

IPPTF February, 2018

Harmonizing Carbon Prices and Expected CES Reductions



What is Harmony?

Harmony is reached when a single CO₂ allowance price throughout the broader RGGI region is consistent with carbon emission reductions equal to those expected to be brought about by CES.

- Carbon prices should not be higher than needed to achieve these expected carbon reductions.

What are Our Alternatives?

There are a variety of approaches, including but not limited to the following:

- Carbon Tax
- Economy-wide Cap and Trade
- Reduction in RGGI Allowances
- Brattle Pricing
- Do Nothing
- Bifurcating Capacity Markets
- Other Approaches

But – how do we decide which approach is preferable?

What are the Overall Objectives?

Our objectives include the following:

- CES compliance
- Enable the wholesale electricity market to support the resources needed to meet load and CES goals
- Allow regional market-based marginal-cost mechanism to set carbon/carbon reduction prices.
- Avoid leakage within RGGI trading mechanisms
- Allow for efficient allocation of carbon abatement among sectors and regions in and outside of NY State.

Proposed Principles

The proposed design should:

- Minimize load carbon abatement cost per ton reduced.
- Allow for efficient allocation of carbon abatement among sectors and regions in and outside of NY State.
- Give generators a reasonable opportunity to recover costs of supplying necessary system services.
- Address leakage concerns
- Promote efficiency in carbon markets and prices consistent with carbon reductions targeted by CES.
- Carbon pricing should not exceed abatement costs.
- Recognize the need to maintain/promote fuel diversity and flexible resources on the grid.

Approach to Consider

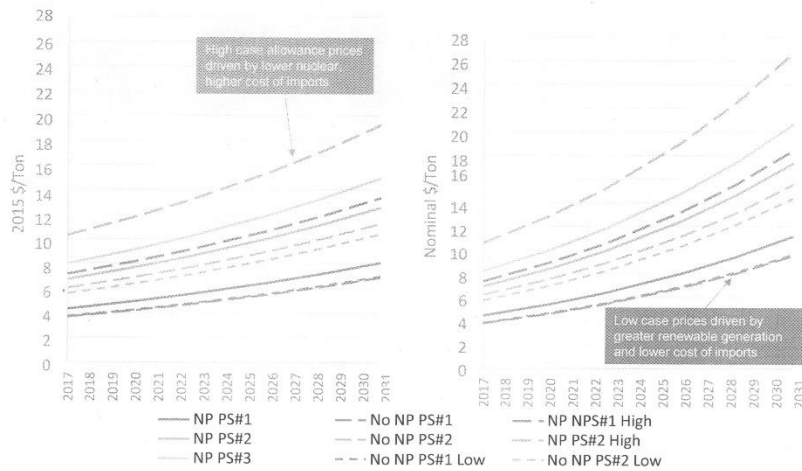
NYISO should consider an approach that increases carbon prices to the RGGI cost containment reserve reservation price, by retiring RGGI allowances equivalent in quantities up to the carbon abated by CES at prices up to the Cost Containment Reserve (CCR) reservation price.

- The goal being to narrow differences between RGGI clearing price and prices required by RGGI to bring about CES reductions.
- Either implemented by NYS and cost shared on a load ratio share basis or, purchased and/or retired by LSE's in proportion to their CES requirements.
- The cost to narrow these differences depends on RGGI's abatement supply curve, which depends on redispatch, imports, relative fuel costs, etc. but is determined by market forces.

Carbon Price Projections

RGGI Allowance Prices

- The chart shows the projected RGGI allowance prices in constant 2015 and nominal dollars.

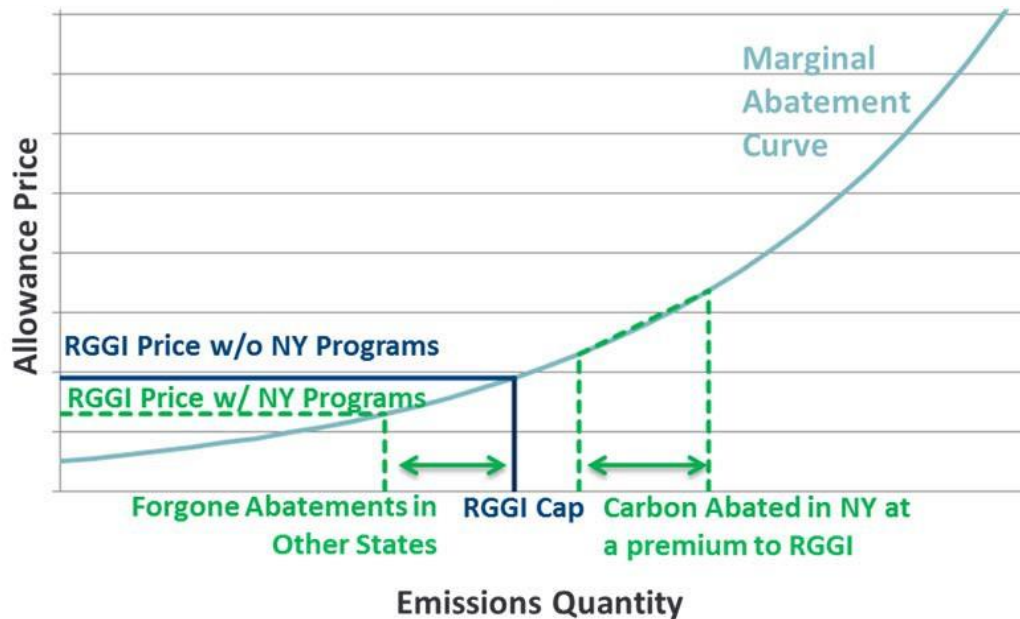


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Source: ICF Draft 2017 Policy Scenario Overview, June 2017

RGGI price projections show a wide range of 2025 allowance prices, the lowest of which accompany high renewable build-out Scenarios, but most are well below \$17/ton for 2025.

CES Impact on RGGI Prices



Source: Brattle Figure 4

The Brattle report suggests that carbon abated at a premium to RGGI prices by CES results in equivalent abatements foregone in other RGGI states.

How would a RGGI Approach Save Loads Money?



Narrowing differences up to the CCR reservation price could be less expensive for load.

	Brattle	RGGI
Sets CO2 prices	PSC sets based on Social Cost of Carbon (SCC)	Market price within RGGI region
CO2 total price adder	\$58/ton 2025	Up to \$17/ton 2025 CCR reservation price
Ability of RGGI to narrow differences	Assumed away as Brattle analysis assumes RGGI trades at CCR reservation price \$17/ton	Likely opportunities as RGGI market prices with CES are likely below \$17/ton
CO2 reduction location	NY reduction	Broader RGGI region
RGGI leakage	Potential border charge to be designed	Reduces border charge by increasing RGGI price