

COMMONWEALTH OF VIRGINIA
STATE CORPORATION COMMISSION
AT RICHMOND, JANUARY 28, 2020

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COMMONWEALTH OF VIRGINIA, *ex rel.*

STATE CORPORATION COMMISSION

CASE NO. PUR-2019-00058

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

FINAL ORDER

On May 1, 2019, Appalachian Power Company ("APCo" 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"). APCo's IRP encompasses the 15-year planning period from 2019 to 2033.¹

On May 9, 2019, 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 APCo 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 Sun Tribe Solar LLC ("Sun Tribe"); Appalachian Voices; VML/VACo APCo Steering Committee ("VML/VACo"); the Old Dominion Committee for Fair Utility Rates; and the Office of the Attorney General's Division of Consumer Counsel ("Consumer Counsel"). No public comments were filed in this docket.

¹ Ex. 2 (IRP) at ES-1.

The Commission's Order for Notice and Hearing also provided for the pre-filing of testimony and exhibits by APCo, respondents, and the Commission's Staff ("Staff"). Sun Tribe, Staff, and the Company filed testimony in this proceeding.

On November 5, 2019, the Commission convened a hearing on the Company's IRP. The Company, Consumer Counsel, Sun Tribe, VML/VACo, Appalachian Voices and Staff participated in the hearing. No public witnesses appeared to testify at the hearing.²

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

Legal Sufficiency of APCo's 2019 IRP

Pursuant to § 56-599 C of the Code, the Commission must, after giving notice and an opportunity to be heard, determine whether APCo's IRP is reasonable and in the public interest. The Commission finds, 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.

The IRP is a planning document, not a document that will determine future decisions on specific resources. Therefore, consistent with prior final orders issued under these provisions of the Code, we reiterate that approval of an IRP does not create a presumption that resource options contained in the approved IRP will be approved in a future certificate of public convenience and necessity, rate adjustment clause, fuel factor, or other type of proceeding governed by different statutes.³

² Tr. 6.

³ 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. PUR-2018-00051, 2018 S.C.C. Ann. Rept. 402, Final Order (Dec. 18, 2018) ("2018 IRP Order"); *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-2017-00045, 2018 S.C.C. Ann. Rept. 215, Final Order (Mar. 12, 2018).

While the Commission finds that APCo's IRP is in the public interest for filing as a planning document, we also find that additional analysis shall be required in future IRP filings. Our findings, including the requirements directed herein, are based on the record in this case, and in reaching our determinations we have considered and weighed all of the arguments and evidence presented in this proceeding.

Future IRPs

Senate Bill 966

The 2018 Regular Session of the General Assembly passed and the Governor signed Senate Bill 966,⁴ which impacted subsequent IRPs. In its Order approving APCo's 2018 IRP, the Commission directed APCo to "include in its next IRP detailed plans to implement the mandates contained in Senate Bill 966...."⁵ The Company complied with this directive in part, but did not include any cost estimates in any of its portfolios for projects that qualify as grid transformation projects under Senate Bill 966.⁶ In future IRPs, the Company shall calculate the incremental cost impacts of any grid transformation project mandates it believes are applicable as contained in Senate Bill 966, including a comparison to the identified least-cost plan.

Executive Directive 11 and Executive Order Number 43

First, the Company shall quantify all known or anticipated costs of carbon abatement under Executive Directive 11⁷ in future IRPs.⁸

⁴ 2018 Acts ch. 296.

⁵ 2018 IRP Order, 2018 S.C.C. Ann. Rept. at 402-403.

⁶ See, e.g., Ex. 11 (Dalton Direct) at 22-29.

⁷ Executive Directive 11, *Reducing Carbon Dioxide Emissions from Electric Power Facilities and Growing Virginia's Clean Energy Economy* (2017).

⁸ See, e.g., Ex. 11 (Dalton Direct) at 5, 35, Attachment No. DJD-1; Ex. 14 (Castle Rebuttal) at 9.

Next, Appalachian Voices requests that the Commission provide "instruction"⁹ on interpreting the Governor's Executive Order Number 43,¹⁰ which directs the Commonwealth to develop a plan to produce "thirty percent of *Virginia's* electricity from *renewable* energy sources by 2030 and one hundred percent of *Virginia's* electricity from *carbon-free* sources by 2050."¹¹ Appalachian Voices describes Executive Order 43 as "vague."¹²

Under the Constitution of Virginia, the power to make laws – legislative power – is vested in the General Assembly.¹³ The General Assembly has the power to enact a mandate that a minimum percentage of electricity either generated or consumed in the Commonwealth must be generated from "renewable" or "carbon-free" (which includes nuclear) sources by a future date and can specify the obligations of the various regulated utilities in different service territories, such as APCo. The General Assembly can also, by law, direct the Commission to undertake this task. The General Assembly has not enacted such a mandatory statute, nor has it delegated such authority to the Commission, so this Commission does not have the power to create such a mandate and require public utilities in Virginia to comply with it.

It is, however, within this Commission's regulatory authority to direct public utilities covered by the IRP statute to *plan* for future contingencies. As we have stated repeatedly, an

⁹ Tr. 21-22.

¹⁰ Executive Order Number 43, *Expanding Access to Clean Energy and Growing the Clean Energy Jobs of the Future* (2019).

¹¹ *Id.* at 3 (emphases added).

¹² Tr. 21-22. Appalachian Voices notes that Executive Order Number 43 does not provide answers to questions such as whether the renewable/carbon-free targets for Virginia apply to each utility individually, to all generators collectively located in the entire Commonwealth, to power that is generated *outside* of the Commonwealth, but by generators that are jurisdictional to a Virginia utility, to load or to supply, etc. *See id.* There is also an ambiguity in the Executive Order, which uses the terms "renewable" and "carbon-free" with regard to the targets for 2030 and 2050, respectively. Nuclear power is "carbon-free," but is explicitly *excluded* from the definition of "renewable energy" in § 56-576 of the Code.

¹³ Va. Const. Art. IV, § 1.

IRP is a *planning* document. Legislative enactment of a renewable or carbon-free power mandate, in some percentage and by some future date, is a possibility sufficiently realistic to merit inclusion in APCo's next IRP. Accordingly, in its next IRP we direct APCo to model the following:

- A "30% renewable power by 2030" plan;
- A "75% renewable power by 2040" plan; and
- A "100% renewable power by 2050" plan.¹⁴

Should the General Assembly enact a specific renewable or carbon-free power mandate before the date of APCo's next IRP submission, APCo shall model that specific mandate and may model any other scenarios it believes would provide useful comparative information. In its modeling of all plans, APCo shall calculate the costs to customers versus the least-cost plan and include an engineering analysis of the effects on reliability of service to customers.

Virginia-Specific Climate Change Effects

Appalachian Voices also requests that APCo be directed to account in its next IRP for the effects of climate change on Virginia, specifically its effect on APCo's ratepayers and its load forecasts.¹⁵ We direct that in all future IRPs, APCo should file accurate load forecasts that are used to support capacity planning and modeling, as well as the most accurate possible analyses of the cost impacts on its customers of meeting those capacity needs in its various plans. In support of those analyses, APCo shall include all supporting data, assumptions, and methodologies of quantification of all relevant factors. The modeling of renewable and

¹⁴ Since APCo has no Virginia-jurisdictional nuclear power, we direct that the plans shall model "renewable energy" as defined in Virginia law. APCo, if it so chooses, may also model "carbon-free," which would include nuclear, as a sensitivity.

¹⁵ See, e.g., Tr. 16.

carbon-free capacity sources, described above, should provide relevant information as to costs to customers.

Gas Price Forecasts

The reasonableness of APCo's gas price forecasts was at issue in this proceeding. Staff had concerns with the accuracy of the Company's projected natural gas price forecasts, finding that "Staff has no confidence that APCo's 2019 natural gas price forecast will serve as a reliable indicator of future fuel prices and recommends that APCo continue to re-evaluate its methodologies in future proceedings."¹⁶ The Company, in contrast, states that its forecasts are "in line with multiple industry sources."¹⁷ As future gas prices are inputs into the Company's modeling optimization process, these forecasts could affect the future mix of resources chosen, or the cost of those resources, in the model.¹⁸ Given this, in future IRP filings, we direct APCo to continue to refine the specific assumptions and sensitivity adjustments used in its gas price forecasting.¹⁹

Wind and Solar Capacity Factors

The Company is required to model its planned wind and solar resources using observed capacity factors from utility-specific, Virginia-specific, or regionally-specific operational data in future IRPs. To the extent the actual performance of such resources falls short of estimated modeled capacity factors, it may affect whether, or to what extent, the Company's optimization

¹⁶ See, e.g., Ex. 12 (White) at 19; Ex. 13 (Johnson Direct) at Attachment BJ-1, p. 5, 7-9; Ex. 11 (Dalton Direct) at 19. As a result of Staff's lower gas price forecasts, Staff's power price forecasts are also lower than the Company's. See Ex. 13 (Johnson Direct) at Report, p. 11.

¹⁷ See, e.g., Ex. 14 (Castle Rebuttal) at 5-7.

¹⁸ See, e.g., Ex. 11 (Dalton Direct) at 19; Ex. 12 (White) at 19-20.

¹⁹ Nothing herein should be construed as either acceptance or rejection of the Company's gas price forecast for any future certificate filings with the Commission.

model selects the resources.²⁰ We agree with Staff that modeling the actual average capacity performance of APCo's Company-owned fleet, or, if that is unavailable, using Virginia-specific or regionally-specific data, is more appropriate than the Company's proposal.²¹ Further, this finding is similar to prior Commission directives.²² APCo may additionally model its wind and solar resources using different capacity factors; however, if the Company chooses to do so, it shall model the actual average capacity performance as described above as the baseline assumption – any different capacity factors should be modeled as sensitivities.

Bill Impacts

We direct APCo to provide its best estimate of customer bill impacts for the least cost plan and preferred plan in future IRPs.²³ The Company should provide the incremental impact of these plans to the bill of a typical residential customer using 1,000 kilowatt-hours per month, for each of the first five years of the IRP. As we have previously held, 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.²⁴

²⁰ See, e.g., Ex. 12 (White) at 25-27; Ex. 11 (Dalton Direct) at 20-22.

²¹ See, e.g., Ex. 12 (White Direct) at 25-27; Ex. 11 (Dalton Direct) at 20-22; Ex. 14 (Castle Rebuttal) at 5-7.

²² See, e.g., *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, Doc. Con. Cen. No. 190730141, Order on Reconsideration at 4-5 (July 19, 2019).

²³ See, e.g., Ex. 11 (Dalton Direct) at 31; Tr. 8-9, 32-33.

²⁴ See *Commonwealth of Virginia, ex rel., State Corporation Commission, In re: Virginia Electric and Power Company's Integrated Resource Plan filing pursuant to Va. Code § 597 et seq.*, Case No. PUR-2018-00065, Doc. Con. Cen. No. 190640049, Final Order (June 27, 2019). Nothing in this determination directs APCo to file a full cost of service study in future IRPs. We understand that as a result, any included bill impacts would be estimates based on the best information available to the Company at the time the estimates are made. Tr. 8-9, 32-33.

Therefore, we find that it is appropriate for the Company to provide estimated bill impacts in future IRP filings.

Additional Requirements

We further direct that in future IRPs, the Company shall:

- make wind or solar power purchase agreements available options for the modeling optimization tool to select for purposes of developing a least-cost plan;²⁵
- include all known or anticipated costs of future transmission projects;²⁶
- model solar coupled with battery storage as a potential capacity resource option;²⁷
- model solar resources using the performance of current and similarly-situated technology;²⁸
- utilize accurate and updated cost estimates when modeling battery storage;²⁹
- describe the Company's modeling of, and sources of, the interconnection costs assumed for future wind and solar facilities;³⁰
- work with Staff to clarify the Company's renewable energy credit ("REC") price forecast methodology and provide sensitivity analyses based on its baseline REC price forecast;³¹ and
- continue to exclude costs associated with carbon control regulation in its least-cost plan as required by law.³²

²⁵ See, e.g., Ex. 11 (Dalton Direct) at 19-20; Ex. 14 (Castle Rebuttal) at 7; Tr. 26.

²⁶ See, e.g., Ex. 11 (Dalton Direct) at 31-35.

²⁷ See, e.g., Ex. 9 (Van Clief) at 8-11; Ex. 14 (Castle Rebuttal) at 7; Tr. 24, 26.

²⁸ Tr. 26.

²⁹ Tr. 26.

³⁰ See, e.g., Ex. 12 (White Direct) at 25. APCo should also work with Staff to develop and refine its analysis of interconnection costs. *Id.*

³¹ See, e.g., *id.* at 14; Tr. 35.

³² See, e.g., Ex. 12 (White Direct) at 12-13. The Company shall also continue to comply with all other applicable directives set forth in Commission Orders from prior IRP proceedings.

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

AN ATTESTED COPY hereof shall be sent 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, c/o Document Control Center, 1300 East Main Street, First Floor, Tyler Building, Richmond, Virginia 23219.

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