Direct & Indirect Carbon Pricing in PJM

Carbon Pricing Senior Task Force

June 30, 2020

A POWERFUL MODEL THAT PUTS CUSTOMER FIRST

A POWERFUL PURPOSE

We are an energy company powered by people and built on dynamic retail brands with diverse generation resources.

We bring the power of energy to people and organizations.

SUSTAINABLE COMMITMENTS

50%
reduction in carbon emissions by 2025

Net zero
Emissions by 2050

COMMUNITY HIGHLIGHTS

300+
Nonprofits served by NRG volunteers

16,000+
Total volunteer hours in 2018[1]

[1]Data taken from the 2018 PositiveNRG recap

INDUSTRY LEADER

A Fortune
500
COMPANY

Over
$9 Bn
IN REVENUE

Over
4,500
FULL-TIME EMPLOYEES

INTEGRATED PLATFORM

Powering the country with a diverse, competitive energy portfolio

- Approximately 23,000 MW of generation
- Over 35 generating assets in 8 states
- Natural gas, coal, oil, nuclear, renewables

Delivering customized electricity solutions for business

- Energy plans
- Energy systems
- Energy efficiency

Providing energy to retail customers across the nation

- Approximately 3.7 million customers large and small[1]
- Serving 67 TWhs by our retail brands (2018)

1. Projected count including Stream customer portfolio.

States Price Carbon Both Directly & Indirectly

- Carbon price is expressed directly through states that have joined RGGI.

- However, RPS/ZEC enactments also imply a carbon price.
  - Total RPS costs 2014-2018 = $4.4 bn. RGGI auctions over same period raised $1.4 bn.* Going forward, with ZEC costs included, that gap is likely to grow substantially larger.

- Treating only states' direct carbon pricing in an RTO carbon-price regime would ignore the whole ball game.

*Source: https://www.rggi.org/auctions/auction-results/prices-volumes

Can Carbon Pricing Effectively Achieve State Goals?

- States express a willingness to pay a certain price for a certain quantity of ZECs/RECs (and, consequently, carbon) through administrative pricing or an alternative compliance payment.
  - Can that price/quantity be translated into a carbon price that accomplishes the same reductions at lower cost (or greater reductions at the same cost)?

- NYISO example: A carbon price in the wholesale market "binds" and drives ZEC price toward zero, even though no formal pre-emption occurs.

- Can a carbon price inspired by PJM state policies' stringency effectively bind?

Border Adjustments

- In the Western Energy Imbalance Market, a style of border adjustment is necessary due to the manner in which California regulates carbon emissions
  - CARB exercises jurisdiction over the "first jurisdictional deliverer" of electricity within the state's boundaries, for the sake of measuring and regulating the associated emissions of imports

- This type of air regulation has not been implemented by PJM states
  - To the extent the task force's work is instructed by state policies, it is not clear what policy would induce border adjustments
  - Absent a state policy asserting imports' associated emissions to be subject to state air regulation, the conventional *situs* approach is appropriate
  - Leakage, resource shuffling, secondary dispatch are a natural result of a system with many state sovereigns. To the degree they pose problems, they are remedied as states migrate toward a consensus position on carbon regulation.