

COMMONWEALTH OF VIRGINIA
STATE CORPORATION COMMISSION

AT RICHMOND, DECEMBER 30, 2015

SCC-CLERK'S OFFICE
DOCUMENT CONTROL CENTER

2015 DEC 30 1 A 11: 20

COMMONWEALTH OF VIRGINIA, *ex rel.*

STATE CORPORATION COMMISSION

CASE NO. PUE-2015-00035

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

FINAL ORDER

On July 1, 2015, Virginia Electric and Power Company ("Dominion" or "Company") filed with the State Corporation Commission ("Commission") the Company's Integrated Resource Plan ("IRP") pursuant to § 56-599 of the Code of Virginia ("Code").

Dominion's IRP encompasses the 15-year planning period from 2016 to 2030.¹ The Company's stated objective in developing this IRP was to identify the mix of resources necessary to meet future energy and capacity requirements in an efficient and reliable manner at the lowest reasonable cost, while considering future uncertainties. According to the Company, these uncertainties include commodity price volatility; reliability concerns based on overreliance on any single fuel source; and changing regulatory requirements, particularly regulation by the United States Environmental Protection Agency ("EPA") to control carbon dioxide emissions from existing electric generation units under Section 111(d) of the Clean Air Act ("Clean Power Plan" or "CPP").²

¹ Exhibit ("Ex. ") 2 (IRP) at 2.

² *Id.*

151250035

When the Company filed its IRP, the Clean Power Plan was a proposed regulation. An unofficial version of the final federal regulation was not available until August 3, 2015, and the final regulation was not published in the Federal Register until October 23, 2015.³

Due to the future regulatory and market uncertainties at the time of the Company's IRP filing associated with, among other things, the Clean Power Plan, Dominion's IRP does not identify a preferred resource plan or a recommended path forward, other than a short-term action plan for the period 2016-2020.⁴ Instead, the IRP presents a set of alternative plans, which the Company indicates represent potential future paths, in an effort to test different resource strategies against plausible scenarios and sensitivities that may occur.⁵

On July 7, 2015, the Commission issued an Order for Notice and Hearing in this proceeding that, among other things, established a procedural schedule; set an evidentiary hearing date; directed Dominion to provide public notice of its IRP; 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. Notices of participation were filed by the Office of the Attorney General's Division of Consumer Counsel ("Consumer Counsel"); the Virginia Department of Environmental Quality ("DEQ"); the Virginia Committee for Fair Utility Rates; the Mid-Atlantic Renewable Energy Coalition ("MAREC"); and the Chesapeake Climate Action

³ *Carbon Pollution Emission Guidelines for Existing Stationary Sources: Electric Utility Generating Units*, 80 Fed. Reg. 64,662, Final Rule (Oct. 23, 2015). Also published on October 23, 2015, were: (1) a proposed federal implementation plan for the regulation of carbon dioxide emissions from existing electric generation units, and (2) performance standards for carbon dioxide emissions from new electric generation units. *Federal Plan Requirements for Greenhouse Gas Emissions From Electric Utility Generating Units Constructed On or Before January 8, 2014; Model Trading Rules; Amendments to Framework Regulations*, 80 Fed. Reg. 64,966, Proposed Rule (Oct. 23, 2015); *Standards of Performance for Greenhouse Gas Emissions From New, Modified, and Reconstructed Stationary Sources: Electric Utility Generating Units*, 80 Fed. Reg. 64,510, Final Rule (Oct. 23, 2015).

⁴ Ex 2 (IRP) at 5, 130-36; Ex. 3 (Wohlfarth) at 7.

⁵ Ex 2 (IRP) at 5-7; Ex. 3 (Wohlfarth) at 3.

Network, Appalachian Voices, the Virginia Chapter of the Sierra Club, and the Natural Resources Defense Council (collectively, "Environmental Respondents").

The Commission's Order for Notice and Hearing also provided for the prefiling of testimony and exhibits by Dominion, respondents, and the Commission's Staff ("Staff"). The Company; Consumer Counsel; MAREC; Environmental Respondents; and Staff prefiled testimony in this proceeding.

Beginning on October 20, 2015, the Commission convened an evidentiary hearing on the Company's IRP. The Company; DEQ; Consumer Counsel; MAREC; the Environmental Respondents; and Staff participated in the hearing. At the outset of the hearing, the Commission received the testimony of public witnesses.⁶ Thereafter, the Commission received testimony and exhibits from Dominion, the respondents, and Staff. The hearing concluded, after closing arguments, on October 22, 2015.

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

Legal Sufficiency of Dominion's 2015 IRP

Pursuant to § 56-599 E of the Code, the Commission must, after giving notice and an opportunity to be heard, determine whether Dominion's IRP is reasonable and in the public interest. We find, based on the record of this proceeding and applicable statutes, that the Company's IRP is reasonable and in the public interest for the specific and limited purpose of filing the planning document as mandated by § 56-597 *et seq.* of the Code.

⁶ The Commission also considered public comments filed pursuant to the Order for Notice and Hearing.

Environmental Respondents have argued that the Commission must reject the Company's IRP because the filing does not identify a preferred resource plan;⁷ however, the Code does not mandate the rejection of IRP filings that do not identify a preferred resource plan for achieving the various statutory objectives of integrated resource planning by electric utilities in the Commonwealth. While a utility may wish to identify its preferred resource plan in an IRP filing or proceeding, and the Commission has the discretionary authority to require such information, the Code does not require the Commission to reject IRP filings that do not include such a stated preference.⁸

In the instant proceeding, the Company's presentation of four resource plans specifically designed to meet the requirements of the proposed Clean Power Plan complies with previous Commission directives. In previous IRP proceedings, we have directed electric utilities in Virginia to consider and update various options for complying with the Clean Power Plan because of its significance to electric utility resource planning.⁹ In doing so, we have recognized that the ability to model options for compliance in Virginia and other states will, by necessity,

⁷ See Tr. 46-49, 52, 734-38.

⁸ Further, the IRP statutes provide, among other things, that "[e]ach integrated resource plan *shall consider options* for maintaining and enhancing rate stability, energy independence, economic development including retention and expansion of energy-intensive industries, and service reliability" and that each utility filing an IRP "may propose...[t]he most cost effective means of complying with current and pending state and federal environmental regulations, *including compliance options* to minimize effects on customer rates of such regulations." Va. Code § 56-599 (emphasis added).

⁹ See, e.g., *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. PUE-2013-00097, 2014 S.C.C. Ann. Rept. 305, 306, Final Order (Nov. 26, 2014); *Commonwealth of Virginia, ex rel., State Corporation Commission, In re: Virginia Electric and Power Company's Integrated Resource Plan filing pursuant to § 56-597 et seq. of the Code of Virginia*, Case No. PUE-2013-00088, 2014 S.C.C. Ann. Rept. 301, 303, Final Order (Aug. 27, 2014) ("2013 IRP").

require some degree of speculation until all stages of the regulatory, legal, and potentially legislative processes associated with the Clean Power Plan are complete.¹⁰

The record in the current proceeding demonstrates that significant uncertainty regarding Clean Power Plan compliance existed at the time the Company filed its IRP and will likely continue for some time. The record includes evidence, for example, that: (i) as discussed above, when the Company filed its IRP, the Clean Power Plan was a proposed regulation; (ii) the final regulation was first made public less than three months before the hearing and had not yet been published in the Federal Register at the time the hearing began;¹¹ (iii) the final regulation contains substantial differences from the proposed regulation;¹² (iv) state-specific compliance plans, which counsel for DEQ has advised the agency will develop for Virginia,¹³ are not yet known and can be submitted to the EPA as late as September of 2018;¹⁴ (v) many different pathways for compliance with the Clean Power Plan have complex and differing implications;¹⁵ and (vi) the EPA's model trading rule and the compliance option of a federal implementation plan have not yet been finalized.¹⁶

Consequently, based on the record, we do not find it to be reasonable to exercise our discretion in this proceeding to require Dominion to identify a preferred resource plan based on

¹⁰ *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. PUE-2013-00097, 2014 S.C.C. Ann. Rept. 305, 306, Final Order (Nov. 26, 2014).

¹¹ Ex. 22 (Walker) at 2, n.1.

¹² Tr. 572-74; Ex. 22 (Walker) at 2-4.

¹³ Tr. 52-53.

¹⁴ Tr. 461.

¹⁵ *See, e.g.*, Tr. 415-25; 510-49.

¹⁶ Tr. 714-15.

either the proposed version of the Clean Power Plan, which would be of limited value now that it has been superseded, or based on the final rule, which would be premature at this time. The lack of a preferred plan is reasonable in this case given the substantial regulatory and planning uncertainty regarding the Clean Power Plan and, given the facts of this proceeding, the Commission will not reject the Company's IRP because it does not identify a preferred plan.

Consumer Counsel also questions the reasonableness of the IRP and recommends that the Commission reject it, based on an argument that the Company has failed to demonstrate that continuing expenditures on the potential North Anna 3 nuclear unit are reasonable and in the public interest.¹⁷ The Commission addresses Consumer Counsel's concerns related to North Anna 3 in more detail below; however, for purposes of determining the reasonableness of the Company's 2015 IRP filing, we do not find that the IRP should be rejected for the reasons discussed by Consumer Counsel. We have previously characterized the IRP proceeding in the following manner:

As such, the Commission's determination in this proceeding does not preclude the Commission from approving or rejecting a particular supply-side or demand-side resource in the future, nor does the Commission's determination in this case create any presumption in favor, or not in favor, of a particular resource, including generation construction projects, generation from non-utility generators, conservation or other options.¹⁸

¹⁷ See, e.g., Tr. 749-50. Other parties to this proceeding have also questioned the Company's assumptions, including price assumptions, for, among other things, wind and other renewable resources and demand-side management. See, e.g., Ex. 11 (Thumma); Ex. 9 (Goggin); Ex. 17 (Loiter).

¹⁸ *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. PUE-2011-00092, 2012 S.C.C. Ann. Rept. 296, 296, Final Order (Oct. 5, 2012) (citing *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. PUE-2009-00096, 2010 S.C.C. Ann. Rept. 385, 387, Final Order (Aug. 6, 2010)).

Accordingly, the reasonableness and prudence of any actual or projected expenditures toward one or more specific demand- or supply-side resource options is not an issue in an IRP proceeding. Indeed, the Commission has previously held:

that actual expenditures incurred toward any specific resource option that has not been approved by this Commission in an applicable formal proceeding are incurred solely at the risk of [the Company's] stockholders. Further . . . finding that an IRP is reasonable and in the public interest under § 56-599 E of the Code in no manner represents - and should not be characterized as representing - explicit or implicit approval for construction or cost recovery of any specific resource option contained in the IRP.¹⁹

Therefore, as is noted above, we find Dominion's IRP to be in the public interest and reasonable for filing as a planning document, not as a document that will determine future Commission decisions on specific resources or the recovery of specific expenditures.

While the Commission finds that Dominion's IRP is reasonable and in the public interest for the purposes set forth herein, we also find that additional analysis in several areas shall be required in future IRP filings.²⁰

2016 IRP Requirements

North Anna 3

During this proceeding, Consumer Counsel has noted that expenditures related to North Anna 3 are rapidly being incurred without Dominion having applied for, much less having received, a certificate of public convenience and necessity ("CPCN") or rate adjustment clause ("RAC").²¹ We reiterated in the Final Order in the Company's 2015 biennial review proceeding

¹⁹ *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. PUE-2011-00092, Doc. Con. Cen. No. 120320147, Order on Certified Question at 4 (Mar. 19, 2012).

²⁰ The analyses required herein are in addition to any ongoing analyses the Commission has directed Dominion to perform in prior IRP proceedings.

²¹ *See* Tr. 59-60, 241-43, 748-49.

what we have repeatedly stated in the past, that Dominion is incurring its North Anna 3 costs purely at its stockholders' risk, and should have no expectation of future recovery from customers without an approved CPCN and/or RAC.²² In this proceeding, however, Dominion testified that it does consider such costs as ultimately recoverable from ratepayers and is booking them as recoverable.²³

As Consumer Counsel pointed out in both the 2015 Biennial Review proceeding and this proceeding, North Anna 3 costs continue to grow significantly. The evidence demonstrates that Dominion has already incurred approximately \$580 million in development costs related to North Anna 3 through September 30, 2015, and that, based on current forecasts, the total cost of North Anna 3, including an estimate of construction interest costs, would be approximately \$19.3 billion.²⁴ The Virginia jurisdictional share of this estimated \$19.3 billion capital investment would increase the total rate base for the Virginia jurisdiction by approximately 100%,²⁵ and would obviously, if it were recoverable, represent a large enough increase in electric bills for residential and business customers to impact Virginia's economic climate.

While Consumer Counsel does not urge us to order Dominion to stop development of North Anna 3, nor does it ask Dominion to stop development, Consumer Counsel restates its

²² *Application of Virginia Electric and Power Company, For a 2015 biennial review of the rates, terms and conditions for the provision of generation, distribution and transmission services pursuant to § 56-585.1 A of the Code of Virginia*, Case No. PUE-2015-00027, Doc. Con. Cen. No. 151140125, Final Order at 21-22 (Nov. 23, 2015).

²³ Although Dominion acknowledged that its shareholders are currently at risk for the costs incurred for North Anna 3 (other than approximately \$310 million already permitted to be recovered in the Company's 2015 Biennial Review pursuant to statute), Dominion testified that it expects to recover its North Anna 3 costs from ratepayers. *See, e.g.*, Tr. 495-96 ("our assessment, from an accounting standpoint, is that it's probable that we will recover that"); Tr. 497-98 ("when you've asked...who's at risk right now for the dollars that are being spent....clearly what we're saying is shareholders are however...the assessment is we're acting prudently, so we'll recover it.").

²⁴ *See* Ex. 13 (Norwood) at 5; Tr. at 472-73, 475-76.

²⁵ Ex. 13 (Norwood) at 7.

request for us to initiate a separate proceeding to review the reasonableness and prudence of the costs Dominion continues to incur for North Anna 3 development.²⁶ Given that Dominion treats these growing costs as recoverable, and given that the General Assembly has already made a substantial portion of past development costs recoverable from ratepayers,²⁷ Consumer Counsel has raised a serious concern. Should Dominion come to this Commission in a future CPCN or RAC proceeding having already incurred multiple billions of dollars in costs on North Anna 3, it is entirely foreseeable that the amount of costs already incurred will be argued in that proceeding as a compelling reason for the Commission to approve the application.

Accordingly, we direct as follows. In its upcoming May 1, 2016 IRP filing, Dominion shall provide answers to the following questions:

- Pursuant to what authority does Dominion believe that the costs it plans to incur for North Anna 3 before receiving a CPCN or RAC are recoverable from its customers?
- Is there a dollar limit on how much Dominion intends to spend on North Anna 3 before applying to this Commission for a CPCN and/or RAC?
- Without a guarantee of cost recovery, what is the limit on the amount of costs Dominion can incur, prior to obtaining a CPCN, without negatively affecting (i) the Company's fiscal soundness, and (ii) the Company's cost of capital?
- Why are expenditures continuing to be made? Solely for NRC approval? Why in the Company's view is it necessary to spend at projected rates, specifically when the Company has not decided to proceed and does not have Commission approval?

²⁶ See Tr. 245-46, 250-51.

²⁷ See Va. Code § 56-585.1 A 6; *Application of Virginia Electric and Power Company, For a 2015 biennial review of the rates, terms and conditions for the provision of generation, distribution and transmission services pursuant to § 56-585.1 A of the Code of Virginia*, Case No. PUE-2015-00027, Doc. Con. Cen. No. 151140125, Final Order at 5-7, 22 (Nov. 23, 2015).

Further, we find that in its upcoming IRP filing, Dominion must provide additional analysis related to the construction of North Anna 3. In its next IRP, the Company shall:

- update the timing analysis that it performed in this proceeding, and, in that timing analysis, quantify the trade-off between operating cost risks that may be increased and the cost savings that may be realized by delaying the construction of North Anna 3.²⁸

Extension of Nuclear Licenses

In Dominion's 2013 IRP, the Commission directed the Company to investigate the feasibility and cost of extending the lives and operating licenses of its four existing nuclear units (Surry Unit 1, Surry Unit 2, North Anna Unit 1, and North Anna Unit 2).²⁹ As the record in the instant proceeding indicates that the Company's investigation into the feasibility and cost of extending the operating licenses for these nuclear units remains ongoing, the Commission directs the Company to:

- continue to investigate the feasibility and cost of extending the operating licenses for Surry Unit 1, Surry Unit 2, North Anna Unit 1, and North Anna Unit 2; and
- prepare a report for its upcoming IRP filing on the status of the license extension process, which shall include, but is not limited to, a discussion of communications between the Company and the United States Nuclear Regulatory Commission concerning the operating license extensions, updated cost estimates of the license renewals, a timetable showing key dates in the renewal process, and the results of Strategist® model runs to

²⁸ Ex. 24 (Abbott) at 35-36, 49. The Company shall also identify the optimum on-line date for North Anna 3 under the Clean Power Plan compliance options as is directed below. See Ex. 22 (Walker) at 8.

²⁹ *Commonwealth of Virginia, ex rel., State Corporation Commission, In re: Virginia Electric and Power Company's Integrated Resource Plan filing pursuant to § 56-597 et seq. of the Code of Virginia*, Case No. PUE-2013-00088, 2014 S.C.C. Ann. Rept. 301, 302, Final Order (Aug. 27, 2014)

determine the net present value of utility costs where it is assumed that the operating licenses for all of the nuclear units are extended for 20 years.³⁰

Clean Power Plan

Dominion's next IRP, which is due on or before May 1, 2016, will likely continue to be subject to significant uncertainty regarding which of several possible approaches will ultimately be chosen for complying with the Clean Power Plan. Virginia may not have decided before May 1, 2016, whether it will adopt a state implementation plan that includes a mass-based approach, a state implementation plan that includes an intensity-based approach,³¹ or a federal implementation plan. Despite these uncertainties, however, the Company's next filing should be able to provide information that is useful in assessing potential approaches for compliance and the costs and rate impacts attendant thereto. Therefore, in its upcoming filing due May 1, 2016, Dominion, at a minimum, shall:

- model and provide an optimal (least-cost, base case) plan for meeting the electricity needs of its service territory over the planning time frame;
- model and provide multiple plans that are each compliant with the Clean Power Plan, under both a mass-based approach and an intensity-based approach (including a least-cost compliant plan where the Strategist® model is allowed to choose the least-cost path given the emission constraints imposed by the Clean Power Plan); provide a detailed analysis of the impact of each plan in terms of all costs, including, but not limited to, capital, programmatic and financing; provide the impact of each plan on the electricity

³⁰ See Ex. 24 (Abbott) at 36-39, 50.

³¹ The record refers to "intensity-based" and "rate-based" compliance interchangeably. An intensity-based (or rate-based) approach considers compliance on the basis of pounds of carbon dioxide emitted per megawatt hour, while a "mass-based" approach considers compliance based on the total tons of carbon dioxide emitted. See, e.g., Ex. 22 (Walker) at 4, n.5.

rates paid by Dominion's customers; and identify whether any aspect of any plan would require changes to existing Virginia law;

- analyze the final federal implementation plan, should the final federal implementation plan be published before May 1, 2016, or, if no final federal implementation plan has been published by this time, analyze the proposed federal implementation plan; provide a detailed analysis of the impact of the proposed or final plan in terms of all costs, including, but not limited to, capital, programmatic and financing; provide the impact of the proposed or final plan on the electricity rates paid by Dominion's customers; and identify whether any aspect of the proposed or final plan would require changes to existing Virginia law;
- provide a detailed description of leakage and the treatment of new units under differing compliance regimes;
- examine the differing impacts of the Virginia-specific targets versus source subcategory specific rates under an intensity-based approach;
- examine the potential for early action emission rate credits and allowances that may be available for qualified renewable energy or demand-side energy efficiency measures;
- analyze the treatment of a new nuclear unit under differing compliance approaches, including an assessment of the cost implications of a nuclear-based plan and the optimal timing of adding a nuclear unit under both an intensity-based approach and a mass-based approach;
- as recommended by MAREC, examine the cost benefits of trading emissions allowances or emissions reductions credits, or acquiring renewable resources from inside and outside of Virginia; and

- identify a long-term plan recommendation that reflects the EPA's final version of the Clean Power Plan.³²

Risk Analysis

In its Final Order in Dominion's 2013 IRP, the Commission directed Dominion to include an analysis of the trade-off between operating cost risk and project development cost risk associated with certain Company plans in its 2015 IRP filing.³³ In this proceeding, Dominion introduced a risk analysis methodology that it applied to all of the plans it studied and presented in this proceeding. In future IRPs, the Company shall:

- continue to evaluate the risks associated with plans that the Company prepares;
- include discount rate risk as a criterion in the Company's risk analysis;
- specifically identify the levels of natural gas-fired generation where operating cost risks may become excessive or provide a detailed explanation as to why such a calculation cannot be made;
- analyze ways to mitigate operating cost risk associated with natural gas-fired generation, including, but not limited to, long-term supply contracts that lock in a stable price, long-term investment in gas reserves, securing long-term firm transportation, and on-site liquefied natural gas storage; and

³² See, e.g., Ex. 24 (Abbott) at 47-48, 50; Ex. 22 (Walker) at 7-8; Ex. 17 (Loiter) at 8; Ex. 11 (Thumma) at 8-9, 12.

³³ *Commonwealth of Virginia, ex rel., State Corporation Commission, In re: Virginia Electric and Power Company's Integrated Resource Plan filing pursuant to § 56-597 et seq. of the Code of Virginia*, Case No. PUE-2013-00088, 2014 S.C.C. Ann. Rept. 301, 302, Final Order (Aug. 27, 2014).

- analyze the cost of mitigating risks associated with the share of natural-gas fired generation that is equivalent to the amount the Company expects would be displaced by the construction and operation of North Anna 3.³⁴

Rate Design

In the present IRP, Dominion analyzed five alternative residential rate designs and five alternative non-residential rate designs for the GS-1 rate class. Both Environmental Respondents³⁵ and Staff³⁶ ask the Commission to direct Dominion to continue studying rate design.

The CPP has magnified the importance of evaluating various rate design options that could be relevant to CPP compliance. Rate design options should be included in the mix of CPP compliance options for consideration both by this Commission and other branches of Virginia government. The use of block rates, inclining or declining, is one form of rate design that could affect energy consumption and carbon emissions all year long. Other rate design programs could affect consumption and emissions within a much more narrow time frame, such as incentives to shift consumption on days of peak demand. For example, a kilowatt consumed at 4 o'clock on one of the hottest summer afternoons when the system is facing peak demand is far more expensive than a kilowatt consumed at 10 o'clock that evening. The "4 pm kilowatt" may also produce far more in carbon emissions than the late-night kilowatt, since low-efficiency generating plants may have to be dispatched to meet the afternoon's peak demand.

³⁴ Ex. 24 (Abbott) at 30-35, 49.

³⁵ Ex. 17 (Loiter) at 13-16; Tr. 730.

³⁶ Ex. 24 (Abbott) at 40-45, 50.

Rate design is a form of Demand Side Management ("DSM"), and while the final CPP removed DSM as one of the four building blocks in the proposed CPP, it has nevertheless created incentives for including DSM in a state implementation plan. Dominion should evaluate and include various rate-design proposals as part of the mix of DSM-related compliance options that it will be modeling for next May's IRP filing.

More specifically, we direct that in its next IRP, Dominion shall:

- continue to report on a residential rate design alternative that includes a flat winter generation rate, an increased inclining summer generation rate, and no changes to distribution rates;
- continue to report on a residential rate design alternative that includes an increased differential between summer and winter rates for residential customers above the 800 kilowatt-hour block and no change to distribution rates;
- continue to report on alternative GS-1 rate designs;
- expand its analysis of alternative rate designs to other non-residential rate classes;
- investigate an alternative rate design for RACs that includes a summer rate with an inclining block rate component combined with a flat winter rate;
- analyze whether maintaining the existing rate structure is in the best interests of residential customers;³⁷ and
- evaluate options for variable pricing models that could incent customers to shift consumption away from peak times to reduce costs and emissions.

³⁷ *Id.* at 40-45, 50; Ex. 17 (Loiter) at 13-16; Tr. 730.

Third-Party Market Alternatives

Next, in the Final Order in Dominion's 2013 IRP, the Commission directed the Company to analyze third-party market alternatives as capacity resources and include its findings in the present IRP.³⁸ The adequacy of the Company's analysis has been challenged by MAREC in this proceeding.³⁹ We find that in future IRP filings, Dominion shall:

- include a more detailed analysis of market alternatives, especially third-party purchases that may provide long-term price stability, and includes, but is not limited to, wind and solar resources;
- examine wind and solar purchases at prices (including prices available through long-term purchase power agreements) and in quantities that are being seen in the market at the time the Company prepares its IRP filings; and
- provide a comparison of the cost of purchasing power from wind and solar resources from third-party vendors versus self-build options, including off-shore and on-shore wind, with this comparison including information from a variety of third-party vendors.⁴⁰

While we direct Dominion to provide a detailed analysis of market alternatives in its next IRP filing, we do not conclude that the Company must, for purposes of satisfying the IRP statutes, enter into a request for proposal process or a request for information process, as recommended by MAREC.⁴¹ As we noted in the Final Order in Case No. PUE-2011-00092, "[w]e do not conclude...that Dominion should be required to perform independent market tests

³⁸ *Commonwealth of Virginia, ex rel., State Corporation Commission, In re: Virginia Electric and Power Company's Integrated Resource Plan filing pursuant to § 56-597 et seq. of the Code of Virginia*, Case No. PUE-2013-00088, 2014 S.C.C. Ann. Rept. 301, 303, Final Order (Aug. 27, 2014).

³⁹ *See, e.g.*, Tr. at 44-45.

⁴⁰ *See e.g.*, Tr. 719-33.

⁴¹ *See, e.g.*, Tr. 216-18, 728.

as part of the IRP because...the IRP is a planning document, and is not a commitment to pursue any particular investment."⁴² Although we do not adopt MAREC's recommendation as a planning requirement in the instant IRP proceeding, the Commission has recently recognized, in a CPCN and RAC proceeding, the Code's requirement for the Company to consider and weigh third-party market alternatives in its process for selecting generation resources.⁴³

Solar Photovoltaic Generation

The adequacy of Dominion's analysis of solar photovoltaic generation has also been challenged in this proceeding.⁴⁴ In its IRP, Dominion concluded that the costs and issues associated with significant solar deployment are unknown and potentially substantial.⁴⁵ Environmental Respondents have challenged the Company's conclusion and claimed that the Company failed to provide adequate documentation to support its concerns regarding solar integration.⁴⁶ In future IRPs, Dominion shall:

- develop a plan for identifying, quantifying, and mitigating cost and integration issues associated with greater reliance on solar photovoltaic generation.⁴⁷

⁴² *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. PUE-2011-00092, 2012 S.C.C. Ann. Rept. 296, 297, Final Order (Oct. 5, 2012) (internal quotation omitted).

⁴³ *See Application of Virginia Electric and Power Company, For approval and certification for the proposed Remington Solar Facility pursuant to §§ 56-46.1 and 56-580 D of the Code of Virginia, and for approval of a rate adjustment clause pursuant to § 56-585.1 A 6 of the Code of Virginia*, Case No. PUE-2015-00006, Doc. Con. Cen. No. 151030161, Final Order (Oct. 20, 2015).

⁴⁴ Ex. 16 (Rábago) at 15-21.

⁴⁵ Ex. 2 (IRP) at 79-81.

⁴⁶ *See* Ex. 16 (Rábago) at 19. The Environmental Respondents also challenged other aspects of the Company's analysis of solar photovoltaic generation.

⁴⁷ *Id.* at 25.

2015 General Assembly IRP Report

Amendments enacted during the 2015 General Assembly Session provide for annual reporting by the Commission to the Governor and General Assembly on integrated resource planning. Section 56-585.1:1 F of the Code states:

The [Commission] shall submit a report and make recommendations to the Governor and the General Assembly annually on or before December 1 of each year assessing the updated integrated resource plan of any investor-owned incumbent electric utility. The report shall include an analysis of, among other matters, the amount, reliability, and type of generation facilities needed to serve Virginia native load compared to what is then available to serve such load and what may be available to serve such load in the future in view of market conditions and current and pending state and federal environmental regulations. As a part of such report, the [Commission] shall update its estimate of the impact upon electric rates in Virginia of the implementation of carbon emission guidelines for existing electric power generation facilities that the U.S. Environmental Protection Agency has issued pursuant to § 111(d) of the federal Clean Air Act....

The Commission has submitted its first report in compliance with these provisions of the Code.⁴⁸

Given the record developed in this proceeding, and the substantial regulatory and planning uncertainty regarding the Clean Power Plan, as discussed above, there was insufficient data to reasonably estimate the impact that the final Clean Power Plan will have on electric facilities and rates in Virginia. However, the more detailed information that we have herein directed the Company to provide in its next IRP filing should help provide a better understanding of the final regulation's effects on Virginia, including estimated rate impacts.

Finally, in future IRPs, Dominion shall include an index that identifies the specific location(s) within the IRP filing that complies with each bulleted requirement in this Final Order.

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

⁴⁸ *Report of the State Corporation Commission Assessing the Updated Integrated Resource Plan of Any Investor-owned Incumbent Electric Utility as Required by Chapter 6 of the 2015 Virginia Acts of Assembly* (Nov. 24, 2015).

AN ATTESTED COPY hereof shall be sent by the Clerk of the Commission to persons on the official Service List in this matter. The Service List is available from the Clerk of the Commission, c/o Document Control Center, 1300 East Main Street, First Floor, Tyler Building, Richmond, Virginia 23219. A copy shall also be sent to the Commission's Office of General Counsel and Divisions of Energy Regulation and Utility Accounting and Finance.

15125094