

**BEFORE
THE UNITED STATES ENVIRONMENTAL PROTECTION AGENCY**

Federal Plan Requirements for :
Greenhouse Gas Emissions from Electric : EPA-HQ-OAR-2015-0199
Utility Generating Units Constructed on :
or Before January 8, 2014; Model :
Trading Rules; Amendments to :
Framework Regulations. :

**COMMENTS
SUBMITTED ON BEHALF OF
THE PUBLIC UTILITIES COMMISSION OF OHIO**

January 21, 2016

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The Public Utilities Commission of Ohio (PUCO) respectfully submits these Comments in response to the rulemaking issued by the United States Environmental Protection Agency (U.S. EPA) on October 23, 2015, in Docket No. EPA-HQ-OAR-2015-0199 (the Proposed FIP Rule).¹

¹ *Federal Plan Requirements for Greenhouse Gas Emissions From Electric Generating Units Constructed on or Before January 8, 2014; Model Trading Rules; Amendments to Framework Regulations*, 80 Fed. Reg. 64,965 (proposed Oct. 23, 2015) (to be codified at 40 C.F.R. pts. 60, 62, and 78).

I. INTRODUCTION

The Proposed FIP Rule is the U.S. EPA's initial attempt to establish a federal implementation plan (FIP) to implement the greenhouse gas (GHG) emission guidelines finalized on August 3, 2015 (the Clean Power Plan or CPP). The U.S. EPA intends to impose a FIP upon those states that either do not submit a state plan to implement the CPP or do not submit a plan deemed acceptable to the U.S. EPA.

The U.S. EPA presents two approaches to a potential FIP within the Proposed FIP Rule: a rate-based emission trading program and a mass-based emission trading program. The PUCO will opine upon technical issues inherent to each of these two approaches within these comments. The PUCO continues to maintain that the CPP is unlawful and that the U.S. EPA has stretched beyond its jurisdiction in drafting that regulation. Concurrently, the PUCO seeks to be constructive in its commentary regarding the CPP in the event that Ohio is eventually required to comply. That duality is extended to these comments.

As such, the PUCO incorporates by reference all legal, technical, and policy challenges raised in its comments to the CPP proposed rule, the Ohio Environmental Protection Agency's (Ohio EPA) comments to the CPP proposed rule, and the Ohio Attorney

General's comments to the CPP proposed rule.² In addition, the PUCO incorporates by reference the comments submitted by the Ohio EPA and the Ohio Attorney General to the Proposed FIP Rule.³

The PUCO appreciates this opportunity to provide feedback on the technical components of the Proposed FIP Rule. The PUCO's core mission is to assure the delivery of reliable and cost effective power to Ohio's residents and businesses. By providing technical comments to the Proposed FIP Rule, the PUCO hopes that the FIP, if imposed upon Ohio, will act in as much accord with that core mission as possible. The PUCO's technical comments will track the Proposed FIP Rule and will appear in the order that comments have been solicited by the U.S. EPA.

² The Public Utilities Commission of Ohio Comments on the U.S. EPA's June 18, 2014 *Carbon Pollution Emission Guidelines for Existing Stationary Sources: Electric Utility Generating Units*, 79 Fed. Reg. 34,829, Docket ID No. EPA- HQ-OAR-2013-0602 (Dec. 1, 2014); Ohio EPA Comments on the U.S. EPA's June 18, 2014 *Carbon Pollution Emission Guidelines for Existing Stationary Sources: Electric Utility Generating Units*, 79 Fed. Reg. 34,829, Docket ID No. EPA- HQ-OAR-2013-0602 (Dec. 1, 2014); Comment from the Ohio Attorney General on Proposed EPA *Carbon Pollution Emission Guidelines for Existing Stationary Sources: Electric Utility Generating Units*, 79 Fed. Reg. 34,829, Docket ID No. EPA- HQ-OAR-2013-0602 (Dec. 1, 2014); Comment from the Attorneys General of the States of Oklahoma, West Virginia, Nebraska, Alabama, Florida, Georgia, Indiana, Kansas, Louisiana, Michigan, Montana, North Dakota, Ohio, South Carolina, South Dakota, Utah and Wyoming on Proposed EPA *Carbon Pollution Emission Guidelines for Existing Stationary Sources: Electric Utility Generating Units*, 79 Fed. Reg. 34,829, Docket ID No. EPA- HQ-OAR-2013-0602 (2014).

³ Ohio EPA Comments on U.S. EPA's October 23, 2015 Proposed Rule, *Federal Plan Requirements for Greenhouse Gas Emissions From Electric Generating Units Constructed on or Before January 8, 2014; Model Trading Rules; Amendments to Framework Regulations*, 80 Fed. Reg. 64,965 (Jan. 2016); Ohio Attorney General Comments on U.S. EPA's October 23, 2015 Proposed Rule, *Federal Plan Requirements for Greenhouse Gas Emissions From Electric Generating Units Constructed on or Before January 8, 2014; Model Trading Rules; Amendments to Framework Regulations*, 80 Fed. Reg. 64,965 (Jan. 2016).

II. COMMENTS OF THE PUBLIC UTILITIES COMMISSION OF OHIO

A. Background and Federal Plan Structure

1. Timing of U.S. EPA Actions

The U.S. EPA's deadlines associated with the CPP remain very challenging and, at times, unrealistic. Within the Proposed FIP Rule, the U.S. EPA seeks comment on over 140 different areas of FIP implementation. States were given just 90 days to: i) comprehend the Proposed FIP Rule; ii) identify and aggregate the areas on which the U.S. EPA solicited comments within the Proposed FIP Rule; iii) evaluate which of these areas would be worthwhile to opine upon; iv) put pen to paper in comment drafting, and; v) vet potential comments for approval through appropriate channels prior to submission. The PUCO posits that both Ohioans and Ohio-based utilities are disadvantaged by their state and federal agencies hastily attempting to provide meaningful responses to over 140 gaps in the Proposed FIP Rule in this 90-day comment timeframe.

This timeframe is even more challenging when considering that the proposed CPP and the final CPP (and associated FIP) are very different attempts at regulating GHG. While there are some similarities, the express inclusion in the final CPP of interstate trading along with defined compliance pathways have mandated that states both relearn the regulation, and conduct entirely new technical analyses.

Further, the U.S. EPA has stated that it will release model trading rules in the summer of 2016, and at the same time is requiring an initial statement of compliance even for those states seeking extensions in September 2016. A state that endeavors to be diligent

and thoughtful in determining the best path to compliance is disadvantaged by the proximity in these timeframes.

Last, although the U.S. EPA extended initial compliance for the CPP to 2022, it remains an ambitious deadline. Even through an expedited process, it would take several years for state legislatures and administrative agencies to amend and revise their respective statutes and administrative rules to reflect selected or mandated CPP compliance. Subsequent to state administrative and legislative resolution, utilities would need time to formulate their plans and processes for compliance, with particular need for additional time among those utilities with assets in multiple states or located in states that participate in a multi-state regional plan.

2. Federal Plan Structure to Achieve Reductions: Addressing Reliability Concerns

In the final CPP, the U.S. EPA included a reliability safety valve that could be invoked if an unanticipated catastrophic emergency caused a conflict between maintenance of electric reliability, and inflexible requirements that a state plan might impose on an affected electric generating unit (EGU).⁴ Within the Proposed FIP Rule, the U.S. EPA requests comment on the need for a reliability safety valve within the FIP.⁵

The U.S. EPA should unquestionably include a reliability safety valve in the FIP. The U.S. EPA has consistently emphasized the importance of preserving the reliability of

⁴ CPP at 64,877.

⁵ Proposed FIP Rule at 64,982.

the electric grid in tandem with CPP compliance. In the final CPP rule, the U.S. EPA states numerous times and in a variety of ways that electric system reliability is of paramount importance.⁶ U.S. EPA Administrator McCarthy declared at a speaking engagement in April 2015 that there is “...absolutely no scenario that I will accept where [electricity] reliability comes into question...”⁷ It is contradictory for the U.S. EPA to consistently emphasize the importance of preserving grid reliability and simultaneously question whether a reliability safety valve should be included in the FIP.

The U.S. EPA posits that a reliability safety valve will not be necessary to include in the FIP due to the interstate trading regime that the FIP will create. This theory is highly speculative. We cannot yet predict the scope, scale, and generation makeup of either an allowance or emission rate credit (ERC) trading marketplace. The CPP allows for states to make that determination, and, assuming that the CPP withstands legal scrutiny, said determination is not likely to be made by a majority of states until September 2018.

Even if the majority of states do participate in an interstate trading regime, there is no guarantee that enough allowances or ERCs will exist within that regime to meet demand and maintain reliability. By 2030, construing the data as liberally as possible by utilizing both U.S. EPA and Energy Information Administration retirement data sets, fossil emitting generators will need to obtain 344,897,759 allowances *in addition* to those

⁶ See e.g., 80 Fed. Reg. 64665.

⁷ Thursday, Apr. 23, 2015, IHSCeraweeek, Houston, TX.

that will be allotted to the states by the U.S. EPA in order to meet projected demand. At present, only 23,727,406 surplus allowances exist, spread across thirteen states and the Land of the Fort Mojave Tribe. This means that, based upon our nation's current generation mix and demand projections for 2030, an allowance deficit will exist for a national mass-based trading regime of 321,170,353 allowances.⁸

While this deficit can be addressed through major retirements of fossil emitting generating units by 2030, the projected deficit suggests a very real concern about meeting our nation's electricity demand. The more our generating units are stretched to meet that demand, the greater the potential reliability concern, even in the most utopian trading regime. Very simply, a reliability mechanism must be written into the FIP to guard against the possibility that there will not be enough allowances or ERCs in the trading market that the U.S. EPA seeks to create.

Further, a scenario could exist wherein a state that has been subjected to a FIP has a significant amount of generation that must run in an extreme weather scenario, akin to the polar vortex of 2014. If the generators in this state cannot utilize a reliability safety valve, then an entire regional transmission organization footprint could suffer, hampering

⁸ See U.S. EPA, *Proposed Federal Plan for the Clean Power Plan – Technical Documents*, Data file: Appendix A: Allocations and Underlying Data (Nov. 24, 2015), available at <http://www.epa.gov/cleanpowerplan/proposed-federal-plan-clean-power-plan-technical-documents> and <http://www.epa.gov/sites/production/files/2015-11/tsd-fp-allowance-allocation-appa.xlsx>; See also, U.S. EPA, *Clean Power Plan Final Rule Technical Documents*, Data file: Goal Computation Appendix 1-5 (Nov. 24, 2015), available at <http://www.epa.gov/cleanpowerplan/clean-power-plan-final-rule-technical-documents> and <http://www.epa.gov/sites/production/files/2015-11/tsd-cpp-emission-performance-rate-goal-computation-appendix-1-5.xlsx>.

the U.S. economy and endangering the citizenry within that footprint. This is not acceptable.

In the event that the U.S. EPA decides to include a reliability safety valve in the FIP and model trading rules, the agency should create a “reliability bank” of allowances or ERCs that can be distributed to these generators if the safety valve is invoked. If the FIP consists of a mass-based trading regime, the allowances should comprise a set-aside that is above and beyond, and not part of, the standard pool of allowances allotted to a state. If the FIP consists of a rate-based trading regime, the U.S. EPA should appropriate a certain number of ERCs to be distributed to those plants that are needed to run. Neither the state nor the generators in that state should be penalized for the necessity of maintaining a reliable electric grid.

The inclusion of a reliability safety valve in the FIP is, simply, smart policy and planning. The U.S. EPA posits that a reliability safety valve will not be needed in a trading environment. Absent analysis from an agency or organization specializing in grid reliability, the PUCO cannot share in this position. The U.S. EPA is not, nor (to its credit) has it held itself out to be, the regulator that is charged with ensuring grid reliability. Thus, it is prudent to plan for the unexpected, especially when the unexpected is completely outside of the realm of jurisdiction and competence of the regulatory agency promulgating the subject regulation.

B. Rate-Based Implementation Approach

1. Crediting Mechanism: ERCs Generated and Owed Against a Standard

Under a rate-based emission standard approach in the FIP, the U.S. EPA proposes that EGUs subject to emission performance requirements for GHG emissions will need to either emit at or below their rate-based emission standard or acquire ERCs to achieve compliance.⁹ The U.S. EPA seeks comments on ways to safeguard the validity of an ERC.¹⁰

The final FIP rule should ensure the validity of an ERC through the application and issuance process. The U.S. EPA has set forth a rigorous and administratively intensive process for creating an ERC. It would be unreasonable to place the burden of proof associated with the validity of the ERC on the purchaser of the ERC, particularly because the ERC could be traded multiple times over many years before it is used for compliance purposes. Once an ERC is processed and verified, it should be deemed valid, otherwise there is no use in incurring the administrative costs associated with having an independent verifier, as is concurrently proposed by the U.S. EPA. As an alternative, the final FIP rule could include a provision stating that ERC fraud would result in fines to the associated verifier, or ultimately, to the revocation of the associated verifier's accreditation by the U.S. EPA to perform verification services.

⁹ Proposed FIP Rule at 64,990.

¹⁰ *Id.* at 64,991.

2. Crediting Mechanism: Incremental NGCC ERCs

The Proposed FIP Rule describes a formula to credit incremental natural gas combined cycle (NGCC) generation with ERCs as a mechanism to shift generation from fossil steam generating units to NGCC units. Such generation shift would be credited in order to incent an NGCC unit's generation of electricity at a less carbon-intensive rate than fossil steam generating units. The proposed formula to compute the generation shift, otherwise termed the Gas Shift ERCs (GS-ERCs), is a product of the NGCC Generation, the Incremental Generation Factor (IGF), and the GS-ERC Emission Factor.¹¹

The IGF should be eliminated from the GS-ERC calculation, as it is incompatible with market-driven principles. Also, removing the IGF from the GS-ERC calculation will incentivize underutilized NGCC by decreasing costs and allowing those units to be dispatched more frequently – a result that the U.S. EPA should want. The IGF is calculated using the formula: $IGF = 1 - (\text{Regional 2012 NGCC Baseline} / 75\% \text{ NGCC Regional Capacity})$. The assumption that affected NGCC units can choose to operate at a 75% capacity factor, which is an increase from the 2012 baseline levels, fails to take into account economic dispatch used to determine which generation facilities are used to meet system load. The total power generated in a given time period and associated capacity factor will be based on how frequently the unit is dispatched in the market, rather than at the sole discretion of the unit owner or operator.

¹¹ Proposed FIP Rule at 64,992.

3. Crediting Mechanism: Incremental NGCC ERCs

The U.S. EPA also requests comment on whether the GS-ERC Emission Factor should be calculated on a unit by unit basis (as currently proposed) or on the least stringent region's baseline 2012 average emission rate.¹²

The GS-ERC Emission Factor should be calculated on a unit-by-unit basis, as proposed. This will better incent affected NGCC units to reduce emission rates by directly rewarding the affected units within a state for having emission rates lower than the regional average. In Ohio, for instance, basing the GS-ERC Emission Factor on the 2012 figures from the Eastern Interconnection would yield an emission rate of 894 lbs./megawatt hour (MWh) on average, while basing the GS-ERC Emission Factor on Ohio-specific 2012 information would result in a reduced emission rate of 866 lbs./MWh on average. Therefore, basing the GS-ERC Emission Factor on the Ohio-specific 2012 information rather than the 2012 figures from the Eastern Interconnection would result in less carbon dioxide emissions and better perpetuation of the goals stated by the U.S. EPA in proposing this rule.

¹²

Proposed FIP Rule at 64,993.

4. Crediting Mechanism: Eligible Emission Reduction Measures for ERC Generation

In the Proposed FIP Rule, the U.S. EPA specifies the following categories of renewable resources as eligible to be issued ERCs: wind, solar, geothermal power, hydro-power, and new nuclear generation. The U.S. EPA requests comment on the inclusion of other emission reduction measures as eligible for ERC issuance under the rate-based federal plan.¹³

The FIP should be flexible enough to accommodate all viable zero- and low-carbon emitting measures for the creation of ERCs and allowances. If the purpose of the CPP and the FIP are to reduce the carbon dioxide emissions of the state, all measures that do this should be counted, rather than selecting only a few measures for compliance. Distributed renewable energy (RE), biomass, combined heat and power, and waste heat power should be included in the categories of measures eligible for the creation of ERCs and allowances under the federal plan.

Similarly, the final FIP rule should include a streamlined process for adding new measures to the list of eligible resources that can create ERCs and/or allowances, as the landscape of zero- and low-carbon emitting technologies develops. Eligibility should be broad in scope, so that the least-cost options can be used for compliance purposes and states can maximize discretion and flexibility. This would allow the marketplace to take action, rather than the various levels of government regulators, to more quickly develop

¹³

Proposed FIP Rule at 64,994.

technologies that complement the goals of the CPP and the FIP, in addition to swiftly reacting to and reflecting changes in state renewable portfolio standard mandates and resource adoption.

5. ERC Tracking and Compliance Operations: Recordation of ERC Generation and ERC Issuance

The U.S. EPA proposes to issue ERCs for qualifying generating entities once per year, but seeks comments on whether such issuance should occur at different intervals (e.g. quarterly, biannually, etc.).¹⁴

An annual ERC issuance and application acceptance period would negatively impact the transparency and efficiency of the ERC trading market. The PUCO instead suggests that ERCs should be permitted to be issued more frequently, with applications permitted to be accepted more frequently. ERCs should be issued, at a minimum, quarterly but preferably monthly. Similarly, project eligibility applications should be accepted on a quarterly basis, if not more frequently. This proposal of more frequent ERC issuance and application acceptance will foster increased efficiency and transparency of the market.

Ohio already has a successful implementation of such issuances. Currently under Ohio's Renewable Portfolio Standard, services administered by PJM Environmental Information Services (EIS) through the Generation Attribute Tracking System are able to

¹⁴

Proposed FIP Rule at 64,999.

issue renewable energy credits (RECs) monthly and accept their applications continuously. The U.S. EPA should leverage the knowledge and capabilities of existing attribute tracking systems, in lieu of reinventing the wheel and increasing the cost of compliance, which will ultimately be borne by electric ratepayers.

6. Evaluation, Measurement and Verification Plans, Monitoring and Verification Reports, and Verification Reports

The Proposed FIP Rule identifies and discusses proposed evaluation, measurement, and verification (EM&V) approaches to quantify and verify MWhs from RE, demand-side energy efficiency (EE), and other eligible measures used to generate ERCs or otherwise adjust an emission rate. In its Proposed FIP Rule, the U.S. EPA requests comments on a wide assortment of topics related to EM&V, both in relation to the model rule and the guidance document. The PUCO is primarily concerned with the overly stringent approach taken in multiple areas of the EM&V proposal, particularly those in which state-level protections are better able to ensure appropriate quantification and verification of ERCs.

First, the Proposed FIP Rule suggests that independent verification requirements are necessary to ensure the integrity of a rate-based emission trading program and seeks comments on the proposed requirements for an independent verifier.¹⁵ The Proposed FIP Rule imposes significant restrictions upon entities before permitting qualification as an

¹⁵ Proposed FIP Rule at 65,001.

independent verifier. Such overly zealous requirements, including the proposed restrictions related to conflicts of interest and the requirement that verifiers must be approved or accredited by the U.S. EPA, may limit the pool of potential independent verifiers to be miniscule or potentially nonexistent. This limited pool of verifiers would thus limit the scheduling availability of the few approved verifiers to provide their services within each state and subsequently enable increased costs due to the limited supply of available, approved verifiers in the market.

Second, in describing the qualifications of potentially credible ERC resources, the U.S. EPA proposes a list of requirements that is too restrictive.¹⁶ The proposed criteria limit the qualifications to certain categories of measures, which it should broaden to include all non-carbon dioxide or reduced carbon dioxide emitting generation resources. Additionally, such list of potential resources should allow for the inclusion of a state's existing renewable and EE programs.

Third, the U.S. EPA proposes that each: i) EM&V plan must identify how verification will be done; ii) measurement and verification report must document installation and quantification of energy savings and generation; and iii) verification report must be done by an independent verifier to verify what was previously reported and describe the review that was done in order to verify it.¹⁷ These multilayered requirements for verification are redundant and unnecessary on their own. When combined with the entity-level

¹⁶ See Proposed FIP Rule at 65,002.

¹⁷ *Id.* at 65.003.

and state-level reviews already being conducted in states such as Ohio, these additional layers of verification apply costs and not value on both states and their utilities. Instead, the U.S. EPA should accept Ohio's current process and achieve the shared goal more efficiently.

Fourth, proposals such as the requirement that all demand-side EE used to generate ERCs be quantified on an *ex-post* basis effectuate a different result than the U.S. EPA's stated intent of establishing EM&V requirements that would help states quantify and verify savings.¹⁸ Ohio's experience has shown that such required *ex-post* measurement would be impractical in many instances and impossible in others. Instead, the PUCO suggests relying on deemed EE savings based on the difference between the equipment that is installed and the equipment that is replaced, which is the measurement practice already in place in Ohio and other states.

Fifth, the U.S. EPA proposes a common practice baseline which seeks to count an EE measure only if it is of greater efficiency than what other entities in the industry are doing, regardless of whether the measure exceeds relevant industry codes or federal standards.¹⁹ The PUCO is adamantly opposed to this approach. It is not clear how the U.S. EPA would conclude a practice is "common" in order to set the standard. Many industrial processes are unique and a "common" standard in such cases is meaningless. Implementation will be a mess. Moreover, this process creates compliance chaos. It

¹⁸ Proposed FIP Rule at 65,005.

¹⁹ *Id.*

leads to ever increasingly stringent requirements and uncertainty for states about what practices may be found to qualify over time, in addition to ever reducing levels of what may be counted under the common practice baseline. The U.S. EPA should eliminate the proposed common practice baseline before issuing the EM&V requirements of the final FIP rule.

Sixth, the Proposed FIP Rule suggests that annual EE savings values be quantified on a recurring basis over the effective useful life of the EE measure. This proposal includes reapplication every one, two, or three years for utility-administered EE programs, and every year for individual, commercial, or industrial projects.²⁰ Such re-establishment of EE savings is unnecessarily burdensome in terms of administration, time, and expense, particularly when savings levels have been established by an approved method. Instead, the method of determining EE savings utilized in Ohio should be used, whereby an EE measure is installed and savings are determined at that time without expiration. At the end of the useful life of that measure, it will undoubtedly be replaced with an equally efficient or more efficient measure; thus, the efficiency achieved by installation of that measure never disappears. There is nothing to be re-verified. The measure should be continually counted. Therefore, savings levels and period over which such savings will apply should be set at the time of measure installation, and not be revisited at later dates in order to reduce the level of measured savings.

²⁰

Proposed FIP Rule at 65,006.

C. Mass-Based Implementation Approach

1. Proposed Allowance Allocation Approach and Alternatives

In addition to the rate-based implementation approach, the U.S. EPA proposes a mass-based implementation approach for the FIP. This mass-based approach would create tradable allowance instruments that authorize a specific quantity of carbon dioxide emissions. The PUCO recommends, first and foremost, that states be provided maximum flexibility in allocating their allowances under a mass-based FIP approach. This allows states to have some semblance of control over their energy future through allowance allocation, set-aside creation, and associated rate mitigation. Every state is different, and every state will have different priorities in preserving and planning for its energy future. The U.S. EPA should not be concerned about allowance allocation, as states will be allocating within the confines of the CPP. State decisions regarding allowances will impact allowance and energy markets, but presumably, states will achieve compliance within the confines of this mass-based interstate trading mechanism. Therefore, the PUCO recommends providing states with the ultimate decision-making ability regarding allowance allocation.

Having made this position clear, if the U.S. EPA does not defer to state expertise in allowance allocation, the U.S. EPA should, at a minimum, revise two specific areas on

which it seeks comments: i) the idea of auctioning all, or a portion of, each state's allowances; and ii) the proposal to allocate allowances to load serving entities (LSEs) instead of affected EGUs.²¹

As to this first area of requested comment, the PUCO opposes a U.S. EPA-administered auction of allowances as part of a FIP. The PUCO instead prefers a non-prejudicial allocation approach that is not unduly complex or administratively burdensome, such as an allocation that is proportionate to historical emissions and updated at each interim compliance period. Additionally, should the U.S. EPA determine an auction is the appropriate allocation methodology, the PUCO specifically opposes the proposal that revenue received from such an auction must be deposited into the U.S. Treasury. The U.S. EPA does not provide support for its reasoning behind its position that such an outcome would be required. If the U.S. EPA determines an auction is the appropriate allocation methodology, the PUCO asserts that such auction revenue should be reallocated, at the state's discretion, to investments and needs of the energy industry.

Secondly, while the U.S. EPA posits that allowance allocation to LSEs will reduce impacts on ratepayers, this will not necessarily be the case in Ohio. Electric generation service in Ohio is competitive, and customers of Ohio electric distribution utilities can procure their default service from a variety of suppliers. Those customers choosing not to shop for this service are served with generation procured by Ohio electric distribution utilities through a competitive auction process, in which bidders compete to serve load at

²¹ Proposed FIP Rule at 65,018.

the lowest price. Thus, in Ohio, there can be no requirement for LSEs to pass the value of any allowance allocations they receive through to the ratepayers that they serve. Should LSEs be allocated allowances, market forces alone will determine what portion, if any, of the value of such allowances will result in lower rates. The fact that allowances may be allocated to an LSE at zero cost does not mean that the value of the allowance will necessarily benefit Ohio's ratepayers through lower rates. Additionally, LSEs who also serve load in other states will likely optimize their decisions across their entire fleet, thus suggesting that the value of the allowance that is allocated by Ohio may ultimately benefit a generating unit in another state entirely.

2. Allowance Set-Asides to Address Leakage to New Sources

The U.S. EPA introduces the concept of "leakage" in the CPP final rule. As described by the U.S. EPA in both the CPP and the Proposed FIP Rule, leakage occurs when air pollution sources that do not have to comply with a set of standards are advantaged over air pollution sources that must comply. This, according to the U.S. EPA, results in an increase in the overall emissions of a pollutant. Within the Proposed FIP Rule, new NGCC units are thought to cause this phenomenon with regard to a carbon dioxide emissions trading market and with respect to new renewable units coming online. The Proposed FIP Rule invites comment on the key parameters for the appropriate design of a set-aside approach, which would provide targeted allocations of a limited portion of

allowances to existing NGCC units as a means of mitigating leakage (hereinafter referred to as leakage set-asides).²²

As the CPP final rule was the U.S. EPA's first introduction of the concept of leakage, the PUCO takes this opportunity to address its four main concerns with the idea as a whole. First, leakage addresses new NGCC units that should not be regulated in an existing source rule. Second, leakage is a nonexistent problem as it does not exist in today's market. Third, even if leakage did exist and was a problem, the U.S. EPA's proposed resolution of leakage set-asides does not address the identified "problem" of leakage. Fourth, the U.S. EPA provides no guidance on how states can appropriately demonstrate that leakage has not occurred.

a. New NGCC Units Do Not Belong in an Existing Source Rule

Regulation of new NGCC units do not belong in the final CPP rule. New NGCC units are currently regulated by the New Source Performance Standards for carbon dioxide emissions from utility-scale combustion sources.²³ Further, under the proposed CPP rule, the U.S. EPA did not contemplate that new NGCC units would be regulated under this existing source rule. In fact, in the proposed CPP rule, the U.S. EPA looked upon new NGCC units as part of the solution to a lower carbon future. In the final CPP rule, these units are treated as part of the problem. The U.S. EPA is attempting to capture

²² Proposed FIP Rule at 65,020.

²³ See e.g., New Source Performance Standards, 40 C.F.R. pt. 60.

these generating units in both existing plant and new plant regulatory paradigms, creating regulatory hurdles for the introduction of new NGCC units that could serve to cripple their construction in the marketplace.

b. Leakage Does Not Exist in Today's Market

The market already biases efficient NGCC units to be dispatched ahead of less efficient NGCC units. The Proposed FIP Rule presents no proof that the proposed leakage set-asides will prevent new NGCCs from causing an increase in carbon dioxide better than natural market mechanisms. New NGCC turbines are already typically more efficient and less costly to operate than existing NGCC units due to the better combustion efficiency exhibited by newer technology. Additionally, because NGCCs are already dispatched before coal-fired boilers in current market conditions, new NGCCs will displace existing coal-fired boilers and decrease carbon dioxide emissions as a natural result of the market. The only time mass-based emissions trading leakage could occur is a situation wherein coal-fired boilers are economically dispatched prior to new and existing NGCC, despite the cost of allowances. However, due to the scale of gas market plays in various locations across the United States, the chance of states experiencing such a phenomenon is *de minimis* at best.

c. The Proposed "Problem" Remains Unresolved

Furthermore, the leakage set-asides do not actually address the concept of leakage, but rather encourage a position of building and using renewable resources instead of building and using combustion electricity generators. After the New Source Performance

Standards for new EGUs were finalized under section 111(b) of the Clean Air Act,²⁴ the likelihood of coal-fired generation being built in the United States has become extremely low, largely due to the cost of carbon dioxide control technology. If the leakage set-asides function as intended, these proposed set-asides would disadvantage new NGCC units and incentivize renewable electricity generation sources by giving existing NGCC units more allowances and by giving allowances to renewable resources. This would create a circumstance where not only coal-fired generation units but also new NGCC units, which together comprise the majority of base load generation, would cease to be built to meet future load growth.

Additionally, with nuclear generation being one of the most expensive electricity generation resources to construct and operate,²⁵ the most likely substitute for base load generation would then be intermittent renewable resources. Intermittent resources cannot, by themselves, fulfill the role of base load generation due to inevitable reliability issues. In order for renewable resources to fulfill base load generation needs, simple cycle turbines or electricity storage must also be installed to help meet electricity demand. However, grid-scale energy storage is not yet economically viable and simple cycle turbines would contribute to overall carbon dioxide emissions, contrary to the purpose of this Proposed FIP Rule.

²⁴ See e.g., New Source Performance Standards, 40 C.F.R. pt. 60; *see also*, 42 U.S.C. 7411(b).

²⁵ See U.S. Energy Information Administration, *Annual Energy Outlook 2015*, DOE/EIA-0383 (2015), available at www.eia.gov/forecasts/aeo.

Relatedly, the U.S. EPA's proposed leakage set-asides to address this nonexistent leakage phenomenon create additional concerns through their failure to incentivize the generation shifts among affected EGUs suggested by building block 2 of the best system of emission reduction (BSER). The category-specific calculations used to compute the BSER emission performance rate goal require Ohio's existing NGCC plants to run at or above a 93% capacity factor.²⁶ The 2030 generator-level final allocations plus the output-based allocations only allow for approximately a 79% capacity factor, leaving an NGCC unit unable to achieve the remaining 14% capacity factor.²⁷ Essentially, the proposed leakage set-asides to existing NGCC units do not allow for the massive generation shift to natural gas that the BSER seeks to accomplish.

²⁶ See U.S. EPA, *Clean Power Plan Final Rule Technical Documents*, Data file: Goal Computation Appendix 1-5 (Nov. 24, 2015), available at <http://www.epa.gov/cleanpowerplan/clean-power-plan-final-rule-technical-documents> and <http://www.epa.gov/sites/production/files/2015-11/tsd-cpp-emission-performance-rate-goal-computation-appendix-1-5.xlsx>. Ohio's NGCC capacity factor of 93% is calculated by using generation figures from Appendices 1, 3, and 4 to determine per unit capacity factor, which is then averaged to determine Ohio's NGCC capacity factor of 93% to reflect a pro rata distribution of affected sources.

²⁷ In determining this 79% figure, the PUCO utilized the U.S. EPA-provided data on net generation in the U.S. for NGCC units and divided this figure by the carbon dioxide amounts those same plants produce. This number was then multiplied by the allowances, which were a summation of the allowances provided to all natural gas plants in Ohio plus the output based allowance amount for those plants. This figure was then divided by the product of the summer capacity of each NGCC generating unit and the number of hours in a year, in order to determine the capacity factor of each Ohio NGCC plant. These individual capacity factors were then averaged together to result in a 79% capacity factor for Ohio NGCC units.

d. No Defined Guidance on Leakage Demonstration

As previously stated, the CPP final rule was the U.S. EPA's first introduction of the concept of leakage and therefore the PUCO herein addresses its concerns with the idea in total. The PUCO's final comment regarding the concept of leakage relates to the U.S. EPA's lack of defined guidance in the CPP on leakage mitigation. The CPP allows states to mitigate leakage by: i) including new sources in a state implementation plan, or ii) demonstrating that no leakage will occur. However, the U.S. EPA provides states with no clear guidance as to *how* states can demonstrate that no leakage will occur. Rather, the CPP, and by extension the FIP, appear to take a "we'll know it when we see it" approach to regulation, which invites a great amount of market risk through uncertainty for states and their utilities. The final FIP rule should remove the requirement of leakage demonstrations from the law or make demonstrations reasonably straightforward to accomplish with defined elements based on current market conditions.

3. Set-Asides for Zero Carbon Dioxide Emitting Sources

The U.S. EPA also requests comment on extending output-based allocation set-aside to zero-emitting generators.²⁸ Extending the output-based allocations to zero-emitting generators would counteract the intended effect of lowering the production cost from sources subject to the proposed mass-based FIP. Providing zero-emitting generators with allocations that they do not need to generate power only incentivizes these zero-emitting

²⁸ Proposed FIP Rule at 65,021.

generators to sell these allowances back to carbon emitting units, eventually resulting in increased costs to consumers.

4. Allocations to Units That Change Status

The Proposed FIP Rule seeks comment on the proposal that once a unit ceases operation or if a unit is modified or reconstructed, its allowances that would otherwise have been allocated to that unit would be allocated to the state's RE set-aside.²⁹

The PUCO suggests that once a unit retires, is modified, or is reconstructed, the allowances that would otherwise have been allocated to that unit should be reallocated and redistributed the following year to the remaining affected EGUs in the state in a pro-rata fashion identical to the approach used in the proposed initial distribution. This proposal would prevent a plant's holding company from using the allowances for plants in other states.³⁰ The cap of total allowances distributed would ensure that the mass limit would not be over-realized. The U.S. EPA's proposal to allocate such allowances to increase the state's RE set-aside would only raise costs for affected sources while providing no additional reductions in carbon dioxide emissions.

²⁹ Proposed FIP Rule at 65,026.

³⁰ An example of this type of action by a holding company could occur if a holding company owns a generating unit in a state, like Ohio, that it retires prior to CPP implementation. There, the PUCO seeks to avoid the holding company taking the retirement allocations from that plant and applying such allocations for compliance purposes in other service territories.

5. Minimizing the Impact on Small Entities

The U.S. EPA seeks comment on allocation approaches that may minimize the impact of the Proposed FIP Rule on small entities.³¹ In attempting to minimize the impact of the Proposed FIP Rule on small entities, the PUCO suggests removing lower capacity combined heat and power (CHP) and waste heat recovery (WHR) generating plants from each state's mass-based allowance, regardless of the fuel used to make the heat or power. This would enable states to maintain focus and administrative efforts on traditional fossil fuel generators and not sources that make electricity as a byproduct of a process. In the alternative, the U.S. EPA should consider exemptions for all CHP and WHR facilities, especially those that must already comply with other federal air standards for other pollutants.³² Otherwise, energy production may be inadvertently impacted by the Proposed FIP Rule as an extension of the CPP, due to CHP and WHR facilities subsequently disconnecting from the electric power grid to avoid regulation, even though their carbon dioxide impact is minimal.

III. CONCLUSION

The PUCO appreciates the opportunity to submit comments to the U.S. EPA regarding the Proposed FIP Rule. The PUCO again asserts that the CPP and associated FIP are not legally enforceable as constructed. However, assuming *arguendo* that the

³¹ Proposed FIP Rule at 65,018.

³² *Supra* note 23.

CPP and FIP survive legal scrutiny, the PUCO respectfully requests that U.S. EPA analyze all of the technical comments addressed herein when constructing the final FIP rule.

Respectfully submitted,

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The **Environmental Protection Agency** (EPA) Proposed Rule: **Federal Plan Requirements: Greenhouse Gas Emissions from Electric Utility Generating Units Constructed on or Before January 8, 2014; Model Trading Rules; Amendments to Framework Regulations**

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The Public Utilities Commission of Ohio respectfully submits these comments in response to the rulemaking issued by the United States Environmental Protection Agency on October 23, 2015, in Docket No. EPA-HQ-OAR-2015-0199. (See attached file(s)).

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Summary: Comments submitted on January 21, 2016 by Assistant Attorney General Thomas McNamee on behalf of the Public Utilities Commission of Ohio to the U.S. Environmental Protection Agency in Docket No. EPA-HQ-OAR-2015-0199, In re 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. electronically filed by Kimberly L Keeton on behalf of Public Utilities Commission of Ohio