

August 24, 2018

Director Al Christopher  
Energy Division  
Department of Mines, Minerals and Energy  
1100 Bank St., #817  
Richmond, VA 23219

Re: Comments on the 2018 Virginia Energy Plan

Dear Mr. Christopher,

The American Council for an Energy-Efficient Economy (ACEEE) welcomes this opportunity to provide comments to the Virginia Department of Mines, Minerals, and Energy (DMME) on the above-referenced action on the development of a 2018 Virginia Energy Plan. ACEEE is a nonprofit research organization based in Washington, D.C. that conducts research and analysis on energy efficiency. ACEEE is one of the leading groups working on energy efficiency issues in the United States at the national, state, and local levels. We have been active on energy efficiency issues for more than three decades. In Virginia, we developed an energy efficiency potential study in 2008 covering electricity savings opportunities, and since then have provided technical assistance on energy efficiency topics to various stakeholders.<sup>1</sup>

ACEEE's comments herein seek to address the agency's request for comments and specific ideas to be considered in the development of the Commonwealth's energy plan. Specifically, we recommend the following:

- I. Prioritize energy affordability by focusing on energy efficiency
- II. Strengthen utility delivery and investment in energy efficiency
- III. Lead by example in public buildings
- IV. Invest in energy efficiency through cap-and-trade program
- V. Prioritize innovation for energy efficiency

### **I. Prioritize energy affordability by focusing on energy efficiency**

Low-income Virginians face high energy burdens, meaning that an outsized portion of their income goes towards home energy bills, including electricity, natural gas, and other heating fuels. This is despite their having some of the lowest energy rates in the United States.<sup>2</sup> While investments in energy efficiency will benefit residents, businesses, and communities throughout the Commonwealth, low-income and rural residents will see the most benefits because they tend to live in less energy-efficient housing and face higher energy burdens. Moreover, the

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<sup>1</sup> ACEEE. 2008. Energizing Virginia: Efficiency First. <http://aceee.org/research-report/e085>.

<sup>2</sup> ACEEE. 2017. How energy efficiency can help low-income households in Virginia. <https://aceee.org/sites/default/files/pdf/fact-sheet/ses-virginia-100917.pdf>. Note that the analysis does not include transportation energy costs in its definition of household energy burdens.

Virginia Poverty Law Center has found above-average energy burdens for zip codes in Southeast Virginia.<sup>3</sup> ACEEE research suggests that for both single and multifamily low-income households, efficiency can eliminate up to 35% of their excess energy burden.<sup>4</sup>

We recommend that Governor Northam work with the State Corporation Commission (SCC) to support the expansion and improvement of utility-sector energy efficiency delivered to low-income customers. SB 966 requires that 5% of utility energy efficiency spending be designated for low-income, elderly, or disabled Virginians. We recommend that Governor Northam coordinate other statewide and local weatherization programs with utility-delivered efficiency funding for these community members.

In addition, we recommend convening stakeholders representing low-income communities, such as the Virginia Poverty Law Center, to identify opportunities for alleviating the higher energy burden and disproportionate health impacts faced by these communities. Increasing investment in energy efficiency programs targeted to reduce energy burdens cannot only save energy, but improve the conditions of affordable housing, and protect the health of building occupants.<sup>5</sup>

## **II. Strengthen utility delivery and investment in energy efficiency**

The Commonwealth has several opportunities to expand energy and cost savings for businesses and residents. In a recent ACEEE ranking of the 51 largest US electric utilities on energy efficiency programs and policies, Dominion Energy ranked 50<sup>th</sup>.<sup>6</sup> Both a stronger portfolio of programs and well-balanced state policies could incentivize utility-sector energy efficiency and deliver deeper energy savings to all Virginians.<sup>7</sup> ACEEE recommends that Governor Northam support the following actions:

- Define a set of criteria for the scope of the new SCC-convened energy efficiency stakeholder collaborative, as required by SB 966, to guide Dominion and Appalachian Power Company (APCo) as they increase spending on energy efficiency programs through 2028 consistent with legislative investment requirements. The 2018 Virginia Energy Plan should set concrete statements around the intended purpose, outcomes, and methods by which the stakeholder group should operate, with an emphasis on consensus-driven program design and intended policy outcomes. The governor should also take a leading role to help facilitate coordination with the SCC, utilities, and key stakeholders in the initial process regarding the creation of the stakeholder group, including the hiring of the independent monitor. Lastly, the governor should encourage

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<sup>3</sup> See slide 14: <https://www.eesi.org/files/073118slides.pdf>.

<sup>4</sup> ACEEE. 2016. Lifting the High Energy Burden in America's Largest Cities: How Energy Efficiency Can Improve Low-Income and Underserved Communities. <https://aceee.org/research-report/u1602>.

<sup>5</sup> See ACEEE's report, *The Next Nexus: Exemplary Programs That Save Energy and Improve Health* (<https://aceee.org/research-report/h1802>), that explores the link between energy efficiency and building occupant health. Also see the *Directory of Health and Energy Linked Programs* (<http://aceee.org/topics/health-environment/program-directory>).

<sup>6</sup> ACEEE. 2017. The 2017 Utility Energy Efficiency Scorecard. <http://aceee.org/research-report/u1707>.

<sup>7</sup> ACEEE. 2017. Utility-Sector Energy Efficiency Performance in the Commonwealth of Virginia. <http://aceee.org/fact-sheet/va-utility-sector-memo>.

the stakeholder group to meet multiple times per year for the duration of the 10-year period to ensure a robust and inclusive process.

- Encourage the SCC-convened stakeholder collaborative to engage a consultant to conduct an energy efficiency potential study with the spending target as the floor, which should be used to set annual savings targets for utilities.<sup>8</sup> A potential study also be used to inform legislation to set long-term energy savings requirements, above the spending floor, that are cost-effective and achievable.
- Legislation to enact strong, long-term energy savings requirements for electric and gas utilities, which would send a clear signal to market actors about the importance of energy efficiency. Most states with aggressive energy savings goals aim to reduce retail electricity sales by 3% annually, but many also set targets at 1-2% annually.<sup>9</sup>
- Legislation to enable full revenue decoupling for electric and gas utilities in Virginia and offer utilities incentives for meeting efficiency program goals. Virginia does not currently allow electric utilities to decouple their profits from sales, nor does it offer electric utilities performance incentives.
- Increased funding for at least one additional full-time employee at DMME to track and engage around energy efficiency (i.e. demand-side management or DSM) filings before the SCC.
- Encourage utilities to offer pilot programs that encourage the adoption of emerging efficiency technologies. In addition, utilities should extend low-income efficiency programs, either directly within its efficiency program portfolio or through Dominion's EnergyShare, an expanded offering for low-income customers. Utilities should also establish savings targets in accordance with legislative requirements including the recent investment requirements and any possible future savings targets. Implementing these strategies will deepen energy and bill savings for all Virginians.
- The SCC should approve more of Dominion and APCo's proposed programs to expand energy efficiency measures available to Virginians and should use the National Standard Practice Manual to more accurately measure all costs and benefits of efficiency programs in accordance with Virginia's policy goals.<sup>10</sup>
- The SCC should require independent oversight of utility-sector energy efficiency evaluation, measurement and verification (EM&V) processes and establish a stakeholder EM&V working group, as recommended by many Virginia stakeholders during a recent public comment process. This would improve efficiency program data, bring transparency to EM&V decision making, and help regulators ensure prudent use of ratepayer dollars.

### III. Lead by example in public buildings

Virginia is one of the top-scoring states for energy efficiency in public buildings in ACEEE's *2017 State Energy Efficiency Scorecard*, scoring almost the maximum points for its state-funded

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<sup>8</sup> However, utilities should not delay in their increased investments in energy efficiency while a potential study is completed. Rather, the study can help inform the following rounds of energy efficiency program planning.

<sup>9</sup> ACEEE. 2017. State Energy Efficiency Resource Standards. <https://aceee.org/sites/default/files/state-eers-0117.pdf>.

<sup>10</sup> NESP. 2017. The National Standard Practice Manual. <https://nationalefficiencyscreening.org/national-standard-practice-manual/>.

financial incentives, lead-by-example initiatives, and publicly funded research and development programs focused on efficiency.<sup>11</sup> However, the Commonwealth has several opportunities to deepen energy savings in the public sector. Virginia had a goal to reduce energy consumption in public buildings 15% by 2017. Through the Virginia Energy Management Program (VEMP), DMME helps state agencies, institutions of higher education and public bodies reduce electric, gas, and water consumption by working with energy savings performance contractors (ESCOs). However, Virginia does not currently track state facility energy consumption and VEMP participation could be improved. We recommend that Governor Northam continue and expand efforts to reduce energy consumption in public buildings and lead the state by example. In particular, we recommend renewing the energy savings target for public facilities and improving energy data collection efforts from the municipal, university, school, and hospital (MUSH) market.

Further, working to engage Virginia institutions of higher education in VEMP will increase savings opportunities. Virginia can look to other states as examples of targeting public universities with energy performance contracting (EPC) programs. For example, the Tennessee Board of Regents completed 17 EPC projects in the past decade, totaling \$54,000,000 in investment. The annual projected savings for these projects is \$6,800,000. In May 2018, the University of Tennessee Health Science Center in Memphis signed a contract for a \$5.5 million ESPC project. This is the first phase of a planned \$30 million project to overhaul the campus' energy and plant equipment.<sup>12</sup> Further, in Kentucky, all seven state-supported universities have had EPCs on their campuses. In addition, all 16 colleges (with more than 70 campuses) of the Kentucky Community and Technical College System have implemented EPCs.<sup>13</sup>

We recommend that the Governor provide DMME with continued and expanded resources to support energy efficiency technical assistance for EPC to localities, public school divisions, and other public bodies so that they can achieve cost-effective energy savings that also deliver operational, environmental, and energy reliability and resilience benefits. Organizations such as the National Association of State Energy Officials can help DMME to understand and apply funding and technical assistance best practices from other states.

Sustained funding for DMME and Department of General Services (DGS) can also support the procurement and management of energy data software, currently under development through the Energy Data Warehouse pilot. Looking to other states as an example, Kentucky tracks real-time energy savings in state buildings and makes these data publicly available through the Kentucky Energy Dashboard. In 2017, the Kentucky Commonwealth Energy Management and Control System (CEMCS) accounted for 164 buildings and more than 10 million square feet. CEMCS was one of the few state government programs granted a budget increase in 2017 so that more buildings could be included. We recommend investing in funding for training and education for state facilities managers to use the software and maintain accurate facilities records. DMME could then use these data points to identify facilities that would be good

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<sup>11</sup> ACEEE. 2017. The 2017 State Energy Efficiency Scorecard. <https://aceee.org/research-report/u1710>.

<sup>12</sup> See ACEEE's State and Local Policy Database on Tennessee for more information: <https://database.aceee.org/state/tennessee>

<sup>13</sup> See ACEEE's State and Local Policy Database on Kentucky for more information: <https://database.aceee.org/state/kentucky>

candidates for participation in VEMP. In addition, we recommend DMME work with public facilities and energy service companies to further improve data collection efforts.

#### **IV. Invest in energy efficiency through cap-and-trade program**

Energy efficiency is an important strategy to reduce emissions in the electric power sector. As it lowers electricity use, energy efficiency avoids emissions of carbon dioxide (CO<sub>2</sub>) and other harmful pollutants, often at lowest cost.<sup>14</sup> As the Commonwealth plans for a cap-and-trade program to link to the Regional Greenhouse Gas Initiative (RGGI), CO<sub>2</sub> reductions from energy efficiency will help electric generating units meet emissions limits by reducing electricity production. We recognize that there remains much uncertainty around Virginia's carbon rule and participation in RGGI. We recommend that the set-aside of allowances for DMME should be used to invest in energy efficiency projects that save energy and reduce utility costs for public and private sectors alike. Set-aside revenues could be spent on any of the aforementioned program ideas, in addition to those recommendations detailed in ACEEE's comments to the Department of Environmental Quality.<sup>15</sup>

While energy efficiency will greatly help to meet the Commonwealth's CO<sub>2</sub> emission reduction targets, this does not mean that energy efficiency deployment will increase on its own without policy and program guidance from the Governor – even when it is more cost-effective than other CO<sub>2</sub> reduction options. Current market and regulatory barriers to investment in energy efficiency can hinder its use as a compliance strategy in a trading program.<sup>16</sup> The Commonwealth should use methods for allowance distribution to help address these barriers to energy efficiency deployment.<sup>17</sup> For example, an updating output-based allocation provides a transparent and predictable price signal, and rewards measures that deliver lasting CO<sub>2</sub> reductions.<sup>18</sup>

We recommend the Commonwealth look to states participating in RGGI as examples of how to increase investment in energy efficiency. During the 2015 program compliance year, RGGI states invested 64% of proceeds in energy efficiency programs, representing \$1.3 billion in lifetime energy bill savings to over 141,000 participating households and 5,700 businesses across the region.<sup>19</sup> Maryland allocates proceeds from the sale of allowances to the state energy office, the Maryland Energy Administration (MEA). The funds are directed through the State's Strategic Energy Investment Fund (SEIF), a non-lapsing fund administered by the MEA, that

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<sup>14</sup> ACEEE. 2016. How Much Does Energy Efficiency Cost? [aceee.org/sites/default/files/cost-of-ee.pdf](http://aceee.org/sites/default/files/cost-of-ee.pdf).

<sup>15</sup> ACEEE. 2018. Comments to Virginia Department of Environmental Quality on Proposed Action to Develop Regulations to Reduce and Cap Carbon Dioxide. <http://aceee.org/regulatory-filing/va-deq-040918>.

<sup>16</sup> ACEEE 2013. Overcoming Market Barriers and Using Market Forces to Advance Energy Efficiency. <http://aceee.org/research-report/e136>.

<sup>17</sup> See a description of allocation methodologies in ACEEE's Comments to Virginia Department of Environmental Quality on Allowance Distribution Under a Market-based CO<sub>2</sub> Trading Program. <https://aceee.org/regulatory-filing/ed-noira-0717>.

<sup>18</sup> Several states participating in the NO<sub>x</sub> SIP Call use output-based allocation. In addition, see AJW's Direct Allocation approach (<http://ajw-inc.com/mass-based-paper/>) and AEE's Performance-based Allocation approach (<http://info.aee.net/allocation-for-clean-power-plan-compliance>).

<sup>19</sup> RGGI. 2017. The Investment of RGGI Proceeds in 2015. [https://www.rggi.org/sites/default/files/Uploads/Proceeds/RGGI\\_Proceeds\\_Report\\_2015.pdf](https://www.rggi.org/sites/default/files/Uploads/Proceeds/RGGI_Proceeds_Report_2015.pdf).

has supported cumulative energy efficiency upgrades for 16,991 low- to moderate-income households and provided over \$2.5 million in grants to assist 42 commercial entities in enhancing efficiency through the Game Changer Competitive Grant Program.<sup>20</sup>

Emission reductions from energy efficiency can lead to significant gains in public health. ACEEE found that reducing annual electricity use by 15% nationwide would save more than six lives every day, prevent nearly 30,000 asthma episodes each year, and save Americans up to \$20 billion through avoided health harms annually. Virginia ranked among the top 15 states that would see the largest avoided health harms - including heart attacks, respiratory illnesses and symptoms, premature deaths, and emergency room visits to treat asthma - from investing in energy efficiency and thereby reducing emissions in the electric power sector.<sup>21</sup>

## **V. Prioritize innovation for energy efficiency**

Prioritizing innovation through policy development, stakeholder engagement, and technology deployment will increase opportunities to advance energy efficiency. Local government engagement, workforce development, and transportation electrification are a few examples of innovative areas where the Commonwealth could lead.

First, we recommend expanding access to building energy data across the residential and commercial sectors. DMME should continue coordination with cities, utilities, the Virginia Energy Efficiency Council (VAEEC), and the SCC on data access and benchmarking at the local level. In addition, we recommend that Governor Northam support 2019 legislation that enables localities to develop mandatory building energy benchmarking and transparency programs. The Commonwealth should develop a voluntary building energy benchmarking system for the residential and commercial sectors that can be leveraged by localities across the state and encourage the SCC to develop guidelines for customer and third-party access to energy usage data as part of grid modernization proceedings.<sup>22</sup>

Second, we recommend that the Commonwealth consider energy efficiency workforce development opportunities and support cities.<sup>23</sup> The success of energy efficiency policies and programs is inextricably linked to a strong, capable energy efficiency workforce. To ensure that trained workers are available to capitalize on energy efficiency investments, the Commonwealth can help local governments to set workforce development goals, coordinate training programs, and provide equal access to opportunities to workers and businesses. In addition, instituting equity-focused workforce development programs and targets will help to extend these benefits to underserved community members.

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<sup>20</sup> Ibid.

<sup>21</sup> ACEEE. 2018. Saving Energy, Saving Lives: The Health Impacts of Avoiding Power Plant Pollution with Energy Efficiency. <https://aceee.org/research-report/h1801>.

<sup>22</sup> See ACEEE's *Energy Usage Data Access: A Getting-Started Guide for Regulators* toolkit for steps that state regulators can take to unleash the many benefits of expanded energy data access: <https://aceee.org/sector/state-policy/toolkit/data-access>.

<sup>23</sup> ACEEE. 2018. Through the Local Government Lens: Developing the Energy Efficiency Workforce. <https://aceee.org/research-report/u1805>.

Finally, we recommend the Commonwealth enact policies to support efficient transportation systems.<sup>24</sup> The Commonwealth should develop programs and policies that improve the efficiency of Virginia's transportation sector. This could include adopting the Clean Car Standard and the Zero Emissions Vehicle Program, as well as expanding mobility options via less energy-intensive modes of transport. Virginia should take full advantage of VW settlement funds to reduce carbon emissions and invest in vehicle electrification. Beneficial electrification of the transportation sector should be done in a way that reduces total energy (source energy), saves money for customers, reduces emissions, and does not worsen peak demand challenges. When these conditions are met, beneficial electrification is a form of energy efficiency for the transportation sector. End-use energy efficiency in the built environment, which is achieved through improvements to our homes and businesses that save energy & money and reduce emissions & peak demand, can and should be complementary to beneficial electrification of the transportation sector.

## Conclusion

Energy efficiency should play a large and central role in Virginia's energy future and in its energy plan. ACEEE is available as a resource to discuss any of the issues raised herein or others DMME may be considering regarding the treatment of energy efficiency as the Commonwealth develops an energy plan. We have kept our comments succinct but welcome the opportunity to provide further information.

Sincerely,



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<sup>24</sup> See Chapter 3 of ACEEE's 2017 *State Energy Efficiency Scorecard*: <https://aceee.org/research-report/u1710>. Also see ACEEE. 2018. *Strategies for Integrating Electric Vehicles into the Grid*. [aceee.org/research-report/t1801](https://aceee.org/research-report/t1801).