

Carbon Pricing Senior Task Force

Eric Hsia

Senior Manager, Applied Innovation
Markets & Reliability Committee

October 20, 2021

- Established in July 2019
 - Problem Statement & Issue Charge by several stakeholders
- Issue Charge – Main Objective:
 - Explore impacts of emissions and price leakage between regions with and without carbon pricing policies (e.g. RGGI), and develop rules to manage leakage where appropriate.
- Two stages:
 - Stage 1 – Education & Analysis
 - Stage 2 – Rule Development
- Conducted polling in summer 2020 to solicit stakeholder interest in moving from Stage 1 to Stage 2.
 - 65% of the responses suggest not moving forward to rule development
 - 62% of the responses suggest continuing education and analysis
 - 35% suggested moving to rule development
- A full history of the education & analysis can be seen through the meetings on the CPSTF page under Task Forces on pjm.com

Carbon pricing & companion policies in PJM region today

Stage 1

Jurisdictional considerations for establishing a carbon price

Jurisdictional considerations for leakage mitigation

Analysis of leakage impacts & mitigation options

Takeaways from other ISO/RTOs

Scope of legal / regulatory design considerations for addressing carbon pricing & leakage mitigation

Scope of technical design considerations for addressing carbon pricing & leakage mitigation

Stage 2

Develop a Common Set of Rules to Implement Carbon Pricing & Manage Leakage Where Appropriate

- Education was provided by PJM and others in the industry on:
 - Carbon pricing concepts
 - Carbon tax vs. carbon cap & trade programs
 - Carbon pricing in PJM today via the Regional Greenhouse Gas Initiative (RGGI)
 - Introduction to leakage
 - Roles of companion policies
 - Review RPS standards and goals around the PJM region
 - Federal Clean Energy Standard legislation (as proposed)
 - Carbon pricing and leakage mitigation efforts in other ISO/RTOs
 - State and Federal jurisdictional considerations

- PJM presented its study on carbon pricing a range of carbon prices and potential leakage mitigation approaches
- Stakeholder analyses on other carbon pricing and leakage mitigation approaches MJB&A/EDF, Monitoring Analytics, Exelon, Vistra, and E3/EPISA
- [Comparison of carbon pricing and leakage mitigation studies](#) was presented at the February 2021 CPSTF

Education

- Carbon pricing exists in PJM today through RGGI
- Leakage occurs in PJM because of disparate state policy, regulation, resources and economics
- PJM states have different views on pricing carbon, leakage, addressing impacts from neighboring state policies
- There are open legal and regulatory questions regarding:
 - Decision on if a carbon price in PJM will continue to come solely from the RGGI program
 - Decision to mitigate leakage

Analysis

- Carbon pricing is an effective tool to achieve cost-efficient emissions reductions
- There are many approaches to leakage mitigation:
 1. Applying carbon pricing regionally
 2. Regional carbon pricing as leakage mitigation for subregional carbon pricing (ex. Vistra's proposal)
 3. Border adjustment constraints within wholesale electricity markets (one-way or two-way)
 4. Adjusting state RGGI allowance caps based on emissions of imports
 5. RGGI allowance allocation & revenue investment to provide incentives for in-state generation & energy efficiency
- Impact of leakage mitigation varies based on:
 - The mechanism utilized
 - Resources in carbon price sub-region
 - Amount of net imports or exports from the carbon price sub-region

- PJM and stakeholders have completed extensive education and analysis on various CPSTF topics
- There was strong feedback from the [survey results](#) to not move forward with Phase 2 – Rule Development on leakage mitigation
- Prioritization of current initiatives for PJM and the stakeholders
 - There are current efforts in the interconnection process, transmission policy (Workshops and the FERC ANOPR) and the capacity market phase 2 reforms that will include discussion related to decarbonization and procurement of clean resource attributes.

Presenter / SME Contact:

Eric Hsia, Eric.Hsia@pjm.com



Member Hotline

(610) 666 – 8980

(866) 400 – 8980

custsvc@pjm.com

Appendix

Presented at CPSTF:

- PJM: [Study of Carbon Pricing & Leakage Mitigation Mechanisms](#)
- MJB&A / EDF: [Carbon Pricing Modeling](#)
- Monitoring Analytics: [Carbon Pricing in PJM](#)
- Exelon: [Using Energy Markets to Enhance RGGI, RTO Leakage Mitigation for Carbon Reduction, Alternative Border Adjustment Methodology](#)
- Vistra Energy: [Regional Carbon Pricing as Leakage Mitigation for Subregional Carbon Pricing](#)
- E3 / EPSA: [Least Cost Carbon Reduction Policies in PJM](#)

Additional:

- ICF / VA DEQ: [Virginia Greenhouse Gas Rule](#)
- ICF / PA DEP: [Pennsylvania RGGI Modeling Report](#)
- Resources for the Future (RFF):
 - [State Policy Options to Price Carbon from Electricity](#)
 - [Options for Issuing Emissions Allowances in a Pennsylvania Carbon Pricing Policy](#)

* This is not intended to be a complete list of studies on this topic.
Each study included in the comparison focuses on the PJM region.