

**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**



**COMMONWEALTH OF VIRGINIA
RICHMOND
2016**

COMMONWEALTH OF VIRGINIA

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STATE CORPORATION COMMISSION

December 1, 2016

The Honorable Terence R. McAuliffe
Governor, Commonwealth of Virginia

The Honorable Thomas K. Norment, Jr.
Chairman, Commission on Electric Utility Regulation

The Honorable Frank W. Wagner
Chairman, Senate Committee on Commerce and Labor

The Honorable Terry G. Kilgore
Chairman, House Committee on Commerce and Labor Gentlemen:

The State Corporation Commission herewith transmits its report in response to Chapter 6 of the 2015 Virginia Acts of Assembly.

Please let us know if you need additional information or assistance.

Respectively submitted,

Handwritten signature of James C. Dimitri.

James C. Dimitri
Chairman

Handwritten signature of Judith Williams Jagdmann.

Judith Williams Jagdmann
Commissioner

Handwritten signature of Mark C. Christie.

Mark C. Christie
Commissioner

cc: Franklin D. Munyan
Division of Legislative Services

EXECUTIVE SUMMARY

In accordance with Chapter 6 of the 2015 Virginia Acts of Assembly ("Chapter 6"), the State Corporation Commission ("Commission") is pleased to provide a report to the Governor and the General Assembly outlining the Commission's assessments of integrated resource plans ("IRP") filed annually by investor-owned electric utilities and the impact of the U.S. Environmental Protection Agency's ("EPA") Final Rule under § 111(d) of the Federal Clean Air Act ("Final Rule"). The EPA issued its Final Rule on August 3, 2015,¹ which included significant modifications to the EPA's proposed rules that were issued in 2014. On February 9, 2016, the U.S. Supreme Court granted a stay of the regulation until it has been reviewed by the D.C. Circuit and then subsequently either reviewed or denied review by the Supreme Court. Oral argument at the D.C. Circuit began on September 27, 2016, and the matter remains pending before the Court. Accordingly, the full impact of the Final Rule on Virginia, if implemented, cannot be determined at this time.

The most recent IRPs submitted by Virginia's electric utilities, Virginia Electric and Power Company d/b/a Dominion Virginia Power ("DVP"), Appalachian Power Company ("APCo") and Kentucky Utilities Company d/b/a Old Dominion Power Company ("KU"), were filed on May 1, 2016. The 2016 IRPs generally indicate that compliance with the Final Rule can be achieved and that the impacts on unit retirements and rates will vary significantly depending on how the Final Rule is implemented in Virginia and the surrounding region.

At this point in time, the broad range of possible compliance pathways associated with the Final Rule in Virginia and other states where generating facilities serving Virginia are located make it impossible to predict with any degree of certainty the generating unit retirements or utility rate impacts that could potentially result from the Final Rule. Pending legal challenges to the Final Rule and the upcoming change in the federal administration add even greater uncertainty regarding § 111(d) of the federal Clean Air Act. Each of Virginia's utilities has estimated the costs and rate impacts of the Final Rule, as described herein; however, there remain many contingencies that could substantially affect those estimates. The Commission will continue to assess the Final Rule and related developments as part of an ongoing effort to better assess the ultimate implications of the Final Rule.

¹ The Final Rule was published in the Federal Register on October 23, 2015. *Carbon Pollution Emission Guidelines for Existing Stationary Sources: Electric Utility Generating Units*, 80 Fed. Reg. 64,662, Final Rule (Oct. 23, 2015).

I. BACKGROUND AND INTRODUCTION

The Commission is pleased to submit this Report in response to Chapter 6 which, among other things, directs the Commission to:

... 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 State Corporation 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 EPA issued its Final Rule on August 3, 2015. The Final Rule included significant modifications to the EPA's proposed rules that were issued on June 18, 2014. The Final Rule provided states with six potential pathways for developing state implementation plans. The six potential compliance pathways include three mass based and three rate based alternative approaches. A rate based approach gauges compliance on a pounds per megawatt basis while a mass based approach considers compliance on a total tons of carbon dioxide emissions basis.

On February 9, 2016, the Supreme Court granted a stay of the regulation until it has been reviewed by the D.C. Circuit and then subsequently either reviewed or denied review by the Supreme Court. Oral argument at the D.C. Circuit began on September 27, 2016, and the matter remains pending before the Court.

In addition to the judicial processes likely to continue beyond 2016, in January 2017 a new federal administration will succeed the administration that promulgated the Final Rule.

II RESOURCE PLANS

Chapter 6 requires that each investor-owned electric utility file updated an IRP annually. As discussed below, DVP, APCo and KU filed IRPs addressing the implications of proposed § 111(d) regulations on July 1, 2015, and filed updated IRPs addressing the Final Rule on May 1, 2016.

2015 Resource Plans

The 2015 IRPs were filed prior to the EPA's issuance of the Final Rule and reflected requirements associated with the EPA's proposed rules and consequently did not address the substantial modifications contained in the Final Rule. As such, the resource plans included in

those filings were not optimized for compliance with the Final Rule.² Accordingly, the Commission was unable to conduct any meaningful analysis of how the Final Rule would impact "the amount, reliability, and type of generation facilities needed to serve Virginia native load" based on the information contained in those filings.

The Commission's Final Orders in the 2015 proceedings generally discussed the uncertainties associated with implementation of the Final Rule and set forth additional requirements for more detailed information regarding various implementation options as provided for in the Final Rule to be filed in the 2016 IRP filings.³ For example, the Commission's Final Order on APCo's 2015 IRP stated:

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.⁴

2016 Resource Plans

Chapter 6 requires that each electric utility file an updated annual IRP by May 1 in 2016 and thereafter. DVP, APCo and KU filed updated IRPs on May 1, 2016.⁵ The updated IRPs included information regarding each utility's respective assessment of compliance under various rate based and mass based alternatives for State Implementation Plans that could potentially be developed under the Final Rule. The 2016 IRP filings generally indicate that compliance with the Final Rule can be achieved and that the impacts on unit retirements and rates will vary significantly depending on how the Final Rule is implemented in Virginia and the surrounding region.

DVP's 2016 IRP included a scenario that assumed there would be no CO₂ regulation, for purposes of comparison against four possible compliance scenarios. DVP's analyses included two rate based and two mass based compliance scenarios. Based on DVP's analyses and assumptions, the expected CPP cost of the compliance would range from \$5.1 billion to \$12.8 billion on a net present value basis depending on the compliance pathway alternative. The monthly bill changes

² In other words, the plans were not developed with a goal of minimizing costs incurred under the requirements of the Final Rule.

³ *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-2015-00035, 2015 S.C.C. Ann. Rept. 320, Final Order (Dec. 30, 2015); *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-2015-00036, Doc. Con. Cen. No. 160210012, Final Order (Feb. 1, 2016) ("*APCo 2015 IRP*"); *Commonwealth of Virginia, ex rel., State Corporation Commission, In re: Kentucky Utilities Company d/b/a Old Dominion Power Company's Integrated Resource Plan filing pursuant to Va. Code § 56-597 et seq.*, Case No. PUE-2015-00037, Doc. Con. Cen. No. 160320122, Final Order (Mar. 14, 2016).

⁴ *APCo 2015 IRP* Final Order at 9.

⁵ At the time of this report, the Commission's final orders have not yet been issued in the 2016 IRP proceedings, which are docketed as Case Nos. PUE-2016-00049 (DVP), PUE-2016-00050 (APCo), and PUE-2016-00053 (KU).

for residential customers using 1,000 kilowatt-hours of electricity per month associated with the various compliance scenarios vary greatly across the scenarios and from year to year. These monthly bill impacts range from as little as 14¢ to over \$43. In discussing DVP's analysis, the Commission Staff noted that DVP had

modelled its system as a compliance "island" where all CPP compliance was effectively achieved through in-system actions. This could overstate CPP related compliance costs since it is possible, and perhaps likely, that final CPP implementation would provide for some form of trading where the Company could avail itself of lower cost compliance alternatives that may be available through regional or cross state measures.⁶

APCo's 2016 IRP similarly examined a "no CO₂ regulation" scenario for purposes of comparison against six possible compliance scenarios, including both mass and rate based scenarios. Based on APCo's analyses and assumptions, the expected CPP cost of the compliance would range from \$317.6 million to \$834.9 million on a net present value basis depending on the alternative compliance pathway. APCo's results produce a range of possible rate impacts depending on the scenario and the years examined and indicate that residential rates will increase by 2.3% to 4.7% after full implementation of the CPP in 2031 and generally continue to rise thereafter.

Although the compliance scenarios generally include varying levels of increased renewable and/or nuclear resources and decreased fossil-fueled generation compared to the "no CO₂ regulation" scenario, the range of potential implementation paths and resource mixes is very broad. Identifying possible compliance scenarios is further complicated by the fact that Virginia's investor-owned utilities own generating facilities that are located in several states and each state could potentially adopt differing compliance pathways. As such, it is not possible to accurately predict generating unit retirements or utility rate impacts that could potentially result from the Final Rule.

The pending legal challenges to the Final Rule and a changing federal administration add even greater uncertainty regarding § 111(d) of the federal Clean Air Act. Given the significant and continuing uncertainty associated with implementation of the Final Rule, the Commission's Staff has recommended in these IRP proceedings that actual utility commitments for resources or actions necessary for compliance should be delayed as long as possible to allow for further developments.

III. SUMMARY AND CONCLUSIONS

The broad range of possible compliance pathways associated with the Final Rule in Virginia and other states where generating facilities serving Virginia are located makes it impossible at this time to predict with any degree of certainty the generating unit retirements or utility rate impacts that could potentially result from the Final Rule. Legal challenges to the Final Rule and a changing federal administration add even greater uncertainty regarding § 111(d) of the federal Clean Air Act. As such, the Commission cannot offer at this time any

⁶ Case No. PUE-2016-00049, Direct Pre-filed Testimony of Cody D. Walker at 9 (Aug. 31, 2016).

definitive analysis on how the Final Rule will impact "the amount, reliability, and type of generation facilities needed to serve Virginia native load" or the specific impact on the rates paid by Virginia's electricity consumers. The Commission will continue to assess the Final Rule and related developments as part of an ongoing effort to better assess the ultimate implications of the Final Rule.