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March 29, 2023

VIA ELECTRONIC FILING

Mr. Bernard Logan, 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 of its
2022 DSM Update pursuant to § 56-585.1 A 5 of the Code of Virginia**

Case No. PUR-2022-00210

Dear Mr. Logan:

Please find enclosed for filing in the above-referenced docket the direct testimony and exhibits of Jim Grevatt on behalf of Appalachian Voices (“Environmental Respondent”). Included with this testimony are Mr. Grevatt’s one-page summary and six attachments.

As authorized by Rule 140 of the Commission’s Rules of Practice and Procedure, Environmental Respondent is providing, and agrees to accept, service of documents in this case exclusively via email unless parties request otherwise.

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

APPLICATION OF VIRGINIA ELECTRIC)
AND POWER COMPANY)

*For approval of its 2022 DSM Update)
pursuant to § 56-585.1 A 5 of the)
Code of Virginia)*

Case No. PUR-2022-00210

**Summary of Direct Testimony of
Jim Grevatt, Energy Futures Group**

**On Behalf of
Environmental Respondent**

March 29, 2023

Summary of Testimony of Jim Grevatt

In developing my testimony, I reviewed the testimony filed on behalf of Virginia Electric and Power Company ("Company" or "Dominion"), as well as the responses to discovery requests propounded by Environmental Respondent and Commission Staff. My perspectives are informed by 30 years of experience in energy efficiency program implementation and strategic planning, as well as my work across North America in reviewing utility demand side management ("DSM") programs to identify improvement opportunities. My focus in this review was to gauge how Dominion's implementation of its Long-Term Plan ("LTP") is progressing and the extent to which the steps it is taking are resulting in increased savings and compliance with the Virginia Clean Economy Act ("VCEA") savings requirements. I also reviewed the new program and program bundling proposals in Dominion's Application. Unfortunately, my review showed Dominion to be falling far short of the savings that would be needed to achieve its statutory requirements. Dominion is moving too slowly in streamlining its portfolio structure and is not proposing program budgets sufficient to achieve the requirements.

Based on my review, I respectfully recommend the Commission:

1. Direct Dominion to ramp up production in its approved programs and thereby "front-load" participation and savings to increase the possibility of achieving the VCEA standards in 2023, 2024, and 2025;
2. Direct Dominion to provide a supplemental filing within 90 days of the Commission's Order in this case that:
 - a. Details the specific steps Dominion will take to meet its VCEA-mandated savings standards in 2023, 2024, and 2025, as well as the expected action dates of these steps; and
 - b. Details Dominion's portfolio-level marketing and awareness campaign, including (i) describing the interrelationships between the overall campaign and individual program marketing and outreach that demonstrates they are mutually supportive and not conflicting, and (ii) describing a streamlined program level marketing approach that treats related programs as bundles for customer communications even in advance of administrative bundling;
3. Confirm that while the specific amount of "free rider" savings involves factual determinations, the VCEA's statutory savings requirements are measured net of free riders, pursuant to the statutory language and consistent with the Commission's ruling in its Final Order in Case No. PUR-2021-00247;
4. Approve Dominion's request for the Phase XI programs and program bundling as proposed, but reject Dominion's proposal to eliminate the Building Performance Institute ("BPI") certification requirement in the Residential Home Retrofit Bundle (Energy Efficiency); and
5. Approve Dominion's request to expand eligibility for its DSM Phase IX Agricultural Program to include farms served by residential accounts.

COMMONWEALTH OF VIRGINIA
STATE CORPORATION COMMISSION

APPLICATION OF VIRGINIA ELECTRIC)
AND POWER COMPANY)
)
For approval of its 2022 DSM Update)
pursuant to § 56-585.1 A 5 of the)
Code of Virginia)
)
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Case No. PUR-2022-00210

**Direct Testimony of
Jim Grevatt, Energy Futures Group**

**On Behalf of
Environmental Respondent**

March 29, 2023

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I. INTRODUCTION AND QUALIFICATIONS

1
2 **Q. Please state your name, title, and employer.**

3 A. My name is Jim Grevatt. I am a Managing Consultant at Energy Futures Group ("EFG"),
4 located at 10298 Route 116, Hinesburg, VT 05461.

5 **Q. Please describe Energy Futures Group.**

6 A. EFG is a clean-energy consulting firm headquartered in Hinesburg, Vermont, with offices
7 in Boston and New York. EFG designs, implements, and evaluates programs and policies
8 to promote investments in efficiency, renewable energy, other distributed resources, and
9 strategic electrification. EFG staff have delivered projects on behalf of energy regulators,
10 government agencies, utilities, and advocacy organizations in forty states, eight Canadian
11 provinces, and several countries in Europe.

12 EFG brings to its work a unique combination of technical, economic, program, and policy
13 expertise. EFG staff have critically evaluated hundreds of efficiency and renewable energy
14 programs, playing key roles in developing many that have subsequently won awards for
15 excellence. Recent work involves efficiency program portfolios and policies in each of the
16 fifteen highest-ranking states on the American Council for an Energy-Efficient Economy
17 ("ACEEE") State Energy Efficiency Scorecard, as well as in Ontario, Manitoba, and
18 British Columbia. EFG staff have provided expert witness testimony on efficiency
19 programs, integrated resource planning, and related policy issues in regulatory proceedings
20 in twenty states and five Canadian provinces.

1 **Q. Please summarize your professional and educational experience.**

2 A. I have worked in the energy efficiency industry since 1991 in a wide variety of roles. Prior
3 to joining EFG, I served as the Director of Residential Energy Services at Efficiency
4 Vermont and the District of Columbia Sustainable Energy Utility. I also served as the
5 Manager of Energy Services at Vermont Gas Systems, managing both residential and
6 commercial energy efficiency programs. I have extensive hands-on experience conducting
7 hundreds of energy audits for Vermont's Low-Income Weatherization Assistance Program
8 and Vermont Gas Systems' DSM programs.

9 In my current role as Managing Consultant at EFG, I have advised regulators, utilities and
10 other energy efficiency program administrators, environmental organizations, and low-
11 income and affordable housing advocates in over twenty states and Canadian provinces,
12 and I have provided expert witness testimony in fourteen of those jurisdictions.

13 I received a B.F.A. from the University of Illinois.

14 My resume, attached as Attachment JG-1, provides additional detail regarding my
15 professional and educational experience.

16 **Q. On whose behalf are you testifying in this case?**

17 A. I am testifying on behalf of Appalachian Voices ("Environmental Respondent").

18 **Q. What is the purpose of your testimony?**

19 A. The primary purpose of my testimony is to provide input for the Commission's
20 consideration of the Phase XI energy efficiency programs proposed by Dominion, and the

1 progress Dominion is making towards compliance with its VCEA savings obligations. I
2 have not reviewed, and do not provide comments on the Company's cost recovery requests.

3 **Q. Have you testified previously before the State Corporation Commission?**

4 A. Yes. I provided expert witness testimony in Case No. PUR-2018-00168, Case No. PUR-
5 2019-00201, Case No. PUR-2020-00156, Case No. PUR-2020-00274, and Case No. 2021-
6 00247.

7 **Q. How is your testimony organized?**

8 A. My testimony is organized as follows:

9 **Section I: Introduction and Qualifications**

10 **Section II: Summary of Requests**

11 **Section III: Background**

12 **Section IV: Implementation of Long-Term Plan**

13 **Section V: Progress Towards Meeting VCEA Savings Standards**

14 **Section VI: Dominion Requested Phase XI Approvals**

15 **Section VII: Conclusions and Recommendations**

16 **II. SUMMARY OF REQUESTS**

17 **Q. Please summarize your primary observations and conclusions.**

18 A. My primary observations and conclusions are as follows:

-
- 1 1. Despite filing of the Long-Term DSM Plan (“LTP”) fourteen months ago and receiving
2 approval from the SCC,¹ Dominion persists in failing to provide a clear picture of how it
3 will comply with the VCEA savings standards. Indeed, Dominion confirms that current
4 projections indicate it will fall short of its statutory savings requirements as early as 2023.
5 While these savings requirements were achievable when the VCEA passed, Dominion’s
6 slow pace of change has made it increasingly unlikely that the utility will achieve the levels
7 of savings required by law;
- 8 2. Dominion persists in claiming that it does not know whether VCEA compliance will be
9 determined on the basis of net or gross savings. But the Commission made clear in last
10 year’s proceeding that “free rider” savings that can be reasonably identified should not
11 count toward compliance with the statutory savings requirements;
- 12 3. The portfolio updating that Dominion has started pursuant to the adoption of its LTP is
13 directionally appropriate, but Dominion is proceeding without any sense of urgency,
14 leaving much to do if participation and savings are to materially increase to achieve the
15 VCEA savings standards;
- 16 4. Dominion has begun development of the general marketing and awareness initiative
17 recommended in the LTP, but important elements of its approach remain unclear at this
18 time;
- 19 5. While Dominion projects the amount of total energy savings counted towards the VCEA
20 standards to increase somewhat going forward, the amount of “new” incremental annual

¹ Final Order, *Petition of Virginia Electric and Power Company for approval of its 2021 DSM Update pursuant to § 56-585.1 A 5 of the Code of Virginia*, Case No. PUR-2021-00247 (Aug. 10, 2022) (“2021 DSM Final Order”).

1 savings Dominion expects its portfolio to achieve is declining year over year – exactly the
2 opposite of what needs to happen for Dominion to meet its VCEA standards;

3 6. The five new programs and four program bundles proposed by Dominion are generally
4 reasonable improvements to the portfolio and have the potential to improve customers'
5 experience of certain programs and increase savings somewhat;

6 7. Dominion's request to expand eligibility for the previously approved DSM Phase IX
7 Agricultural Program recognizes a market sector that has heretofore been omitted from
8 eligibility and that may benefit from inclusion; and

9 8. Dominion has proposed that a BPI certification will only be required for contractors in the
10 Residential Home Retrofit Bundle who "wish to perform certain measures, such as air
11 sealing and insulation."² Allowing contractors who lack BPI certification to conduct audits
12 poses a significant risk that fewer long-lasting comprehensive home retrofit measures will
13 be installed than if BPI certification is required for all contractors doing assessments. There
14 is also greater risk that pre-existing health and safety issues will not be identified and
15 addressed.

16 **Q. What are your recommendations to the Commission in this proceeding?**

17 **A. Based on my review, I respectfully recommend the Commission:**

² Attachment JG-2, Company Response to APV Set 2-7(c).

-
- 1 1. Direct Dominion to ramp up production in its approved programs and thereby
2 “front-load” participation and savings to increase the possibility of achieving the
3 VCEA standards in 2023, 2024, and 2025;
- 4 2. Direct Dominion to provide a supplemental filing within 90 days of the
5 Commission’s Order in this case that:
- 6 a. Details the specific steps Dominion will take to meet its VCEA-mandated
7 savings standards in 2023, 2024, and 2025, as well as the expected action dates
8 of these steps; and
- 9 b. Details Dominion’s portfolio-level marketing and awareness campaign,
10 including (i) describing the interrelationships between the overall campaign and
11 individual program marketing and outreach that demonstrates they are mutually
12 supportive and not conflicting, and (ii) describing a streamlined program level
13 marketing approach that treats related programs as bundles for customer
14 communications even in advance of administrative bundling;
- 15 3. Confirm that while the specific amount of “free rider” savings involves factual
16 determinations, the VCEA’s statutory savings requirements are measured net of
17 free riders, pursuant to the statutory language and consistent with the Commission’s
18 ruling in its Final Order in Case No. PUR-2021-00247;³

³ 2021 DSM Final Order at 9, fn. 33.

1 Dominion's energy efficiency program planning is also made in the context of
2 requirements under HB 2789 to establish a program to provide "incentives to low income,
3 elderly and disabled individuals in an amount not to exceed \$25 million in the aggregate
4 for the installation of measures that reduce residential heating and cooling costs and
5 enhance the health and safety of residents."⁷ The \$25 million investment requirement for
6 heating and cooling efficiency is applied to meeting the \$870 million GTSA requirement.

7 **Q. Are there other state policies or statutes in place that are shaping Dominion's filing?**

8 A. Yes. Importantly, the VCEA, passed by the Virginia General Assembly and signed by
9 Governor Northam in 2020,⁸ establishes annual energy savings requirements, which has
10 been a topic of considerable discussion in previous testimony I have filed on behalf of
11 Environmental Respondent. For Dominion, this will mean that the sum of its programs'
12 energy savings, from measures that continue to save energy in that year, must equal a
13 predetermined percentage of its 2019 jurisdictional retail sales. Specifically, Dominion
14 must achieve savings in 2022 equal to 1.25 percent of its 2019 jurisdiction retail sales, 2.5
15 percent in 2023, 3.75 percent in 2024, and 5 percent in 2025.⁹

16 **Q. Has the Commission confirmed whether "net" or "gross" energy savings will be
17 used in determining Dominion's compliance with its VCEA requirements?**

18 A. I believe that the Commission's Order in Case No. PUR-2021-00247 resolves this question,
19 which was debated vigorously in that proceeding. In terms of the energy savings

⁷ 2019 Va. Acts, ch. 748.

⁸ 2020 Va. Acts, chs. 1193 and 1194.

⁹ Va. Code § 56-596.2 B 2.

1 requirements, the VCEA requires that such savings be “achieved by” the utility’s energy
2 efficiency and demand response programs and measures.¹⁰ Savings from free riders—*i.e.*,
3 customers that would have reduced their energy usage regardless of the programs offered
4 by the Company—are by definition not achieved by a utility’s programs and should not be
5 included in any calculation for compliance. Accounting for free riders is long-standing
6 industry-standard practice. Taking gross savings (which includes free riders) and
7 translating such savings to a net basis (taking out free riders) is a practice that has long
8 been used to understand the amount of savings a utility’s programs are actually achieving.
9 Dominion, for example, has translated its savings to a net basis for purposes of cost-benefit
10 analyses for many years.

11 After this issue was examined extensively during the 2021 DSM proceeding and briefed
12 by the parties, the Commission determined that “the Company must factually establish the
13 amount of savings that occurred as the result of its programs and measures,” and further
14 explained that “to the extent the term ‘free riders’ factually represents specific savings that
15 can be reasonably identified, and that were not achieved as a result of Dominion’s programs
16 and measures, such savings do not fall within the plain language of this statute.”¹¹ Stated
17 differently, “free rider” savings do not fall within the plain language of the statute, provided
18 that they can be “reasonably identified” and that they were “not achieved as a result of
19 Dominion’s programs and measures.”¹²

¹⁰ Va. Code § 56-576 (definition of “total annual energy savings”); *see also id.* § 56-596.2 B (“[E]ach investor-owned incumbent electric utility shall implement energy efficiency programs and measures to achieve the following total annual energy savings...”).

¹¹ 2021 DSM Final Order at 9, fn. 33.

¹² *Id.*

1 **Q. How did Dominion address this ruling in its current petition?**

2 A. In the current filing, Dominion acknowledges that “free riders” are customers “who would
3 have achieved the energy savings regardless of the DSM Program” and further
4 acknowledges that “net savings” are adjusted for savings attributed to free riders.¹³
5 Nonetheless, Dominion claims that it does not know whether the VCEA savings
6 requirements will be measured in net or gross terms. Thus, and as directed by the
7 Commission, Dominion provides projections in Phase XI for both net and gross savings.

8 **Q. Do you agree with Dominion that the Commission’s order is unclear as to whether
9 the standards should apply to “gross” or “net” savings?**

10 A. I do not. While the Commission’s order acknowledges that there may be factual issues as
11 to the ultimate amount of free rider savings, I believe the order was clear that free rider
12 savings should not be counted when measuring compliance, so long as they can be
13 “reasonably identified.” In this case, Dominion has already identified the free rider savings
14 by calculating savings on a net basis, and moreover, Dominion has confirmed that free
15 rider savings are “achieved . . . regardless of the DSM Program.”¹⁴

16 Given these facts, I do not understand how Dominion could reasonably believe that using
17 gross savings is consistent with the Commission’s prior ruling.

¹³ Direct Testimony of Nathan J. Frost, *Petition of Virginia Electric and Power Company for approval of its 2021 DSM Update pursuant to § 56-585.1 A 5 of the Code of Virginia*, Case No. PUR-2022-00210 (Dec. 13, 2022) (“2022 DSM Frost Direct”) at 12.

¹⁴ *Id.*

1 Q. What would you recommend the Commission do?

2 A. Although I believe the prior order was clear, I recommend that the Commission find that
3 compliance with the VCEA's energy savings standards shall be determined on the basis of
4 *savings net of free riders*. Including this precise language—"savings net of free riders"—
5 should help obviate claims of confusion. I further recommend that the Commission
6 rule that in future DSM filings, Dominion shall only present its actual and projected savings
7 for compliance with § 56-596.2 in terms of savings net of free riders, modifying the
8 requirement set forth in the 2020 DSM order¹⁵ given the subsequent ruling on this issue.¹⁶

9 **IV. IMPLEMENTATION OF LONG-TERM PLAN**

10 Q. What are the key elements of the LTP filed by Dominion and approved by the
11 Commission in Phase X?

12 A. The LTP is multi-faceted, focusing on streamlining customer participation processes,
13 improving customer awareness, and filling gaps in current program offerings to maximize
14 savings. The LTP called for consolidation of Dominion's many programs into seven
15 overarching program bundles, including the following:

- 16 • Residential Efficient Products
17 • Residential Energy Services
18 • Residential New Construction

¹⁵ Final Order, *Petition of Virginia Electric and Power Company for approval of its 2020 DSM Update pursuant to § 56-585.1 A 5 of the Code of Virginia*, Case No. PUR-2020-00274 (Sept. 7, 2021) ("2020 DSM Final Order") at 12 ("An exhibit measuring Dominion's actual and projected compliance or noncompliance with the total energy savings requirements in Code § 56-596.2, using both net and gross savings metrics.").

¹⁶ While it remains important for EM&V reports to include gross savings determinations, continuing to present gross savings in consideration of VCEA requirements muddies the waters without providing a benefit.

-
- 1 • Income and Age Qualified
 - 2 • Small Business Solutions
 - 3 • Large Business Solutions
 - 4 • Nonresidential New Construction

5 Among other things, the program consolidation is intended to “[d]eliver a streamlined
6 energy efficiency program portfolio using a customer-sector approach (serving the
7 residential, income-qualified, and small and large nonresidential sectors) that creates value
8 and provides a unified, positive customer experience” while enhancing “program
9 comprehensiveness by offering broad, overarching programs that span end uses,
10 consolidate administrative functions, and are flexible to allow the Company to control the
11 pace of programs if customer preferences or market conditions change.”¹⁷

12 **Q. Has Dominion undertaken steps to implement these recommendations?**

13 A. The bundling proposed by Dominion in the instant proceeding is a first step in the direction
14 of consolidated program offerings. I am glad to see this, though there is considerably more
15 Dominion must be doing now to facilitate this streamlining. In particular, even if the
16 bundling is approved, Dominion will still have 36 distinct programs and program bundles
17 that it “plans to continue to market...as distinct offerings,” albeit with hopes that the
18 “awareness campaign of West Cary Group [will] aid in creating a more uniform and
19 streamlined approach to communications with customers.”¹⁸ Table 1 illustrates the number

¹⁷ Ex. 6, Direct Testimony of Terry M. Fry, *Petition of Virginia Electric and Power Company for approval of its 2021 DSM Update pursuant to § 56-585.1 A 5 of the Code of Virginia*, PUR-2021-00247 (Dec. 14, 2021), at Schedule 1, p. 16 of 151.

¹⁸ Attachment JG-3, Company Response to APV Set 2-10.

of individual programs that Honeywell, one of several program implementation vendors, implements – and by extension must market – for Dominion:

Table 1: Programs Implemented by Honeywell¹⁹

Phase IX	Non Res.	Agriculture
Phase IX	Non Res.	Building Automation
Phase IX	Non Res.	Building Optimization
Phase IX	Non Res.	Engagement
Phase IX	Non Res.	Prescriptive Bundle
Phase VIII	Non Res.	EE Products
Phase VIII	Non Res.	Multi Family
Phase VIII	Non Res.	New Construction
Phase VIII	Non Res.	Small Business Improvement
Phase X	Non Res.	Data Center
Phase X	Non Res.	Lighting & Controls
Phase IX	Res.	Smart Home
Phase IX	Res.	Virtual Audit
Phase IX	Res.	Water Savings - DR
Phase IX	Res.	Water Savings - EE
Phase VIII	Res.	EE Kits
Phase VIII	Res.	Home Retrofit Bundle
Phase VIII	Res.	Manufactured Housing
Phase VIII	Res.	Multi Family
Phase VIII	Res.	Smart Thermostat - DR
Phase VIII	Res.	Smart Thermostat - EE

Q. Could Dominion be more proactive in advancing the program consolidation proposed in the LTP?

A. Yes. For example, for programs that will eventually be bundled, Dominion could develop and implement a bundled marketing approach in advance of carrying out the administrative step of functionally bundling the programs. This would move Dominion closer and faster to the consolidated program model proposed in the LTP. The result would be streamlined

¹⁹ Attachment JG-4, Company Response to APV Set 3-6, “Attachment APV Set 03-06 (MTH).”

1 customer communications with more clarity of purpose – which the LTP suggests will lead
 2 to greater participation.

3 **V. PROGRESS TOWARDS MEETING VCEA SAVINGS STANDARDS**

4 **Q. Has Dominion provided the Commission with a Strategic Plan for achieving the**
 5 **VCEA savings standards?**

6 A. Yes. In the 2020 DSM order, the Commission required Dominion in “future DSM filings”
 7 to include a long-term plan with a number of specific elements, including:

8 (i) proposed Program savings and budgets for the five-year period
 9 beginning January 1, 2022, sufficient to comply with the total
 10 energy savings targets in the VCEA and investment levels in the
 11 GTSA; (ii) proposed plan and framework for consolidating,
 12 streamlining, and marketing the public-facing aspects of the
 13 Company’s approved and proposed DSM Programs to facilitate
 14 participation at the levels required to achieve the VCEA targets; and
 15 (iii) a detailed project management plan and risk management
 16 strategy demonstrating that the Company has identified and planned
 17 for deployment of the resources required to implemented its revised
 18 Programs. This strategic plan shall reflect short-term, medium-term,
 19 and long-term recommendations for improvement of the Company’s
 20 DSM Portfolio.²⁰

21 Dominion filed its LTP in Case No. PUR-2021-00247 along with its proposed DSM Phase
 22 X programs. The Commission approved the LTP in its Final Order in that case.

23 **Q. Do you believe that Dominion is fully complying with this planning requirement?**

24 A. I do not. The 2020 Order directed Dominion to file a long-term plan in future DSM filings
 25 with many requirements aimed at helping ensure Dominion proposes and implements

²⁰ 2020 DSM Final Order at 11-12.

1 changes that are needed for it to “achieve the VCEA targets.”²¹ I believe Dominion is
2 advancing and implementing its plans far too slowly, and at far too limited a scale, to
3 achieve the VCEA standards.

4 **Q. What level of energy efficiency savings, in terms of MWh, must Dominion achieve as**
5 **a result of the VCEA requirements you describe above?**

6 A. Dominion calculates that it must achieve the total annual energy savings shown below in
7 Table 2.

8 **Table 2: Dominion VCEA Total Energy Savings Requirements²²**

	2022	2023	2024	2025
VCEA Cumulative Savings Requirement(%)	1.25%	2.50%	3.75%	5.00%
Dominion's VCEA Energy Savings Targets (MWh/yr)	852,892	1,705,783	2,558,675	3,411,567

9
10 As I discussed above, and in more detail in my Phase IX and Phase X testimony, the “total
11 annual energy savings” include measures installed in the specific year for which the
12 standard has been established plus the annual savings from any measures installed prior to
13 that year if the measures are still in service and providing savings.

²¹ *Id.*

²² 2022 DSM Frost Direct at 14, Table I.

1 Q. Has Dominion projected the savings it will achieve based on approved and proposed
 2 programs?

3 A. Yes. The net savings forecast provided by Dominion is reproduced in Table 3 for
 4 convenience.

5 **Table 3: Dominion Net Savings Forecast²³**

Net	VCEA Target	VCEA Target %	Total DSM Forecast	DSM Target %
	MM\$		MM\$	
2022	852,892	1.25%	985,880	1.4%
2023	1,705,783	2.50%	1,346,307	2.0%
2024	2,558,675	3.75%	1,659,416	2.4%
2025	3,411,567	5.00%	1,987,801	2.9%

6
 7 Dominion estimates that it will meet the 2022 savings requirement, but that currently
 8 approved and proposed programs will fall short of the 2023, 2024, and 2025 standards
 9 assuming net savings are used to determine compliance.²⁴

10 Dominion confirmed in response to discovery that the data provided in its filing suggests
 11 that it “will fail to achieve its 2023, 2024, and 2025 VCEA targets if the target is measured
 12 in terms of net savings” and “will fail to achieve its 2024, and 2025 VCEA targets if the
 13 target is measured in terms of gross savings.”²⁵ Dominion noted in its response that this is
 14 true “based on facts and circumstances at the time of the filing. It should be noted that this
 15 information reflects a snapshot in time, and it does not yet incorporate all the improvements

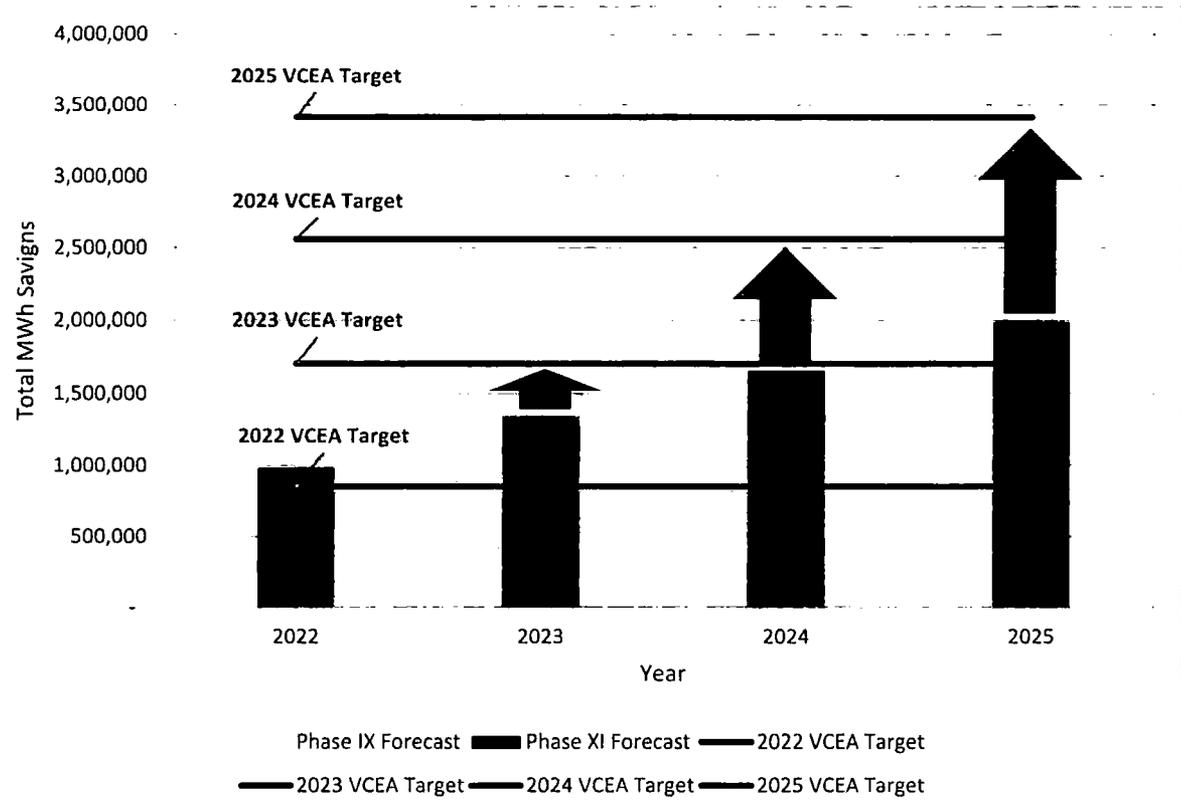
²³ *Id.* at Schedule 2, Table 1.

²⁴ *Id.*

²⁵ Attachment JG-5, Company Responses to APV Sets 2-2(c) and 2-2(d).

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Figure 1: Forecast Savings Vs. VCEA Standards²⁷



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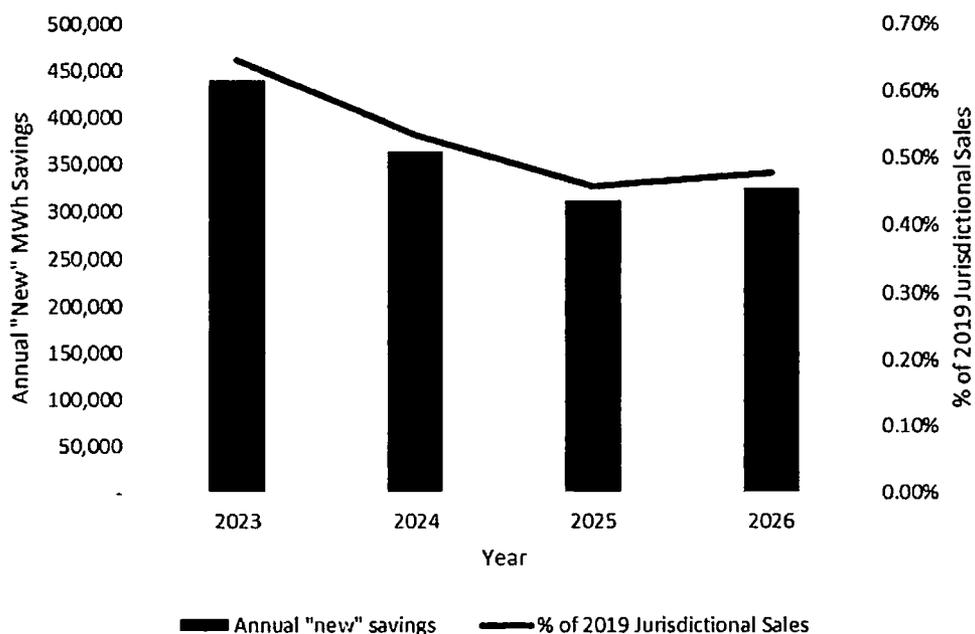
3 Q. Is Dominion increasing the “new” savings it achieves for customers each year?

4 A. Unfortunately, no. While the total annual savings, which include savings from prior years,
 5 are increasing due to the cumulative effect of savings that last for multiple years (albeit
 6 more slowly than required to meet the VCEA standards), the opposite is true for the annual
 7 incremental savings. The annual incremental, or “new” savings Dominion forecasts it will
 8 achieve each year, is declining. I determined this by analyzing the data reported in

²⁷ Ex. 12, Direct Testimony of Jim Grevatt, *In the matter of the application of Virginia Electric and Power Company for approval of its 2020 DSM Update pursuant to § 56-585.1 A 5 of the Code of Virginia*, Case No. PUR-2020-00274 (Apr. 16, 2021) at 30, Figure 3; 2022 DSM Frost Direct at Schedule 2, Table 1.

1 Company Witness Hubbard’s Direct Testimony, specifically his Schedule 7.²⁸ For each
 2 year, Schedule 7 includes a column containing the “Net Annual Energy Savings (MWh).”
 3 By calculating the difference from one year to the next, and then adding back savings that
 4 are “lost” due to measures from prior program years that have reached the end of their
 5 useful lives, I calculated the amount of “new” savings that Dominion forecasts it will
 6 achieve. For each year from 2023-2026 these values are shown as blue columns in Figure
 7 2, along with those savings as a percent of 2019 jurisdictional sales which are shown as a
 8 black line.

9 **Figure 2: Annual “New” Savings by Year²⁹**



10

²⁸ Direct Testimony of Michael T. Hubbard, *Petition of Virginia Electric and Power Company for approval of its 2021 DSM Update pursuant to § 56-585.1 A 5 of the Code of Virginia*, Case No. PUR-2022-00210 (Dec. 13, 2022) (“2022 DSM Hubbard Direct”) at Schedule 7.

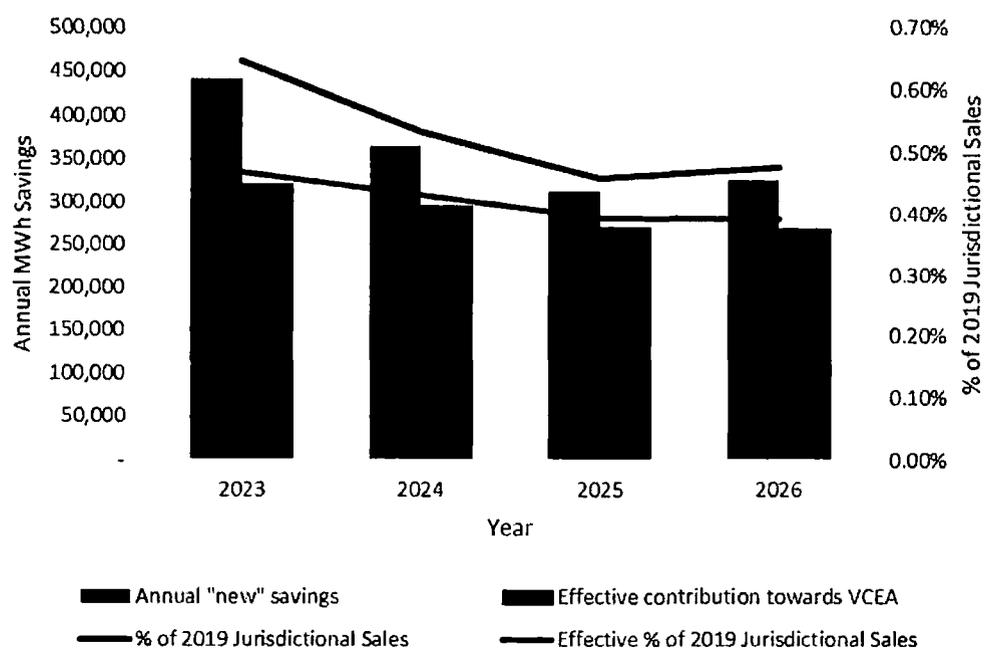
²⁹ Savings for 2023-2026 from 2022 DSM Hubbard Direct at Schedule 7. Savings for 2022 from Ex. 7, Direct Testimony of Michael T. Hubbard, *Petition of Virginia Electric and Power Company for approval of its 2021*

1 Q. Do all of the savings shown in the blue columns in Figure 2 increase what Dominion
2 reports towards its VCEA standards?

3 A. Not at all. This is because a portion of the “new” savings are actually replacing savings
4 from previously installed measures that are no longer functionally saving energy, because
5 the measures have worn out, or “expired.” The green columns in Figure 3 show the
6 effective savings from each year of approved and proposed programs that will contribute
7 to the total annual energy savings requirement of the VCEA. It is also important to note
8 that all of these projections are solely based on the Company’s forecasted savings.
9 Evaluated, realized savings could vary significantly from these projections. Dominion has
10 the opportunity to exceed its forecasts through aggressively ramping up its efforts, but it
11 could also fall even further behind if it fails to act assertively enough.

DSM Update pursuant to § 56-585.1 A 5 of the Code of Virginia, Case No. PUR-2021-00247 (Dec. 14, 2021) at Schedule 8. Ex. 15, Direct Testimony of Jim Grevatt, Petition of Virginia Electric and Power Company for approval of its 2021 DSM Update pursuant to § 56-585.1 A 5 of the Code of Virginia, Case No. PUR-2021-00247 (Mar. 22, 2022) at 25, Table 4 was used to calculate “new” savings for 2023. 2019 Jurisdictional Sales figure from 2022 DSM Frost Direct at Schedule 2, Tab “VCEA Targets.”

Figure 3: Effective Annual Savings Contribution to VCEA Standards



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Q. How likely is it that Dominion can achieve the 2023, 2024, and 2025 savings requirements?

Unfortunately, I believe Dominion’s failure to implement its LTP with any sense of urgency means it is unlikely to achieve the required savings standards. Dominion has continuously failed to propose expanded programs that directionally increase annual new savings with the result that it now appears to have little chance to reach its statutory savings standards after 2022. Because it has been so belated in proposing plans to ramp up its programs, there is very little Dominion can still do in terms of new program proposals to reach its savings standards. Consider that the programs proposed in the instant proceeding, if approved, would not be implemented until 2024, and the current forecast is that Dominion will fall short in 2023 based on net savings. Any new or expanded programs Dominion might propose in Phase XII would not be implemented, if approved, until 2025,

1 management plan,³⁰ would differ from the LTP, which provided a high-level, directional
 2 outline of recommended actions the Company could take to achieve the VCEA standards.
 3 The action plan would identify specific, detailed action items Dominion will complete to
 4 realize the directional steps outlined in the LTP. It should look at each program and the
 5 portfolio as a whole to identify critical startup and implementation milestones – the things
 6 that must occur in order to achieve objectives – and determine who will be accountable for
 7 making sure they are completed when required and the required budgets, staff, and
 8 contractor resources to get them done. The action plan should also assess the risk of
 9 unanticipated events that could keep them from meeting each critical milestone. Where the
 10 risks are perceived to be moderate to high, Dominion should develop alternate steps that it
 11 could undertake if needed in order to keep programs on track towards standards. The action
 12 plan would also provide a timeline showing start and completion dates for each specific
 13 action – and the timeline should be aggressive enough to increase portfolio savings in the
 14 near term.

15 **Q. Would a company such as Dominion have experience with project management?**

16 **A.** Yes. Project management is a critical tool for operationalizing any number of projects for
 17 a utility, such as the poles and wires upgrades that Dominion routinely undertakes. The
 18 principles are not different, even when the projects are. Making distribution upgrades and
 19 restructuring the DSM portfolio both require a similar management approach in which

³⁰ Project management is a well-studied and documented process for ensuring that teams are able to complete complex “projects” on time and on budget. *See, e.g.* Adrienne Watt, *Project Management* (2nd Edition) (Aug. 14, 2014), <https://opentextbc.ca/projectmanagement/>.

1 action items, responsibilities, resources, deliverables, and due dates are laid out and
2 managed.

3 **VI. DOMINION REQUESTED PHASE XI APPROVALS**

4 **Q. What has Dominion requested the Commission approve in this application?**

5 A. Dominion has requested approval of five proposed Phase XI Programs including
6 enhancements and extensions for some previously approved programs. The Phase XI
7 programs include the following:

- 8 • Residential Customer Engagement (EE)
- 9 • Residential Energy Efficient Products Marketplace (EE)
- 10 • Residential Peak Time Rebate (DR)
- 11 • Non-residential Custom (EE)
- 12 • Residential Electric Vehicle ("EV") Telematics (Pilot)

13 **Q. Has the Company requested other approvals?**

14 A. The Company also requests approval of four program bundles to “streamline the DSM
15 Portfolio,” including the following:

- 16 • Residential Income and Age Qualifying Bundle (EE)
- 17 • Non-residential Income and Age Qualifying Bundle (EE)
- 18 • Non-residential Prescriptive Bundle (EE)
- 19 • Residential Home Retrofit Bundle (EE)

1 **Q. Do you support approval of Dominion’s proposed programs and bundles?**

2 A. I do support approval, with one important caveat regarding BPI certifications in the
3 Residential Home Retrofit Bundle that I describe below. As I understand Dominion’s
4 proposal, the Residential Customer Engagement (EE) and Residential Energy Efficient
5 Products Marketplace (EE) programs essentially replace and update similar programs that
6 were previously approved. The Residential Peak Time Rebate (Demand Response)
7 program is intended to add to the Company’s demand management capability. The Non-
8 residential Custom Program (Energy Efficiency) fills a critical gap in Dominion’s portfolio
9 that was identified in the LTP. Non-residential customer EE programs targeted at larger
10 customers are often a significant source of portfolio savings for utility energy efficiency
11 portfolios and it is important for Dominion to become much more active in this sector. The
12 Residential EV Telematics – Pilot (Demand Response) program is described as exploring
13 the opportunity to manage EV charging demand by communicating with the vehicle instead
14 of the charger.

15 **Q. What does Dominion propose regarding program bundling?**

16 A. Dominion is requesting Commission approval of four program bundles, which effectively
17 combine elements of previously approved programs with the intent of streamlining both
18 the customer experience and the administration of the programs. Bundling is one of the
19 critical steps called for in the LTP. The Phase XI bundling proposal also includes the
20 shuttering of several previously approved Phase VII and Phase VIII programs, the
21 measures from most of which will be incorporated into the new program bundles.

1 **Q. What program areas does Dominion propose to bundle?**

2 A. The first of the proposed program bundles is the Residential Income and Age Qualifying
3 Bundle (Energy Efficiency) which Dominion describes as combining existing and new
4 program measures “to provide income and age qualifying residential customers with in-
5 home energy assessments and installation of select energy-saving measures.”³¹ Dominion
6 goes on to say that:

7 [t]he newly added program measures are wall insulation, heat pump
8 replacement, baseboard upgrade, upgrade to mini split, ventilation
9 fan, and duct replacement as well as EnergyStar ceiling fans, smart
10 power strips, and T8 and T12 (fluorescent tube lighting) upgrade to
11 LED lighting. This Bundled Program approach will allow homes to
12 be treated more comprehensively and offer qualifying customers the
13 opportunity to implement a wider variety of energy efficiency
14 measures during the in-home energy assessment stage.³²

15 Improving project comprehensiveness generally, and especially for income-qualified
16 (“IQ”) customers is a positive step for the portfolio, which I support. The Non-residential
17 Income and Age Qualifying Bundle (Energy Efficiency) will also, I hope, improve the
18 comprehensiveness of energy efficiency projects aimed at IQ customers but also help to
19 reduce the owners’ operating costs of affordable housing, which is a critical aspect of
20 keeping affordable housing affordable.

21 **Q. What are the other two program bundles proposed by Dominion?**

22 A. The non-residential Prescriptive Bundle (Energy Efficiency) “would incorporate the
23 Company’s expiring Phase VII Non-residential Heating and Cooling Efficiency Program,
24 Non-residential Small Manufacturing and Non-residential Window Film Programs with

³¹ 2022 DSM Hubbard Direct at 9:7-9.

³² *Id.* at 9:14-20.

1 the Phase IX Non-residential Enhanced Prescriptive Program.”³³ This is a logical step to
2 reduce administrative costs and customer confusion while offering as many measures to
3 this customer segment as possible. The fourth proposed program bundle is the Residential
4 Home Retrofit Bundle (Energy Efficiency). There has been considerable discussion in prior
5 proceedings about the confusing overlap between the various home retrofit and audit
6 programs Dominion proposed for approval. This consolidation should address at least some
7 of the previously raised concerns.

8 **Q. Does Dominion propose modifications to the BPI Certification requirement as part of**
9 **its proposal for the Residential Home Retrofit Bundle?**

10 A. Yes, Dominion indicates that:

11 [t]he proposed program re-design incorporates key program
12 measures from the Company's Phase VII Residential Home Energy
13 Assessment Program into the Phase VIII Residential Home Retrofit
14 Program, but the requirement for all contractors to have Building
15 Performance Institute ("BPI") certification will no longer be
16 required for all installed measures. Instead, BPI certification will
17 only be required for those contractors that perform measures that
18 require BPI certification for detail diagnostic audits, including - air
19 sealing, attic insulation, drill & fill wall insulation, basement wall
20 insulation, and crawl space insulation.³⁴

21 In response to discovery from Environmental Respondent, Dominion further clarified that
22 BPI certification will not be required for all individuals who are conducting residential
23 assessments. Instead, “BPI Certification is only required for contractors that wish to
24 perform certain measures, such as air sealing and insulation.”³⁵

³³ 2022 DSM Hubbard Direct at 10:14-17.

³⁴ *Id.* at 11:4-11.

³⁵ Attachment JG-2, Company Response to APV Set 2-7(c).

1 **Q. What is BPI certification?**

2 A. The Building Performance Institute (“BPI”) was created by industry leaders several
3 decades ago in response to the widely varying skill and knowledge levels among home
4 retrofit contractors at a time when there were no tools for homeowners and program
5 implementors to distinguish between them. BPI certification requires knowledge of the key
6 principles of building science that affect home energy consumption – and without such
7 understanding it is inappropriate for contractors to represent to customers that they have
8 the expertise to make recommendations to reduce energy use. Removing the BPI
9 certification requirement is a step backward for the residential home retrofit offerings, may
10 lead to significantly less comprehensiveness due to reduced recommendations for air
11 sealing and insulation measures that only certified contractors can install, and could result
12 in projects that ignore critical health and safety concerns such as moisture or carbon
13 monoxide risks.

14 **Q. If individuals who are not BPI certified conduct residential assessments, will they be
15 qualified to recommend important energy-saving measures such as insulation and air
16 sealing, even though they are precluded from installing them?**

17 A. Dominion seems to think that such individuals without BPI certification would be able to
18 recommend insulation and air sealing measures, but I do not see how this makes sense. In
19 response to discovery from Environmental Respondent, which asked “does the Company
20 believe it is reasonable to expect that contractors without certification to install air sealing
21 and insulation measures, will inform customers about such opportunities and have the
22 ability to do so accurately?”, Dominion replied “the software used to perform general
23 assessments in both the DSM VII Home Energy Assessment Program and the DSM VIII

1 Home Retrofit Program also enables *certified* contractors, where applicable, to identify and
 2 recommend improvements that can be made in the home, which includes the potential for
 3 installing air sealing and insulation measures.”³⁶ Dominion’s answer implies that only
 4 certified contractors will be able to operate the software, which in and of itself suggests
 5 that contractors without certification would not have access to the software tool Dominion
 6 relies on for its residential audits.

7 **Q. Do you support removing the certification requirement?**

8 A. No, I do not see such a step as providing a benefit to customers. Removing the BPI
 9 certification requirement would be in stark contrast to industry best practices. In fact, many
 10 states—Virginia included—require such certification as part of its contractor licensing
 11 requirements: “[n]o person shall engage in, or offer to engage in, work as a residential
 12 building energy analyst in the Commonwealth unless he has been licensed.”³⁷ Virginia
 13 Code also defines a “licensed residential building energy analyst” as “an individual who
 14 has successfully completed an accredited residential building energy analyst training
 15 program or meets the criteria of experience required by this article and regulations of the
 16 Board and who has been licensed by the Board.”³⁸ Removing the BPI certification
 17 requirement would appear to disregard licensure requirements as well as the industry best
 18 practices that have been developed over decades. I do not support this request from
 19 Dominion.

³⁶ Attachment JG-6, Company Response to APV Set 3-4(c) (emphasis added).

³⁷ Va. Code § 54.1-1145 A.

³⁸ *Id.* § 54.1-1144.

1 **Q. What actions do you recommend the Commission take with respect to the Company's**
2 **Phase XI application?**

3 A. Based on my review, I respectfully recommend the Commission:

4 1. Direct Dominion to ramp up production in its approved programs and thereby
5 "front-load" participation and savings to increase the possibility of achieving the
6 VCEA standards in 2023, 2024, and 2025;

7 2. Direct Dominion to provide a supplemental filing within 90 days of the
8 Commission's Order in this case that:

9 a. Details the specific steps Dominion will take to meet its VCEA-mandated
10 savings standards in 2023, 2024, and 2025, as well as the expected action dates
11 of these steps; and

12 b. Details Dominion's portfolio-level marketing and awareness campaign,
13 including (i) describing the interrelationships between the overall campaign and
14 individual program marketing and outreach that demonstrates they are mutually
15 supportive and not conflicting, and (ii) describing a streamlined program level
16 marketing approach that treats related programs as bundles for customer
17 communications even in advance of administrative bundling;

18 3. Confirm that while the specific amount of "free rider" savings involves factual
19 determinations, the VCEA's statutory savings requirements are measured net of

1 free riders, pursuant to the statutory language and consistent with the Commission's
2 ruling in its Final Order in Case No. PUR-2021-00247³⁹;

3 4. Approve Dominion's request for the Phase XI programs and program bundling as
4 proposed, but reject Dominion's proposal to eliminate the BPI certification
5 requirement in the Residential Home Retrofit Bundle (Energy Efficiency); and

6 5. Approve Dominion's request to expand eligibility for its DSM Phase IX
7 Agricultural Program to include farms served by residential accounts.

8 **Q. Does this conclude your testimony?**

9 A. Yes, it does.

³⁹ 2021 DSM Final Order at 9, fn. 33.

Attachment JG-1

Jim Grevatt

Managing Consultant



Professional Summary

Jim Grevatt has 30 years of experience in energy efficiency, with a primary focus on residential and income-eligible program design and implementation. At Energy Futures Group Jim has advised regulators, program implementers, and advocates in two dozen states and provinces, and has provided expert witness testimony in fourteen of those jurisdictions, with a frequent emphasis on improving energy efficiency programs for customers in historically disadvantaged communities. Jim has hands-on experience with industry-leading approaches to designing and managing energy efficiency programs, including multi-family, low income, residential retrofit, new construction, HVAC, and efficient products programs. His in-depth knowledge of program operations and clear understanding of strategic thinking and planning ensure that programs achieve their desired market impacts. In past leadership roles at Efficiency Vermont, the DCSEU, and Vermont Gas, Jim had overall responsibility both for program design and operations.

Experience

- 2013-present: Managing Consultant, Energy Futures Group, Hinesburg, VT
- 2012-2013: Director, Targeted Implementation, Vermont Energy Investment Corp., Burlington, VT
- 2010-2012: Managing Consultant, Vermont Energy Investment Corp., Burlington, VT
- 2005-2010: Director, Residential Services, Vermont Energy Investment Corp., Burlington, VT
- 2001-2005: Manager, Energy Services, Vermont Gas Systems, S. Burlington, VT
- 1998-2001: Manager, Residential Energy Services, Vermont Gas Systems, S. Burlington, VT
- 1996-1998: Manager, HomeBase Retrofit Program, Vermont Gas Systems, S. Burlington, VT
- 1994-1996: Technical Specialist, Vermont Gas Systems, S. Burlington, VT
- 1991-1994: Associate Director and Technical Specialist, Champlain Valley Weatherization Program, Burlington, VT

Education

B.F.A., University Honors, University of Illinois, 1982

Selected Projects

- Natural Resources Defense Council and Sierra Club. Provided expert witness testimony in Public Service Company of Colorado's Demand-Side Management and Beneficial Electrification Strategic Issues proceeding. (2022-2023)

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PO Box 587, Hinesburg, VT 05461 – USA | ☎ 802-482-4086 | @jgrevatt@energyfuturesgroup.com

Jim Grevatt

Managing Consultant



- British Columbia Sustainable Energy Association. Provided expert review, discovery, and evidence regarding Fortis BC's proposed RNG Gas Connections service. (2022)
- The South Carolina Coastal Conservation League, Southern Alliance for Clean Energy, and Vote Solar. Provided expert witness testimony describing the need for energy efficiency programming as a result of Duke Energy Progress' proposed rate increase. (2022)
- The South Carolina Coastal Conservation League and Southern Alliance for Clean Energy. Provided expert witness testimony critiquing Dominion Energy South Carolina's petition for new natural gas efficiency programs. (2022)
- Appalachian Voices. Provided expert witness testimony in Virginia Electric and Power Co.'s application for approval of its 2021 DSM Update. (2022)
- Natural Resources Defense Council and Sierra Club. Provided expert witness testimony in Tri-State Generation and Transmission Association's 2020 Electric Resource Plan Proceeding. (2021)
- West Virginia Citizens Action Group, Solar United Neighbors, and Energy Efficient West Virginia. Provided expert witness testimony in Monongahela Power Company and the Potomac Edison Company Petition and General Investigation to Determine Reasonable Rates and Charges (2021)
- Natural Resources Defense Council and Sierra Club. Provided expert witness testimony in Public Service Company of Colorado's 2021 Electric Resource Plan and Clean Energy Plan proceeding. (2021)
- The Institute for Sustainable Communities. Partnered with Common Spark Consulting to develop an energy efficiency action plan to support increased energy efficiency programs for disadvantaged communities of the Southeast Florida Regional Climate Change Compact. (2022)
- Natural Resources Defense Council, Sierra Club, and Southwest Energy Efficiency Project. Provided expert witness testimony to the Public Utility Commission of Nevada regarding the Application of Southwest Gas Corporation for Approval of a Conservation and Energy Efficiency Plan for the Years 2022, 2023 and 2024. (2021)
- Energy Efficient West Virginia, West Virginia Citizen Action Group, and Earthjustice. Provided expert witness testimony in Appalachian Power Company and Wheeling Power Company's Petition regarding EE/DR program approvals. (2021)
- Appalachian Voices. Provided expert witness testimony in Virginia Electric and Power Co.'s EM&V proceeding and its application for approval of its 2020 DSM Update. (2021)
- The South Carolina Coastal Conservation League, Southern Alliance for Clean Energy, Upstate Forever, Sierra Club, and Natural Resources Defense Council. Provided expert witness testimony critiquing the market potential study used in Duke Energy Carolinas and Duke Energy Progress 2020 Integrated Resource Plans. (2021)
- The Coalition for Affordable Utility Services and Energy Efficiency in Pennsylvania ("CAUSE-PA"). Provided expert witness testimony in support of robust low income efficiency programs in

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PO Box 587, Hinesburg, VT 05461 – USA | ☎ 802-482-4086 | @jgrevatt@energyfuturesgroup.com

- Philadelphia Gas Works Petition for Approval of Demand-Side Management Plan and PECO, Duquesne, and First Energy Act 129 Phase IV Plan proceedings. (2020-2021)
- Appalachian Voices and Natural Resources Defense Council. Provided expert witness testimony in Virginia Electric and Power Co. Phase VIII DSM Program Application. (2020)
 - Citizens Action Coalition of Indiana. Provided expert witness testimony in Duke Energy Indiana 2020-2023 DSM Plan. (2020)
 - The Consumers' Association of Canada (Manitoba) and Winnipeg Harvest. Provided expert witness testimony in the Efficiency Manitoba 2020/23 Efficiency Plan proceeding. (2019-2020)
 - British Columbia Sustainable Energy Association. Provided expert review, discovery, and evidence in DSM-related aspects of multiple proceedings with Fortis BC, BC Hydro, and FEI. (2017-2020)
 - Southern Environmental Law Center. Provided technical support to environmental and social justice advocates in the Carolinas, and ongoing participation in the Duke Energy EE Collaborative (2019-2020) and Dominion South Carolina EE Advisory Group, as well as technical support for SELC staff regarding pre-pay programs and other policy issues. (2015-2022).
 - Coalition of Maryland Energy Efficiency Advocates. Prepared written comments and multiple appearances before the Commission to present evidence regarding Maryland utilities' 2015-2017, 2018-2020, and 2021-2023 EmPOWER Maryland energy efficiency plans, and in additional proceedings related to utility goal setting, cost-effectiveness testing, best-practices in low-income programs, and energy efficiency financing. (2014-2022)
 - Southern Alliance for Clean Energy and Earthjustice. Provided expert witness testimony in the Florida Energy Efficiency and Conservation Act goal setting proceeding. (2019)
 - Energy Efficient West Virginia, West Virginia Citizen Action Group, and Earthjustice. Provided expert witness testimony in Appalachian Power Company and Wheeling Power Company's Petition regarding EE/DR program approvals. (2019)
 - Alliance for Affordable Energy and Natural Resources Defense Council. Provided expert technical support for Louisiana Public Service Commission EE Rulemaking and Entergy New Orleans DSM Plan. (2019-2021)
 - New Jersey Clean Energy Program. Planning support for NJCEP implementation team. Facilitated focus groups, worked with Board of Public Utilities Staff, program administrators, utility companies, and other stakeholders to identify opportunities to improve NJCEP strategic direction and increase benefits for ratepayers. Lead author drafting strategic plan. (2015-2020)
 - Natural Resources Defense Council and Sierra Club. Provided expert witness testimony in Public Service Company of Colorado's Strategic Issues, 2019-2020 DSM Plan, and 2021-2022 DSM Plan proceedings. (2017-2020)
 - Natural Resources Defense Council and Sierra Club. Provided expert witness testimony in Nevada Energy Company's 2019-2038 Triennial Integrated Resource Plan and 2019-2021 Energy Supply Plan, and 2019 and 2020 DSM Update proceedings and participated in stakeholder collaboratives. (2018-2021)

Jim Grevatt

Managing Consultant



- Environmental Law & Policy Center and Iowa Environmental Council. Provided expert witness testimony in DSM proceedings regarding MidAmerican Energy Company's and Interstate Power and Light's 2019-2023 Energy Efficiency Plans. (2018)
- Pueblo County Colorado. Provided expert witness testimony in DSM proceedings regarding Black Hills Energy Company's 2019-2021 DSM Plan. (2018)
- Sierra Club. Provided expert witness testimony in proceedings regarding Kentucky Power Company's DSM programs and cost-effectiveness. (2017-2018)
- California Alternative Energy and Advance Transportation Financing Authority. Provide technical assistance on development of commercial energy efficiency financing pilot. (2017-2019)
- Energy Efficiency for All. Expert technical support for affordable multifamily energy efficiency advocacy in Pennsylvania and Virginia. Worked with a coalition of energy efficiency and affordable housing advocates to shape advocacy efforts with utilities and regulators. (2015-2020)
- Regulatory Assistance Project. Researched and co-authored with Chris Neme: The Next Quantum Leap in Efficiency: 30 Percent Electric Savings in Ten Years, addressing program and policy questions related to doubling the best efficiency program results. (2016)
- Natural Resources Defense Council. Provided expert witness testimony in support of NRDC's intervention in Ameren Illinois' 2014-2016 energy efficiency plan. Testimony demonstrated that Ameren would be capable of capturing significantly greater efficiency savings than it had proposed. (2013)
- Regulatory Assistance Project. Expert technical support for DSM in China. Worked with various government agencies and grid companies, as well as advocacy organizations to provide technical support related to advancing DSM and energy efficiency in China. (2015)
- Vermont Public Service Department. Evaluation of Clean Energy Development Fund. Conducted interviews of staff and key stakeholders under contract to NMR and prepared memo outlining process findings and recommendations. (2014-2015)
- Evaluation of Efficiency Maine Low-Income Multi-Family Weatherization Program. Responsible for program staff and building owner interviews and process evaluation under contract to NMR and Efficiency Maine. (2014-2015)
- Northeast Energy Efficiency Partnerships. Researched and co-authored meta-study of the use of energy efficiency to defer T&D investments. (2014)
- Northeast Energy Efficiency Partnerships- Researched and co-authored meta-study of ductless heat pump performance and market acceptance. (2014)
- New Hampshire Electric Co-op. Conducted assessment of the co-op's environmental and social responsibility programs' promotion of whole building efficiency retrofits, cold climate heat pumps and renewable energy systems. Presented recommendations to the co-op Board. (2014)
- High Meadows Fund. Co-authored a study assessing the market viability of "High Performance Homes" in Vermont. (2014)
- Energy Savings Potential Study, Delaware Department of Natural Resources. Led narrative development for the residential programs for a study of the energy efficiency savings potential in Delaware. (2013-2014)

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PO Box 587, Hinesburg, VT 05461 – USA | ☎ 802-482-4086 | @jgrevatt@energyfuturesgroup.com

- **Regulatory Assistance Project.** Provide technical support to energy efficiency advocates in proceedings in Maryland, Mississippi, and Missouri. (2013-2017)
- **Better Buildings Solutions Center, U. S. Department of Energy.** Energy Futures Group's lead author in drafting and reviewing web content for ten how-to "handbooks" detailing proven approaches to designing and implementing residential retrofit efficiency programs. (2013-2014)
- **Utility Program Benchmarking.** Led research on behalf of a large IOU to compare the cost of saved energy across ~10 leading utility portfolios. The research sought to determine if there are discernable differences in the cost of saved energy related to utility spending in specific non-incentive categories, including administration, marketing, and EM&V. (2013)
- **Research on trends in multi-family, HVAC, and new construction programs.** Developed an analysis of emerging program trends on behalf of a leading energy efficiency industry firm. (2013-2014)
- **Efficiency Power Plant, Regulatory Assistance Project.** Partnered with RAP to develop a demonstration tool to show how energy efficiency measures can be used to mitigate air quality impacts related to power production. (2013)
- **Natural Gas Energy Efficiency Analysis, the Green Energy Coalition.** Provided analytical support to demonstrate in testimony that Enbridge Gas could reduce the scale of its proposed pipeline expansion by implementing aggressive energy efficiency programs. (2013)
- **Targeted Implementation, VEIC.** Responsible for market analysis and strategic planning for a new division expanding VEIC's energy efficiency program implementation projects. (2012-2013)
- **DC Sustainable Energy Utility.** Led the planning and startup implementation of Residential programs for the DC SEU, including single and multi-family and retail market programs. Led the development of the initial portfolio-level Annual Plan. Led client and partner interactions around planning and policy development. Member of DC SEU Senior Management Team. (2011-2012)
- **EmPOWER Maryland Critical Program Review.** Expert consultant to the Maryland Office of Peoples' Counsel in EmPOWER Maryland hearings regarding utility energy efficiency planning and reporting. Represented the OPC in stakeholder meetings that informed the current 2012-2014 EmPOWER plans. Multiple appearances before the Maryland Public Service Commission. (2010-2012)
- **Efficiency Vermont 20 year Forecast of Efficiency Potential.** Senior Advisor in developing the forecast scenarios that led to significantly increased efficiency investment in Vermont. (2010-2011)
- **Efficiency Vermont Residential Programs.** Directed 100% growth in program budgets to nearly \$10M annually. Responsible for strategic direction, leadership, and results for Efficiency Vermont's award-winning residential retrofit, new construction, retail, and low-income programs. Supported excellence in a staff of 30. (2005-2010)
- **Vermont Gas Systems Efficiency Program Leader.** Directed strategic planning and program operations that led to six programs and portfolio as a whole being recognized as exemplary in Responding to the Natural Gas Crisis: America's Best Natural Gas Energy Efficiency Programs (ACEEE, 2003). Built contractor infrastructure and internal support to consistently meet program objectives. Led development of Annual Reports, planning and budgeting. Collaborated with Efficiency Vermont

staff to develop a fuel-blind, state-wide, jointly offered residential new construction program. (2001-2005)

- Residential Retrofit Program Development. Enhanced design and performance of VGS' residential retrofit offerings by streamlining delivery and building strong relationships with contractors, homeowners, and property managers. (1994-2005)
- Demonstrated Technical Excellence in Approaches to Residential Retrofits. Conducted hundreds of residential energy audits and quality assurance inspections for natural gas and alternative-fueled homes. Trained and coached installers to obtain desired quality. Worked to satisfy homeowners through explanation, education, sound listening to concerns, and ultimately assuring that concerns were addressed. Trained new staff in auditing techniques. (1991-1998)

Selected Presentations

Small Steps in Coordination Equal Leaps and Bounds for Pennsylvania's Underserved Families: Driving Policy Improvements through Collaborative Advocacy- ACEEE 2018 Summer Study on Energy Efficiency in Buildings, August, 2018

Keys to the House: Unlocking Residential Savings with Program Models for Home Energy Upgrades- ACEEE 2016 Summer Study on Energy Efficiency in Buildings, August, 2016

Home Upgrade Program Design & Implementation Models for Acquiring Savings in Multiple Climate Zones- 2016 National Home Performance Conference, April, 2016

EERS Advancements in Maryland: EmPOWER After 2015- Presentation at ACEEE Energy Efficiency as a Resource Conference, September, 2015

Leveling the Playing Field for Distributed Energy Resources- Panelist discussing the use of energy efficiency to defer T&D investments, Acadia Center forum on Envisioning Our Energy Future, February, 2015

Residential Retrofit Programs: What's Working? Perspectives from National Program Leaders- Panelist at AESP National Conference 2012

Elements of Retrofit Program Incentive Design- DOE Technical Assistance Program Publication, April, 2011

Designing Effective Incentives to Drive Residential Retrofit Participation- DOE Technical Assistance Program Webinar, October, 2010

Quality Assurance for Residential Retrofit Programs- DOE Technical Assistance Program Webinar, October, 2010

Home Performance with ENERGY STAR, Quality Assurance in Vermont- Panelist at the ACI Home Energy Retrofit Summit, April 2010

Delivering on the Promise-Engaging Communities and the Public- Panelist at 2010 NEEP Summit, March, 2010

Energy Futures Group, Inc

PO Box 587, Hinesburg, VT 05461 – USA | ☎ 802-482-4086 | @jgrevatt@energyfuturesgroup.com

Jim Grevatt Managing Consultant



Home Performance with Energy Star in Vermont - Presentation at CEE Member meeting, June 2009

Leading by Example: Exemplary Low Income Energy Efficiency Programs –Presented on Efficiency Vermont’s Residential low income services at California’s Low Income Energy Efficiency Symposium, June 2006

“Natural Gas Efficiency Policies, Responding to the Natural Gas Crisis One Therm at a Time” - Co-presented with Dan York and Anna Monis Shipley of American Council for an Energy-Efficient Economy (ACEEE) -ACEEE/CEE Market Transformation Symposium, 2004

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PO Box 587, Hinesburg, VT 05461 – USA | ☎ 802-482-4086 | @jgrevatt@energyfuturesgroup.com

Attachment JG-2

Virginia Electric and Power Company
Case No. PUR-2022-00210
Appalachian Voices
Second Set

The following response to Question No. 7 of the Second Set of Interrogatories and Requests for Production of Documents propounded by Appalachian Voices and received on February 22, 2023, was prepared by or under the supervision of:

Michael T. Hubbard
Manager, Energy Conservation
Dominion Energy Virginia

Question No. 7

Please refer to the Direct Testimony of Michael T. Hubbard, p. 11, lines 4-11: "The proposed program re-design incorporates key program measures from the Company's Phase VII Residential Home Energy Assessment Program into the Phase VIII Residential Home Retrofit Program, but the requirement for all contractors to have Building Performance Institute ("BPI") certification will no longer be required for all installed measures. Instead, BPI certification will only be required for those contractors that perform measures that require BPI certification for detail diagnostic audits, including - air sealing, attic insulation, drill & fill wall insulation, basement wall insulation, and crawl space insulation."

- (a) Who conducts the assessments for the Residential Home Retrofit Program Bundle?
- (b) Can a contractor both conduct assessments and install measures in this proposed program bundle?
- (c) Will BPI certification be required for all individuals who are conducting residential assessments? Please explain.
- (d) Will any contractors without BPI certification be able to recommend measures without a customer first having an assessment conducted by a BPI certified individual?
- (e) If a residential assessment identifies opportunities for measures that require BPI certification to install, how will the customer determine which contractor to use for the installation?
- (f) Are the measures listed - air sealing, attic insulation, drill & fill wall insulation, basement wall insulation, and crawl space insulation – the only measures available in the proposed program that would require installation to be done by a BPI certified contractor? If not, please provide a listing of all measures that can only be installed by a BPI certified contractor.

(g) Please provide a full listing of all measures in the Phase VIII Residential Home Retrofit Program that can be installed by a contractor who is not BPI certified.

Response:

- (a) The assessment is completed by the contractors in the trade ally program network.
- (b) A contractor can conduct the assessment and install measures in the program bundle, if the contractor is properly licensed for the measures they plan to install.
- (c) No. BPI Certification is only required for contractors that wish to perform certain measures, such as air sealing and insulation.
- (d) A contractor performing the assessment can install simple measures like LED bulbs, water heater pipe insulation, aerators and showerheads and can make suggestions to the homeowner for other measures that may qualify for program incentive. However, to install those measures, a contractor must have proper credentials and agree to install measures per BPI standards. Quality Assurance inspection validates measures are installed per BPI standards
- (e) Customers will have the ability to search the program website (domsavings.com) by zip code and trade service type to choose a contractor in their area for measures they wish installed in their home.
- (f) Yes.
- (g) The following measures can be installed by a contractor that is not BPI certified:
 - Fixed Showerhead
 - Handheld Showerhead
 - Bathroom Aerator 1.0 gpm
 - Kitchen Aerator 1.5 gpm
 - 3/4" Pipe Insulation
 - 1/2" Pipe Insulation
 - DHW temperature Turndown
 - 8W LED Reflector (R20/PAR20 (50 w Equiv) In Unit
 - 10W LED Reflector (R20/BR30 (65 w Equiv) In Unit
 - 11W LED Reflector (BR30/PAR30 (75 w Equiv) In Unit
 - 12W LED Floodlight (85 w Equiv) In Unit
 - 4W LED Globe Lamp (25w Equiv) In Unit
 - 5W LED Globe Lamp (40w Equiv) In Unit
 - 4.5 w Candelabra LED (25 w equivalent) In Unit
 - 7 w Candelabra LED (40 w equivalent) In Unit
 - HVAC CAC Tune ups (w EBB or GH)
 - HVAC Heat Pump Tune ups
 - Smart Thermostat Install from Manual CAC only

- Smart Thermostat Install from Manual CAC + GH
- Smart Thermostat Install from Manual Heat Pump
- Smart Thermostat Install from Programmable CAC only
- Smart Thermostat Install from Programmable CAC + GH
- Smart Thermostat Install from Programmable Heat Pump
- Energy Star Refrigerator Top Freezer with TTD Ice Maker
- Energy Star Refrigerator Top Freezer W/O TTD Ice Maker
- Energy Star Refrigerators Bottom Freezer W/O
- Energy Star Refrigerators Side by Side W/O
- Energy Star Refrigerators Side by Side W TTD Ice Maker
- Energy Star Room/Wall AC units < 8000 BTU
- Energy Star Room/Wall AC units 8000 - 11999 BTU
- Energy Star Room/Wall AC units => 12000 BTU
- Central Home Energy Management System
- ECM Fan Motors HP or CAC + Gas Furn
- Replace Elec DHW with HP DHW
- Air Source HP - SEER ≥ 16 HPSF 8.7
- Air Source HP - SEER ≥ 17 HPSF 9.2
- Air Source HP - SEER ≥ 18 HPSF 9.2
- Air Source HP - SEER ≥ 19 HPSF 10
- Air Source HP - SEER ≥ 21 HPSF 10.5
- Ductless MS HP - SEER ≥ 19 HPSF 10 per ton
- Ground Source Heat Pump
- Replace Elec EBB with Air Source HP - SEER ≥ 16 HPSF 8.7
- Replace Elec EBB with Air Source HP - SEER ≥ 17 HPSF 9.2
- Replace Elec EBB with Air Source HP - SEER ≥ 18 HPSF 9.2
- Replace Elec EBB with Air Source HP - SEER ≥ 19 HPSF 10
- Replace Elec EBB with Air Source HP - SEER ≥ 21 HPSF 10.5
- Replace Elec EBB with Ductless MS HP - SEER ≥ 19 HPSF 10 per ton
- Replace Elec EBB with Ductless MS HP - SEER ≥ 21 HPSF 10 per ton
- Cool Roof
- Room AC < 8000 BTUs CEER 12.1
- Room AC 8000 -13,999 BTUs CEER > 12
- Room AC >14000 BTUs CEER over 11.8
- Shower Thermo Existing Showerhead
- Shower Thermo With New Showerhead

Attachment JG-3

Virginia Electric and Power Company
Case No. PUR-2022-00210
Appalachian Voices
Second Set

The following response to Question No. 10 of the Second Set of Interrogatories and Requests for Production of Documents propounded by Appalachian Voices and received on February 22, 2023, was prepared by or under the supervision of:

Michael T. Hubbard
Manager, Energy Conservation
Dominion Energy Virginia

Question No. 10

Please list all of the programs that would be customer-facing, i.e., that would be marketed to customers in 2024 if the Commission approves the Company's Phase XI as proposed.

- (a) Are there programs that would be active in 2024 but that would be provided to customers without directly marketing them as distinct offerings, consistent with the Company's Strategic Plan which called for streamlined communications and implementation? If yes, please list all such programs and, for each, explain how the Company proposes it will be marketed to and implemented for customers.

Response:

Please see Attachment APV Set 02-10 (MTH) for a list of all programs that would be marketed to customers in 2024, assuming Commission approval of the Company's current filing. The Company will continue to market the programs as distinct offerings as listed but will utilize the awareness campaign of West Cary Group to aid in creating a more uniform and streamlined approach to communications with customers.

- (a) The Company plans to continue to market its DSM programs as distinct offerings and as program bundles as presented in this Proceeding with the exception of the Phase X Voltage Optimization program. The Company does not plan to market the Voltage Optimization program, as the customer does not need to take any action to be a participant in the program.

Attachment JG-4

	Res/Non-Res	Program Name	Implementation Vendor
Phase VIII	Res.	EE Kits	Honeywell
	Res.	Electric Vehicle - EE	Energy Hub
	Res.	Electric Vehicle - DR	Energy Hub
	Res.	Home Retrofit Bundle	Honeywell
	Res.	Smart Thermostat - DR	Honeywell
	Res.	Smart Thermostat - EE	Honeywell
	Res.	Manufactured Housing	Honeywell
	Res.	Multi Family	Honeywell
	Res.	New Construction	ICF
	Non Res.	EE Products	Honeywell
	Non Res.	Multi Family	Honeywell
	Non Res.	New Construction	Honeywell
	Non Res.	Small Business Improvement	Honeywell
Phase IX	Res.	Smart Home	Honeywell
	Res.	Virtual Audit	Honeywell
	Res.	Water Savings - EE	Honeywell
	Res.	Water Savings - DR	Honeywell
	Res.	HB2789 Solar	Resource Innovations
	Non Res.	Agriculture	Honeywell
	Non Res.	Building Automation	Honeywell
	Non Res.	Building Optimization	Honeywell
	Non Res.	Engagement	Honeywell
Non Res.	Prescriptive Bundle	Honeywell	
Phase X	Res.	IAQ HER	ICF
	Non Res.	Data Center	Honeywell
	Non Res.	Healthcare	TRC
	Non Res.	Hotel & Lodging	TRC
	Non Res.	Lighting & Controls	Honeywell
	Non Res.	SBI Behavioral	ICF
Phase XI	Res.	Customer Engagement	TBD
	Res.	Efficient Products Marketplace	TBD
	Res.	Peak Time Rebate	TBD
	Res.	IAQ Bundle	Resource Innovations
	Res.	EV Telematics - Pilot	WeaveGrid
	Non Res.	IAQ Bundle	Resource Innovations
	Non Res.	Custom	TBD

Attachment JG-5

Virginia Electric and Power Company
Case No. PUR-2022-00210
Appalachian Voices
Second Set

The following response to Question No. 2 of the Second Set of Interrogatories and Requests for Production of Documents propounded by Appalachian Voices and received on February 22, 2023, was prepared by or under the supervision of:

Nathan J. Frost
Director – New Technology & Energy Conservation
Dominion Energy Virginia

Dan Feng
Principal Consultant
DNV

Question No. 2

Please refer to Table 1 and Table 2 on p. 14 of Mr. Frost's Direct Testimony.

- (a) Please explain why the values in these tables differ from those on p. v (pdf p. 9) of the Evaluation, Measurement, and Verification Report for Virginia Electric and Power Company (Dominion Energy) Public Version, Volume 1 of 5.
- (b) Please provide the electronic workpapers, in fully functional format with all formulas intact, that were relied on by the Company to develop Table 1 and Table 2 on p. 14 of Mr. Frost's Direct Testimony as well as the tables referenced above on p. v (pdf p. 9) of the Evaluation, Measurement, and Verification Report for Virginia Electric and Power Company (Dominion Energy) Public Version, Volume 1 of 5.
- (c) Please confirm that Table 1, which presents projected net savings, suggests that the Company will fail to achieve its 2023, 2024, and 2025 VCEA targets if the target is measured in terms of net savings. For any answer other than confirm, please explain.
- (d) Please confirm that Table 2, which presents projected gross savings, suggests that the Company will fail to achieve its 2024, and 2025 VCEA targets if the target is measured in terms of gross savings. For any answer other than confirm, please explain.

Response:

- (a) There are many contributors to the differences in the values in the tables, including but not limited to, updated 2021 EM&V results (including annual energy reductions, program participation and NTG values) and the effects of the removal of the replacement in kind methodology. These updates are reflected in Tables 1 and 2 of Company Witness Nathan

J. Frost's Direct Testimony as compared to the referenced table in the June 15, 2022 EM&V Report.

- (b) Please refer to Attachment APV Set 02-02 (EJH).
- (c) Confirmed, based on facts and circumstances at the time of the filing. It should be noted that this information reflects a snapshot in time, and it does not yet incorporate all the improvements to energy efficiency savings that will result from the Company's implementation of the many recommendations in the DSM Long-Term Plan.
- (d) Confirmed, based on facts and circumstances at the time of the filing. It should be noted that this information reflects a snapshot in time, and it does not yet incorporate all the improvements to energy efficiency savings that will result from the Company's implementation of the many recommendations in the DSM Long-Term Plan.

Attachment JG-6

Virginia Electric and Power Company
Case No. PUR-2022-00210
Appalachian Voices
Third Set

The following response to Question No. 4 of the Third Set of Interrogatories and Requests for Production of Documents propounded by Appalachian Voices and received on March 8, 2023, was prepared by or under the supervision of:

Michael T. Hubbard
Manager, Energy Conservation
Dominion Energy Virginia

Question No. 4

Please refer to the Company's response to APV Question No. 7(c).

- a. Please explain the process and criteria used by the Company in determining not to require BPI certification for contractors conducting assessments.
- b. Did the Company consider whether contractors without BPI certification would be able to effectively determine insulation and air tightness levels of homes?
- c. Does the Company believe it is reasonable to expect that contractors without certification to install air sealing and insulation measures, will inform customers about such opportunities and have the ability to do so accurately? If so, please explain why.

Response:

To the extent this interrogatory refers to APV Set 2-7 subpart (c), the Company provides the following response.

- a. The bundling of the expiring DSM VII Home Energy Assessment (HEA) Program with the DSM VIII Home Retrofit Program provides the Company's residential customers with a more simplistic walk-thru "assessment" and installation of direct install measures, while highlighting the additional opportunity to pursue a more in-depth diagnostic audit by a certified technician to recognize additional savings. As such, the Company believes this bundling provides the perfect opportunity to drive more customer awareness and participation through lead generation into the Residential Home Retrofit Program.
- b. Yes.
- c. Yes. The software used to perform general assessments in both the DSM VII Home Energy Assessment Program and the DSM VIII Home Retrofit Program also enables certified contractors, where applicable, to identify and recommend improvements that can

be made in the home, which includes the potential for installing air sealing and insulation measures.

23034623

CERTIFICATE OF SERVICE

I hereby certify that the following have been served with a true and accurate copy of the foregoing via electronic mail:

Paul E. Pfeffer
Lisa R. Crabtree
DOMINION ENERGY SERVICES, INC.
120 Tredegar Street, RS-2
Richmond, VA 23219

Vishwa B. Link
Jontille D. Ray
Briana M. Jackson
MCGUIRE WOODS, LLP
Gateway Plaza
800 East Canal Street
Richmond, VA 23219

C. Meade Browder, Jr.
John E. Farmer, Jr.
OFFICE OF THE ATTORNEY GENERAL
202 N. Ninth Street
Richmond, VA 23219

William H. Chambliss
Office of General Counsel
STATE CORPORATION COMMISSION
1300 E. Main Street – 10th Floor
Richmond, VA 23218

Cale Jaffe
University of Virginia School of Law
580 Massic Road
Charlottesville, VA 22903



DATED: March 29, 2023

Nathaniel Benforado
SOUTHERN ENVIRONMENTAL LAW CENTER