 67-102.

B. In addition, the Plan shall include:

1. Projections of energy consumption in the Commonwealth, including but not limited to the use of fuel sources and costs of electricity, natural gas, gasoline, coal, renewable resources, and other forms of energy resources used in the Commonwealth;

2. An analysis of the adequacy of electricity generation, transmission, and distribution resources in the Commonwealth for the natural gas and electric industries, and how regional generation, transmission, and distribution resources affect the Commonwealth;
3. An analysis of siting requirements for electric generation resources and natural gas and electric transmission and distribution resources;
4. An analysis of fuel diversity for electricity generation, recognizing the importance of flexibility in meeting future capacity needs;
5. An analysis of the efficient use of energy resources and conservation initiatives;
6. An analysis of how these Virginia-specific issues relate to regional initiatives to assure the adequacy of fuel production, generation, transmission, and distribution assets;
7. An analysis of siting of energy resource development, refining or transmission facilities to identify any disproportionate adverse impact of such activities on economically disadvantaged or minority communities; and
8. Recommendations, based on the analyses completed under subdivisions 1 through 7, for legislative, regulatory, and other public and private actions to implement the elements of the Commonwealth Energy Policy.

C. In preparing the Plan, the Division and other agencies involved in the planning process shall utilize state geographic information systems, to the extent deemed practicable, to assess how recommendations in the plan may affect pristine natural areas and other significant onshore natural resources.

D. In preparing the Plan, the Division and other agencies involved in the planning process shall develop a system for ascribing numerical scores to parcels of real property based on the extent to which the parcels are suitable for the siting of a wind energy facility or solar energy facility. For wind energy facilities, the scoring system shall address the wind velocity, sustained velocity, turbulence, proximity to electric power transmission systems, potential impacts to natural and historic resources and to economically disadvantaged or minority communities, and compatibility with the local land use plan. For solar energy facilities, the scoring system shall address the parcel's proximity to electric power transmission lines, potential impacts of such a facility to natural and historic resources and to economically disadvantaged or minority communities, and compatibility with the local land use plan. The system developed pursuant to this section shall allow the suitability of the parcel for the siting of a wind energy facility or solar energy facility to be compared to the suitability of other parcels so scored, and shall be based on a scale that allows the suitability of the parcel for the siting of a such an energy facility to be measured against the hypothetical score of an ideal location for such a facility.

E. After July 1, 2007, upon receipt by the Division of a recommendation from the Department of General Services, a local governing body, or the parcel's owner that a parcel of real property is a potentially suitable location for a wind energy facility or solar energy facility, the Division shall analyze the suitability of the parcel for the location of

such a facility. In conducting its analysis, the Division shall ascribe a numerical score to the parcel using the scoring system developed pursuant to subsection D.

§ 67-202. Schedule.

A. The Division shall complete the Plan by July 1, 2007.

B. Prior to completion of the Plan and updates thereof, the Division shall present drafts to, and consult with, the Coal and Energy Commission and the Commission on Electric Utility Regulation.

C. The Plan shall be updated by the Division and submitted as provided in § 67-203 by July 1, 2010, and every four years thereafter. Updated reports shall reassess goals for energy conservation based on progress to date in meeting the goals in the previous plan and lessons learned from attempts to meet such goals.

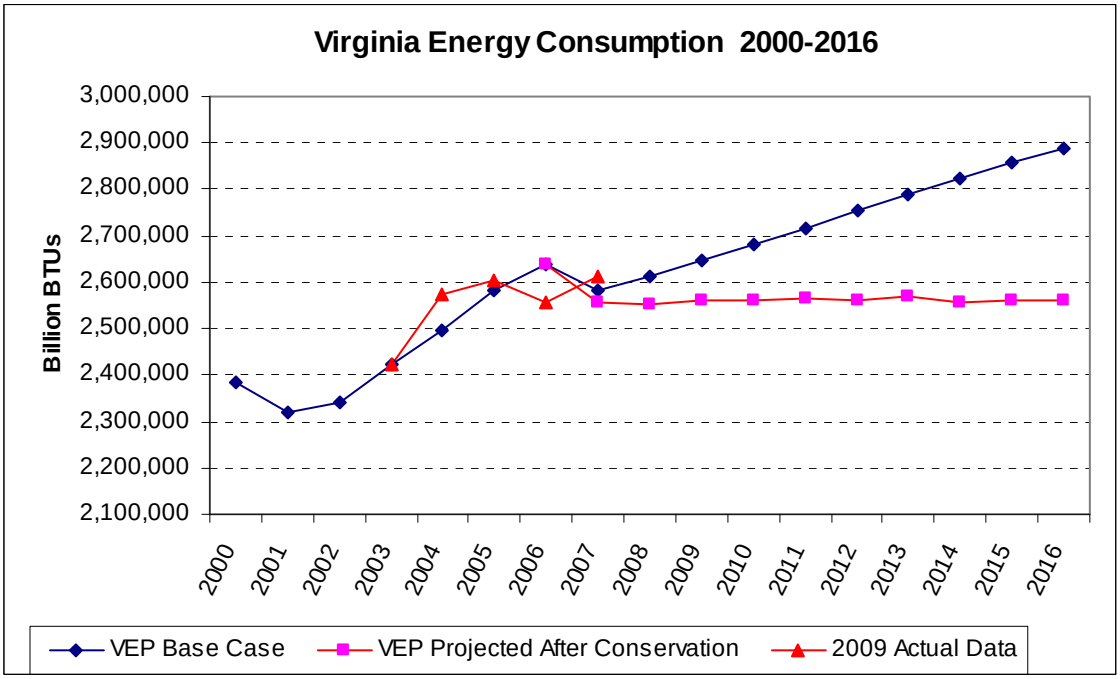
§ 67-202.1. Annual reporting by investor-owned public utilities.

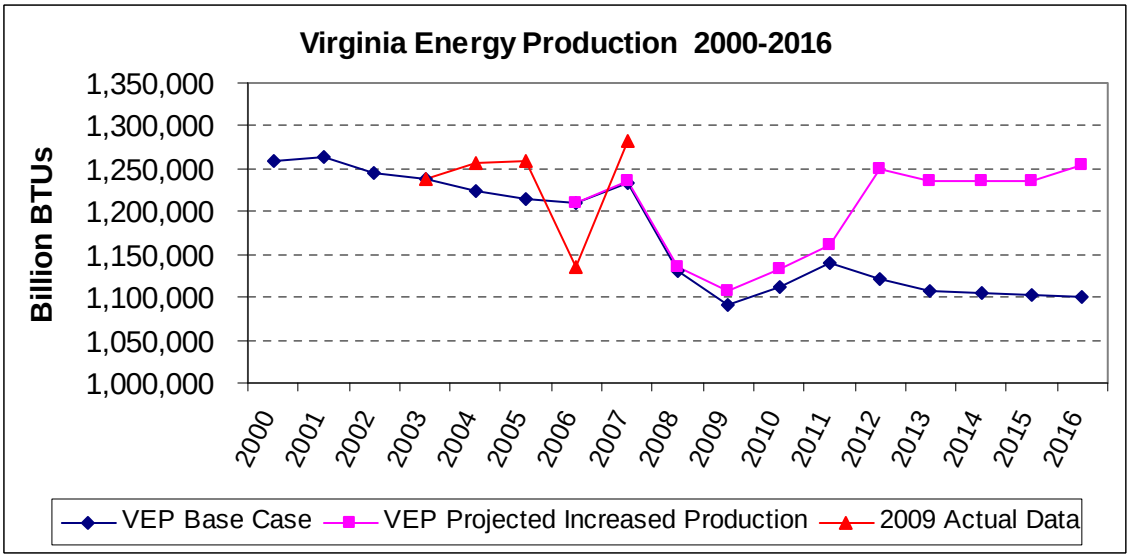
Each investor-owned public utility providing electric service in the Commonwealth shall prepare an annual report disclosing its efforts to conserve energy, including but not limited to (i) its implementation of customer demand-side management programs and (ii) efforts by the utility to improve efficiency and conserve energy in its internal operations pursuant to § 56-235.1. The utility shall submit each annual report to the Division of Energy of the Department of Mines, Minerals and Energy by November 1 of each year, and the Division shall compile the reports of the utilities and submit the compilation to the Governor and the General Assembly as provided in the procedures of the Division of Legislative Automated Systems for the processing of legislative documents.

§ 67-203. Submission of Plan.

Upon completion, the Division shall submit the Plan, including periodic updates thereto, to the Governor, the Commissioners of the State Corporation Commission, and the General Assembly. The Plan shall be submitted as provided in the procedures of the Division of Legislative Automated Systems for the processing of legislative documents. The Plan's executive summary shall be posted on the General Assembly's website.

Virginia Energy Plan - Preliminary Metrics – Goal 1





Virginia Energy Plan
Accomplishments

Goals and Recommendations	Results
Goal 1 Increase energy independence -- Reduce growth rate of energy use by 40% -- Increase indigenous energy production by 20%	See charts below showing energy consumption and production Virginia Energy Plan projections and actual
Goal 1 Recommendations	
Increase incentives for consumer energy efficiency by expanding tax benefits for consumer investments	• Federal income tax incentives for energy efficiency in ARRA. • Two fall Energy Star appliance sales tax holidays held. • No state income tax incentives implemented. In lieu of tax incentives, $15 million in rebates for energy efficiency improvements with State Energy Program ARRA funds.
Utilities should sponsor or offer energy efficiency and conservation programs for their customers	• 2008 legislation authorized rate decoupling through the Natural Gas Conservation and Ratemaking Efficiency (CARE) Act, combining decoupling with energy efficiency. Virginia Natural Gas has implemented its plan. Columbia Gas has applied to the SCC for its plan. • 2009 legislation authorized investor-owned electric utility rate of return for investments in efficiency actions. Dominion has completed pilot efficiency programs and has filed a portfolio of efficiency programs with the SCC. • Electric cooperatives offer a portfolio of efficiency and conservation programs, primarily targeted at reducing peak electric use. Coops are undertaking an assessment of the statutory, regulatory, organizational, physical, contractual, financial, and market impediments to cooperative implementation of initiatives relating to dynamic rates, standby rates, interruptible rates, and rates for purchases of electricity generated from renewable sources. • Dominion, electric cooperatives, and municipal electric utilities are implementing smart grid improvements. • Electric and natural gas utilities have implemented upstream efficiency improvements such as increasing output of generating plants and pipeline replacement programs to eliminate leaks.
Expand support for programs that help low-income Virginians reduce energy use	• The Weatherization Assistance Program (WAP) appropriation was increased 100% for FY 2010 from approximately $6 million to $12 million per year. • The ARRA provided $94.1 million increased funding to the WAP.
Implement policies to improve energy efficiency of its building stock	• The Board for Housing and Community Development is implementing the 2009 changes

	to the International Energy Conservation Code as part of the Virginia Uniform Statewide Building Code. These are estimated to improve the minimum energy performance of new buildings by approximately 15%. • The Department of Housing and Community Development is working with a work group to evaluate proposals for the 2012 update of the International Energy Conservation Code to achieve an additional 15% improvement in energy performance. • The Virginia Housing and Environment Network has provided training to home builders and energy auditors to improve builder technical proficiency and expand availability of energy auditors. • The Home Builders Association of Virginia selected Earth Craft Homes as its energy-efficient, green home standard. • Under Executive Order 82, all new state buildings are to meet LEED silver or Green Globe two globe standards.
Support efforts of industrial and commercial sectors to improve efficiency in operations	• Federal income tax incentives for energy efficiency expanded in ARRA. • No state income tax incentives implemented. In lieu of tax incentives, $15 million in rebates for energy efficiency improvements put in place with State Energy Program ARRA funds. • Virginia is joining the SE industrial energy efficiency program with the US Department of Energy, other SE states, and Southeast Energy Efficiency Alliance (SEEA).
Support deployment of new energy conservation technologies	• $5 million in State Energy Plan ARRA funds are proposed for creating new jobs related to commercialization of new clean energy technologies.
Federal government should expand efforts in support of energy efficiency and conservation	• Federal CAFE standards increased. • Energy Star equipment list expanded. • ARRA provides increased energy efficiency support.
Local governments should establish policies to increase the energy efficiency of its citizenry	• VML/VACo/VSBA Go Green Virginia has been expanded. • Community Energy Planning is being started in northern Virginia localities. • Numerous localities are completing GHG inventories and reduction plans, many working with ICELI. • Charlottesville and Albemarle County are implementing the Local Energy Alliance Program (LEAP).
Government should lead by example and implement all cost-effective conservation opportunities	• State actions under Executive Order 82 (48): • $200 million performance contracting; demand response; natural gas and heating oil procurement; energy manager training.

	• VML/VACo/VSBA Go Green Virginia • Local governments are investing EECBG ARRA funds in energy improvements.
Individual consumers should make day-to-day and long-term lifestyle choices to save energy	• Anecdotal evidence of increased investments in energy efficiency. No hard data available.
Commercial businesses should give priority to energy-efficiency and conservation actions	• Anecdotal evidence of increased investments in energy efficiency. No hard data available.
Manufacturers should give priority to energy efficiency and conservation actions	• Anecdotal evidence of increased investments in energy efficiency. No hard data available.
Agricultural and forestry operations should expand use of energy efficiency and conservation actions	• DMME, Cooperative Extension & JMU completing farm audits & training in Shenandoah Valley.
Increase energy efficiency of fleets and transportation systems	• Increases in transit funding provided. • Norfolk light rail and Metro Dulles expansion construction started. • HOT lanes being developed in Northern Virginia beltway. • Freight management facilities being expanded in the I-81 corridor. • Under Executive Order 82, state diesel purchases to be minimum 2% biodiesel as of July 1, 2010.
Higher education institutions should expand efforts to use energy wisely and train the next generation of leaders about energy	• Community colleges offering new training in energy efficiency, wind and other renewable power use, nuclear technicians, and other energy areas. • Universities expanding programs including nuclear engineering, energy engineering, sustainability, and other energy areas. • Universities are implementing campus-wide sustainability plans to involve the entire student bodies in the efforts.
Support expansion of the state's electric infrastructure	• Utilities are implementing numerous transmission and distribution system improvements when justified by service reliability needs. • Implementing expanded communication between public utility commissions and state energy offices and policy staff in PJM region. • Study of management of electric lines and conservation lands continuing.
Encourage generation of electricity from new renewable resources	• RPS expanded to 15% of base by 2025. • State tax credit for solar and wind systems failed. • First large scale wind project under construction. • VCERC offshore wind efforts leading to interest in Virginia offshore waters. • DEQ permit-by-rule for small renewable systems being drafted. • VMRC assessment of offshore waters for renewable power being developed. • ARRA State Energy Program funding $38 million for solar and wind system and $10 million for biomass and waste-to-energy support. • New landfill gas to energy systems being developed.

Support expansion of natural gas infrastructure.	• Third pipeline crossing between north and south Hampton Roads under development. • MMS OCS Lease Sale 220 activity subject to MMS's ongoing review of the current 5-year plan.
Support development of infrastructure to supply petroleum and alternate transportation fuels	• Virginia is home to 5 commercial biodiesel producers. • Kinder Morgan completed the first commercial pipeline shipments of biodiesel in 2009 to Roanoke and one non-Virginia community. • Virginia's first ethanol plant is under construction. • The Biofuels Incentive Grant program was amended to provide a greater incentive for cellulosic and algae based production over conventional sources.
Ensure adequate coal and electric supplies to the US steel industry	• Coal production has declined due to increasing difficult mining conditions resulting in the temporary closure of the Buchanan No. 1 mine. • Federal changes to regulation of surface mining.
Support implementation of Virginia's Hydrogen Blueprint	• Hydrogen energy curriculum and the first round of teacher training for middle schools completed. Funding for implementation has not continued.
Secure infrastructure from natural and manmade disasters	• Energy annex to Virginia's Emergency Operations Plan updated. • First draft of the energy portion of Critical Infrastructure Protection Plan completed. • State Energy Assurance plan to be completed under ARRA grant. • Energy system owners continue to make reliability and security improvements.
Goal 2 Increase consumer education about energy use and conservation	
Goal 2 Recommendations	
Implement an expanded energy education program	• SCC developed electric energy efficiency consumer education program as per 2008 legislative direction.
Goal 3 Reduce Carbon emissions by 30% by 2025, to return to 2000 emission levels	
Goal 3 Recommendations	
Establish an Climate Change Commission to make a more complete assessment of greenhouse gas (GHG) issues and develop a plan to reach the GHG remission reduction goal	• Governor Kaine established the Governor's Commission on Climate Change. The Commission completed its deliberations and issued its recommendations in December 2008.
Require reporting of GHG emissions using the Climate Registry Protocol	• Virginia legislation providing mandatory GHG emission reporting failed. • Federal GHG reporting rules under development by EPA.
Decisions on how Virginia will meet future energy needs should be based on both costs of energy	• Balance between energy cost and environmental impacts addressed through permitting process for

sources and the need to protect ecosystems, natural resources, and the health and wellbeing of citizens, including economically disadvantaged and minority communities	projects such as Virginia City Hybrid Generation Plant, electric transmission lines, Highland New Wind, and the HRX crossing.
Development should be clustered, and infill and brownfield development should be encouraged to reduce energy impacts	• Secondary road standards revised to allow more compact development. • Established requirements for urban development areas in high growth localities. • High growth localities granted authority to impose road impact fees. • Urban counties authorized to create urban transportation service districts. • Commonwealth Transportation Board to develop new transportation and land-use performance measures.
Renewable energy production should be promoted to reduce environmental emissions. Carbon capture and storage should be further developed	• See renewable energy items above. • Virginia Tech, Marshall Miller, and others, through SECARB, is completing tests of carbon storage in unminable coal seams including a test well in Russell County.
Environmental programs should be leveraged to increase energy efficiency and renewable energy development	• DEQ developing permit by rule for renewable projects. • VMRC starting study of offshore state waters for renewable energy. • Energy management is a component of the DEQ's Virginia Environmental Excellence Program and pollution prevention programs.
Goal 4 Capitalize on economic development opportunities through business expansion and increased R&D in areas of strength – alternate transportation fuels, nuclear technology, coastal energy production, and carbon capture and storage	
Goal 4 Recommendations	
Provide a consistent funding source for energy RD&D, with primary focus on existing areas of strength	• The Tobacco Commission – $40 million in five energy technology centers and plans for up to $100 million in energy RD&D activities. • State has invested in VCERC through FY 2009. No funding continued in FY 2010. • State continues its investment in the Virginia Tech Center for Coal and Energy Research. • Numerous state universities have invested internal funding in energy R&D, particularly to match federal R&D grants. • CIT continues its support for companies with SBIR/STTP grants for energy and other projects.
Establish a public-private governance structure to set priorities for public energy R&D funding	• The proposed VERDO not formed. • The Tobacco Commission serves as a governance structure for energy investments in the Commission's region.
Support development of two to three energy technology parks	• Tobacco Commission has funded five energy technology centers.
Target business development actions to energy	• VEDP formed Interagency Task Force for

businesses producing employment and capital investment gains	Energy Project Recruitment and is implementing an energy business recruitment plan. • Clean Energy Manufacturing Incentive Grant not funded. • $5 million in State Energy Program ARRA funds proposed for clean energy business growth.
Support growth of the nuclear industry cluster	• Support for AREVA and B&W provided through items such as the Campbell County nuclear training and research center. • AREVA and Newport News Northrop Grumman building the nuclear component manufacturing center in Newport News. • Coal and Energy Commission overseeing uranium mining study.
Provide workforce services that support development of adequate numbers of trained workers for energy businesses	• VA Energy Workforce Consortium continues to work on energy job pipeline needs. • State and private entities applying for US Department of Labor ARRA Green Jobs grants. • VCCS and university training expanding.
Address potential negative environmental impacts and economic value when assessing whether projects impose a disproportionate adverse impact on economically disadvantaged or minority communities	• No new action – continues to be addressed in public policy consideration of energy projects.