COMMONWEALTH OF VIRGINIA

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STATE CORPORATION COMMISSION

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COMMONWEALTH OF VIRGINIA, *ex rel.*

STATE CORPORATION COMMISSION

CASE NO. PUR-2020-00035

In re: Virginia Electric and Power Company's
Integrated Resource Plan filing pursuant to
Va. Code § 56-597 *et seq.*

FINAL ORDER

On March 9, 2020, the State Corporation Commission ("Commission") issued an Order ("March 9 Order") docketing this proceeding and directing Virginia Electric and Power Company ("Dominion" or "Company") to include certain additional information in its 2020 Integrated Resource Plan ("IRP") related to the passage of the Virginia Clean Economy Act ("VCEA") by the 2020 General Assembly.[1]

On April 6, 2020, the Commission issued an Order Establishing Schedule for Proceedings that, among other things: established a procedural schedule; set an evidentiary hearing date; and provided any interested person an opportunity to file comments on the Company's IRP, or to participate in the case as a respondent by filing a notice of participation.

On May 1, 2020, Dominion filed its 2020 IRP with the Commission. On May 8, 2020, the Company filed a letter informing the Commission that Dominion intended to supplement its 2020 IRP filing on or before May 15, 2020. On May 14, 2020, Dominion filed supplemental information to complete its 2020 IRP filing.[2]

[1] 2020 Acts ch. 1193 and ch. 1194.

[2] In accordance with 5 VAC 5-20-160, a memorandum of completeness was filed on May 14, 2020, finding the IRP complete as of that date. Thus, pursuant to Code § 56-599 C, the Commission's final order in this matter is due on or before February 15, 2021.

On May 18, 2020, the Commission issued an Order for Notice that directed Dominion to provide public notice of its IRP. On June 4, 2020, the Commission issued an Order Scheduling Public Witness Testimony providing that, due to the ongoing public health emergency related to the spread of COVID-19, a telephonic hearing would be convened for the receipt of testimony from public witnesses on Dominion's IRP on October 22, 2020. On October 5, 2020, the Commission issued an Order Modifying Hearing wherein it directed, among other things, that the evidentiary hearing scheduled to be held in the Commission's courtroom on October 27, 2020, would be held remotely.

Notices of participation were filed by Appalachian Voices; Mr. Glen Besa; Sierra Club; the Board of Supervisors of Culpeper County, Virginia ("Culpeper County"); MAREC Action ("MAREC"); the Natural Resources Defense Council ("NRDC"); and the Virginia Office of the Attorney General, Division of Consumer Counsel ("Consumer Counsel").

On October 22, 2020, the Commission convened a telephonic hearing for the receipt of public witness testimony. The Commission received the testimony of four public witnesses.[3] On October 27, 2020, the Commission convened the evidentiary hearing on the Company's 2020 IRP.[4] The Commission received testimony and exhibits from Dominion, respondents, and Staff. The hearing concluded, after closing arguments, on October 30, 2020. On December 18, 2020, as directed at the close of the hearing, hearing participants filed a list of issues for the Commission's consideration.

NOW THE COMMISSION, upon consideration of this matter, is of the opinion and finds as follows.

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[3] Tr. 9-26.

[4] Commission Staff ("Staff") and all parties except Culpeper County participated in the hearing.

Legal Sufficiency of Dominion's 2020 IRP

Pursuant to Code § 56-599 C, the Commission must, after giving notice and an opportunity to be heard, determine whether Dominion's IRP is reasonable and in the public interest. With the passage of the VCEA, Dominion is subject to many new requirements and mandates that will significantly impact its future resource mix, as well as the electric bills paid by Dominion's customers. Among other things, the VCEA directs:

- "By December 31, 2045, [Dominion][5] shall retire all [] electric generating units located in the Commonwealth that emit carbon as a by-product of combusting fuel to generate electricity."[6]
- "[Dominion] shall participate in a renewable energy portfolio standard program ["RPS Program"] that establishes annual goals for the sale of renewable energy . . . . To comply with the RPS Program, [Dominion] shall procure and retire Renewable Energy Certificates ["RECs"] originating from renewable energy standard eligible sources."[7]
- "By December 31, 2035, [Dominion] shall petition the Commission for necessary approvals to (i) construct, acquire, or enter into agreements to purchase . . . 16,100 megawatts of generating capacity located in the Commonwealth using energy derived from sunlight or onshore wind . . . and (ii) pursuant to § 56-585.1:11, construct or purchase one or more offshore wind generation facilities located off the Commonwealth's Atlantic shoreline or in federal waters interconnected directly into the Commonwealth with an aggregate capacity of up to 5,200 megawatts."[8]
- "By December 31, 2035, [Dominion] shall petition the Commission for necessary approvals to construct or acquire 2,700 megawatts of energy storage capacity."[9]

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[5] Pursuant to Code §§ 56-585.1 A and 56-585.5 A, Dominion is a Phase II Utility. Code § 56-585.1 A provides that "[f]or purposes of this section, a Phase I Utility is an investor-owned incumbent electric utility that was, as of July 1, 1999, not bound by a rate case settlement adopted by the Commission that extended in its application beyond January 1, 2002, and a Phase II Utility is an investor-owned incumbent electric utility that was bound by such a settlement."

[6] Code § 56-585.5 B 3. Dominion "may petition the Commission for relief from the requirements of this subsection on the basis that the requirement would threaten the reliability or security of electric service to customers." Code § 56-585.5 B 4.

[7] Code § 56-585.5 C. "The RPS Program requirements shall be a percentage of the total electric energy sold in the previous calendar year . . . ." *Id.* For Dominion, the percentage grows over time, reaching 100% by 2045. *Id.*

[8] Code § 56-585.5 D 2.

[9] Code § 56-585.5 E 2. As required by Code § 56-585.5 E 5, the Commission promulgated regulations to achieve the deployment of energy storage, including regulations that set interim targets, in Case No. PUR-2020-00120.

- "Notwithstanding any other provision of law, each investor-owned incumbent electric utility shall implement energy efficiency programs and measures to achieve the following total annual energy savings: . . . For [Dominion]: . . . [i]n calendar year 2025, at least 5.0 percent of the average annual energy jurisdictional retail sales by that utility in 2019."[10]

Enactment Clause No. 9 of the VCEA also directs that "nothing in [the VCEA] shall require the utilities or the [Commission] to take any action that, in the [Commission's] discretion and after consideration of all in-state and regional transmission entity resources, threatens the reliability or security of electric service to the utility's customers."

The Commission's March 9 Order referenced the significance of the passage of the VCEA and the Commission's previous recognition that an IRP is a planning document and it is "within [the] Commission's regulatory authority to direct public utilities covered by the IRP statute to *plan* for future contingencies."[11] Consistent with that authority, the Commission directed Dominion to include certain VCEA-related analyses in its 2020 IRP. As pertinent herein, the March 9 Order directed Dominion's 2020 IRP to:

1. Model the mandates and requirements of the VCEA and other relevant legislation based on the best available information, using reasonable and appropriately documented assumptions if necessary;

2. Calculate separately the net present value costs to customers of the least cost plan, the VCEA, and other relevant legislation including not only generation costs but also transmission and distribution costs;

3. Calculate separately the annual bill impacts of the least cost plan, the VCEA, and additional legislation over each of the next ten years as compared to the bill of a residential customers using 1,000 kilowatt-hours per month as of May 1, 2020, including not only generation costs but also transmission and distribution costs;

Commonwealth of Virginia, ex rel. State Corporation Commission, Ex Parte: In the matter of establishing rules and regulations pursuant to § 56-585.5 E 5 of the Code of Virginia related to the deployment of energy storage, Case No. PUR-2020-00120, Doc. Con. Cen. No. 201230015, Order Adopting Regulations (Dec. 18, 2020).

[10] Code § 56-596.2 B. "For the time period 2026 through 2028, and for every successive three-year period thereafter, the Commission shall establish new energy efficiency savings targets." Code § 56-596.2 B 3.

[11] March 9 Order at 1-2 (quoting *Commonwealth of Virginia, ex rel. State Corporation Commission, In re: Appalachian Power Company's Integrated Resource Plan filing pursuant to Va. Code § 56-597 et seq.*, Case No. PUR-2019-00058, Doc. Con. Cen. No. 200130181, Final Order at 4 (Jan. 28, 2020)).

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5. Include an engineering analysis of the effects of the mandates and requirements of the VCEA and other relevant legislation on reliability of service to customers and identify any Company concerns regarding the impact of the mandates and requirements of the VCEA and other relevant legislation on the reliability of the Company's service;

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At the time of the March 9 Order, the VCEA had been passed by the 2020 General Assembly, but not yet signed by the Governor, which subsequently occurred on April 11, 2020. The VCEA became effective on July 1, 2020.

Under the VCEA, Dominion must engage in robust planning to achieve the policy goals therein in a cost-effective manner. The Commission recognizes that Dominion did not have an extended opportunity to conform its 2020 IRP to address all the interrelated aspects of recent legislation. The Commission, however, cannot conclude, based on the record in this proceeding and issues discussed further below,[12] that Dominion's 2020 IRP, as filed, is reasonable and in the public interest for purposes of a planning document.[13] Further in this regard, the participants in this matter have raised significant issues, the resolution of which may not come into full focus until after gaining actual experience in implementing the Commonwealth's new policy goals in the context of specific resource proposals.[14]

[12] The Commission has fully considered the evidence and arguments in the record supporting and opposing the positions of all participants. *See also Board of Supervisors of Loudoun County v. State Corp. Comm'n*, 292 Va. 444, 454 n.10 (2016) ("We note that even in the absence of this representation by the Commission, pursuant to our governing standard of review, the Commission's decision comes to us with a presumption that it considered all of the evidence of record.") (citation omitted).

[13] We took objections to Exhibit 32 under advisement during the evidentiary hearing. Exhibit 32 consists of a legislative bill offered as a substitute to the VCEA that was not adopted. Tr. 305-306, 318, 332-334. Upon further consideration thereof, the objection is over-ruled, and we admit Exhibit 32.

[14] The VCEA requires Dominion to file annually plans for the development of new solar, onshore wind, and energy storage resources. Code § 56-585.5 D 4. Dominion's first RPS filing is currently pending before the Commission. *Commonwealth of Virginia, ex rel. State Corporation Commission, Ex Parte: Establishing 2020 RPS Proceeding for Virginia Electric and Power Company*, Case No. PUR-2020-00134, Doc. Con. Cen. No. 201060058, Petition

The Commission's determination in this proceeding, however, is not the end of the Company's continuing and ongoing integrated resource planning activities. Under the Commission's Integrated Resource Planning Guidelines,[15] Dominion must file updates to its 2020 IRP in 2021 and 2022. Thereafter, under Code § 56-599, the Company must file a full IRP by May 1, 2023. Based on the record in this case, and not by way of limitation,[16] the Commission directs that future IRPs and updates thereto reflect the following.

Modeling of Alternative Plans. In addition to Plan A, which Dominion asserts is a least cost plan that does not comply with the VCEA,[17] the 2020 IRP included four plans to comply with the VCEA ("VCEA Plans").[18] Respondents and Staff took issue with the Company's modeling of the VCEA Plans as well as the reasonableness of the results. Among other things, participants criticized the following aspects of the VCEA Plans:

- The VCEA Plans substantially overbuild for purposes of meeting peak load and energy requirements.[19] For example, the Company's analysis shows that Plan B_{19} includes

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(Oct. 30, 2020). Unlike an IRP proceeding, which does not involve the approval of any specific resource, these RPS filings may include "any request for approval to construct such facilities pursuant to subsection D of § 56-580 and a request for approval or update of a rate adjustment clause pursuant to subdivision A 6 of § 56-585.1 to recover the costs of such facilities." Code § 56-585.5 D 4.

[15] *Commonwealth of Virginia, ex rel. State Corporation Commission, Concerning Electric Utility Integrated Resource Planning Pursuant to §§ 56-597 et seq. Code of Virginia*, Case No. PUE-2008-00099, 2008 S.C.C. Ann. Rept. 606, Order Establishing Guidelines for Developing Integrated Resource Plans (Dec. 23, 2008).

[16] With respect to issues raised by participants not expressly addressed by the Commission herein, the Commission finds that resolution of such issues is not necessary to the Commission's decision in this proceeding, but that such issues may be raised again in future proceedings, as appropriate.

[17] *See* Ex. 4 (IRP) at 3. As discussed by the Company, Senate Bill 1349 passed by the 2015 General Assembly required the Commission to submit certain reports to the General Assembly addressing the impacts of federal carbon emission guidelines during the Transitional Rate Period, which has now concluded. Tr. 1229-1233. *See also* 2015 Acts ch. 6; Code § 56-585.1:1 F 1. As a result, as supported by the Company, the NRDC and Appalachian Voices, we will no longer require Dominion to file a least cost plan that does not take into consideration applicable environmental laws and regulations. *See, e.g.,* Ex. 44 (Levin) at 38-39; Ex. 31 (Rábago) at 9; Ex. 82 (Kelly Rebuttal) at 39.

[18] Ex. 4 (IRP) at 3-4; Ex. 5 (IRP Supplement) at 1.

[19] *See, e.g.,* Ex. 58 (Norwood) at 19-20; Ex. 64 (Dalton) at 33-34, 41-42.

capacity in excess of projected load requirements of approximately 1,800 megawatts ("MW") by 2027; 5,700 MW by 2035, and 7,400 MW by 2045.[20] Plan B_{19} similarly produces energy in excess of forecasted PJM[21] energy requirements of 1,600 gigawatt-hours ("GWh") in 2033; 5,100 GWh in 2035; and 15,700 GWh in 2045.[22]

- Dominion forced all resource additions and retirements to be selected by the model rather than allowing the model to select optimal eligible resources on a least cost basis.[23]

- With few exceptions, Dominion's VCEA Plans are substantially similar and do not model multiple paths to compliance with the VCEA.[24]

- The Company conducted few sensitivity analyses to evaluate changes to modeling inputs on the VCEA Plans.[25]

- The VCEA Plans produce RECs in excess of the requirements of the RPS Program.[26] For example, the Company's analysis shows that Plan B_{19} and Plan D exceed RPS requirements in each year from 2027 through 2042.[27]

- Dominion's modeling of the VCEA's RPS Program requirements did not consider monetizing or banking excess RECs or model the RPS Program deficiency payments.[28]

- The Company did not update its forecasts of future commodity prices, such as energy, capacity and fuel prices, to reflect the passage of the VCEA, the implementation of which will significantly impact future commodity prices.[29]

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[20] Ex. 64 (Dalton) at 33.

[21] PJM Interconnection, L.L.C., regional transmission organization.

[22] Ex. 64 (Dalton) at 34.

[23] *See, e.g.,* Ex. 54 (R. Wilson) at 10-11; Ex. 58 (Norwood) at 14-19; Ex. 82 (Kelly Rebuttal) at 8.

[24] *See, e.g.,* Ex. 31 (Rábago) at 8-9; Ex. 64 (Dalton) at 8-9, 37-38; Tr. 691, 774.

[25] *See, e.g.,* Ex. 35 (J. Wilson) at 12; Ex. 67 (Abbott) at 11-16; Ex. 82 (Kelly Rebuttal) at 14. In future IRPs and updates, the Company shall, at a minimum, include the following sensitivities: (i) high and low PJM energy prices; (ii) high and low PJM capacity prices; (iii) high and low REC prices; (iv) high and low construction costs; (v) high and low fuel prices; (vi) high and low load forecast scenarios; and (vii) the impact of not meeting legislatively-mandated energy efficiency savings targets. Ex. 67 (Abbott) at 16; Ex. 82 (Kelly Rebuttal) at 14 and Rebuttal Schedule 1; Ex. 75 (Hall Rebuttal) at 8.

[26] *See, e.g.,* Ex. 64 (Dalton) at 44-47.

[27] *See, e.g., id.*

[28] *See, e.g., id.* at 44-48; Ex. 82 (Kelly Rebuttal) at 15-16.

[29] *See, e.g.,* Ex. 67 (Abbott) at 23; Ex. 59 (Johnson) at Enverus Report, pp. 6, 27-29; Tr. 928.

In response to many of these criticisms, the Company asserts it had insufficient time following the passage of the VCEA to re-configure and validate its modeling in PLEXOS to incorporate many provisions of the VCEA.[30] The Company explains that it is working to reconfigure its modeling to be able to incorporate the requirements of the VCEA.[31] We agree that the Company should work expeditiously to refine its modeling processes so that it may fully model the VCEA in future IRPs and updates. As discussed by the Company, we also direct Dominion to provide an update on the status of its efforts to reconfigure its modeling in its IRP update to be filed this year.[32]

Reliability concerns. The large-scale transition from traditional fossil fuel generation to cleaner intermittent renewable generation raises potential reliability concerns that must be carefully considered and addressed.[33] The General Assembly explicitly preserved the Commission's authority in this regard in Enactment Clause No. 9 of the VCEA, which is quoted above. The Commission takes very seriously its obligation to take necessary actions to protect the security and reliability of the electric system, upon which many aspects of modern life depend.

In response to the requirements of the March 9 Order, the Company filed a preliminary high-level transmission system reliability analysis as part of the 2020 IRP.[34] The 2020 IRP acknowledges that "[t]ransmission planning work has begun, but more planning analysis is

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[30] Ex. 82 (Kelly Rebuttal) at 8.

[31] *See, e.g., id.* at 11-12, 27, and Rebuttal Schedule 1.

[32] Tr. 1221.

[33] *See, e.g.,* Ex. 4 (IRP) at 6; Ex. 12 (Cizenski) at 16-23.

[34] *See, e.g.,* Ex. 12 (Cizenski) at 22-23; Ex. 79 (K. Thomas) at 8-11; Tr. 1021.

necessary to model the grid under different conditions to assure system reliability, stability, and security with the retirement of traditional generation."[35] The Company states additional reliability analyses are ongoing and will be included in future IRP-related proceedings.[36] The Commission directs the Company to include in future IRPs and updates the up-to-date reliability analyses of the impacts of retiring traditional fossil generation and adding growing amounts of renewable energy resources on the Company's electric system.

Several parties, including Appalachian Voices and Sierra Club, criticized the 2020 IRP for modeling 970 MW of new natural gas-fired combustion turbines to be placed in-service between 2023 and 2024 in all VCEA Plans, particularly given the clean energy policy goals of the VCEA.[37] The Company asserts that these resources were included as "placeholders" to address potential system reliability issues resulting from the addition of large amounts of intermittent resources to the Company's system.[38] In the future, the Company should also include one or more plans without such "placeholder" additions to address reliability concerns for comparison purposes and to improve transparency in the Company's planning processes.[39]

Retirements. The 2020 IRP's consideration of retirements was a significant issue in this proceeding. The VCEA contains a timeline for the required retirement of various types of carbon emitting generation, subject to certain exceptions, with all such generation retired by

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[35] Ex. 4 (IRP) at 6.

[36] Ex. 79 (K. Thomas Rebuttal) at 7-8.

[37] Tr. 192. *See, e.g.,* Ex. 31 (Rábago) at 6-7; Ex. 54 (R. Wilson) at 29-34.

[38] *See, e.g.,* Ex. 79 (K. Thomas) at 11-12.

[39] Further in regard to transparency, we direct the Company to provide in future IRP proceedings, upon request, the PLEXOS input files necessary for Staff or respondents to reproduce the Company's modeling results. Ex. 67 (Abbott) at 16.

2045, unless the retirement of a particular unit would threaten grid reliability and security.[40] The Company's VCEA Plans retire all the same units in the same years, with the exception that two plans model the continued operation of 9,500 MW of natural gas fired resources beyond 2045.[41] Outside the IRP modeling, the Company performed a 10-year resource-specific economic analysis of the Company's coal fired, heavy-oil fired, and large combined cycle units under market conditions.[42]

Participants, including Staff, Consumer Counsel and Sierra Club, took issue with how the results of the 10-year economic analysis were incorporated into the VCEA Plans.[43] In response, among other things, the Company committed to modeling retirements within the PLEXOS model going forward.[44] According to the Company, such modeling will permit the determination of an optimum retirement date based on economics and qualitative benefits of dispatchable resources.[45] We agree that it is appropriate to model retirements as part of the PLEXOS modeling; however, we will also require the Company, for the time being, to continue to file a separate retirement analysis comparable to the economic analysis performed in this case.[46]

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[40] Code § 56-585.5 B.

[41] *See, e.g.,* Ex. 4 (IRP) at 27-29; Ex. 64 (Dalton) at DJD-1, pp. 1-6.

[42] Ex. 4 (IRP) at 83.

[43] *See, e.g.,* Ex. 54 (R. Wilson) at 11, 16-17; Ex. 58 (Norwood) at 22-25; Ex. 64 (Dalton) at 11-17.

[44] *See, e.g.,* Ex. 82 (Kelly Rebuttal) at Rebuttal Schedule 1.

[45] Tr. 1089-1091.

[46] Tr. 1089-1090. Company witness Kelly acknowledged that the Company planned to continue to perform the separate economic analysis in order to understand the economics of individual resources in different years. Tr. 1090. Such analysis shall continue to evaluate Company's coal fired, heavy-oil fired, and large combined cycle units under market conditions.

Load Forecast. As part of the 2018 IRP proceeding, the Commission directed the Company to use the Dominion Zone PJM coincident peak load forecast and energy sales forecast, scaled down to the Dominion load serving entity level.[47] We also directed energy efficiency spending to be modeled separately as (1) an impact on the PJM peak load and energy sales forecast, and (2) a supply-side resource.[48] Dominion and Appalachian Voices suggested the Commission revisit this decision for various reasons.[49] At this time, however, we will continue to require use of the PJM forecast as directed in the 2018 IRP.[50]

To address reliability issues, the Company also made certain adjustments to its load forecast modeling to reflect that PJM forecasts the winter peak demand for the Dominion Zone to exceed the summer peak demand during its forecast period.[51] The Company asserts that such adjustments were necessary to evaluate the Company's capacity and energy needs in winter when solar production is lower than during the summer.[52] We do not find the record sufficiently developed to rule on the specific adjustments made by the Company at this time. In future IRPs and updates, the Company should study and report separately on its summer and winter capacity and energy needs, and its alternative plans' ability to meet those requirements. The Company

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[47] *Commonwealth of Virginia, ex rel. State Corporation Commission, In re: Virginia Electric and Power Company's Integrated Resource Plan filing pursuant to Va. Code § 56-597 et seq.*, Case No. PUR-2018-00065, 2019 S.C.C. Ann. Rept. 190, 195, Final Order (June 27, 2019) ("2018 IRP Final Order"); *Commonwealth of Virginia, ex rel. State Corporation Commission, In re: Virginia Electric and Power Company's Integrated Resource Plan filing pursuant to Va. Code § 56-597 et seq.*, Case No. PUR-2018-00065, 2018 S.C.C. Ann. Rept. 415, 417, Order (Dec. 7, 2018) ("2018 IRP December 7 Order").

[48] 2018 IRP Final Order, 2019 S.C.C. Ann. Rept. at 195.

[49] *See, e.g.,* Tr. 815-818; Ex. 35 (J. Wilson) at 20-33.

[50] Staff recommended and the Company did not object to providing certain capacity-related information in future IRPs and updates, and we so direct as agreed by Staff and the Company. Ex. 63 (White) at 14, 22; Ex. 82 (Kelly Rebuttal) at 51; Tr. 635.

[51] *See, e.g.,* Ex. 4 (IRP) at 40-41; Ex. 7 (IRP Corrections) at 41; Tr. 168-174.

[52] Tr. 168-174, 764

should also give due consideration to market purchases during the winter from the PJM wholesale market,[53] which remains a summer peaking entity.[54]

Energy Efficiency Programs. Certain parties, including the NRDC and Appalachian Voices, criticized the Company for modeling no energy efficiency targets after 2025.[55] Under the VCEA, specific savings targets are established through 2025 and the Commission is required to set energy efficiency targets after 2025.[56] The Commission has not yet set the post-2025 energy efficiency targets. We agree, however, that assuming those targets would be zero after 2025 was unreasonable and direct the Company to continue to model energy efficiency targets after 2025.

Solar Capacity Factor. The solar capacity factor modeled by the Company was a significant issue in the Company's 2018 IRP proceeding. In that proceeding, the Commission directed the Company to "model future solar PV tracking resources using two alternative capacity factor values: (a) the actual capacity performance of Dominion's Company-owned solar tracking fleet in Virginia using an average of the most recent three-year period; and (b) 25%."[57] At Dominion's request, the Commission further clarified that the Company may model a solar capacity factor as a sensitivity; however, if the Company chooses to do so, it shall model the actual capacity performance of Dominion's Company-owned solar tracking fleet as the baseline

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[53] This consideration should include market purchases from merchant generators located within the Dominion Zone that are not subject to a transmission import capacity constraint.

[54] Tr. 169-170, 656, 764.

[55] *See, e.g.,* Ex. 31 (Rábago) at 17-18; Ex. 44 (Levin) at 15-16; Ex. 75 (Hall Rebuttal) at 7-8.

[56] Code § 56-596.2 B.

[57] 2018 IRP Final Order, 2019 S.C.C. Ann. Rept. at 195. In the original 2018 IRP, Dominion modeled a projected 26% solar capacity factor. At that time, the Company's solar resources had experienced actual capacity factors of approximately 20% on average over the past five years. 2018 IRP December 7 Order, 2018 S.C.C. Ann. Rept. At 418.

assumption and use 25% as the sensitivity.[58] In the 2020 IRP, the average three-year solar capacity factor achieved by the Company's solar fleet between 2017 and 2019 was 19%.[59] The Company and MAREC requested the Commission no longer require the Company to model the solar capacity factor based on actual historical experience in future IRPs.[60] The Commission declines to revisit its previous directives with respect to modeling the solar capacity factor.

Least Cost Planning. Staff and respondents, including the NRDC, Sierra Club, and Consumer Counsel, were generally critical of the Company for failing to include a least cost VCEA compliant plan.[61] Mr. Besa took issue with the Company's inclusion of a 300 MW pumped storage facility in all VCEA Plans, arguing that the resource is uneconomic.[62] Notably, parties took varying views of what should be included in a "least cost" VCEA compliant plan. For example, Staff argued that Dominion's second tranche of offshore wind is not mandated under the statute.[63] Appalachian Voices argued that the Commission is not required to approve many of the resources in the VCEA and retains authority to disallow resources if the associated costs are not reasonable and prudent.[64] Consumer Counsel similarly argued that the VCEA

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[58] *Commonwealth of Virginia, ex rel. State Corporation Commission, In re: Virginia Electric and Power Company's Integrated Resource Plan filing pursuant to Va. Code § 56-597 et seq.*, Case No. PUR-2018-00065, 2019 S.C.C. Ann. Rept. 196, 197, Order on Reconsideration (July 19, 2019).

[59] Ex. 4 (IRP) at 67.

[60] *See, e.g.,* Tr. 1159-1161; Ex. 73 (Mitchell Rebuttal) at 6-7.

[61] *See, e.g.,* Ex. 44 (Levin) at 6-7; Ex. 54 (R. Wilson) at 11; Ex. 58 (Norwood) at 14-19; Ex. 64 (Dalton) at 36-38; Tr. 1121.

[62] *See, e.g.,* Ex. 10 (Cusick) at 5, 22-25.

[63] *See*, e.g., Ex. 64 (Dalton) at 36-38.

[64] Tr. 1121-1133.

allows for the Commission to apply a "reasonableness and prudence test" in determining the recoverability of costs of resource additions under the VCEA.[65]

To address this issue, Dominion proposes that future IRPs and updates include a least cost VCEA plan that would meet (i) applicable carbon regulations and (ii) the mandatory RPS Program requirements of the VCEA.[66] For this plan, the Company proposes not to force the model to select any specific resource nor exclude any reasonable resource and allow the model to optimize the accompanying resource plan.[67] Based on the record in this proceeding, we find this proposal to be reasonable at this time.

Environmental Justice. The 2020 IRP is the first opportunity for Dominion to address environmental justice in the context of long-term planning. We agree with Commission Staff that the IRP is one venue for examining Dominion's plans to address environmental justice.[68] We note that the Commonwealth's policy on environmental justice is broad, including "the fair treatment and meaningful involvement of every person, regardless of race, color, national origin, income, faith, or disability, regarding the development, implementation, or enforcement of any environmental law, regulation, or policy."[69] Accordingly, in addition to addressing environmental justice in more specific contexts, such as requests for certificates of public convenience and necessity for particular facilities at known locations, the Commission finds that

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[65] Ex. 58 (Norwood) at 4, 21-22.

[66] *See, e.g.*, Ex. 82 (Kelly Rebuttal) at 39. *See also* Tr. 1106-1107. The Company states such plans would also be subject to what Dominion terms "commonsense build constraints." Ex. 82 (Kelly Rebuttal) at 39. One such build constraint was subject to dispute in this proceeding. Ex. 64 (Dalton) at 35. While the Commission recognizes that certain build constraints may be necessary under certain circumstances, the reasonableness of any such build constraints will be subject to Commission review in future proceedings.

[67] Ex. 82 (Kelly Rebuttal) at 39-40.

[68] Tr. 637-638.

[69] Code § 2.2-234.

the Company should address environmental justice in future IRPs and updates, as appropriate. As one example, the Company may consider the impact of unit retirement decisions on environmental justice communities or fenceline communities.[70]

Bill Impact Analysis. The Commission has previously explained that "[a] primary purpose of an IRP . . . is to give the public – which includes customers and the legislators who represent them – a reasonably accurate picture of the probable costs that customers will pay in the future to receive a reliable supply of electrical power, which is essential to modern life and commerce."[71] In its March 9 Order, the Commission directed Dominion to provide residential customer bill impacts of the 2020 Plan over the next 10 years. Based on Dominion's analysis, residential bills may increase by between \$52.40 and \$55.02 per month by 2030.[72] Staff's analysis found that Dominion's projected bill impacts understate likely increases, because the Company's analysis projects that it will recover a declining percentage of its costs from the residential class over the next 10 years.[73] Based on current allocation factors, Staff estimates that residential bills will increase between \$64.27 and \$67.32 per month based on the Company's plans to comply with the VCEA.[74]

Given the issues identified above regarding the Company's 2020 Plan, and the uncertainty attendant to the precise resources that will be added in the future, the Commission will require

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[70] *See* Code §§ 2.2-234 and -235.

[71] 2018 IRP Final Order, 2019 S.C.C. Ann. Rept. at 191.

[72] *See, e.g.,* Ex. 6 (based on 1,000 kilowatt-hours ("kWh") usage per month); Ex. 66 (Myers) at 5.

[73] *See, e.g.,* Ex. 66 (Myers) at 9-10. By necessity, if a smaller percentage of total costs is paid by the residential class, then remaining costs are transferred to other classes (such small business, other commercial, and industrial classes); these costs do not go away. *See, e.g.,* Tr. 703.

[74] *See, e.g.,* Ex. 66 (Myers) at 11 (based on 1,000 kWh usage per month).

Dominion to file an updated bill analysis by plan in future IRPs and updates with the following modifications:

- The Company shall provide bill impacts over the next ten years for the least cost VCEA plan, the Company's preferred plan, and any additional plans presented, including residential, small general service and large general service customer bills. Each update shall include an additional year of projections beyond 2030 as each year passes and should consistently be compared back to the actual bill as of May 1, 2020.[75]
- As proposed by Staff, the Company shall use class allocation factors and projected sales recently used to set rate adjustment clause rates in the bill analysis.[76]
- In addition to projections, the analysis shall include actual bill impact information as each year passes.[77] For example, in the 2021 update filing, the Company would include the actual bill information as of December 31, 2020 in the bill analysis.

Accordingly, IT IS SO ORDERED, and this matter IS DISMISSED.

Commissioner Angela L. Navarro did not participate in this matter.

A COPY hereof shall be sent electronically by the Clerk of the Commission to all persons on the official Service List in this matter. The Service List is available from the Clerk of the Commission.

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[75] Tr. 705. The Commission recognizes that the Company did not provide bill impact information for classes other than the residential class as part of the 2020 IRP filing; however, the Commission finds that small general service and large general service information should be provided in future IRPs and updates.

[76] Ex. 66 (Myers) at 16-17.

[77] Staff and Consumer Counsel also raised concerns in this proceeding regarding the format and information provided on residential bills. Ex. 67 (Abbott) at 34-44; Tr. 1193, 1206-1207. In response, the Company states its intent to redesign the customer bill as part of the implementation of its new customer information platform ("CIP"), which was approved as part of the Company's grid transformation plan. The Company states its core CIP project will be completed in 2023 and the bill redesign will be completed in 2024. Ex. 80 (Trexler Rebuttal) at 8. In this regard, we direct the Company to address the following in its next grid transformation plan filing: (1) the Company's plan and progress towards the redesign of the residential bill; (2) whether the current bill format continues to be sufficient under 20 VAC 5-312-90; and (3) alternative bill format proposals for the Commission's consideration. Given the uncertainty of the timing of the Company's next grid transformation plan filing, the Commission shall, should it see fit, address this issue in a future stand-alone proceeding, or triennial review (after 2021). *See* Tr. 721-722.