Adverse impact notification sent to Joint Commission on Administrative Rules, House Committee on Appropriations, and Senate Committee on Finance (COV § 2.2-4007.04.C): Yes[1] ☒ Not Needed ☐

If/when this economic impact analysis (EIA) is published in the *Virginia Register of Regulations*, notification will be sent to each member of the General Assembly (COV § 2.2-4007.04.B).

Virginia Department of Planning and Budget
Economic Impact Analysis [Final]

9 VAC 5-140 Regulation for Emissions Trading
Department of Environmental Quality
Town Hall Action/Stage: 4818 / 8608
April 26, 2019 [Final Stage Update of Proposed Stage Economic Impact Analysis]

Summary of the Proposed Amendments to Regulation

The Air Pollution Control Board (Board) proposes to establish the CO_2 Budget Trading Program in regulation. The original proposed regulatory language for the CO_2 Budget Trading Program was published in the Virginia Register of Regulations on January 8, 2018.[2] An economic impact analysis of that proposal was published in the Virginia Regulatory Town Hall on December 13, 2017.[3] Afterward, the Board issued a revised proposed stage with revised text, which was published in the Virginia Register of Regulations on February 4, 2019.[4] An economic impact analysis of the revised proposal was published in the Virginia Regulatory Town Hall on December 19, 2018.[5] Pursuant to Code of Virginia § 2.2-4007.04 E, additional information is

[1] Adverse impact is indicated if there is any increase in net cost for any entity, even if the benefits exceed the costs for all entities combined.

[2] See "9VAC5-140. Regulation for Emissions Trading Programs (Proposed)" at http://register.dls.virginia.gov/vol34/iss10/v34i10.pdf

[3] See http://townhall.virginia.gov/l/GetFile.cfm?File=1\4818\8130\EIA_DEQ_8130_v2.pdf

[4] See "9VAC5-140. Regulation for Emissions Trading Programs (Rev. C17) (Reproposed)" at http://register.dls.virginia.gov/vol35/iss12/v35i12.pdf

[5] See https://townhall.virginia.gov/L/GetFile.cfm?File=1\4818\8476\EIA_DEQ_8476_v1.pdf

now being reported. For full analysis of the proposal, see the economic impact analysis reports published on December 13, 2017 and December 19, 2018, as well as this report.

Estimated Economic Impact

The economic impact analysis for the revised proposed stage reported the results of modeling conducted by two consulting firms on behalf of the Department of Environmental Quality (DEQ). ICF modelled the impact of Virginia joining a CO_2 Budget Trading Program and produced several outputs, including projected energy prices in Virginia over the 2020 to 2030 time period. ICF also compared power prices under two scenarios: 1) the Commonwealth maintains the status quo and does not join a multi-state trading program (Reference), to 2) Virginia does join a multi-state trading program (Policy). The consultants found that power prices in Virginia are higher under the Policy scenario versus the Reference scenario. For example, the model indicates Virginia electricity prices of $34.90 per megawatt hour in 2025 under Policy, and $34.50 under Reference.

A different firm called the Analysis Group used the results of ICF's modelling to estimate the impact on monthly electricity bills for Virginia residential, commercial, and industrial consumers. Pursuant to DEQ's instructions, the Analysis Group assumed that customers received all of the revenue resulting from the sale of CO_2 emission allowances that had been allocated to Virginia sources. Under this assumption, the projected revenue from the sale of CO_2 emission allowances is large enough that it outweighs the higher electricity prices that occur when comparing the Policy and Reference scenarios, and also results in estimated net lower electric bills to consumers. Specifically, the Analysis Group found that over the ten-year period (on average), monthly electric bills would be 0.4 percent ($0.55) lower for residential customers, 0.6 percent ($5.24) lower for commercial customers, and 0.7 percent ($198.75) lower for industrial customers under the Policy scenario when compared to the Reference scenario.

Public comment received after the revised proposed stage referenced a different modeling approach that found negative economic impacts to the business and residential customers. Accordingly, and as required by statute, DPB has prepared a new EIA.[6] Dominion Energy and the Virginia Manufacturers Association (for example) referenced model results that were

[6] The *Code of Virginia* (§ 2.2-4007.04 E) states that DPB "shall revise and reissue its economic impact analysis" at the final stage if "there is significant or material difference between the agency's proposed economic impact analysis and the anticipated negative economic impacts to the business community as indicated by public comment."

presented by the State Corporation Commission (SCC) that found an increase of $6.95 (on average) in the typical residential customer's electric bill between 2019 and 2043. This SCC finding compares to the DEQ finding of a $0.55 decrease (on average) in monthly bills for residential customers between 2020 and 2030. Although the timeframes are not identical, the SCC has indicated that their analysis shows residential bills are higher throughout the overlapping years. It does not appear that SCC has specifically estimated the impact on electric bills for commercial and industrial customers, but the SCC analysis found that participation in a multi-state trading program would result in a $3.3 billion cost increase for Dominion. The Virginia Manufacturers Association stated in public comment, "Experience informs our members that a substantial portion of these increased costs will be passed to industrial customers."

The different results between the DEQ and SCC models appear to be largely due to differences in the assumptions used in modeling. A review of publically available information suggests that there likely are significant differences in several assumptions, and each group has identified what they assert are deficiencies in the other model. Without direct access to the models, DPB cannot confirm or reject these assertions.

The SCC modeling assumes that large units at Chesterfield and Clover coal plants would continue operation for several decades in the absence of the regulation and participation in a multi-state trading program. Their modeling indicates that participation in a multi-state trading program would cause the units to be retired between 12 to 26 years earlier than they otherwise would. The DEQ modeling assumes that these plants would cease operations much sooner with or without participation a multi-state trading program due to economic factors.

In addition, presumed prices to be paid for CO_2 emission allowances affect costs, and the two groups use very different presumed allowance prices. The table below shows the differences.

Year	DEQ/consultants	SCC/Dominion	Percentage Difference
2021	$4.01	$6.00	50%
2022	$4.01	$6.42	60%
2023	$4.01	$6.87	71%
2024	$4.55	$7.35	62%
2025	$4.55	$7.86	73%
2026	$4.55	$8.41	85%
2027	$5.18	$9.00	74%
2028	$5.18	$9.63	86%
2029	$5.18	$10.30	99%
2030	$5.65	$11.02	95%

Legal Mandates

General: The Department of Planning and Budget has analyzed the economic impact of this proposed regulation in accordance with § 2.2-4007.04 of the Code of Virginia (Code) and Executive Order Number 17 (2014). Code § 2.2-4007.04 requires that such economic impact analyses determine the public benefits and costs of the proposed amendments. Further the report should include but not be limited to: (1) the projected number of businesses or other entities to whom the proposed regulatory action would apply, (2) the identity of any localities and types of businesses or other entities particularly affected, (3) the projected number of persons and employment positions to be affected, (4) the projected costs to affected businesses or entities to implement or comply with the regulation, and (5)the impact on the use and value of private property.

Adverse impacts: Pursuant to Code § 2.2-4007.04(C): In the event this economic impact analysis reveals that the proposed regulation would have an adverse economic impact on businesses or would impose a significant adverse economic impact on a locality, business, or entity particularly affected, the Department of Planning and Budget shall advise the Joint Commission on Administrative Rules, the House Committee on Appropriations, and the Senate Committee on Finance within the 45-day period.

If the proposed regulatory action may have an adverse effect on small businesses, Code § 2.2-4007.04 requires that such economic impact analyses include: (1) an identification and estimate of the number of small businesses subject to the proposed regulation, (2) the projected reporting, recordkeeping, and other administrative costs required for small businesses to comply with the proposed regulation, including the type of professional skills necessary for preparing required reports and other documents, (3) a statement of the probable effect of the proposed regulation on affected small businesses, and (4) a description of any less intrusive or less costly alternative methods of achieving the purpose of the proposed regulation. Additionally, pursuant to Code § 2.2-4007.1, if there is a finding that a proposed regulation may have an adverse impact on small business, the Joint Commission on Administrative Rules shall be notified.