UNITED STATES OF AMERICA
BEFORE THE
FEDERAL ENERGY REGULATORY COMMISSION

Carbon Pricing in FERC-Jurisdictional Organized Regional Wholesale Electric Energy Markets	**)** **)** **)**	**Docket No. AD20-14-000**

COMMENTS OF THE INSTITUTE FOR POLICY INTEGRITY AT NEW YORK UNIVERSITY SCHOOL OF LAW

The Institute for Policy Integrity at NYU School of Law (Policy Integrity)[1] respectfully submits these comments in response to the Federal Energy Regulatory Commission's (FERC or Commission) October 15, 2020 Notice of Proposed Policy Statement on Carbon Pricing in Organized Wholesale Electricity Markets (Proposed Statement). Policy Integrity is a non-partisan think tank dedicated to improving the quality of government decisionmaking through advocacy and scholarship in the fields of administrative law, economics, and public policy. Policy Integrity staff have made carbon pricing in wholesale electricity markets an area of particular focus: we published a comprehensive report and several academic articles on carbon pricing in organized wholesale markets,[2] have participated in several Independent Service Operator (ISO) and Regional Transmission Organization (RTO) stakeholder proceedings on the subject,[3] and, in March 2020, co-hosted a conference titled "Carbon Pricing in Wholesale

[1] These comments do not reflect the views of NYU School of Law.

[2] *See, e.g.*, MATT BUTNER ET AL., CARBON PRICING IN WHOLESALE ELECTRICITY MARKETS: AN ECONOMIC AND LEGAL GUIDE (2020), https://policyintegrity.org/publications/detail/carbon-pricing-in-wholesale-electricity-markets; Bethany A. Davis Noll & Burcin Unel, *Markets, Externalities, and the Federal Power Act: The Federal Energy Regulatory Commission's Authority to Price Carbon*, 27 NYU ENVTL. L.J. 1 (2019); Justin Gundlach & Romany Webb, *Carbon Pricing in New York ISO Markets: Federal and State Issues*, 35 PACE ENVTL. L. REV. 1 (2017).

[3] *See, e.g.*, Avi Zevin, Inst. for Pol'y Integrity, Carbon Pricing in RTO Markets: Jurisdictional Considerations (Nov. 15, 2019), https://www.pjm.com/-/media/committees-groups/task-forces/cpstf/20191115/20191115-item-03a-carbon-pricing-in-rto-markets-jusidictional-considerations.ashx; Comments on the Notice on Process, Soliciting Proposals and Comments, and Announcing Technical Conference, In the Matter of Carbon Pricing in New York Wholesale Markets NYISO/DPS Integrating Public Policy Task Force, Matter No. 17-01821 (Nov. 30, 2017), https://policyintegrity.org/documents/Comments_NYISO_Carbon_Pricing_DPS.pdf.

Electricity Markets" with Duke University's Nicholas Institute for Environmental Policy Solutions.[4]

1. The Commission Should Clarify a Basic Point of Law

FERC's Proposed Statement should be amended to better articulate the nature and limits of the authority available to an RTO and to the state or states within that RTO's service territory, respectively, in relation to carbon pricing. As written, the Proposed Statement is ambiguous. Specifically, it contemplates "incorporating a carbon price set by one or more states into RTO/ISO markets,"[5] and observes that such a price "can fall within the Commission's jurisdiction as a practice affecting wholesale rates."[6] The ambiguity lies in the words "incorporating" and "set."

As Policy Integrity's report, *Carbon Pricing in Wholesale Electricity Markets*, explains, regardless of who *specifies* the level of a carbon price, authority for *imposing* that carbon price on generators must rest on either state law or the Federal Power Act (FPA)—it cannot rest on both.[7] It follows that an RTO's incorporation of a carbon price that a state imposes on generators pursuant to state law into a tariff is distinct from an RTO imposing a cost on generators, the price level of which is determined in whole or in part by a state or group of states, for instance by compelling generators to reflect that carbon price level in their bids.[8]

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[4] *See Events: Carbon Pricing in Wholesale Energy Markets* (Mar. 3, 2020, Washington, DC), INST. FOR POL'Y INTEGRITY, https://policyintegrity.org/news/event/carbon-pricing-in-wholesale-energy-markets (providing access to video recordings of keynote, presentations, and panel discussions).

[5] Proposed Statement at P 1.

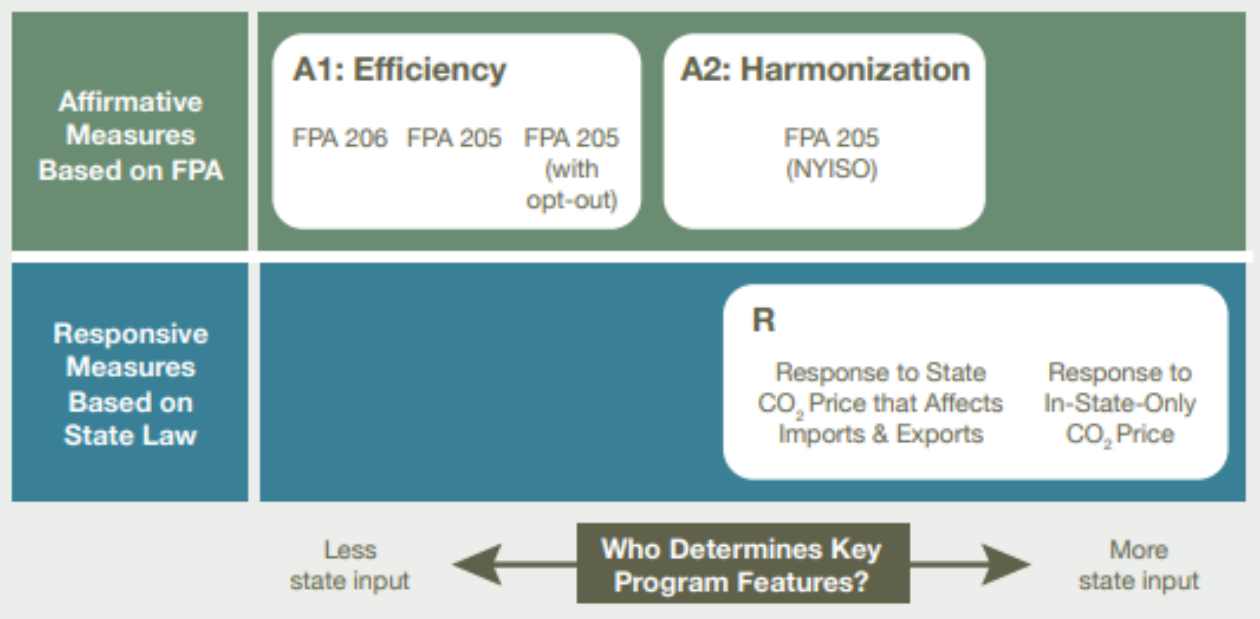
[6] *Id.* at P 9.

[7] BUTNER ET AL., *supra* note 2, at 29–30.

[8] *See* Policy Statement and Interim Rule Regarding Ratemaking Treatment of the Cost of Emissions Allowances in Coordination Rates, 59 Fed. Reg. 65,930, 65,935 (1994) ("We will allow the recovery of incremental costs of emission allowances in coordination rates whenever the coordination rate also provides for recovery of other variable costs on an incremental basis."). *See also* Grand Council of Crees v. FERC, 198 F.3d 950, 957 (D.C. Cir.

The Regional Greenhouse Gas Initiative (RGGI) and California Cap and Trade Program are examples of a state-imposed cost. An RTO incorporating such a price set by a state, in the language of our report, is "responsive" carbon pricing. In responsive scenarios, a profit maximizing generator would automatically raise its offer price to recover the incremental costs imposed by the state's policy, and, thus, usually other than accepting that carbon price as a cost, no other action by the RTO is needed. By contrast, no RTO has yet imposed a cost of carbon on generators (though NYISO has a proposal to do so), which our report calls an "affirmative" wholesale market carbon price. (See Figure 1.)

Figure 1. Framework for Carbon Pricing in Wholesale Electricity Markets[9]



FERC's responsibility differs with respect to responsive and affirmative carbon pricing measures. When a state or states develop a carbon pricing policy and impose a carbon cost themselves under a state law, FERC's main role in "incorporating a carbon price set by one or

2000) (holding that just and reasonable rates may take into account a generator's "need to meet environmental requirements," and that this "may affect the firm's costs").

[9] BUTNER ET AL., *supra* note 2, at 30.

more states into ISO/RTO markets" is to continue allowing "the recovery of incremental costs" resulting from that policy, consistent with cost recovery principles.[10] If the state policy has additional design features, such as border adjustments, ISO/RTOs play an additional *administrative* role, providing the relevant state authorities with information about bids and power flows to facilitate compliance with and enforcement of the state's carbon pricing policy.

But, in cases of responsive carbon pricing, FERC's role stops there, and the questions proposed in the Commission's draft policy statement are largely irrelevant. Whether the design of the state-level policy employs a cap-and-trade or taxation mechanism, for instance, does not change that FERC's role in "incorporating" the incremental cost imposed on state generators is extremely limited. FERC does not get to second-guess state-level policy design. This remains the case if state policymakers choose not to impose leakage mitigation in their policy design: FERC cannot deny generators cost recovery or unilaterally modify the policy by imposing a border adjustment that does not exist in the state carbon pricing policy.

FERC's responsibility with respect to an RTO's affirmative approach to carbon pricing, under which the RTO designs the policy in whole or in part *and* imposes compliance obligations on generators, is different, regardless of who sets the level of this cost. While the price level incorporated into an affirmative carbon pricing program can be set by a state or reflect the state policies with which it harmonizes wholesale market operation, the Federal Power Act is the authority that translates that price into an obligation on generators. Thus, even if a state specifies the price—or some other aspect—of an affirmative carbon pricing program, an RTO must still

[10] *See, e.g.*, ISO-NE, Market Rule 1, App'x A § III.A.7.5.1 (effective Mar. 1, 2020) (authorizing recovery of emissions allowance compliance costs); NYISO Market Services Tariff §§ 4.1.9.2, 23.3.1.4.1.3 (effective Aug. 12, 2019) (same); PJM Interconnection, Inc., Operating Agreement Sch. 1 § 3, Sch. 2 Exh. A (effective Dec. 3, 2019) (same).

justify its adoption and enforcement of that program for reasons consistent with action under the FPA.

Making this fundamental point clearer would also serve to clarify other points as well—for instance, the issue of the basis for setting the level of a carbon price incorporated into an RTO's carbon pricing tariff. While, in principle, there is no formal restriction on a price imposed under authority granted by state law or the FPA, the two are distinct. A carbon price imposed by state authorities under state law is bounded only by the limits of state law, and an RTO and FERC would have no obligation or authority to review or approve that price level before allowing it to be reflected in a responsive RTO tariff. By contrast, a price imposed by an RTO under the FPA must be shown to be consistent with a tariff that yields just and reasonable rates.

2. The Commission Should Clarify the Meaning and Potential Significance of "Leakage"

The Proposed Statement suggests that the Commission should ask, upon receipt of an RTO's section 205 filing that proposes a carbon pricing program, "Does the proposal result in economic or environmental leakage? How does the proposal address any such leakage?"[11] The Commission should clarify two points in relation to this query. First, it should recognize the basic and legally meaningful differences between emissions leakage, which can undermine the efficacy of a carbon pricing program, and what the Commission calls "economic" leakage, a distributional effect arising from changes in market prices and outputs. Second, the Commission should clarify that not all types of leakage are necessarily cognizable factors for the Commission to consider when assessing the justness, reasonableness, and discriminatory effects of an RTO

[11] Policy Statement at P 16(e).

carbon pricing program proposal. Before elaborating these points, it is useful to explain some features of carbon dioxide emissions leakage across a jurisdictional boundary.

Emissions leakage. Under an incomplete carbon pricing policy, not all sources of emissions are covered. Emissions leakage refers to a change in emissions from uncovered sources that is *caused* by an incomplete carbon pricing policy.[12] This discrepancy between covered and uncovered sources leads to two main channels for leakage.

First, a carbon price will affect the trade competitiveness of covered resources.[13] Because a carbon price would increase the production costs of covered sources relative to the production costs of uncovered sources, some production will shift to uncovered sources.[14] As a result, emissions from uncovered sources will increase as a result of the policy, even as emissions from covered sources decrease.[15] Second, a carbon price will reduce demand for fossil fuels in the covered regions, leading to lower global prices and hence higher demand in uncovered regions.[16]

These increases in emissions that result directly from the policy undermine the intended goal of a carbon pricing policy—emissions "leak" out. Such leakage is an inevitable side-effect of any incomplete carbon pricing program,[17] whether that program rests on state law or the FPA.

Emissions leakage *will* happen so long as there is no uniform, global, economy-wide carbon price for *all* sources of emissions. If there is a size threshold for carbon pricing, there will

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[12] *See* Meredith Fowlie & Danny Cullenward, *Report on Emissions Leakage and Resource Shuffling* 1–14 (2018), https://calepa.ca.gov/wp-content/uploads/sites/6/2018/09/6e.-IEMAC_Meeting_Materials_9-21-18__Fowlie_and_Cullenward_Report_on_Emissions_Leakage.pdf; Meredith L. Fowlie, *Incomplete Environmental Regulation, Imperfect Competition, and Emissions Leakage*, 1 AM. ECON. J. ECON. POLICY 72 (2009).

[13] Fowlie & Cullenward, *supra* note 12, at 1.

[14] Fowlie, *supra* note 11, at 72.

[15] *Id.*

[16] Fowlie & Cullenward, *supra* note 12, at 2.

[17] BUTNER ET AL., *supra* note 2, at 15 n.28.

be leakage between differently sized sources. If there is a locational difference, there will be leakage between different locations. If there is a sectoral difference, there will be leakage between sectors.

The degree to which leakage occurs depends on multiple factors, only some of which are determined by program design; others, such as supply and demand elasticities, resource mixes, endowments, and unrelated policies on both sides of the relevant jurisdictional boundary, determine the degree of leakage and the channels through which it occurs.[18] Emissions leakage can be partially mitigated using a border adjustment mechanism (a "one-way" mechanism applies the carbon price to imports from other jurisdictions, a "two-way" mechanism both applies the price to imports and removes it from exports),[19] but even a well-designed border-adjustment mechanism cannot eliminate leakage altogether.[20] Such a mechanism might equalize the treatment of offers from within and outside of the carbon pricing region over the short term, but, even if it is designed and executed perfectly, it cannot, for instance, mute the signal that incomplete carbon pricing sends to adjacent non-pricing regions about prospective fuel demand and longer-term investments in the generation mix. Emissions leakage is thus rightly understood not as a feature but an inevitable by-product of an *incomplete* carbon pricing program, and one that, unaddressed, can partly undermine the program's efficacy.

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[18] *See, e.g.*, Harrison Fell & Peter Maniloff, *Leakage in Regional Environmental Policy: The Case of the Regional Greenhouse Gas Initiative*, 87 J. ENV'T ECON. & MGMT. 1 (2018) (identifying multiple technological, political, and economic factors, several of them wholly unexpected by policymakers, that influenced the incidence of leakage beyond the boundaries of RGGI-participating states).

[19] *See* BUTNER ET AL., *supra* note 2, at 19, 21, 39, 41, 51–54 (describing border adjustments generally and discussing the CAISO EIM, an example of a 1-way border adjustment mechanism, and NYISO's proposal, an example of a 2-way mechanism).

[20] Fowlie & Cullenward, *supra* note 12, at 2. *See also* Carolyn Fischer & Alan K. Fox, *Comparing Policies to Combat EmissionsLleakage: Border Carbon Adjustments Versus Rebates*, 64 J. ENV'T. ECON. MGMT. 199–216 (2012), http://dx.doi.org/10.1016/j.jeem.2012.01.005 (explaining that none of the studied policies "*necessarily* reduce global emissions" nor "do they necessarily reduce leakage…").

There is no one-size-fits-all approach with leakage mitigation: "optimal" leakage mitigation depends on the goal of the carbon pricing program, the presence of potential leakage channels, and other factors such as the resource mixes within and outside of the pricing region. For instance, depending on the regions' relative emission intensities, if the goal is to reduce "global" emissions, then "optimal" leakage mitigation might include a border adjustment, but if the goal is to reduce emissions only within the pricing region, the "optimal" policy might be different. Or, policymakers might decide that other channels, such as fuel demand, are more important than the trade competitiveness of covered resources and opt to redistribute pricing program revenue to in-state energy efficiency programs—as is done by RGGI participants—instead of developing and applying border adjustments.

Whatever its animating goal, if the costs of the carbon pricing program are imposed on generators under state law, whether or how emissions leakage is mitigated lies beyond FERC's jurisdiction. For example, California has chosen to mitigate leakage by imposing obligations on imported electricity but RGGI has not. FERC cannot reject an opportunity for generators to recover their costs from a state-imposed carbon price just on the theory that the state's approach to leakage mitigation is somehow deficient or different than what FERC would have chosen to do. Therefore, the question is irrelevant where the carbon pricing policy is designed and implemented by a state, and an RTO merely supports administratively generators' recovery of the resulting costs and the state's tracking of flows.

The difference between responsive and affirmative carbon pricing in wholesale electricity markets, described in the first part of these comments, is also relevant to the Commission's treatment of emissions leakage. The degree and incidence of emissions leakage arising from a state-imposed carbon pricing program, such as RGGI, which Commission-approved tariffs have

long treated as a source of compliance costs, is not something that the Commission weighs when assessing whether an RTO's tariff is just, reasonable, and not unduly discriminatory or preferential. At most, it is part of an administrative issue for RTOs prompted by state authorities' need for cooperation in order to implement state policy based on state law.[21] By contrast, emissions leakage arising from an affirmative carbon pricing program that is adopted and enforced by an RTO should be a factor that the Commission considers when assessing whether the program is just, reasonable, and not unduly discriminatory, because it partly determines the efficacy of a policy that is being designed subject to the Commission's jurisdiction under the FPA. Though, when conducting that assessment, the Commission should recognize that there is no single, consistently superior way to deal with leakage and that, because some channels of leakage cannot be stoppered, some amount of leakage will be inevitable.

"Economic" leakage. A carbon pricing program incorporated by an RTO into its tariff would have multiple effects, including, most obviously, effects on the energy market offers submitted by covered generators—and those changes in offers would, in turn, affect the dispatch order and market price.[22] Prices and production would change in uncovered regions as a result of the policy, and there is also a potential for rent leakage to uncovered sources.[23] However, these economic effects are dissimilar to emissions leakage, which is a result that undermines the efficacy of a carbon pricing policy.

An analogy might help explain the difference between emissions leakage and economic leakage. Congestion due to grid constraints is also a negative externality, similar to carbon-

[21] BUTNER ET AL., *supra* note 2, at 51–54.

[22] *Id.* at 12–13, fig.3.

[23] Fowlie & Cullenward, *supra* note 12, at 1.

dioxide emissions. It is a cost imposed by a market transaction on third parties that is not borne by the parties engaged in the transaction. Hence, it is a cost that is not accounted for by those transacting parties. When there are capacity constraints, as in the case of a transmission network, increased demand by one customer at times when the network is close to its limit might mean that another customer cannot be served. But, without a proper price signal, the first customer would have no incentive to reduce demand.

Using locational marginal prices that take grid constraints into account—as ISO/RTOs currently do—signals market participants to find the cost-effective way to reduce that congestion.[24] These prices help internalize the externality, and help "promote efficient use of the transmission grid, promote the use of the lowest-cost generation, provide for transparent price signals, and enable transmission grid operators to operate the grid more reliably."[25]

Now imagine a hypothetical scenario involving an RTO that does not currently price congestion, and a region within that RTO that wants to impose a congestion price to internalize this externality and reduce congestion. That addition of a congestion price would change not only locational marginal prices across the entire RTO but also which resources are dispatched, how often they are dispatched, and how much revenue each resource will get. Yet these effects, taken alone or together, would not be a sufficient reason to reject a congestion price.

But what if, in this hypothetical example, the same congestion price also leads to new congestion in the non-pricing region? That new and additional "congestion leakage," which would not have occurred absent the newly imposed congestion price, partially undermines the

[24] Michel Rivier et al., *Electricity Transmission*, *in* REGULATION OF THE POWER SECTOR 251, 277 (2013); *see also* Pa.-N.J.-Md. Interconnection Atl. City Elec. Co., 81 FERC ¶ 61,257, 62,253–56 (1997) (approving PJM's locational marginal pricing model, which accounts for "the opportunity costs of using congested transmission paths.").

[25] Cal. Indep. Sys. Operator Corp., 116 FERC ¶ 61,274, 62,136 (2006).

goal of the congestion pricing policy. In contrast to the program's effects on prices, dispatch, and revenues, this "congestion leakage" would raise questions about program design and potential mitigation measures that the Commission would rightly consider.

A carbon price and a congestion price—and the "leakage" potentially caused by each—are analogous. It follows that while the Commission can examine both the emissions leakage and economic effects arising from a carbon pricing tariff, it should take somewhat different approaches to each, similar to the way the Commission has treated congestion. Most importantly, the Commission should recognize that the occurrence of either emissions leakage or economic effects beyond the pricing region would not indicate a fatal flaw in an otherwise well-designed carbon pricing proposal.

Respectfully submitted,

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Dated: November 16, 2020

CERTIFICATE OF SERVICE

In accordance with Rule 2010 of the Commission's Rules of Practice and Procedure, I hereby certify that I have this day served by electronic mail a copy of the foregoing document upon each person designated on the official service list compiled by the Secretary in this proceeding.

Dated at New York, New York this 16th day of November 2020.

Respectfully Submitted,

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