

# GREENHOUSE GAS ACCOUNTING IN EASTERN MARKETS

Eastern states' distinctive model for greenhouse gas accounting (the "East Coast Model") combines production- and consumption-based accounting frameworks in parallel fashion within three independent system operators (ISOs): PJM, New York ISO, and ISO New England.



## Key features of the East Coast Model:

- Utilities' membership in an independent system operator
- State membership in the Regional Greenhouse Gas Initiative

## What is the Regional Greenhouse Gas Initiative?

The Regional Greenhouse Gas Initiative is a mandatory cap and trade program for electric generation above 25 megawatts capacity, and many East Coast states are members of the program. This mass-based emission pricing program requires the purchase of emissions allowances equal to an electric generating unit's carbon-dioxide emissions over a three-year period. As such, the program serves as a de facto production-based greenhouse gas accounting mechanism, since all thermal generation must be accounted for using an emissions allowance. This necessitates strict record keeping of the greenhouse gas emissions for electric generating units in the program's member states.

## What is the working logic of the program and its greenhouse gases pricing?

The program's quarterly emissions allowance auctions create a carbon pricing mechanism, internalizing the price of emissions into thermal electricity generation. For independent system operators whose footprint includes the program's member states, greenhouse gas pricing is indirectly included in the operator's resource costs for thermal sources.

## What is the classic model for greenhouse gas accounting?

The classic model is when all states with jurisdictional utilities in an independent system operator are subject to compliance with the Regional Greenhouse Gas Initiative.

## How does greenhouse gas accounting work in the classic model?

The classic model allows for ease of greenhouse gas accounting while minimizing internal shuffling of resources. This is due to all energy resources produced within an independent system operator complying with the regional initiative's carbon pricing. The purchase of carbon emissions allowances by an electric generating unit allows those units to indirectly report and therefore track their emissions.

## What is the hybrid model for greenhouse gas accounting?

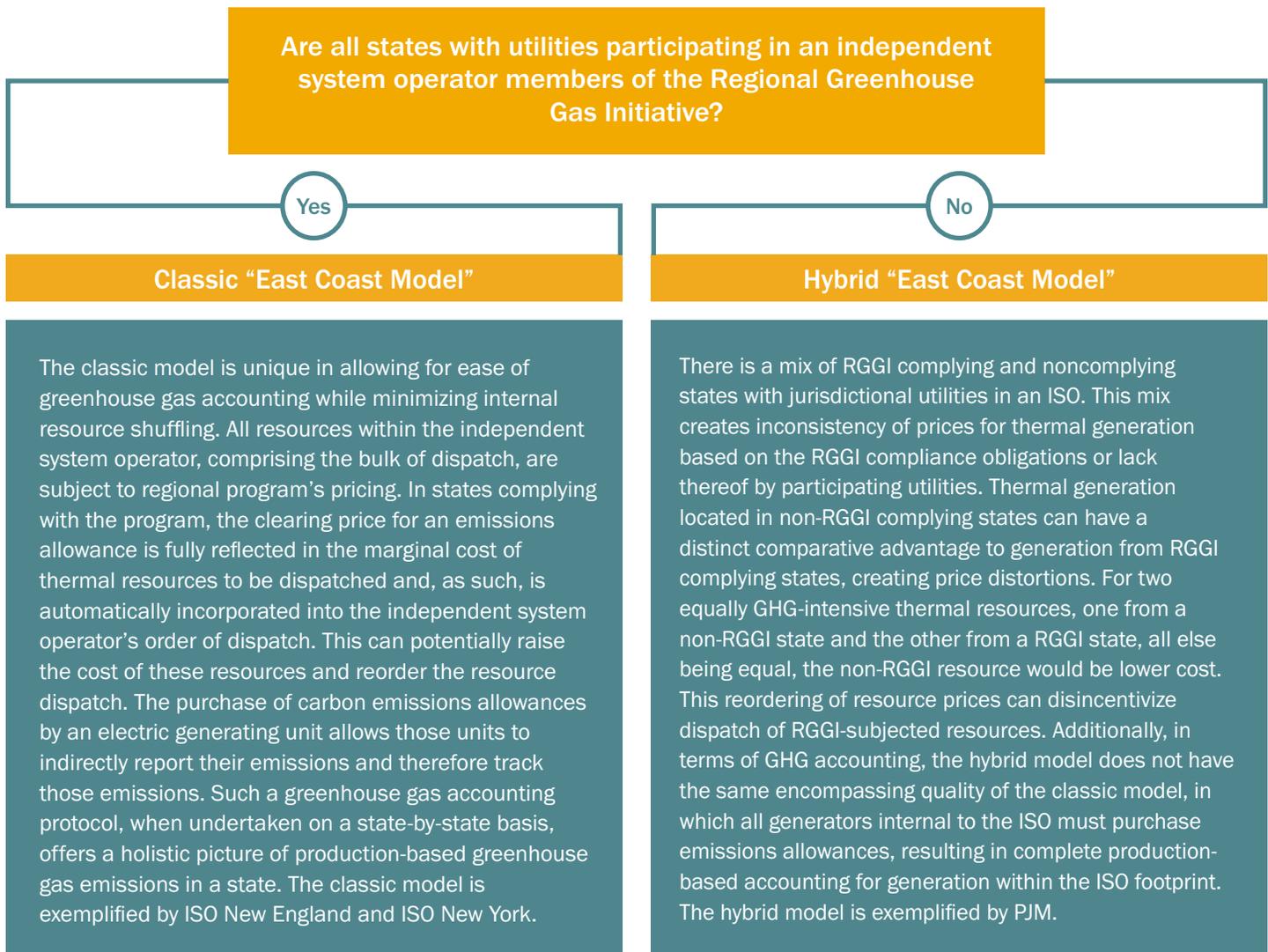
The hybrid model occurs when there is a mix of Regional Greenhouse Gas Initiative complying and non-complying states with jurisdictional utilities in an independent system operator.

## How does greenhouse gas accounting work in the hybrid model?

The mix of compliance statuses creates inconsistency of prices for thermal generation based on the regional program's compliance obligations or lack thereof by participating utilities. For two equally greenhouse gas-intensive thermal resources, one from a non-complying state and the other from a participating state, all else being equal, the non-complying

resource would be lower cost. This reordering of resource prices can disincentivize dispatch of resources subject to the regional program's requirements. In terms of greenhouse gas accounting, the hybrid model does not have the same encompassing quality of the classic model, in which all generators within the independent system operator must purchase emissions allowances, resulting in complete production-based accounting for generation within the operator's footprint.

### Classic and Hybrid "East Coast Models"



For more information, contact:

Vijay Satyal, Ph.D. | Regional Energy Markets Manager | [vijay.satyal@westernresources.org](mailto:vijay.satyal@westernresources.org) | 385.722.2551

Deborah Kapiloff | Transportation Electrification Policy Analyst