



Environmental and Regulatory Law Clinic

CALE JAFFE, DIRECTOR

April 28, 2017

VIA ELECTRONIC FILING

Mr. Joel H. Peck, Clerk
c/o Document Control Center
State Corporation Commission
Tyler Building – First Floor
1300 East Main Street
Richmond, Virginia 23219

RE: Application of Virginia Electric and Power Company for approval to implement new, and to extend existing, demand-side management programs and for approval of two updated rate adjustment clauses pursuant to § 56-585.1 A 5 of the Code of Virginia

Case No. PUE-2016-00111

Dear Mr. Peck:

Enclosed for filing in the above-captioned proceeding is the Post-Hearing Brief of the Virginia Energy Efficiency Council, which is being filed electronically on the Commission's Electronic Document Filing system. If you should have any questions regarding this filing, please contact me at (434) 924-4776, or via email at cjaffe@virginia.edu.

Sincerely,

A handwritten signature in black ink, appearing to read "Cale Jaffe".

Cale Jaffe
Assistant Professor of Law, General Faculty
Director, Environmental and Regulatory Law Clinic
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cc: Parties on Service List
Commission Staff

COMMONWEALTH OF VIRGINIA
STATE CORPORATION COMMISSION

APPLICATION OF)
)
VIRGINIA ELECTRIC AND POWER)
COMPANY)
) Case No. PUE-2016-00111
For approval to implement new, and to)
extend existing, demand-side management)
programs and for approval of two updated)
rate adjustment clauses pursuant to)
§ 56-585.1 A 5 of the Code of Virginia)

POST-HEARING BRIEF
OF THE VIRGINIA ENERGY EFFICIENCY COUNCIL

I. INTRODUCTION

Pursuant to the Commission’s Rules of Practice and Procedure, 5 VA. ADMIN. CODE § 5-20-200, the Commission’s directive at the close of the evidentiary hearing on March 29, 2017,¹ and the Commission’s Order of March 31, 2017, the Virginia Energy Efficiency Council (“VAEEC”) hereby files this Post-Hearing Brief in the above-captioned docket related to Virginia Electric and Power Company’s (the “Company” or “Dominion”) application for approval to implement two, new demand-side management (“DSM”) programs and to extend certain existing programs that had been approved in earlier proceedings. As stated at the evidentiary hearing, the VAEEC strongly supports continuation of the Phase II Residential Heat Pump Upgrade Program, and supports implementation of two, new Phase VI programs: the Residential Home Energy Assessment Program and the Non-Residential Prescriptive Program. These three programs are cost-effective, contribute to economic development in the Commonwealth, and are in the public interest.

¹ See Tr. at 349: 12-13.

II. BACKGROUND ON THE VIRGINIA ENERGY EFFICIENCY COUNCIL

The Virginia Energy Efficiency Council is a 501(c)3 charitable organization that provides a platform for stakeholder engagement while assessing and supporting cost-effective energy efficiency programs, best practices in the energy efficiency industry, and sound policies that advance energy efficiency in Virginia. A core component of the VAEEC's mission is to develop the voice of the energy efficiency industry before local, state and national policymakers and regulators. The VAEEC's seventy-five members include several energy efficiency businesses, individual citizens, non-profit affiliates, local governments, natural gas companies, and electric utilities. The VAEEC's interest in participating in this proceeding is to aid the Commission in understanding the perspective of the energy efficiency industry—the individuals who will be working in the field to implement these demand-side management programs—as it reviews the Company's application.

III. LIST OF ISSUES TO BE DECIDED

In response to the Commission's Order of March 31, 2017 asking filers to include a list of issues to be decided in this case, the VAEEC has elected to focus its post-hearing brief on two issues of particular concern.

- 1) The VAEEC maintains that the Commission should consider the economic benefits that the energy efficiency industry provides to communities throughout the Commonwealth.
 - a. It is unquestionably within the Commission's discretion to consider these economic development benefits among the "other factors" evaluated pursuant to Va. Code § 56-576.
- 2) The VAEEC maintains that any process to improve energy efficiency programs must be data driven. That is, there must be evidence in the record to show that proposed changes to a program will increase energy savings and reduce the total kilowatt-hours consumed.
 - a. With respect to the Phase VI Residential Home Energy Assessment Program, the data and evidence in the record here amply support adoption of a \$90 rebate for the Heat Pump Tune-Up Measure.

IV. ARGUMENT

A. The Economic Benefits Provided to the Commonwealth from the Growth of the Energy Efficiency Industry Support Approval of the Company's Petition.

In evaluating DSM programs, Va. Code § 56-576 requires consideration of “other factors” outside of the cost-benefit tests. The VAEEC maintains that the economic benefits that the energy efficiency industry provides to communities where programs are implemented should be considered as part of this analysis.

1. The interpretation of Va. Code § 56-576 is properly before the Commission.

In opening remarks, the Commission Staff addressed the economic benefits question, stating that the “issue is not before the Commission today.” *See* Tr. at 54: 11-19. Respectfully, the VAEEC disagrees. The issue is squarely before the Commission and must be considered in evaluating the statutory requirements imposed by the General Assembly. The Company's petition has been made pursuant to Va. Code § 56-585.1 A 5 c, which provides, in pertinent part, that “[p]rojected and actual costs for the utility to design, implement, and operate energy efficiency programs, including a margin to be recovered on operating expenses” may be recovered through a rate adjustment clause if the Commission finds that the proposed programs are “in the public interest” as defined in Va. Code § 56-576.

Commission Staff witness Brian S. Pratt discussed the application of Va. Code § 56-576 in his prefiled Direct Testimony. Mr. Pratt noted, “Staff evaluated Dominion's proposed Phase VI programs according to the definition of ‘in the public interest’ as set forth in § 56-576 of the Code of Virginia (‘Code’).” *See* Exhibit 23, at 4: 9-10. Mr. Pratt's testimony goes on to quote the definition of “in the public interest” in its entirety, including the mandate to assess “other factors” beyond the cost-benefit tests. *Id.* at 4: 12-23. On cross examination, Mr. Pratt agreed that it was within the Commission's discretion to include economic benefits provided by the energy

efficiency industry (e.g., job creation benefits) in its determination of whether a DSM program was “in the public interest.” *See* Tr. at 223: 9-18 (“I would imagine that the Commission would have discretion to determine what they feel fits that statute [Va. Code § 56-576] outside of the four cost-benefit test[s].”).

In sum, there can be no doubt that the definition of “in the public interest” in Va. Code § 56-576 must be interpreted by the Commission in order to evaluate the Company’s petition. The statutory definition requires assessment of energy efficiency programs through the application of four cost-benefit tests “*among other factors.*” The phrase “other factors” must necessarily refer to factors outside of the traditional cost-benefit analyses, and should include the economic development benefits that the energy efficiency industry provides to the Commonwealth.

2. *Economic Development Benefits Should Be Considered “Among Other Factors.”*

Section 56-576 reads, in pertinent part:

“In the public interest,” for purposes of assessing energy efficiency programs, describes an energy efficiency program if, among other factors, the net present value of the benefits exceeds the net present value of the costs as determined by the Commission upon consideration of the following four tests: (i) the Total Resource Cost Test; (ii) the Utility Cost Test (also referred to as the Program Administrator Test); (iii) the Participant Test; and (iv) the Ratepayer Impact Measure Test. Such determination shall include an analysis of all four tests, and a program or portfolio of programs shall not be rejected based solely on the results of a single test. In addition, an energy efficiency program may be deemed to be “in the public interest” if the program provides measurable and verifiable energy savings to low-income customers or elderly customers.

Restated more simply, the statute clarifies that the phrase “in the public interest” describes an efficiency program if the net present value of the benefits exceeds the net present value of the costs *among other factors.*

While the statute obligates the Commission to consider “other factors,” it does not delineate what these factors are. The breadth and scope of the phrase “among other factors” is

left to the Commission's well-considered discretion. Here, the VAEEC respectfully submits that economic development benefits provided by the energy efficiency industry should be taken into account. In fact, the Commission routinely considers analogous benefits in other proceedings.

For example, Va. Code § 56-46.1 A specifies, "Whenever the Commission is required to approve the construction of any electrical utility facility ... [it] shall consider the effect of the proposed facility on economic development within the Commonwealth, including but not limited to furtherance of the economic and job creation objectives of the Commonwealth Energy Policy set forth in §§ 67-101 and 67-102" Thus, when evaluating the Company's application to construct a natural gas-fired power plant in Greensville County, Virginia, the Commission considered the jobs that would be created along with the benefit of increases in local and state tax revenues. *See Final Order, Application of Va. Elec. & Power Co. for approval and certification of the proposed Greensville County Power Station*, at 10-11 (Mar. 29, 2016).

The energy efficiency programs supported by the VAEEC in this proceeding deliver these very same benefits. The programs create jobs in the energy efficiency industry, which benefit the economy and increase state tax revenues. These energy efficiency jobs are designed to spur homeowners and businesses to make tangible improvements to their properties—upgrading water heaters, installing Energy Star appliances, switching to new LED lamps, etc.—which help increase property values. Higher property valuations, in turn, lead to an increase in local property tax collections.

Unlike the Greensville County Power Station, where the economic development benefits inhere primarily to one locality, the benefits from building an "energy efficiency power plant" are more diffuse. The positive economic impact from deploying energy efficiency measures is seen in communities throughout Dominion's service territory where the DSM programs are

implemented. These are the communities where electricians, HVAC installers, and plumbers are hired to meet the needs of the programs. In short, the economic development benefits of DSM programs are just as quantifiable as the benefits from traditional supply-side resources. The Commission should account for these benefits as it evaluates a DSM petition under Va. Code §§ 56-576 and 56-585.1 A 5 c.

3. *Evidence in the Record Supports a Finding that Dominion's Petition Would Provide Tangible Economic Development Benefits to the Commonwealth.*

The record before the Commission includes ample and specific evidence on the economic benefits provided by the energy efficiency industry. It shows the enormous role that energy efficiency has in the Virginia economy. For example, the prefiled Direct Testimony of VAEEC witness Chelsea Harnish documents that energy efficiency is a \$1.2 billion business in Virginia, responsible for 75,000 jobs. *See* Exhibit 16, at 4: 12-23. With respect to the programs at issue in this proceeding, Company witness Crable testified that Dominion maintains a network of over 900 contractors who work to implement these DSM programs. *See* Exhibit 3, Prefiled Direct Testimony of Brett A. Crable, at 4: 6-8; Tr. at 60: 12-16. Several contractors testified as public witnesses and highlighted the tangible, job creation impacts of Dominion's DSM programs. *See, e.g.,* Public Witness Testimony of Chris Hodges, Tr. at 16: 3-7 (“...these programs ... [help] me to provide additional services, which means I can stay in business and potentially add more team members.”); Public Witness Testimony of Chris Pfund, Tr. at 22: 22-25 (“We have grown from one employee to about 40 employees ... because of state-initiated efficiency programs...”).

The economic benefits also highlight just how harmful it would be to stop an energy efficiency program midstream. As VAEEC witness Andrew Grigsby explained, “[I]t causes confusion, customer loss, and a substantial harm to small businesses when programs are started, cancelled, and re-started after a gap in the program. It hurts contractors to have to hire, lay off,

and then attempt to re-hire staff who have moved on to other jobs and opportunities.” *See* Exhibit 17, Prefiled Direct Testimony of Andrew Grigsby, at 6: 23, 7: 1-3. Company witness Hubbard further explained the costs to contractors who participate in Dominion’s programs. Tr. at 81: 5-7 (“[C]ontractors participating have to go through training. Their first five jobs have to be put through a quality assurance.”). These costs cannot be recouped if programs are cancelled or severely delayed. In other words, a gap in service for an existing DSM program, or the cancellation of a DSM program, is not costless. It imposes harm on the contractors who deliver DSM services. Harm to these energy efficiency businesses then translates into economic harm for their communities.

For these reasons, the VAEEC respectfully asks the Commission to give full and fair consideration to the evidence highlighted above and to the economic development benefits provided by the energy efficiency industry. It is well within the Commission’s discretion to consider these benefits as it evaluates Dominion’s petition under Va. Code §§ 56-576 and 56-585.1 A 5 c.

B. Modernizing DSM Programs Must Be Data Driven.

As the Commission reviews Dominion’s Phase VI portfolio, it is important to recognize the process by which various iterations of the Company’s portfolios have been refined. Company witness Hubbard explained that changes to DSM programs are made in response to “EM&V results, things that we had tunneling back in, feedback that we got through the bid process — again, somebody coined it earlier, it’s an iterative process....” Tr. at 108: 4-7. That is, the Company modernizes and improves its programs based on evidence-based data gathered in EM&V reports, the stakeholder review process, and feedback from market participants such as contractors in the energy efficiency industry. *See* Tr. at 75: 21-25, 76: 1-3 (“Again, we’re always

open to improvements in controls and based on reports, EM&V reports, or feedback we're getting from the field, observations from the field, regular meetings, operation meetings with our field implementation vendors, so annual stakeholder review meetings that we hold, so, yes, we're always open to improvements and controls in quality assurance.”).

An iterative process ensures that there is an opportunity to continually make corrections with each new generation of programs, and cost-benefit scores have generally trended upward over time as a result. *See* Tr. 118: 24-25, 119: 5-12 (Company witness Kesler, agreeing that cost-benefit scores from Phases I through III have improved over time).² In keeping with this iterative process, the VAEEC maintains that the Commission should only mandate changes to the Company's proposals when the evidence in the record—analyses, studies, EM&V data, sworn testimony of expert witnesses, etc.—confirms that changes would actually deliver greater energy savings. That is, data must support a finding that mandated changes will deliver the same energy services with fewer kilowatt-hours consumed. The process must be data driven.

1. Slashing the \$90 Heat Pump Tune-Up Rebate to \$45 or \$67.50 is Not Supported by Data or Evidence in the Record.

The Commission Staff testimony sought to raise a number of questions about the \$90 rebate for the Heat Pump Tune-Up that is part of the proposed Residential Home Energy Assessment Program. The Staff's conclusions about any proposed changes to the rebate, however, are not supported by data or evidence in the record. To the contrary, evidence from the

² For example, the Phase III Non-Residential Heating & Cooling Efficiency Program was proposed in 2013 with cost benefit scores of 2.33 on the Participant test, 1.82 on the Utility Cost test, 1.31 on the Total Resource Cost test, and 0.64 on the Ratepayer Impact Measure test. *See* Prefiled Direct Testimony of Ripley C. Newcomb, *Petition of Va. Elec. & Power Co. for approval to implement new demand-side management programs and for approval of two updated rate adjustment clauses pursuant to § 56-585.1 A 5 of the Code of Virginia*, PUE-2013-00072, at Schedule 2 (filed Aug. 30, 2013). Today, the going-forward scores for the same program are 12.65 (Participant test), 19.29 (Utility Cost test), 12.55 (Total Resource Cost test), and 1.09 (Ratepayer Impact Measure test). *See* Exhibit 34, Rebuttal Testimony of Deanna R. Kesler, at Rebuttal Schedule 3 (filed March 16, 2017).

Company and the VAEEC amply demonstrates that the \$90 rebate is successful in delivering the savings the program is designed to achieve.

The Staff has not conducted any study on whether another rebate amount (*e.g.*, \$45 or \$67.50) would result in a more or less effective program. *See* Tr. at 217: 23-24. Staff has not formally studied the impact that a lower rebate would have on overall participation numbers, or on the percentage of participants who would be free riders. *See* Tr. at 217: 23-24, 218: 20. Ultimately, Staff concedes that its proposals to reduce the rebate are not a “firm recommendation,” but are merely options developed by calculating the value of half of the current credit and three-fourths of the current credit. *See* Tr. at 217: 24, 218: 3-4. As Staff witness Ellis explained, “If the program is looking to incent 50 percent, 50 percent times \$90 is 45 It’s just math at that point. ... [I]f you want to split it in the middle, the \$90 and the 45, you know, reducing it by 25 percent [\$67.50] is in the middle ground on that as well.” Tr. at 203: 2-11.

Respectfully, the VAEEC maintains that the Commission Staff’s proposals to reduce the rebate amount are not supported in the record and should be rejected. Changes in an iterative process such as the one used to develop the Company’s Residential Home Energy Assessment Program must be data driven. These proposed changes are not. At most, they are mathematical calculations of options that might be analyzed through a future stakeholder review process. They have not, however, been analyzed for this case.

2. *Reducing the \$90 Rebate in the Heat Pump Tune-Up Measure Would Harm the Residential Home Energy Assessment Program.*

Not only does the evidence fail to support a reduction in the rebate amount, the testimony in this proceeding strongly suggests that a lower rebate would cause real *harm* by reducing the total amount of kilowatt-hours saved through the program. Such a result would be contrary to the

public interest. Staff witness Britton P. Ellis opined, “I think logically I could conclude, you know, there would be *less participation* at \$45 than there would be at \$90.” See Tr. at 203: 21-23 (emphasis added). Less participation in the program necessarily would mean fewer energy savings. Similarly, Staff witness Brian S. Pratt testified, “I would agree as a mathematical exercise that lowering the incentive wouldn’t necessarily change the free ridership; it would change the free ridership as a proportion of overall participation because participation comes down essentially.” Tr. at 219: 6-10.

Mr. Pratt’s observation here is critical. A lower rebate would cause a drop in participation from new program participants who would not tune-up their heat pumps absent a significant rebate. Left behind in the program would be the free riders. The Company’s Residential Home Energy Assessment Program is not the “but for” cause of savings for those free riders because they would likely tune-up their heat pumps without any rebate at all. It is therefore in the public interest to target new participants because they are the ones driving the verified savings. And yet, these new program participants are the very customers who would drop out if the rebate were reduced. A reduced rebate would effectively sabotage the effectiveness of the program. In order to maintain an effective, iterative process that is guided by data, the Commission must reject the options proposed by the Commission Staff to lower the rebate amount to \$45 or \$67.50.

3. *Approving the Heat Pump Tune-Up Measure with a \$90 Rebate is in the Public Interest and is Abundantly Supported by Evidence in the Record.*

The record before the Commission plainly supports maintaining the \$90 rebate as part of the Heat Pump Tune-Up Measure within the Residential Home Energy Assessment Program. Put simply, the evidence shows that a \$90 rebate is working. Mr. Grigsby’s testimony on his real-world experience establishes why a \$90 rebate for the Heat Pump Tune-Up Measure is necessary

in order to keep participation high. *See* Tr. at 135: 12-20. His experience with varying rebate amounts shows that the market for energy efficiency programs is highly inelastic. *See* Exhibit 18 (LEAP Chart); Tr. at 132: 10-20 (explaining that there was a 90% decrease in participation for an efficiency program with a \$20 fee compared to a free program). More than just participation, the record demonstrates the reduction in marginal effectiveness with a lower rebate amount. *See* Tr. at 136: 15-25 (noting that not only would participation be lower with a lower rebate but those who would participate would have fewer opportunities for real energy savings because they likely already take care of their equipment).

Additionally, a lower rebate amount would also limit participation because fewer contractors would be willing to offer the program. Without sufficient customer demand, it is very difficult to entice contractors to incur the additional costs associated with participating in the program. Company witness Hubbard testified as to these costs—in time and money—that contractors must absorb as part of Dominion’s quality assurance efforts. *See* Tr. at 81: 5-7. Importantly, these costs are not covered by the rebate amount. *See* Tr. at 329: 3-14. VAEEC witness Grigsby explained that his organization, the Local Energy Alliance Program, is already struggling to convince contractors to participate in efficiency programs because of these additional costs.³ Contractors are reluctant to take the time off for training because of the opportunity costs; training means time away from work on paying jobs. *Id.* Cognizant of these expenses, Company witness Little testified that it would be even harder to bring in contractors

³ Tr. at 144: 5-22:

“Q: Are there other costs ... to the contractor that aren’t necessarily reflected in the price that’s charged ... to the customer?”

A: Absolutely. I mean, as was noted before, the training, the quality assurance that goes into maintaining your status as a participating contractor, that’s time and expense that contractors pay attention to. ...[W]e’re trying to get more folks into these so that ... there’s more uptake in the market. But that’s a barrier, the time and expense to be a participating contractor....”

with a significant reduction to a \$45 or \$67.50 rebate. *See* Tr. at 331:2-3. Dominion relies on a network of over 900 contractors to implement these measures. *See* Tr. at 60: 12-16. Reducing the rebate by 25% or 50% could very well reduce that network and limit program effectiveness considerably.

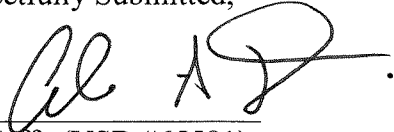
That said, Staff witness Pratt questioned whether a \$90 rebate would create a “perverse incentive” for a homeowner to seek a tune-up based solely on the generous size of the rebate—even if his or her heat pump was already operating efficiently and would not benefit from the service. *See* Tr. at 219: 11-25, 220: 1-22. The evidence in the record addresses and alleviates Mr. Pratt’s concern. The U.S. Department of Energy recommends that tune-ups be conducted “at least” annually. *See* Exhibit 32, “Operating and Maintaining Your Heat Pump, Department of Energy website.” Mr. Gilbert Little, a Program Manager at Honeywell International and an expert in the field, testified that “the consensus [in the industry] is twice per year, every six months, having a maintenance appointment set up to have your HVAC system inspected and tuned up.” Tr. at 336: 12-15. Given that a customer is not eligible to participate in Dominion’s Heat Pump Tune-Up Measure if his or her heat pump is newer than six months, and given that customers can receive only one rebate every five years, there is virtually no risk that tune-ups would be performed unnecessarily. In fact, Company witness Little agreed that the risk of an unnecessary tune-up would be “infinitesimally small.” *See* Tr. at 337: 15.

In sum, the iterative process for developing DSM programs must be grounded in fact, and the facts before the Commission here are clear. The \$90 rebate works to deliver verified energy savings and fairly compensate participating contractors. It is in the public interest. As such, the VAEEC respectfully asks the Commission to approve its use as part of the Phase VI Residential Home Energy Assessment Program.

V. CONCLUSION

In sum, the Virginia Energy Efficiency Council asks that the Commission approve the Phase VI the Residential Home Energy Assessment Program, the Phase VI Non-Residential Prescriptive Program, and the extension of the Phase II Residential Heat Pump Upgrade Program. The VAEEC insists that the economic benefits provided by the energy efficiency industry and the data in the record on cost-effectiveness provide overwhelming support for such approvals.

Respectfully Submitted,



Cale Jaffe (VSB #65581)

Matthew Schneider (*admitted on third-year practice certificate*)

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DATED: April 28, 2017

CERTIFICATE OF SERVICE

I hereby certify that the following have been served with a true and accurate copy of the foregoing by electronic mail and by deposit in the U.S. Mail, first class, postage prepaid:

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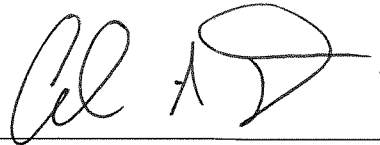
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DATED: April 28, 2017



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