



**UNITED STATES OF AMERICA
BEFORE THE
FEDERAL ENERGY REGULATORY COMMISSION**

**Inquiry Regarding the Commission’s
Proposed Policy on State
Determined Carbon Pricing
in Wholesale Markets**)
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Docket No. AD20-14-000

**INITIAL COMMENTS OF THE
AMERICAN WIND ENERGY ASSOCIATION
AND THE ALLIANCE FOR CLEAN ENERGY – NEW YORK**

Pursuant to the Federal Energy Regulatory Commission’s (“Commission” or “FERC”)) October 15, 2020, Proposed Policy Statement¹ in the above-referenced proceeding, the American Wind Energy Association (“AWEA”)² and the Alliance for Clean Energy – New York (“ACE-NY”) submit the following initial comments. The Commission’s Proposed Policy Statement to address state-determined carbon pricing proposals in wholesale power markets administered by Regional Transmission Organizations and Independent System Operators (“RTOs/ISOs”) represents an important step forward in harmonizing state policies and wholesale energy markets. AWEA and ACE-NY believe that carbon pricing can play an important role in enabling the achievement of state environmental policy goals, while simultaneously “improv[ing] the efficiency and transparency of the organized wholesale markets by providing a market-based

¹ Carbon Pricing in Organized Wholesale Electricity Markets, 173 FERC ¶ 61,602 (Oct. 15, 2020), <https://www.ferc.gov/media/ad20-14-000-0> (“Proposed Policy Statement”).

² AWEA is a national trade association representing a broad range of entities with a common interest in encouraging the expansion and facilitation of wind energy resources in the United States. AWEA’s more than 1,000 member companies include wind turbine manufacturers, component suppliers, project developers, project owners and operators, financiers, researchers, utilities, marketers, customers, and others.

method to incorporate state efforts to reduce GHG emissions.”³ AWEA and ACE-NY appreciate the Commission considering and developing a proactive policy incorporating many of the factors that must be addressed in any carbon pricing proposal and encourage it to finalize the policy statement.

I. EXECUTIVE SUMMARY

AWEA and ACE-NY agree with the Commission’s proposal to carefully consider how carbon pricing would function in wholesale markets, and lay out essential elements in advance of any actual proposal. Carbon pricing presents complex questions for wholesale markets, and the Commission’s September 30 Technical Conference⁴ provided a strong initial foundation for RTOs/ISOs, states, and the Commission to build upon. The considerations identified by the Commission in the Proposed Policy Statement would generally ensure that RTO/ISO rules incorporating a state-initiated carbon pricing proposal result in wholesale rates that are just, reasonable, and not unduly discriminatory or preferential. Internalizing carbon pricing into wholesale markets leverages the efficiency of existing market structures to accomplish state policy goals. As many participants testified in the Technical Conference, carbon pricing can be implemented consistently with market elements such as transparent pricing, clarity regarding when and how carbon prices would be set and changed, measures to minimize leakage, and broad applicability to participating resources and loads.

The goal of any carbon pricing proposal is to send accurate market signals that will reflect the social cost of carbon, which is currently addressed (if at all) only through state

³ See Proposed Policy Statement at P 13.

⁴ FERC Technical Conference regarding Carbon Pricing in Wholesale Electricity Markets, Docket AD20-14-000(Sep. 30, 2020), <https://www.ferc.gov/news-events/events/technical-conference-regarding-carbon-pricing-organized-wholesale-electricity> (“Technical Conference”).

programs.⁵ A carbon price would cause market participants to internalize what is currently an externality in wholesale electricity markets, resulting in prices that more accurately reflect the true and total costs of generating electricity at a particular location. Carbon pricing should provide market participants and consumers with more accurate and transparent price signals when making investment and electricity consumption decisions, and will better harmonize state environmental policies, state clean energy policies and wholesale market prices. However, a multitude of important details must be addressed by RTOs/ISOs, stakeholders, and the Commission when considering whether and how to integrate a carbon price into any wholesale electricity markets in the eventual context of considering a specific RTO/ISO proposal under Section 205 of the Federal Power Act (“FPA”).

Although any FPA section 205 filing must be reviewed based on the specific facts and circumstances presented in each proceeding, AWEA and ACE-NY appreciate the Commission’s willingness to allow interested parties to explore approaches that will incorporate a state-determined carbon price in RTO/ISO markets.⁶ AWEA and ACE-NY agree that the questions posed by the Commission in the Proposed Policy Statement are appropriate considerations for evaluating a state-implemented carbon price. Additionally, as described below, AWEA further recommends that the Commission consider the breadth of any carbon pricing proposal, to ensure that similarly situated market participants are subject to comparable requirements.

⁵ OPENING REMARKS OF RANA MUKERJI ON BEHALF OF THE NEW YORK INDEPENDENT SYSTEM OPERATOR, INC., page 2, <https://www.ferc.gov/media/panel-3-group-1-rana-mukerji-new-york-iso>.

⁶ 73 FERC ¶ 61,602, ¶15.

II. BACKGROUND

On April 13, 2020, a diverse group of electric sector stakeholders filed a petition with the Commission seeking a technical conference or workshop on carbon pricing in organized regional wholesale electricity markets.⁷ On September 30th, 2020, in response to this petition, the Commission hosted a “Technical Conference Regarding Carbon Pricing in Organized Wholesale Electricity Markets.”⁸ The overriding goals of the Conference were to gather information on how FERC could effectively incorporate state-initiated carbon prices into wholesale electricity market prices, and analyze whether FERC has the legal authority to do so. The Technical Conference included four panels that discussed different aspects of carbon pricing, including; Legal Considerations for Stated-Adopted Carbon Pricing and RTO/ISO Markets; Overview of Carbon Pricing Mechanisms and Interactions with RTO/ISO Markets; Considerations for Market Design; and a Closing Roundtable Discussion. At the Technical Conference, numerous stakeholders indicated that the Commission has jurisdiction to consider and approve carbon pricing proposals driven by states and implemented in RTO/ISO markets.⁹

Following the successful conference, on October 15, 2020, the Commission issued the Proposed Policy Statement, in which it proposed a policy encouraging “efforts to incorporate a state-determined carbon price in organized energy markets.”¹⁰ Importantly, the Commission clarified that it “has the jurisdiction over RTO/ISO market rules that incorporate a state-

⁷ See *Carbon Pricing in FERC-Jurisdictional Organized Regional Wholesale Electric Energy Markets; Notice of Request for Technical Conference or Workshop*; 85 FR 23512 (April 21, 2020), <https://www.federalregister.gov/documents/2020/04/28/2020-08913/carbon-pricing-in-ferc-jurisdictional-organized-regional-wholesale-electric-energy-markets-notice-of>.

⁸ FERC Technical Conference regarding Carbon Pricing in Wholesale Electricity Markets, Docket AD20-14-000(Sep. 30, 2020).

⁹ [Cite***] See *e.g.*, Pre-conference Filing of Air Peskoe, at 1, Pre-conference Filing of Matthew Price, at 8, Pre-conference Filing of Jim Rossi, at 4; see also, 73 FERC ¶ 61,602, ¶7.

¹⁰ 173 FERC ¶ 61,602.

determined carbon price in those markets.”¹¹ The Commission also acknowledged the numerous benefits of a state-determined carbon price identified by panelists,¹² and agreed that “a state-determined carbon price in RTO/ISO markets could, if properly designed and implemented, significantly improve the efficiency of those markets.”¹³

The Proposed Policy Statement included specific questions identifying “information and considerations” which the Commission may use in the future to evaluate any RTO/ISO’s state-implemented carbon price proposal to ensure that such proposal result in rates that are just, reasonable, and are not unduly discriminatory or preferential. AWEA’s comments below respond to these questions.

III. COMMENTS: RESPONSES TO SPECIFIC QUESTIONS

A. How do the relevant market design considerations change depending on the manner in which the state or states determine the carbon price (e.g. price-based or quantity-based methods)? How will that price be updated?

AWEA agrees that there are important differences between a price-based and a quantity-based carbon pricing system. However, the Commission should remain open to either approach, as wholesale market structures are fully capable of accommodating either.

1. Price-based carbon pricing

A price-based carbon pricing proposal uses a price on carbon emissions that is incorporated into generators’ wholesale market bids. Numerous methodologies could be used by a state to calculate the price of emitted carbon, but internalizing that price should follow a similar

¹¹ Proposed Policy Statement at P 7.

¹² 73 FERC ¶ 61,602, ¶14.

¹³ 73 FERC ¶ 61,602, ¶15.

structure in most RTO/ISO markets. Generators that produce carbon emissions would need to represent the price of those emissions in their market bids. Price-based systems also ensure cost-effective emissions reductions by sending signals that allow market participants to optimize their own activity.¹⁴ Price-based systems provide clear signals that encourage flexibility and incentivize changes toward lower-cost generation.

Once a carbon price is established by a state (or multiple states), RTOs/ISOs will need to ascertain how much CO₂ is produced for every MWh of electricity produced, so that the full costs associated with generators' electricity production can be known and represented in their market bids. RTOs/ISOs can follow different processes when measuring and validating emissions rates that will be used to calculate generators' cost estimates,¹⁵ and the Commission should ensure that any proposed market rules provide clear procedures for establishing and validating such emissions rates for covered facilities. Without accurate emissions details for generators, markets may not completely and accurately internalize the cost of carbon, and market efficiencies will not be fully realized.¹⁶

Emissions rates in other circumstances, such as New Source Review for generators (administered by the Environmental Protection Agency), have suffered from a lack of definitional clarity. A price-based market design should mitigate those issues by establishing a price per MWh value, where a carbon price applies to every MWh of electricity produced. These

¹⁴ MATT BUTNER ET AL., INSTITUTE FOR POLICY INTEGRITY, CARBON PRICING IN WHOLESALE ELECTRICITY MARKETS 12 (2020) ("For example, price signals would prompt many people to charge their electric vehicles at desirable times."), <https://policyintegrity.org/publications/detail/carbon-pricing-in-wholesale-electricity-markets>.

¹⁵ Existing EPA sources (this is what RGGI uses), generator filings to markets/FERC, generator manufacturer specifications...

¹⁶ Importantly, generator emissions are not consistent during all operating times, i.e. a natural gas plant will produce more CO₂ emissions during startup periods because carbon capture technology may not be online. Additionally, the selected validation methodology should establish a process to revise emissions based on completed upgrades at a plant (new control technology, fuel switching, etc).

price-based proposals more easily integrate into existing market structures, and will not require elaborate rules to account for large true-ups or metering errors. Alternatively, if a state or group of states imposes emissions costs on generators within its borders, the Commission should be prepared to approve RTO/ISO tariff revisions, if needed, that expand bidding parameters so that affected resources can fully recover their costs. The Commission has previously found this type of accommodation of state policies just and reasonable in CAISO and ISO-NE.

2. Quantity-based carbon pricing

A quantity-based carbon pricing proposal would involve establishing a fixed maximum quantity of emissions for a particular state or region, and developing a regulatory framework to ensure that both individual sources and the state or region do not exceed the applicable limits. Under most formulations of a quantity-based program, sources could trade emissions allowances (a “cap-and-trade” program), so that participants with excess allowances could transfer them to participants with emissions exceeding their allowances. This type of carbon pricing program raises several issues the Commission should properly consider in its evaluation, once it has specific RTO/ISO proposals before it.

i. Updating the Price and Quantity

Updating a price on carbon is an important component of any carbon pricing proposal, and in a quantity-based program would typically be accomplished via an auction. Although the exact procedures required will depend on how a price is originally established (see, *infra*, section III.a.i.), several factors should be considered no matter the original methodology selected. Any proposals should clearly establish the timing of any updates to the carbon price, as successfully obtaining the efficiencies of wholesale electricity markets requires certainty in the timing of any

adjustments of the carbon price. For example, a state-determined proposal could identify a formula that would be run at fixed intervals to calculate the price for a specified time period. RTO/ISO Proposals could include a pre-planned price increase schedule that tracks the update schedule of the state. A price could fluctuate in near-real time, or the state could revise the price on some regular basis (e.g., quarterly or annually). So long as market participants clearly understand when and how price updates will occur, market prices will signal efficient investment and consumption decisions.

Existing Commission-jurisdictional rates and practices already provide this type of information - for example, in capacity markets. Capacity auction rules establish clear timelines for when auctions will be held and settled, and the time periods each auction will cover. The timing of any changes in a carbon price should be clearly communicated to market participants, as should the factors and processes that will be involved in any changes.

As many speakers at the Technical Conference noted, the optimal carbon pricing structure would be for RTO/ISO markets to incorporate a national carbon price.¹⁷ While the question of how the Commission could incorporate a national carbon price into wholesale electric markets is outside the scope of the Proposed Policy Statement, AWEA and ACE-NY believe that any market rules approved by the Commission that incorporate a state-initiated price on carbon should be flexible enough to accommodate a national price on carbon if and when one is adopted.

¹⁷ FERC Carbon Pricing Technical Conference, Comments of William Hogan, page 4. (“Implementation of efficient carbon pricing, with a common price everywhere, will not be here soon.”)

B. How does the FPA section 205 proposal ensure price transparency and enhance price formation?

1. Price Transparency

Certain elements will increase the transparency of any proposal. Generally speaking, AWEA and ACE-NY interpret “transparency” to mean that any proposal must make clear how the RTO/ISO calculates a carbon price using as inputs the carbon prices and/or programs of a state or states, and how the price is then applied to individual participants.¹⁸ Transparency means that market conditions, system needs, and the effects of generation and consumption are clear to all market participants, as reflected in market prices.¹⁹ Such price transparency not only provides the ability for generators to make efficient short-term decisions, but it also enables investors to make long-term investments with confidence. Those long-term decisions hold heightened importance in the power sector, where capital investments for generation and transmission are planned years or decades in advance. Carbon pricing can provide clarity by leveraging existing market structures--which are well understood by market participants--to provide pricing signals. When all resources are subject to a consistent, transparent and market-based price, investor confidence is enhanced. Additionally, consumers can adjust their behaviors, including decisions related to long-term electricity and environmental attribute procurement, due to these more transparent market signals.

Starting with the price on carbon, the methodology used by the RTO/ISO to calculate the value should be publicly available. This ensures that participants have equal knowledge of the

¹⁸ Opening remarks of Clare Breidenich, page 1. <https://www.ferc.gov/media/panel-3-group-2-clare-breidenich-western-power-trading-forum>.

¹⁹ <https://www.nyiso.com/documents/20142/2244202/Analysis-Group-NYISO-Carbon-pricing-Report.pdf/81ba0cb4-fb8e-ec86-9590-cd8894815231?t=1570098686835#:~:text=NYISO's%20proposal%20would%20incorporate%20a,by%20New%20York%20State%20officials> , page 4.

value of carbon and will understand how the prices change as real-world conditions change. Publishing the carbon pricing methodology will ensure transparency. The Commission can encourage RTO/ISOs to publish carbon prices alongside energy market prices. For example, NYISO's proposed carbon pricing method would ensure price transparency by publishing the Gross Social Cost of Carbon, established by the New York PSC.²⁰ That price would be publicly available, to provide price certainty to market participants. Additionally, the prices for future years would also be made available. Under the NYISO proposal, NYISO would also publish the carbon price component of the NYISO's locational based marginal prices (LBMPs) by zone, by 5-minute interval.²¹

2. Price formation

Price formation is important to ensure market prices reflect the true incremental cost of serving load; while price transparency assures that participants understand the process, accurate price formation seeks to ensure that the market outcome is reflective of real costs. Currently, energy markets seek to ensure accurate price formation in a variety of ways, and some of those strategies can also be applied to carbon pricing. For instance, proposals should clearly define the universe of market participants the carbon price applies (or does not apply) to. Any proposal will have to accommodate unique considerations, including any adjacent state programs (renewable portfolio standards, other emissions reduction programs such as the Regional Greenhouse Gas Initiative, etc.).

²⁰ IIPTF Carbon Pricing Proposal, page 4 (Dec. 7, 2018). <https://www.nyiso.com/documents/20142/3911819/Carbon-pricing-Proposal%20December%202018.pdf/72fe5180-ef24-f700-87e5-fb6f300fb82c>.

²¹ *See id.*

C. How will the carbon price or prices be reflected in locational marginal pricing?

Today, a carbon price is often implicit in investors' evaluations of potential projects.²²

Without a clear signal from wholesale markets, investors rely on fragmented state policies to try and estimate a future cost of carbon. Internalizing that cost into Locational Marginal Prices ("LMPs") will reduce price uncertainty, increase market transparency for investor and consumers, and promote consumer and investor confidence.

LMP is a hallmark of wholesale electricity markets and is largely the mechanism through which the internalization of carbon pricing will occur. Carbon pricing proposals could, for example, leave it up to carbon-emitting generation owners to incorporate carbon into generator offers such that the price of carbon would be effectively subsumed within LMPs via existing RTO/ISO market clearing rules and software, just as environmental costs adders are today. Alternatively, a separate LMP "adder" could directly indicate the carbon pricing component of generators' bids, as is the case today the California Independent System Operator's Energy Imbalance Market. No matter the exact mechanism that is proposed by an RTO/ISO, when the marginal generator (i.e. the generator that sets LMP for the market in a particular interval) is one which emits carbon, the cost of that carbon would be included in the bid they submit, and thus be reflected in LMP for all participants.

Many of the factors that will ensure price transparency will also influence the process by which the price of carbon is reflected in LMPs. As noted above, establishing the cost of carbon, and the procedures generators use to determine the cost of carbon will influence the carbon price's precise impact on LMPs. When analyzing a proposal, the Commission should ensure that

²² MATT BUTNER ET AL., INSTITUTE FOR POLICY INTEGRITY, CARBON PRICING IN WHOLESALE ELECTRICITY MARKETS 15 (2020).

the impact on LMP truly internalizes the cost of carbon, and that that cost is accurately reflected in the LMP.

Proposals should explain how the price of carbon will be reflected in the LMP by clearly stating the changes such proposal will make, if necessary, to the RTO/ISO's bidding procedures to accommodate carbon pricing. For example, the carbon component of the market clearing price could be published alongside other LMP components, which not only would contribute to overall price transparency in the markets, but would also allow market participants to make usage decisions based on current emissions levels if they choose to do so. As noted above, the draft proposal of the NYISO includes the publication of the carbon component of LMPs by zone, by 5-minute interval. Additionally, under the NYISO proposal, the carbon price will be incorporated through a "supplier carbon adder." The draft proposal indicates that:

The NYISO would apply the carbon price by debiting each energy supplier a charge for its carbon emissions at the specified price as part of its settlement. Suppliers would embed these additional carbon charges in their energy offers (referred to as the supplier's carbon adder or adjustment in \$/MWh) and thus incorporate the carbon price into the unit commitment, dispatch, and price formation through the NYISO's existing processes.²³

Under this proposal, LMP would reflect the carbon price because generators would include the cost of carbon in their offers. This proposal, where generators include the cost of carbon in their energy market offers, leverages the existing efficiencies of wholesale markets.

²³ https://www.nyiso.com/documents/20142/3911819/Carbon_pricing-Proposal%20December%202018.pdf/72fe5180-ef24-f700-87e5-fb6f300fb82c, page 4.

D. How will the incorporation of the state-determined carbon price into the regional market affect dispatch? Will the state-determined carbon price affect how the regional market co-optimizes energy and ancillary services?

Currently, wholesale markets do not reflect the social cost of the carbon that is emitted in the process of generating electricity. In 2018, 26.9% of CO₂ emissions in the United States came from the electricity sector.²⁴ Currently, the cost of those emissions on society are not paid by the emitters. Resources that produce CO₂ transfer the cost of those emissions to society without having to pay for the coincident harm. Internalizing those costs through a price on carbon retains the efficiency benefits of organized wholesale markets while cost effectively reducing CO₂ emissions. Additionally, internalizing those costs sends clear price signals to the market by shifting lower emitting facilities down the dispatch curve.

Implementing a carbon price will change the economic dispatch merit order, but not the fundamental mechanism. Units with the lowest marginal cost of production will still be dispatched first, but prices will reflect the previously unrecognized social cost of carbon. When carbon-emitting units are the marginal generator, LMPs will reflect that cost. As a result of this change in the market dispatch order, low-emitting resources will be called on more often, all else equal.

E. Does the proposal result in economic or environmental “leakage,” in which production may shift to more costly generators in other states, without regard to their carbon emissions? How does the proposal address any such leakage?

Leakage is a complex problem for any market operator, and that complexity increases in an RTO/ISO where states or markets adopt different carbon pricing methods, or where some states or markets do not adopt any carbon pricing policy. So long as jurisdictions price carbon differently, leakage will need to be addressed, any proposal should address how leakage will be

treated, but the Commission should evaluate each proposal on its own merits due to likely state and regional differences. One solution that can address leakage is a border adjustment, which could ensure that the carbon component of market prices is only reflected in jurisdictions adopting a carbon price.

Unaddressed leakage would undermine any proposed carbon price policy by incentivizing least cost dispatch to call on lower cost units located outside of the geographic region where carbon prices apply, which would fail to yield a net emissions decrease. Commission evaluation of proposals that resolve leakage issues are essential. AWEA and ACE-NY note that the Commission has previously approved a form of border adjustment for the CAISO EIM, in which resources located outside of California use a contingent bid adder to reflect their willingness to be dispatched into California. If such a resource is dispatched to California, the adder becomes part of the California LMP; if a resource is not dispatched to California, the adder does not affect marginal prices in any part of the EIM. The precise approach may vary, but this well-demonstrated process in California may be transferable to other jurisdictions as well.

F. Will all similarly-situated market participants be subject to identical or comparable pricing provisions?

Finally, AWEA and ACE-NY note that carbon pricing is most effective when applicability is as uniform as possible. In any final Policy Statement, the Commission should clearly state that any carbon pricing proposal must treat similarly situated market participants (including generators and loads) similarly, consistent with statutory requirements that any approved rate avoid undue discrimination or preference. This should provide another element

which RTOs/ISOs will incorporate in any eventual proposal, and will further solidify the basis for any Commission action approving incorporation of a carbon price.

IV. CONCLUSION

WHEREFORE, AWEA and ACE-NY respectfully submit their initial comments and request that the Commission consider this input as it evaluates future refinements to its incentives policies, as well as broader improvements to its transmission policies.

Respectfully submitted,

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