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**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: Petition of Virginia Electric and Power Company for approval of a  
plan for electric distribution grid transformation projects pursuant to  
§ 56-585.1 A 6 of the Code of Virginia.**

**Case No. PUR-2021-00127**

Dear Mr. Peck:

Attached for filing in the above-referenced docket please find the Post-Hearing Brief and Issues Matrix being submitted on behalf of Appalachian Voices (“Environmental Respondent”). This notice is being filed electronically, pursuant to the Commission’s electronic document filing system.

Pursuant to Rule 140 of the Commission’s Rules of Practice and Procedure, Environmental Respondent is providing service of documents in this case exclusively via email unless parties request otherwise. Please let me know if you do not agree to electronic service and would like to receive hard copies of documents.

If you should have any questions regarding this filing, please do not hesitate to contact me at (434) 977-4090.

Regards,



Nathaniel Benforado

cc: Parties on Service List  
Commission Staff

COMMONWEALTH OF VIRGINIA  
STATE CORPORATION COMMISSION

PETITION OF )  
)  
VIRGINIA ELECTRIC AND POWER )  
COMPANY )  
)  
*For approval of a plan for electric )  
distribution grid transformation projects )  
pursuant to § 56-585.1 A 6 of the Code of )  
Virginia.* )

Case No. PUR-2021-00127

**ENVIRONMENTAL RESPONDENT’S  
POST-HEARING BRIEF AND ISSUES MATRIX**

Pursuant to the Commission’s direction at the conclusion of the October 13, 2021 evidentiary hearing, Appalachian Voices (the “Environmental Respondent”) respectfully submits this post-hearing brief and issues matrix.

**INTRODUCTION**

The Company has failed to carry its burden in this case, and the Commission should reject the application in its entirety. Pursuant to statute, the Company must establish that grid transformation projects and their associated costs are reasonable and prudent, including establishing a clear need.<sup>1</sup> While the Code declares grid transformation projects to be in the public

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<sup>1</sup> See Final Order, *Petition of Virginia Electric Power Company for approval of a plan for electric distribution grid transformation projects pursuant to § 56-585.1 A 6 of the Code of Virginia, and for approval of an addition to the terms and conditions applicable to electric service*, Case No. PUR-2019-00154 (Mar. 26, 2020) (“2019 Final Order”) at 22 (holding that for the Company’s self-healing grid proposal, “the Company has not sufficiently established the need for this level of investment to improve overall system reliability, and we will not commit customers to pay for such an expensive investment based on this record.”); Final Order, *Petition of Virginia Electric and Power Company for approval of a plan for electric distribution grid transformation projects pursuant to § 56-585.1 A 6 of the Code of Virginia*, Case No. PUR-2018-00100 (Jan. 17, 2019) (“2018 Final Order”) at 13-15 (noting that “respondents question, among other things, the need for grid hardening on this scale” before holding that “the Commission cannot find that the Company’s Phase I Grid Hardening proposal is reasonable and prudent.”).

interest, the Commission is not required to approve any of these projects. The Company's request for \$778 million from customers, representing just the first two years of a \$3.2 billion 10-year plan, falls woefully short of a reasonable and prudent standard.

In particular, the Company has failed to establish a current need for numerous projects. For example, the Company justifies many projects by claiming that massive distributed energy resource ("DER") growth is coming and the Company must immediately prepare the distribution system. But the Company bases this claim on high-level statutory and regulatory policies, with virtually no quantified analysis. Moreover, the Company has presented zero evidence of when and where problems due to DER growth will occur. Instead, the available evidence shows that the existing distribution system is more than adequate to accommodate DER growth, as problems are unlikely to happen for another decade or even longer. Approving these projects in advance of an established need will harm customers, who will be forced to pay significant capital expenses and carrying charges for projects that will provide no real benefit for years to come.

For other projects, the Company has failed to consider options that will provide the same function at a significantly lower cost. With the customer information platform and telecommunications proposals, the Company failed to analyze licensing or leasing options that will provide the same functionality as the Company-owned option, but at a far lower cost. Moreover, with a licensing or leasing arrangement, most of those costs are operations and maintenance ("O&M") expenses, rather than capital expense, which would save customers significantly on financing charges. With the voltage optimization enablement project, there are alternative approaches—including one offered by a Dominion subsidiary—that provide significantly greater effectiveness at a significantly lower cost.

With all three of these projects, the Company failed to consider these readily available alternatives, which could save customers hundreds of millions of dollars in up-front costs and in financing costs. Approving the Company's preferred capital-intensive options without first requiring the Company to analyze these significantly cheaper options is not reasonable and prudent.

There are also numerous flaws in the Company's cost-benefit analysis, all of which exaggerate benefits. Troublingly, even with these exaggerated benefits the Company's proposal is only *narrowly* cost-effective at 1.05. If the Company were to fix these errors, the cost-benefit analysis would likely show that overall, the proposal costs customers more than they benefit.

The Company also needs to streamline its complicated list of process-oriented metrics and focus on working with Staff and stakeholders to develop a streamlined set of outcome-oriented metrics, which are far more effective at measuring performance. Finally, as conditions of AMI approval, the Company should be required to implement a universal peak-time rebate as well as Connect-My-Data functionality.

Given the numerous flaws, Environmental Respondent recommends the Commission reject the Company's Phase II proposal. But Environmental Respondent has also provided specific, program-by-program and issue-by-issue recommendations. If the Commission elects to approve some projects while denying others, Environmental Respondent requests the Commission adopt the recommendations set forth in the attached Issues Matrix, consistent with the recommendations of Mr. Alvarez and Mr. Stephens.

### **ENVIRONMENTAL RESPONDENT**

Appalachian Voices, the Environmental Respondent, is a non-profit environmental organization dedicated to bringing people together to solve the environmental problems having the

greatest impact on the central and southern Appalachian Mountains. As part of its mission, Environmental Respondent advocates for investments in cost-effective energy efficiency programs, conservation, and renewable energy resources as alternatives to heavily polluting coal-fired power. Environmental Respondent has members living in the Company's service territory that stand to benefit from the Company's Grid Transformation Plan.

### **PROCEDURAL HISTORY**

On June 21, 2021, the Company filed the Petition with the Commission.

On July 14, 2021, the Commission issued an Order for Notice and Hearing (the "Procedural Schedule").

On August 12, 2021, Environmental Respondent filed a notice of participation.

On September 13, 2021, Environmental Respondent filed the Direct Testimony of Paul Alvarez and Dennis Stephens.

On September 24, 2021, the Commission Staff filed Pre-filed Staff Testimony.

On October 1, 2021, the Company filed Rebuttal Testimony.

On October 7, 2021, public comments were submitted to the Commission for consideration.

On October 12-13, 2021, a public hearing was held by the Commission via Microsoft Teams.

### **LEGAL STANDARD**

The Company filed this Plan pursuant to § 56-585.1 A 6 of the Virginia Code. Va. Code § 56-585.1 A 6 permits a utility to "petition the Commission, not more than once annually, for

approval of a plan for electric distribution grid transformation projects.”<sup>2</sup> Plans for electric distribution grid transformation projects are required to include “both measures to facilitate integration of distributed energy resources and measures to enhance physical electric distribution grid reliability and security.”<sup>3</sup>

While Va. Code § 56-585.1 A 6 provides that “[e]lectric distribution grid transformation projects are in the public interest,” there is no requirement that the Commission approve any project.<sup>4</sup> Instead, the Code requires the Commission to “consider whether the utility’s plan for such projects, and the projected costs associated therewith, are reasonable and prudent.”<sup>5</sup> As part of this prudence review, the Company must demonstrate a need,<sup>6</sup> which the Company acknowledged in this case.<sup>7</sup>

Consistent with the Commission’s order in the 2018 grid transformation proceeding, the Commission can approve specific segments or parts of the proposed plan as reasonable and prudent, reject other parts as not reasonable or prudent, and place specific conditions on other parts

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<sup>2</sup> Va. Code § 56-585.1 A 6.

<sup>3</sup> *Id.*

<sup>4</sup> See 2019 Final Order at 5 (finding that “the Company has not proven the reasonableness and prudence of the plan or the costs associated with AMI, the self-healing grid and related investments, and certain components of grid hardening. These parts of the Plan are not approved.”); See 2018 Final Order at 4 (noting that “[a]ll parties filing legal memoranda and Staff agree that the Commission may approve or disapprove the Plan in whole or in part.”).

<sup>5</sup> Va. Code § 56-585.1 A 6 (emphasis added).

<sup>6</sup> 2019 Final Order, *supra* note 1; 2018 Final Order, *supra* note 1.

<sup>7</sup> Hearing Transcript, *Petition of Virginia Electric and Power Company for approval of a plan for electric distribution grid transformation projects pursuant to § 56-585.1 A 6 of the Code of Virginia*, Case No. PUR-2021-00127 (Oct. 13, 2021) (“Hearing Transcript”) at 382:9-11 (Cross Examination of Company Witness Woomer); *see also* Hearing Transcript at 281:17-19 (Cross Examination of Staff Witness Cizenski).

of the plan.<sup>8</sup> In accordance with Subsection A 6, the Commission must issue its final order on a petition for approval of an electric distribution grid transformation plan “not more than six months after the date of filing such petition.”<sup>9</sup>

## ARGUMENT

### **I. Dominion Has Not Established a Current Need for Many of the Proposed Investments.**

The Company must prove that the proposed projects and their associated costs are reasonable and prudent.<sup>10</sup> Importantly, it is the Company’s obligation to prove a need for these investments as part of a prudency review, a requirement that the Company does not dispute.<sup>11</sup> Unfortunately, the Company has failed to establish a current need for numerous projects—in many cases providing virtually no analysis or evidence of need and instead relying on conclusory statements. With hundreds of millions of dollars at stake, the Company’s request should be denied until it actually establishes need.

#### **A. The Company Has Failed to Establish that DER Growth Will Pose Any Problems in the Near Term.**

Although the Company is requesting hundreds of millions of dollars from customers, the Company has provided virtually no evidence or analysis to support its claims that many of these investments “will be vital to effectively accommodating the expected penetration of DERs in the

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<sup>8</sup> See 2018 Final Order at 6 (ruling that “[w]hile we find the Plan elements related to Cyber and Physical Security are well-conceived, well-supported and cost-effective, we find that the remaining Plan elements, which will cost customers hundreds of millions of dollars, are not.”).

<sup>9</sup> Va. Code § 56-585.1 A 6.

<sup>10</sup> *Id.*

<sup>11</sup> Hearing Transcript at 382:9-11 (Cross Examination of Company Witness Woomer); see also Hearing Transcript at 281:17-19 (Cross Examination of Staff Witness Cizenski).



near term resulting from the VCEA and FERC Order 2222.”<sup>12</sup> The Company makes dire claims, for example, about the urgent need to deploy projects across its grid “*before* these DERs become too much to manage piecemeal,”<sup>13</sup> but it has failed to perform any analysis to determine *where* and *when* DERs will become too much to manage. This claim—that DER penetration will happen so fast that these investments must be made now—underlies numerous projects including intelligent grid devices, FLISR, DER Management System (DERMS), Enterprise Asset Management System (EAMS), and Substation Technology Deployment.<sup>14</sup>

Consider, for example, the Company’s intelligent grid devices proposal. In the direct testimony of Robert S. Wright Jr., the Company claims that it “expects significant proliferation of DERs in the near future,”<sup>15</sup> and that “intelligent grid devices will become increasingly necessary to understand the impacts occurring on grid segments in order to take proactive action.”<sup>16</sup> The Company asserts that “to not pursue intelligent grid devices means the Company will only be

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<sup>12</sup> Ex. 2, Petition, *Petition of Virginia Electric and Power Company for approval of a plan for electric distribution grid transformation projects pursuant to § 56-585.1 A 6 of the Code of Virginia*, Case No. PUR-2021-00127 (June 21, 2021) (“Petition”) at 6, ¶ 12.

<sup>13</sup> Ex. 4, Pre-Filed Testimony of Augustus Johnson, IV, *Petition of Virginia Electric and Power Company for approval of a plan for electric distribution grid transformation projects pursuant to § 56-585.1 A 6 of the Code of Virginia*, Case No. PUR-2021-00127 (June 21, 2021) (“Johnson Direct”) at 41:13-14.

<sup>14</sup> E.g., Grid Transformation Plan, *Petition of Virginia Electric and Power Company for approval of a plan for electric distribution grid transformation projects pursuant to § 56-585.1 A 6 of the Code of Virginia*, Case No. PUR-2021-00127 (June 21, 2021) (“2021 Plan”) at 23-26; Ex. 3, Pre-Filed Testimony of Joseph A. Woomer, *Petition of Virginia Electric and Power Company for approval of a plan for electric distribution grid transformation projects pursuant to § 56-585.1 A 6 of the Code of Virginia*, Case No. PUR-2021-00127 (June 21, 2021) (“Woomer Direct”) at 11:9-12:10.

<sup>15</sup> Ex. 5, Pre-Filed Testimony of Robert S. Wright, Jr., *Petition of Virginia Electric and Power Company for approval of a plan for electric distribution grid transformation projects pursuant to § 56-585.1 A 6 of the Code of Virginia*, Case No. PUR-2021-00127 (June 21, 2021) (“Wright Direct”) at 21:11-13.

<sup>16</sup> *Id.* at 21:6-8.

reactive to the impacts of DERs on the grid, increasing the potential for adverse impacts to customers,”<sup>17</sup> such as “irregular voltage patterns and more dynamic load profiles.”<sup>18</sup>

Despite these broad and dire claims, the Company has provided virtually no evidence in support of the expected “significant” DER penetration in the “near future.” The Company has not established with any certainty that high-levels of DERs are imminent, and moreover, it has made no attempt to quantify the expected levels of DER penetration that will cause problems with the Company’s distribution system. Without this analysis, the Commission lacks the information required to find that these investments are needed.

As to this first point, the Company bases its claim that high levels of DERs are coming, almost entirely on broad policies in the VCEA and FERC Order 2222.<sup>19</sup> While certain aspects of the VCEA may encourage growth of DERs,<sup>20</sup> there is no quantified DER growth requirement like there is for the renewable portfolio standard<sup>21</sup> or the energy efficiency resource standard.<sup>22</sup> The same is true with FERC Order 2222, which is not yet even final, and once again, *may* facilitate

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<sup>17</sup> *Id.* at 21:8-10.

<sup>18</sup> *Id.* at 21:14-15.

<sup>19</sup> See Ex. 34, Rebuttal Testimony of Joseph A. Woomer, *Petition of Virginia Electric and Power Company for approval of a plan for electric distribution grid transformation projects pursuant to § 56-585.1 A 6 of the Code of Virginia*, Case No. PUR-2021-00127 (Oct. 1, 2021) (“Woomer Rebuttal”) at 6:14-16 (claiming that “beyond the VCEA, Order 2222 and legislation incentivizing EVs are sure to encourage further proliferation of DERs.”).

<sup>20</sup> See, e.g., Ex. 28, DEV-PE-3, Enrolled Version of Virginia Acts of Assembly at 11:661-12:669; 23:1392-1397; and 30:1785-1794

<sup>21</sup> Va. Code § 56-585.5 C.

<sup>22</sup> Va. Code § 56-596.2 B.

DER growth but does not provide any numerical growth requirements or targets. FERC Order 2222 simply does not justify this spending at this time. As Staff Witness Volkmann testified:

- Q. I think you said PJM's approach to FERC Order 2222 is not final, is it?
- A. No.
- Q. So can we be certain that the proposed spending here will do everything necessary to enable compliance with FERC Order 2222 once PJM finalizes their approach?
- A. It's premature to conclude that.
- Q. And is it also true that FERC Order 2222 creates an opportunity but not a mandate to aggregate behind-the-meter resources?
- A. That's correct.<sup>23</sup>

This claim of "need" is especially problematic since Dominion proposes to incur millions of dollars in costs based on FERC Order 2222 without even committing to enabling behind-the-meter aggregation:

- Q. So let me just ask this another way. Has Dominion committed to using DERMs to aggregate resources once 2222 is finally implemented?
- A. I don't believe they have committed to do that.<sup>24</sup>

Thus, the fact that there are policies in place that may facilitate DER growth does not, by itself, establish a specific need for the Company's distribution system. It is the Company's burden to translate these policies and other market forces into a detailed DER forecast. On this point, the only piece of evidence in this proceeding—which seeks hundreds of millions of dollars from customers *now*—is a small table produced in discovery.<sup>25</sup> The table purports to provide system-wide forecasts for the next five years for several DER-related categories based on Company

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<sup>23</sup> Hearing Transcript at 316:24-317:10 (Cross Examination of Staff Witness Volkmann).

<sup>24</sup> *Id.* at 317:22-318:2 (Cross Examination of Staff Witness Volkmann).

<sup>25</sup> Ex. 18, DEV-PE-18, Company Response to Staff Set 1-3 at 2-3.

forecasts, but does not provide any of the assumptions or methods used to create the table.<sup>26</sup> During the hearing, Staff Witness Cizenski confirmed that other than the policies set out in the VCEA and the Company's unsupported forecast, he is "not aware of other evidence" in this case showing how much distributed energy is actually going to be on the system, and when and where it will be.<sup>27</sup>

Likewise, Staff Witness Volkmann questions the Company's DER growth claims, highlighting that the growth of the net-energy metering in the Company's service territory is expanding far more slowly than in other utilities' territories.<sup>28</sup> At the hearing, Staff Witness Volkmann testified that "Dominion has less than 200 megawatts of net energy metered solar in a robust distribution system that can safely and reliably accommodate DER growth."<sup>29</sup> On cross examination, Staff Witness Volkmann testified unequivocally that Dominion has failed to prove DERs pose any threat to system reliability at any point in the near future:

- Q. Okay. So addressing reliability, is current DER penetration on Dominion's system so high that right now, those DERs threaten reliability without DERMs?
- A. No.
- Q. Okay. Has Dominion quantified to your satisfaction when and where the DER penetration will be so high that it actually threatens system reliability?
- A. No.<sup>30</sup>

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<sup>26</sup> See Hearing Transcript at 286:11-289:9 ("Q. Do you have any knowledge of how Dominion prepared this forecast? A. I have no idea.") (Cross Examination of Staff Witness Cizenski).

<sup>27</sup> *Id.* at 289:21-290:7 (Cross Examination of Staff Witness Cizenski).

<sup>28</sup> Ex. 30, Pre-Filed Testimony of Curt Volkmann, *Petition of Virginia Electric and Power Company for approval of a plan for electric distribution grid transformation projects pursuant to § 56-585.1 A 6 of the Code of Virginia*, Case No. PUR-2021-00127 (June 21, 2021) ("Volkmann Direct") at 6:12-8:8.

<sup>29</sup> Hearing Transcript at 312:5-11 (Sur-Rebuttal of Staff Witness Volkmann).

<sup>30</sup> *Id.* at 316:1-10 (Cross Examination of Staff Witness Volkmann).

Even if the Company had provided a robust and supported forecast, a forecast alone is insufficient to establish need. The Company also needs to apply any forecast on a circuit-by-circuit basis in order to ensure the specific projects are actually cost-justified.<sup>31</sup> The Company has not done this work. The Company has provided *no* analysis to establish—or even estimate—when and where DER penetration will begin to cause problems on the Company’s distribution grid. In fact, the Company has acknowledged that there appear to be no problems with the current distribution grid due to DER penetration,<sup>32</sup> and no witness has testified that the expected DER penetration over the next five years (accepting the Company’s simple forecast table as accurate) will cause any problems with the Company’s distribution.

Far from the unsupported claims of urgency from the Company, the evidence shows that the existing distribution grid can already accommodate DER growth for at least several years, if not longer. As Staff Witness Volkmann testified, the Company’s existing distribution grid can already support DER growth.<sup>33</sup> As Environmental Respondent witnesses Alvarez and Stephens testified, the Company appears to be preparing the grid for a problem that is a “decade or more” away.<sup>34</sup>

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<sup>31</sup> *Id.* at 195:13-25 (Re-Direct of Environmental Respondent Witness Stephens).

<sup>32</sup> Ex. 41, Rebuttal Testimony of Jonathan S. Bransky, *Petition of Virginia Electric and Power Company for approval of a plan for electric distribution grid transformation projects pursuant to § 56-585.1 A 6 of the Code of Virginia*, Case No. PUR-2021-00127 (Oct. 1, 2021) (“Bransky Rebuttal”) at Schedule 2, p. 6 (“[T]he Company believes that most feeders are currently operating without adverse impact from DER, which is consistent with Region A of the illustrative chart on hosting capacity provided in Figure 5 of Dr. Romero Agüero’s testimony . . . The Company is not currently aware of any part of its distribution grid that is not operating in Region A.”).

<sup>33</sup> Ex. 30, Volkmann Direct at 9:8-14; Hearing Transcript at 312:5-11 (Sur-Rebuttal of Company Witness Volkmann).

<sup>34</sup> Hearing Transcript at 145:7-146:19-23 (Sur-Rebuttal of Environmental Respondent Witness Stephens); *see also* Ex. 17, Pre-Filed Testimony of Dennis Stephens, *Petition of Virginia Electric and Power Company for approval of a plan for electric distribution grid transformation projects pursuant to § 56-585.1 A 6 of the Code of Virginia*, Case

In the absence of any attempt by the Company to quantify when problems could occur on its system, Hawaii continues to serve as a useful comparison. As Environmental Respondent established during the hearing, DER penetration in Hawaii has reached 35 percent—far higher than the levels here—and Hawaii is only just now beginning to install some of the technologies that the Company proposes here.<sup>35</sup> In fact, given the differences between the distribution systems, the Company’s system may already be better equipped to handle increased DER penetration than Hawaii’s system.<sup>36</sup>

Moreover, the Company’s claim that it needs these technologies to even understand what is happening on the distribution system (*i.e.*, to provide “situational awareness”) is also overstated and unsupported. The mere fact that a technology can provide situational awareness does not establish a specific need, nor does it prove that the project is cost-beneficial for customers. In fact, the evidence in the record shows that the Company’s existing distribution planning processes are sufficient to identify DER growth issues, at least over the next two or three years, which will provide sufficient time for the Company to seek approval for appropriate investments once need can actually be established.<sup>37</sup> The Company has provided no analytical evidence in this case proving a need for additional “situational awareness” at this time.

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No. PUR-2021-00127 (Sept. 13, 2021) (“Stephens Direct”) at 14:18-15:7 (describing DER problems as “many years away”).

<sup>35</sup> Ex. 17, Stephens Direct at 14:18-15:7; Hearing Transcript at 141:5-143:21 (Sur-Rebuttal of Environmental Respondent Witness Stephens).

<sup>36</sup> Hearing Transcript at 141:5-142:3 (Sur-Rebuttal of Environmental Respondent Witness Stephens).

<sup>37</sup> *Id.*

Once again, Staff Witness Volkmann made clear the Company has not established the level of spending here is necessary to achieve “situational awareness”:

- Q. Dominion has a certain level of investment proposed here. And I believe you just testified that they could get the situational awareness and interconnection information that you think is vital by making smaller investment, although nobody has quantified how much smaller it needs to, be or at least Staff hasn't. Has Dominion done that analysis to figure out what the minimum number of feeders and circuits they would need to invest in to get the adequate information about the situational awareness or interconnection?
- A. I'm not aware of that analysis.<sup>38</sup>

Requiring a true showing of need is critical to protecting customers. The Company has asked for hundreds of millions of dollars from its customers, and the precise timing of these investments will make substantial differences in customer cost. If a technology is deployed before it is needed, customers will immediately begin paying for an asset that is not providing a benefit, including carrying costs, and moreover, that asset will then need to be replaced sooner.<sup>39</sup> As such, it is critical for customers that the deployment date match the need date, but that cannot happen until the Company actually establishes the need date.

Until the Company has performed the required analysis, the Commission should not be compelled to approve projects based on unsubstantiated claims of urgency. The evidence shows that the Company's existing distribution system can safely and reliably accommodate DER growth in the near term. Accordingly, Environmental Respondent requests that the Commission reject the

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<sup>38</sup> *Id.* at 325:8-20 (Cross Examination of Staff Witness Volkmann).

<sup>39</sup> *Id.* at 159:7-162:9 (Cross Examination of Environmental Respondent Witness Stephens).

proposal for intelligent grid devices, FLISR, DERMS, EAMS, and Substation Technology Deployment.

**B. The Company Has Failed to Justify its Physical Security Proposal.**

The Company has also failed to prove any need for improvements to the physical security of its distribution system, let alone one that justifies the \$38 million requested here, as part of the \$143.9 million 10-year cost. Once again, the Company raises dire concerns about the need to improve its physical security but provides virtually no evidence of this need and how these costly improvements will actually reduce service outages.<sup>40</sup>

The only real evidence in the record is the Company's report that it experienced 292 physical security events in the past nine quarters.<sup>41</sup> But many security events—which can include “suspicious incidents, vandalism, [or] trespassing”<sup>42</sup>—never jeopardize service in any way. When asked in discovery, the Company *refused* to disclose whether any of these 292 events actually caused a service outage, citing security concerns.<sup>43</sup>

The only other evidentiary support offered by the Company is the well-publicized 2013 PG&E incident,<sup>44</sup> where a gunman with a rifle *outside* the substation's perimeter caused an outage. As Mr. Stephens established, however, “[h]ad the PG&E substation been equipped with the

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<sup>40</sup> Ex. 17, Stephens Direct at 18:20-20:14.

<sup>41</sup> *Id.* at 20:5-7.

<sup>42</sup> *Id.* at Attachment DS-3 (Company Response to APV Set 2-31).

<sup>43</sup> *Id.*

<sup>44</sup> Ex. 9, Pre-Filed Testimony of Jonathan S. Bransky, *Petition of Virginia Electric and Power Company for approval of a plan for electric distribution grid transformation projects pursuant to § 56-585.1 A 6 of the Code of Virginia*, Case No. PUR-2021-00127 (June 21, 2021) (“Bransky Direct”) at 7:17-21.



protections proposed by Dominion in this proceeding, the outcomes of the attack would have been no different.”<sup>45</sup> In rebuttal, Dominion did even not dispute Mr. Stephens’ analysis, effectively conceding that the physical security measures proposed here would not stop an incident like the 2013 incident.

As a final tactic, the Company implies that because the Commission approved some physical security measures in Phase I, Phase II should also be approved.<sup>46</sup> But the Phase I proceeding never included the costs or specific projects included here in Phase II. It is always the Company’s burden to prove the costs of its proposals are reasonable and prudent. In *this* proceeding, there is simply no evidence that the \$38 million the Company seeks will actually decrease service outages and benefit customers. The only evidence underlying the substantial revenue request is (1) a nearly decade old event at another utility’s substation that would not be prevented by the measures proposed by the Company; and (2) the cumulative number of recent “security” events, which may have never resulted in a single service outage.

Maintaining adequate physical security is an important consideration in providing reliable electricity service to customers. But the Commission should not accept fear tactics in lieu of actual analysis establishing a need for physical security improvements, and proof that such investments will benefit customers. The Commission should deny this proposal until the Company can substantiate its claims with actual analysis and evidence.

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<sup>45</sup> Ex. 17, Stephens Direct at 19:11-15.

<sup>46</sup> Ex. 41, Bransky Rebuttal at 3:11-19.

**II. The Company Has Failed to Evaluate Alternatives that Could Provide the Same Functionality at Significantly Lower Cost.**

Despite the requirement that the costs of these projects be reasonable and prudent, the Company failed to evaluate available alternatives that could provide the same functionality at a significantly lower cost. Due to the Company’s failure to consider alternatives, the Commission does not have the information it needs to determine that the costs associated with the Company’s Plan are in fact reasonable and prudent. Until the Company considers all reasonably available alternatives, it has not carried its burden in this case and the Commission should reject these proposals.

**A. A “Software as a Service” Customer Information Platform Could Provide the Same Function at a Far Lower Cost to Customers.**

The Company has proposed a costly, capital-intensive customer information platform (CIP).<sup>47</sup> The Company will own and operate this system, requiring a significant up-front capital expense and substantial carrying charges that will be imposed on customers.<sup>48</sup>

While Environmental Respondent has acknowledged that the Company may need a new CIP, the Company failed to consider a Software as a Service (“SAAS”) option that would provide the same function with dramatically lowered costs, including far lower capital expense.<sup>49</sup> This SAAS option is widely available, as “almost all of the major purveyors of utility customer

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<sup>47</sup> 2021 Plan at 31, fig. 6.

<sup>48</sup> Ex. 20, Direct Testimony of Paul J. Alvarez, *Petition of Virginia Electric and Power Company for approval of a plan for electric distribution grid transformation projects pursuant to § 56-585.1 A 6 of the Code of Virginia*, Case No. PUR-2021-00127 (Sept. 13, 2021) (“Alvarez Direct”) at 10:4-5.

<sup>49</sup> See Hearing Transcript at 234:14-18 (stating “I’m not contending that the Company didn’t need to do something. I’m contending the Company didn’t do the analysis of what that something should be to find the lowest cost approach.”) (Cross Examination of Environmental Respondent Witness Alvarez).

information systems offer a SAAS option,”<sup>50</sup> including “*the specific CIS platform [the Company] selected.*”<sup>51</sup> With a SAAS option, all of the services provided by the CIP would be “provided by software developers as a service, [and] rented over time as an operations and maintenance expense rather than purchased and capitalized in the rate base.”<sup>52</sup> Even the Company admitted that the leased option could provide the same function to support things like the PIPP program and shared solar.<sup>53</sup>

From a customer perspective, a SAAS option is far superior. With a SAAS approach, O&M spending “can be less expensive [than capital spending] to customers, owing to the carrying charges (utility profits, income taxes on profits, interest expense, etc.) customers must pay on utility capital.”<sup>54</sup>

When asked in discovery whether it had completed any analyses comparing its \$233 proposal “to the cost of leasing a hosted CIP,” the Company admitted that it “did not complete such an analysis.”<sup>55</sup> Moreover, the Company’s consultant admitted on cross-examination that he did not even perform a separate cost benefit analysis for a SAAS option.<sup>56</sup> There is ample evidence in the record that a SAAS option would provide the same functionality as a Company owned option

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<sup>50</sup> Ex. 20, Alvarez Direct at 10:1-2.

<sup>51</sup> *Id.* at 10:15-16 (emphasis added).

<sup>52</sup> *Id.* at 9:20-21.

<sup>53</sup> Hearing Transcript at 456:23-457:16 (Cross Examination of Company Witness Jennings).

<sup>54</sup> Ex. 20, Alvarez Direct at 10:3-6.

<sup>55</sup> Ex. 23, Company’s Response to APV Set 2-61(i).

<sup>56</sup> *See* Hearing Transcript at 492:22-493:17 (confirming that a separate cost benefit analysis of the leased option “was not completed[.]”) (Cross Examination of Company Witness Trump).

at a significantly reduced cost and capital expense, and because the Company has not analyzed that option, it has not met its burden to show that the costs of its CIP proposal are reasonable and prudent.

The Company has no real explanation for its failure to explore this widely available option. In rebuttal, the Company just states that the Phase II CIP is an extension of Phase I.<sup>57</sup> But Phase I approved Phase I. Phase I approval cannot substitute for a *current* showing of reasonableness and prudence for Phase II. With a \$200 million lower price tag in nominal dollars and a far lower capital component, the SAAS option is likely far better for customers even factoring in the Company's unsubstantiated claim that changing course would lead to "delays." Customers could receive the same benefits with a SAAS platform at a far lower cost but the Company did not analyze that option. Until the Company provides this alternative analysis, the Commission cannot know whether the Phase II costs of the CIP are reasonable and prudent and should deny the proposal.

**B. The Company Failed to Consider a Leased Telecommunications Network, Which Could Provide the Same Function at a Far Lower Cost.**

As with the CIP, the Company proposes owning a telecommunications system despite the fact that it has not analyzed a lower cost alternative that would provide the same function—a leased or rented telecommunications network. The Company proposes to extend "high-speed connectivity to additional critical facilities (generally, substations) through Company-owned fiber

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<sup>57</sup> Ex. 34, Woomer Rebuttal at 6:15-7:6.

and microwave facilities.”<sup>58</sup> The Company’s capital-intensive proposal comes at a cost of \$290 million, not including financing costs.<sup>59</sup>

As with the CIP proposal, however, these same telecommunications services are available as a rental option.<sup>60</sup> According to the Company’s own figures, the cost to rent telecommunication network services over the expected useful life of the owned equipment is just \$93.5 million.<sup>61</sup> This rental option, almost entirely an O&M expense, would provide considerable value to customers as it would not include the substantial carrying charges associated with the capital-intensive proposal by the Company.<sup>62</sup> The Company failed to evaluate what appears to be a substantially cheaper option. The Company’s consultant confirmed that he was not asked for, and did not perform a different cost-benefit analysis for this rental option.<sup>63</sup>

In its response, the Company does not dispute that a leased option would provide the same functionality as a Company-owned option. Instead, the Company argues that the Company-owned system would be “inherently more secure, resilient, and reliable than leased carrier options, and provide[] the Company with more robust security capabilities.”<sup>64</sup> The Company provides zero

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<sup>58</sup> Ex. 20, Alvarez Direct at 11:2-3.

<sup>59</sup> *Id.* at 11: 5-8 (citing Direct Testimony of Andrew L. Trump, *Petition of Virginia Electric and Power Company for approval of a plan for electric distribution grid transformation projects pursuant to § 56-585.1 A 6 of the Code of Virginia*, Case No. PUR-2021-00127 (June 21, 2021) (“Trump Direct”) at Schedule 2, p. 42, tbl. 45).

<sup>60</sup> *Id.* at 11:3-4.

<sup>61</sup> *Id.* at 11: 5-8 (citing Trump Direct at Schedule 2, p. 42, tbl. 45).

<sup>62</sup> *Id.* at 11:9.

<sup>63</sup> Hearing Transcript at 494:10-495:6 (Cross Examination of Company Witness Trump).

<sup>64</sup> Ex. 40, Rebuttal Testimony of Bradley R. Carroll, Sr., *Petition of Virginia Electric and Power Company for approval of a plan for electric distribution grid transformation projects pursuant to § 56-585.1 A 6 of the Code of Virginia*, Case No. PUR-2021-00127 (Oct. 1, 2021) (“Carroll Rebuttal”) at 3:8-9.

analysis to support these claims. There is no evidence in the record that Company-owned systems would in fact be more secure, but even if there were, there is no evidence that these incremental security benefits would be worth a \$200 million premium in nominal dollars.<sup>65</sup> Staff Witness Volkmann agreed that a cost/benefit analysis of the costs of increased security would be useful:

Q. If the leased option is \$200 million cheaper, do you think it might be relevant to the Commission to quantify the value of that increased security for cost/benefit analysis?

A. Yes.<sup>66</sup>

Staff Witness Volkmann further stated that Staff would not oppose a Commission requirement that Dominion conduct such an analysis:

Q. If the Commission were to require Dominion to perform that analysis and to quantify the value of the increased security and to prove that the increased security exists before approving this investment, would Staff be opposed?

A. No.<sup>67</sup>

As Staff Witness Volkmann agrees, Dominion has failed to prove that the ratepayer benefits of a company-owned telecommunications system are worth the additional \$200 million in cost. The Company failed to do any informed risk analysis of the purported resilience benefits of a Company-owned telecommunications system and did not incorporate that analysis in the cost-benefit analysis.<sup>68</sup>

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<sup>65</sup> See Hearing Transcript at 478:24-479:2 (confirming that the Company did not conduct “an analysis to put a dollar figure on that incremental improvement to resiliency based on a company-owned network[.]”) (Cross Examination of Company Witness Carroll).

<sup>66</sup> *Id.* at 328:19-23 (Cross Examination of Staff Witness Volkmann).

<sup>67</sup> *Id.* at 329:10-16 (Cross Examination of Staff Witness Volkmann).

<sup>68</sup> *Id.* at 477:23-478:3 (Cross Examination of Company Witness Carroll).

Instead of an informed risk analysis, the Company provides anecdotal examples of leased telecommunications networks failing during a bombing event in Nashville and a major hurricane, Hurricane Ida.<sup>69</sup> Yet on cross examination, the Company's witness could not provide assurances that the proposed Company-owned option "would be sufficiently resilient enough to not have any outages at all under these sorts of events."<sup>70</sup> In other words, there is no evidence to suggest that the Company-owned system would be able to withstand a bombing or major hurricane any better than the significantly cheaper leased option.

Until the Company has adequately analyzed this alternative leased option, the Commission should deny this proposal. As it stands, the Company may be imposing far more costs on customers than is necessary.

**C. The Company Did Not Consider Alternative Approaches to Voltage Optimization that Could Provide Better Functionality and Save Customers Money.**

The Company's voltage optimization proposal suffers from the same defect as their CIP and telecommunications proposals—the Company did not analyze an alternative that could provide the same functionality at a fraction of the cost. As established by Environmental Respondent Witness Stephens, a systematic conservation voltage reduction ("CVR") approach could provide *greater* energy reductions at a *lower* cost than what the Company has proposed.<sup>71</sup> This CVR option would likely cost far less than the \$442 million proposal by the Company (over

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<sup>69</sup> Ex. 40, Carroll Rebuttal at 4:11-14.

<sup>70</sup> See Hearing Transcript at 476:15-476-20 (stating "I would never say that we will have no outages.") (Cross Examination of Company Witness Carroll).

<sup>71</sup> See Ex. 17, Stephens Direct at 30:1-2 (explaining that "[n]ot only would systemic CVR likely provide greater energy reduction benefit, it is also likely to be significantly cheaper to implement than [the Company's] approach.").

10 years), because CVR would only be implemented “on those circuits for which conservation benefits are likely to exceed costs” and “the cost per circuit is lower.”<sup>72</sup>

The Company’s failure to analyze this alternative is particularly egregious because the Company’s own unregulated subsidiary, Dominion Voltage Inc., offers a systematic form of CVR that can “increase energy efficiency by up to 4% without requiring customer behavioral changes or lifestyle impact.”<sup>73</sup> That is significantly more than the 1% energy reduction that the Company attributed to its voltage optimization proposal.<sup>74</sup>

Despite the clear benefits of a CVR approach, the Company’s consultant did not even perform a separate cost/benefit analysis for CVR.<sup>75</sup> The Commission should deny the proposal until the Company provides a full analysis of available alternatives—which appear to provide *better function at lower cost*.

### **III. The Company Should Be Required to Fix Numerous Deficiencies in its Cost-Benefit Analysis.**

The Company makes several key errors in its cost-benefit analysis, which likely result in exaggerated benefits. First, the Company relies heavily on economic benefits from the Interruption Cost Estimator (“ICE”), a tool that was never intended to be used for this purpose and inherently exaggerates benefits. Second, the Company has included certain benefits but refused to include the comparable costs, and made several other faulty assumptions that all overstate benefits.

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<sup>72</sup> *Id.* at 30:3-6.

<sup>73</sup> *Id.* at 29, fn. 28.

<sup>74</sup> *Id.* at 29:11-12.

<sup>75</sup> Hearing Transcript at 492:10-12 (Cross Examination of Company Witness Trump).



Troublingly, even with the exaggerated benefits, the Company's cost-benefit analysis shows the proposed projects are *barely* cost-beneficial with a ratio of 1.05 benefits to costs.<sup>76</sup> If the Company were to fix these errors, or if the projects' actual costs or actual benefits change even slightly, the Company's proposal could easily end up costing customers more than they benefit.

**A. The Company Improperly Relies on the ICE Calculator to Exaggerate Benefits.**

First, the Company relies heavily on the ICE calculator. The ICE-generated benefits are the most significant assumptions in the Company's cost benefit analysis, with the purported economic benefits flowing from reliability improvements from grid infrastructure and grid technology projects accounting for over half of all benefits.<sup>77</sup> Yet the ICE tool was never intended to be used in this way and exaggerates the economic benefits from reliability improvements.<sup>78</sup> The ICE calculator is based on old surveys that were never intended to estimate economic impacts over a defined geography, and were not even collected in a statistically valid manner.<sup>79</sup> The surveys reflect a number of significant biases including selection bias (only from C&I customers), response bias (the C&I customers knew the utilities were conducting the surveys and were likely hoping for financial remuneration), and geographic bias (only completed in five US geographies and may not be representative of Virginia at all).<sup>80</sup> Moreover, the surveys had no consistency across instructions

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<sup>76</sup> Ex. 20, Alvarez Direct at 12:15-21.

<sup>77</sup> *Id.* at 16:4-11.

<sup>78</sup> *Id.* at 14:5-15.

<sup>79</sup> *Id.* at 14:5-16:3.

<sup>80</sup> *Id.* at 15:7-16:3.

to take back-up generation and uninterruptible power supplies into account.<sup>81</sup> In fact, the researchers who developed the ICE tool expressly warn of these very limitations.<sup>82</sup>

In rebuttal, the Company simply points out that other utilities use the calculator.<sup>83</sup> But the mere fact that some utilities rely on ICE does not mean that it is sufficiently reliable to impose considerable costs on customers. As the ICE tool inherently exaggerates benefits, it is no surprise that other utilities are also using ICE to justify significant capital expenses.

**B. The Company Makes Several Faulty Assumptions and Includes Benefits Without Corresponding Costs.**

Second, the Company makes a number of questionable benefit assumptions, all of which exaggerate benefits as compared to costs. For example, the Company estimates that the voltage optimization enablement proposal will result in \$2.4 billion of economic benefit over 40 years, but the proposal here only *enables* voltage optimization; the Company has not even filed its actual approach to voltage optimization.<sup>84</sup> This is a significant leap for cost-benefit purposes, particularly when considering the voltage optimization benefits represent the Plan's second largest source of

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<sup>81</sup> *Id.* at 15:22-16:3.

<sup>82</sup> See Michael J. Sullivan, et al., *Updated Value of Service Reliability Estimates for Electric Utility Customers in the United States*, Ernest Orlando Lawrence Berkeley National Laboratory (Jan. 2015), <https://eta-publications.lbl.gov/sites/default/files/lbnl-6941e.pdf>, at 48-49 (“No data were available from the Northeast/mid-Atlantic region . . . [t]he absence of interruption cost information for the northeast/mid-Atlantic region is particularly troublesome because of the unique population density and economic intensity of that region. It is unknown whether, when weather and customer compositions are controlled, the average interruption costs from this region are different than those in other parts of the country.”).

<sup>83</sup> Ex. 42, Rebuttal Testimony of Andrew L. Trump, *Petition of Virginia Electric and Power Company for approval of a plan for electric distribution grid transformation projects pursuant to § 56-585.1 A 6 of the Code of Virginia*, Case No. PUR-2021-00127 (Oct. 1, 2021) (“Trump Rebuttal”) at 14:1-5; Ex. 43, Rebuttal Testimony of Dr. Julio Romero Agüero, *Petition of Virginia Electric and Power Company for approval of a plan for electric distribution grid transformation projects pursuant to § 56-585.1 A 6 of the Code of Virginia*, Case No. PUR-2021-00127 (Oct. 1, 2021) (“Agüero Rebuttal”) at 12:11-12.

<sup>84</sup> Ex. 20, Alvarez Direct at 16:15-19:3.

benefits.<sup>85</sup> While the Company claims that the optimization approval needs to occur through its demand-side management proceeding, the Company could easily have timed this voluntary proceeding to more closely match with the DSM proceeding to provide the Commission with a full record on its voltage optimization plans.<sup>86</sup> As it stands, the Company has improperly included all of the benefits from voltage optimization, major components of which are absent from the record.

In addition, the Company inconsistently uses certain reductions in activity levels to estimate O&M savings, rather than utilizing the more typical headcount reduction measure that it uses for other projects.<sup>87</sup> This problematic approach is also a significant contributor to the exaggerated benefits.<sup>88</sup>

The Company also includes certain intangible benefits of its plan, including reduced greenhouse gas emissions, electric vehicle ownership savings, and job creation and follow-on benefits to the Virginia economy from its spending. But the Company refuses to include the corresponding costs in its analysis.<sup>89</sup> If the Company wants to include broader benefits to the economy, it must also consider the corresponding costs to Virginia's economy stemming from a rate increase.<sup>90</sup>

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<sup>85</sup> *Id.* at 18:20-19:3.

<sup>86</sup> Hearing Transcript at 245:1-247:10 (Cross Examination of Environmental Respondent Witness Alvarez).

<sup>87</sup> Ex. 20, Alvarez Direct at 19:5-20:14.

<sup>88</sup> *Id.* at 20:15-22.

<sup>89</sup> *Id.* at 24:12-18.

<sup>90</sup> Hearing Transcript at 220:5-221:20 (Sur-Rebuttal of Environmental Respondent Witness Alvarez).

**C. The Commission Should Reject the Phase II Proposal and Direct the Company to Improve its Cost-Benefit Analysis in Future Filings.**

As the flawed cost-benefit analysis underlies the entire Phase II proposal, Environmental Respondent believes it would be appropriate for the Commission to reject the Phase II proposal until these issues are fixed. As described above, even with the exaggerated benefits, the cost benefit analysis is only narrowly cost beneficial. Once the errors are fixed, it is likely that the updated cost-benefit analysis will show that as proposed, Phase II costs customers more than they will benefit.

Whether the Commission denies the Phase II proposal or approves certain projects, Environmental Respondent requests that the Commission require the Company to remedy its cost benefit approach in future proceedings. As a minimum, the Commission should direct the Company to:

- (1) Stop using the ICE calculator to estimate reliability benefits and instead prepare one market research study and one econometric study, as overseen by Staff,<sup>91</sup>
- (2) Consistently use headcount reductions to measure O&M savings as opposed to other activity measures; and
- (3) Include corresponding intangible costs to the extent the Company insists on including intangible benefits in its analysis.

Finally, Environmental Respondent requests the Commission deny the voltage optimization enablement project until the full proposal, including any demand-side management component, has been presented to the Commission.

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<sup>91</sup> Ex. 20, Alvarez Direct at 37:11-20.

**IV. The Commission Should Direct the Company to Work with Stakeholders and Staff to Streamline its Metrics and Propose a Narrow Set of Outcomes Metrics.**

As set forth by Mr. Alvarez, the Company relies heavily on process-oriented metrics, rather than metrics that measure a particular outcome.<sup>92</sup> Process metrics only indicate progress (*e.g.*, number of truck rolls avoided) but do not directly measure the intended outcome (*e.g.*, reduced field labor costs).<sup>93</sup> Measuring particular processes is not only a problematic approach to measuring performance, it also results in an unwieldy number of metrics as there are numerous processes that can be measured and reported. Outcomes metrics are much more useful for measuring actual performance and customer benefit, and also help streamline the number of metrics required. Many project outcomes can be measured by a small number of metrics that answer simple questions, *e.g.*, “Did the project reduce O&M costs?” or “Did the project reduce customer outages?”

For this reason, Environmental Respondent recommends that the Commission direct the Company to revisit its current metrics, *i.e.*, those listed in Exhibit 21 and any additional metrics coming out of this proceeding, and work with Staff and stakeholders to propose a streamlined set of outcomes metrics with baselines and targets. Any process metrics for projects whose performance can be better measured by an outcome metric should be removed.

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<sup>92</sup> *Id.* at 31:17-33:6; *see also* Ex. 21, DEV-PE-17.

<sup>93</sup> Ex. 20, Alvarez Direct at 32:5-10.

**V. The Company Should Implement a Universal Peak Time Rebate in Connection with its AMI Proposal and Include a Connect My Data Standard.**

The Company's Plan omits two opportunities to increase demand response and energy conservation that would provide considerable economic and environmental benefits. First, the Company should be required to develop and incorporate a universal peak time rebate with its AMI rollout.<sup>94</sup> Second, the Company should be required to incorporate Green Button's Connect My Data standard.<sup>95</sup>

Importantly, the Company's three-part time-of-use rate does not contain a critical peak price feature. Research shows, however, that time-of-use rates without a critical peak price feature are far less effective than those with critical peak price features at reducing coincident system peaks.<sup>96</sup> Because utilities like the Company spend a sizeable amount of capital to accommodate coincident system peaks, the Company's failure to incorporate critical peak price features into TOU rate design represents a significant missed opportunity.<sup>97</sup> For this reason, Environmental Respondent recommends that the Company's AMI and TOU proposal include a universal peak time rebate feature, an approach that strikes the proper balance and does not impose any bill risk for particular customers.<sup>98</sup> If the Commission elects to approve AMI in this proceeding, the

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<sup>94</sup> *Id.* at 25:16.

<sup>95</sup> *Id.* at 25:17.

<sup>96</sup> *Id.* at 27:4-8.

<sup>97</sup> *Id.* at 27:8-10.

<sup>98</sup> *Id.* at 29:12-18.

Commission should condition such approval on the Company implementing a universal peak time rebate program.<sup>99</sup>

The Company's other key omission is compliance with Green Button's Connect-My-Data standard. This standard was developed to help customers better manage energy use, allowing "customers to choose their preferred smart phone app or home energy management system provider[.]"<sup>100</sup> By omitting Connect-My-Data standard compliance, the Company's "customers will effectively be denied access to a growing ecosystem of energy management service providers, solar system purveyors, energy efficiency contractors, and the like which could otherwise help [the Company's] customers achieve their energy-related economic and environmental goals."<sup>101</sup>

This customer data issue has been at play for several years now, in prior plan proceedings<sup>102</sup> and in a stakeholder process that resulted in no concrete recommendations.<sup>103</sup> The Connect-My-Data standard is beneficial to customers and the Commission should condition approval of AMI on the implementation of the Connect-My-Data standard.<sup>104</sup> Such a requirement would not be

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<sup>99</sup> *Id.* at 39:1-3.

<sup>100</sup> *Id.* at 30:17-18.

<sup>101</sup> *Id.* at 31:5-9.

<sup>102</sup> Ex. 37, Rebuttal Testimony of Thomas J. Arruda, *Petition of Virginia Electric and Power Company for approval of a plan for electric distribution grid transformation projects pursuant to § 56-585.1 A 6 of the Code of Virginia, and for approval of an addition to the terms and conditions applicable to electric service*, Case No. PUR-2019-00154 (Jan. 10, 2020) at 5:14-19.

<sup>103</sup> Hearing Transcript at 449:22-450:19 (Cross Examination of Company Witness Jennings).

<sup>104</sup> Ex. 20, Alvarez Direct at 39:1-3.

unique or unusual; commissions in California, Colorado, Illinois, New York, and Texas have all mandated that regulated utilities comply with the Connect-My-Data standard.<sup>105</sup>

### CONCLUSION

Environmental Respondent requests the Commission deny the Company's proposal, based on the numerous flaws in the Company's proposal, including its flawed cost-benefit analysis, failure to consider cheaper alternatives, and failure to establish need. If the Commission elects to approve certain projects and deny others, Environmental Respondent makes specific recommendations as set forth in the following Issues Matrix, consistent with this Post-Hearing Brief and the recommendations of Mr. Stephens and Mr. Alvarez.

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<sup>105</sup> *Id.* at 31:12-13.



**ISSUES MATRIX**

<b>Issue</b>	<b>Environmental Respondent's Position</b>
Should the Commission approve the Company's petition?	No. Environmental Respondent requests the Commission deny the Company's proposal based on the numerous flaws in the Company's proposal, including its flawed cost-benefit analysis, failure to consider cheaper alternatives, and failure to establish need.
In particular, should the Commission approve the Customer Information Platform?	No. The Company failed to consider the significantly cheaper licensing option that would provide the same functionality. The Commission should reject the proposal until the Company provides full analysis of the software as a service ("SAAS") option.
Should the Commission approve the telecommunications proposal?	No. The Company failed to consider the significantly cheaper leased option that would provide the same functionality. The Commission should reject the proposal until the Company provides full analysis of the leased telecommunications option.
Should the Commission approve the voltage optimization enablement project?	No. The Company failed to consider cheaper, more effective conservation voltage reduction ("CVR") approaches, and has not even filed its proposal for the demand-side management component. Until the Company has provided a full analysis of alternative CVR approaches, the Commission should reject the proposal.
Should the Commission approve the intelligent grid devices project?	No. The Company has failed to establish a current need for intelligent grid devices, with no evidence that DER growth will pose any problems to the Company's distribution system for at least several years, if not a decade or more into the future. To the extent the Commission approves the project despite the lack of demonstrated need, Environmental Respondent recommends the project be approved as a limited pilot for only 4 to 8 circuits and 1 to 2 substations.
Should the Commission approve the FLISR proposal?	No. The Company has failed to establish a current need for FLISR, with no evidence that DER growth will pose any problems to the Company's distribution system for at least several years, if not a decade or more into the future.

<p>Should the Commission approve the Enterprise Asset Management System proposal?</p>	<p>No. The Company has failed to establish a current need for the EAMS, with no evidence that DER growth will pose any problems to the Company's distribution system for at least several years, if not a decade or more into the future.</p>
<p>Should the Commission approve the Distributed Energy Resource Management System?</p>	<p>No. The Company has failed to establish a current need for the DERMS, with no evidence that DER growth will pose any problems to the Company's distribution system for at least several years, if not a decade or more into the future.</p>
<p>Should the Commission approve the substation technology deployment program?</p>	<p>No. The Company has failed to establish a current need for substation technology deployment program, with no evidence that DER growth will pose any problems to the Company's distribution system for at least several years, if not a decade or more into the future.</p>
<p>Should the Commission approve the physical substation security proposal?</p>	<p>No. The Company has provided no evidence that the physical security projects will in fact avoid service outages. The Commission should reject the proposal until the Company has established a need and provided an informed risk analysis establishing that the significant expense is justified.</p>
<p>Should the Commission approve the voltage island mitigation proposal?</p>	<p>No. The Company has not established that this project will provide sufficient benefit to customers. The Commission should reject the proposal until the Company has provided an informed risk analysis establishing that the significant expense is justified.</p>
<p>Should the Commission approve the AMI proposal?</p>	<p>To the extent the Commission does not reject the Company's Phase II plan outright, the Commission should condition AMI approval on the Company implementing a universal peak time rebate and Connect-My-Data functionality.</p>

<p>Should the Commission accept the Company's cost-benefit analysis?</p>	<p>No. The Company's cost-benefit analysis suffers from numerous flaws, all of which exaggerate benefits. Given these flaws and the thin cost-benefit margin, as well as the other significant issues with the Company's proposal, Environmental Respondent recommends rejection of the Phase II proposal. To fix the cost-benefit analysis in future proceedings, Environmental Respondent asks the Commission to direct the Company to:</p> <ul style="list-style-type: none"> <li>• Stop using the ICE calculator to estimate reliability benefits, and instead require the Company to develop a market research study and econometric study with Staff supervision;</li> <li>• Consistently use headcount reduction to measure O&amp;M savings as opposed to other activity measures; and</li> <li>• Include corresponding intangible costs to the extent the Company insists on including intangible benefits in its analysis.</li> </ul>
<p>Are the Company's metrics adequate for tracking performance and results?</p>	<p>No. The Company's metrics skew heavily towards process-oriented measures that only indicate progress but do not directly measure performance. Environmental Respondent requests the Commission direct the Company to work with Staff and stakeholders to propose a streamlined set of outcomes metrics, including baselines and targets, and eliminate process metrics.</p>

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Respectfully submitted,




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