

Planning for Evolving Energy & Environmental Policies RGGI, Clean Power Plan, & New York State Energy Plan

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Topics

- ◆ **RGGI Program Review**
- ◆ **USEPA Clean Power Plan**
- ◆ **New York State Energy Plan**
- ◆ **NYISO Study Plan**

RGGI Program Review

- ◆ **2016 Program Review to serve two purposes**
 - *“ ...to consider program successes, impacts, potential additional reductions to the cap post-2020, and other program design elements.”*
 - *“ ...to receive comments from stakeholders and experts on potential program changes in pursuit of compliance with the EPA Clean Power Plan.”*

RGGI Program Review

- ◆ **Potential Changes to the cap post-2020**
(currently 78 Mil. Tons)
- ◆ **Review of Cost Containment Reserve (CCR)**
 - *5 Million Tons 2014*
 - *10 Million Tons 2015*
 - *Appears to be effective at price moderation*
 - *No allocation provided for post-2020*
- ◆ **Allowance Auction Process & Tracking Systems**

RGGI Program Review & Potential Use for CPP

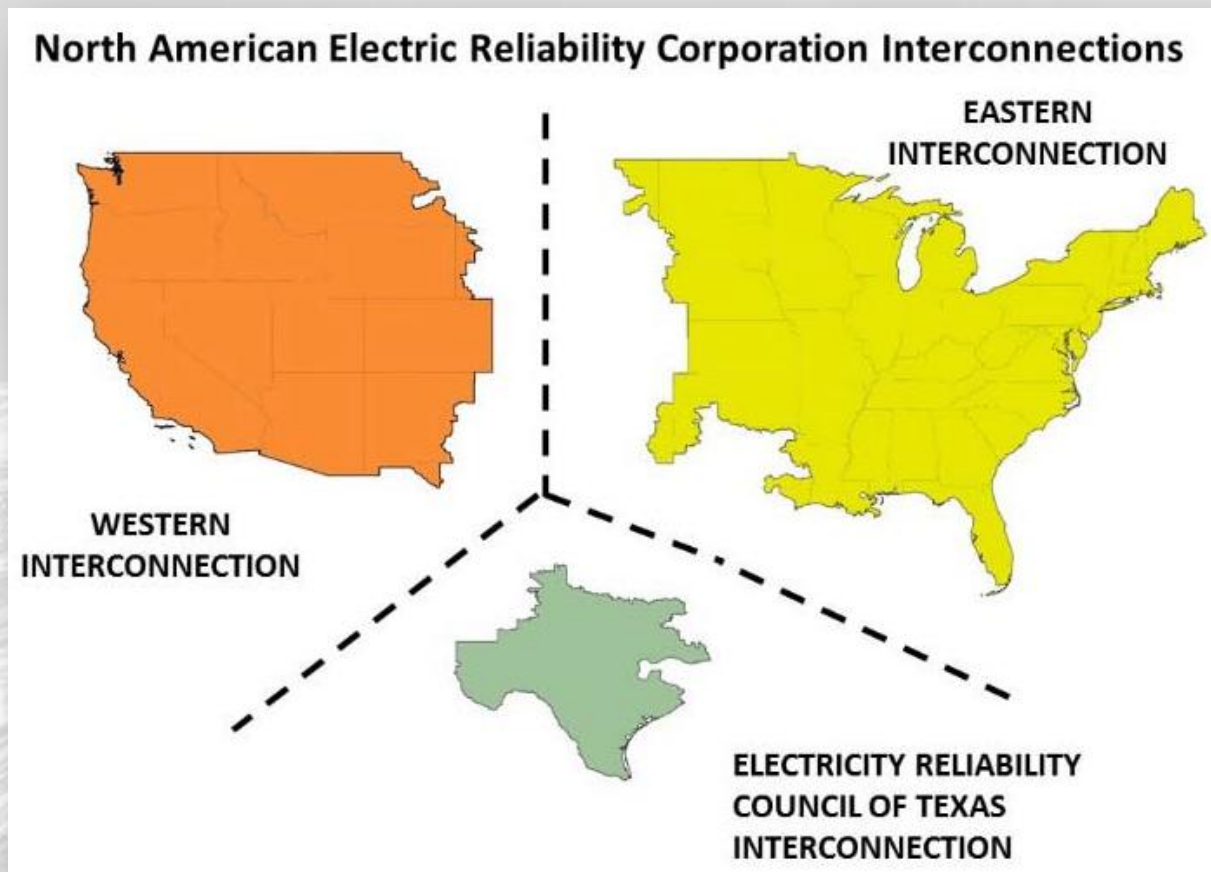
- ◆ “The RGGI states currently anticipate using the mass goals for both existing and new sources as a pathway for compliance with CPP.”
 - *Issues to be examined include:*
 - Use of “banked RGGI allowances”
 - Cost Containment Reserve
 - Offsets
 - Control Periods
 - Regulated sources (GTs not covered in CPP)
 - Trading Partners
 - Auctions
 - Clean Energy Incentive Program
 - Vermont and other States?

New Features in Final Rule

- ◆ **Specific rates applied nationally by Technology Category**
- ◆ **The machine to be regulated is defined per synchronously interconnected system**
- ◆ **Delayed start until 2022**
- ◆ **Phased-in increase use of NGCCs**
- ◆ **Limited recognition of early actions**
- ◆ **Simple Cycle Combustion Turbine generally excluded from regulation**

Best System of Emission Reduction (BSER)

Applied to Three Interconnections

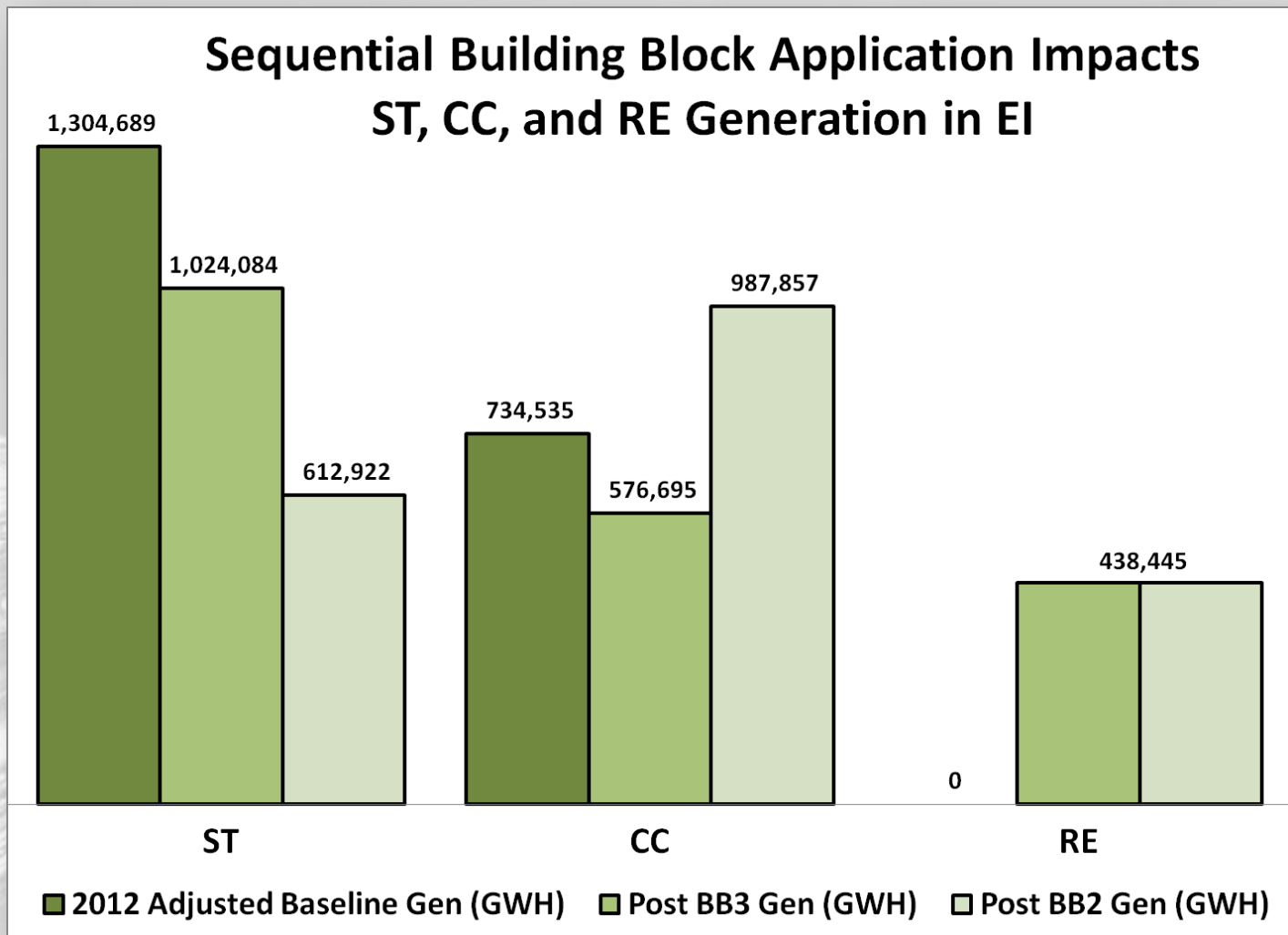


<http://www2.epa.gov/cleanpowerplan/fact-sheet-overview-clean-power-plan>

Three Building Blocks

- ◆ **Sequentially applying three Building Blocks to the 2012 Baseline Generation Levels establishes the uniform Best System or Emission Reduction (BSER) Category-Specific CO₂ Emission Rate Performance Standards**
 1. ***BB1: 4.3% Heat Rate Improvement at Coal Steam Turbines***
 2. ***BB3: Renewable Energy (incremental to 2012 baseline) reduces Electric Generating Unit (EGU) MWH on a one-for-one basis in proportion to baseline***
 3. ***BB2: Redispatch ST to CC generation up to 75% Summer Capacity Factor ceiling***

Generation Levels due to BBs

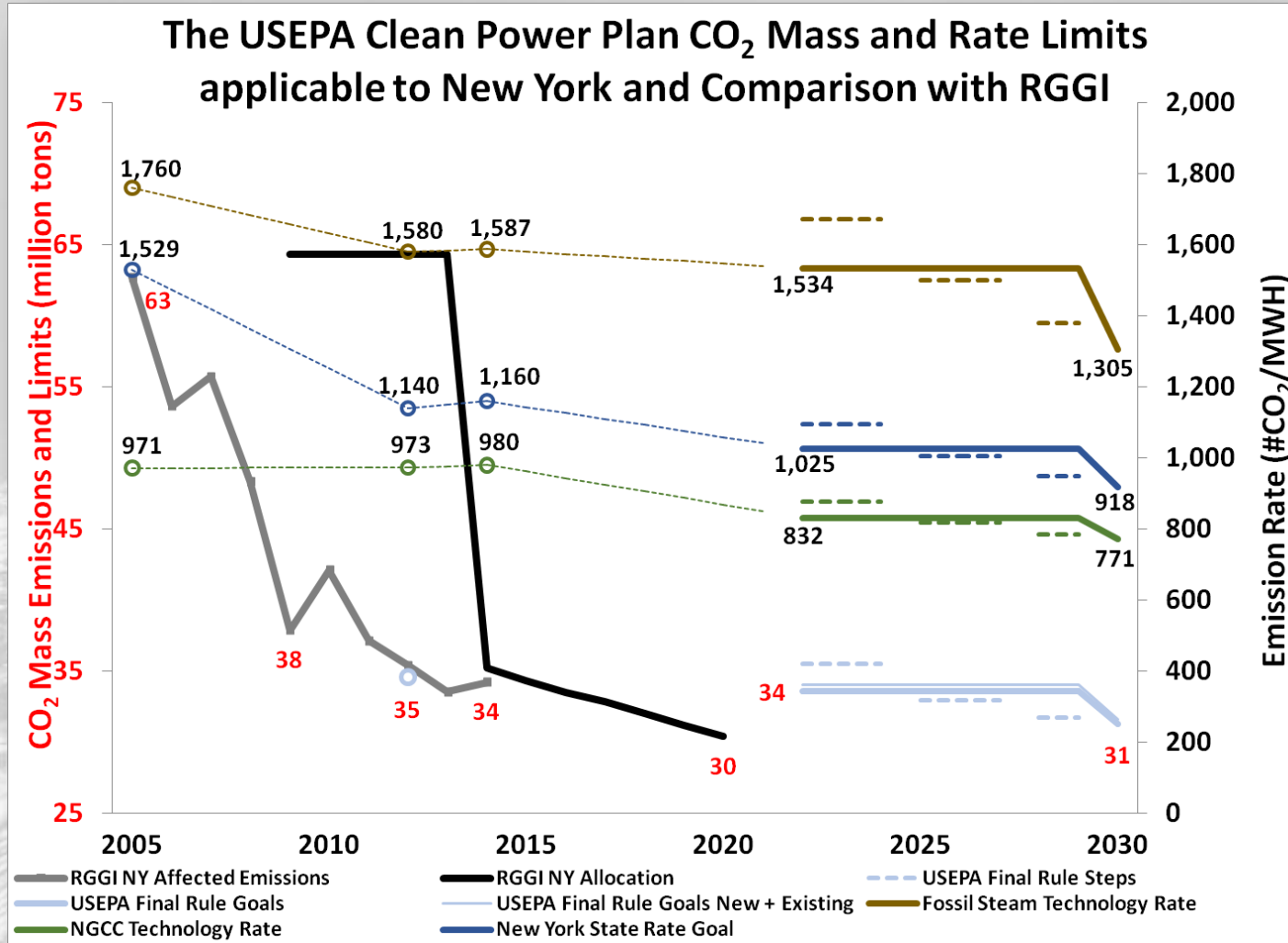


Clean Power Plan

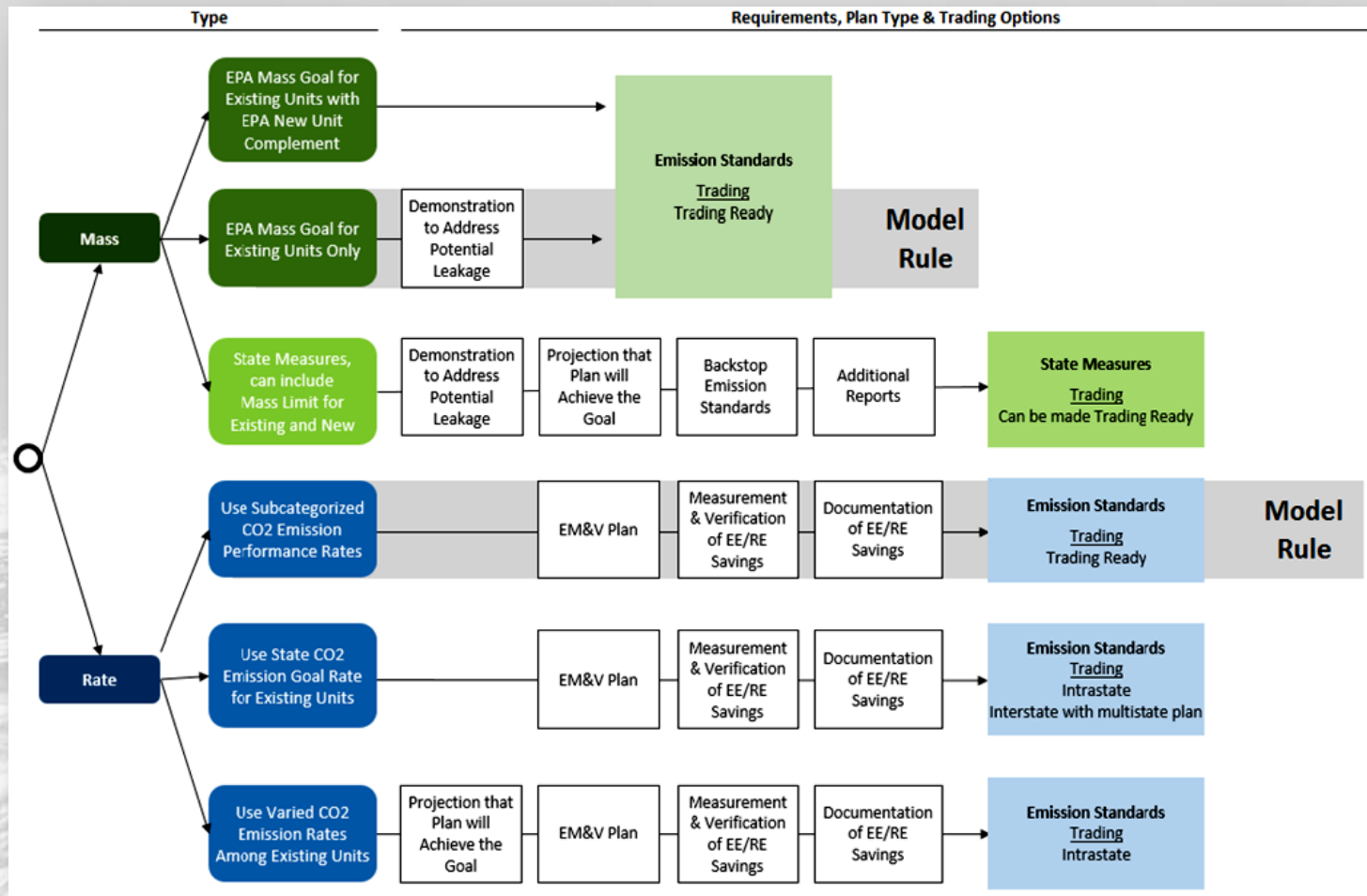
Performance Standards for NY

	2022	2023	2024	2025	2026	2027	2028	2029	2030	Interim*	Final*
Annual Category-Specific Rates (#CO₂/MWH)											
ST	1,741	1,681	1,592	1,546	1,500	1,453	1,404	1,355	1,304	1,534	1,305
CC	898	877	855	836	817	798	789	779	770	832	771
New York State Annual, Interim, Final, and Step Rate Goals (#CO₂/MWH)											
NY Annual Rate Goal	1,129	1,098	1,057	1,031	1,005	978	958	937	918	1,025	918
NY Step Rate Goal	1,095			1,005			948		918	1,025	918
New York State Annual, Interim, Final, and Step Mass Goals (million tons CO₂)											
NY Annual Mass Goal	36.66	35.54	34.28	33.66	32.99	32.15	31.89	31.60	31.26	33.60	31.26
NY Step Mass Goal	35.49			32.93			31.74		31.26	33.60	31.26

CPP Rate & Mass Limits

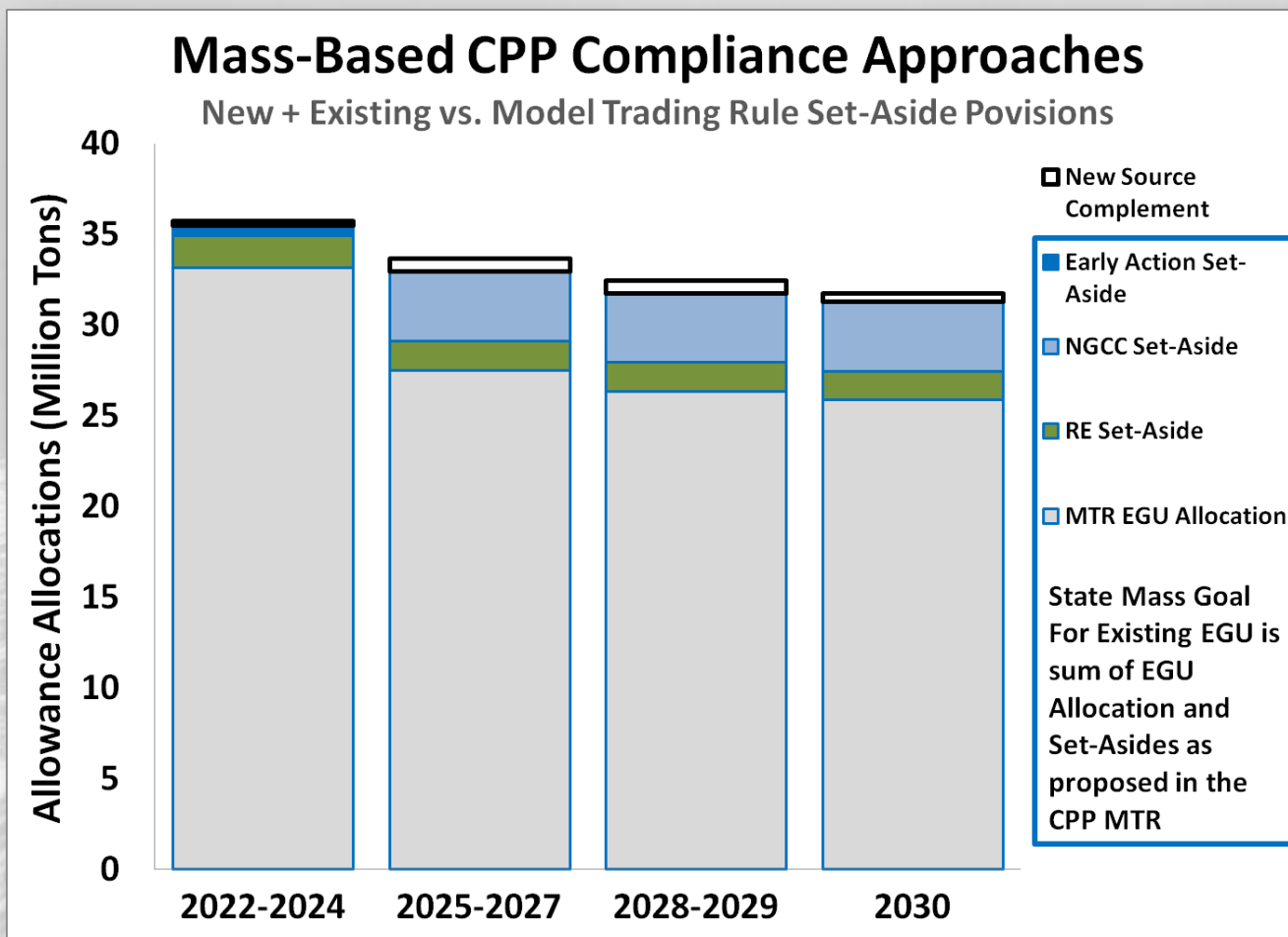


State Plan Compliance Pathways

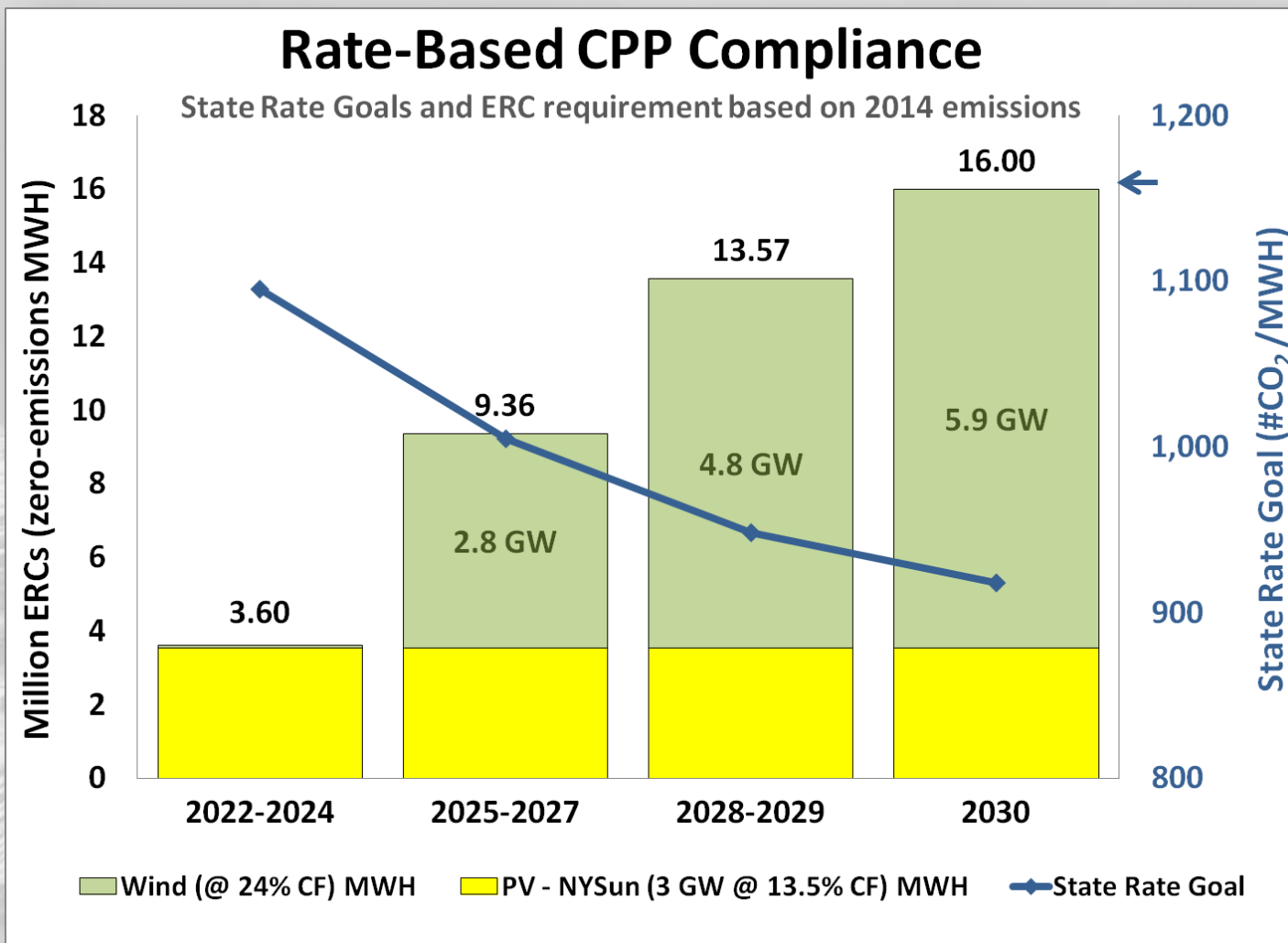


<http://www2.epa.gov/cleanpowerplanttoolbox/state-plan-decision-tree>

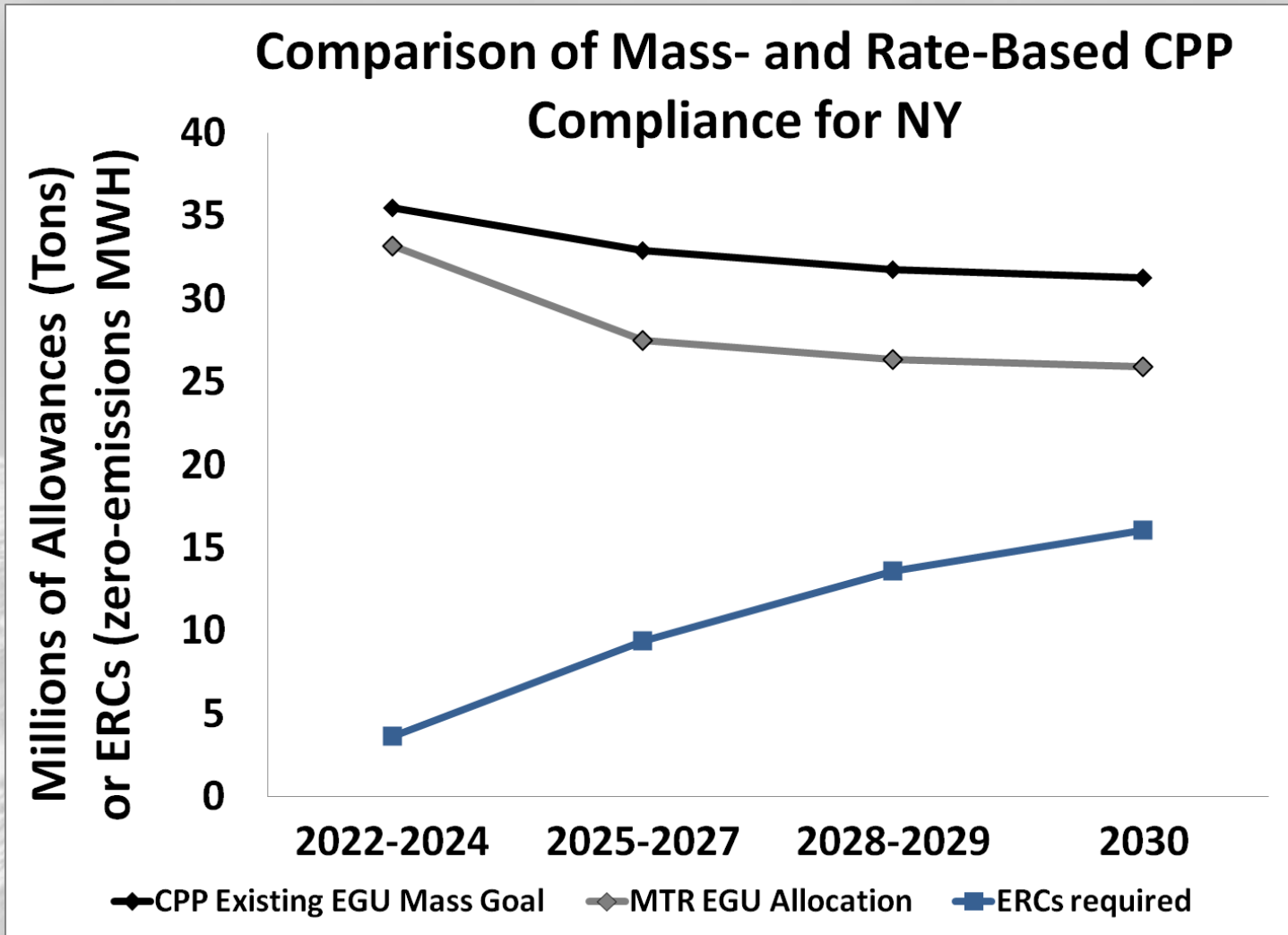
Mass-Based Compliance Options



Rate-Based Compliance Options



Rate vs. Mass



NYS Energy Plan 2030 Targets

- ◆ **40% Reduction in GHG emissions compared to 1990**
- ◆ **50% Electricity Generation from Renewable Energy Sources**
- ◆ **600 TBTU Increase in Statewide Energy Efficiency**

NYISO Collaboration

- ◆ **NYSPSC TO State Resource Plan**
 - *Identify boundary conditions to meet CPP & NYS Energy Plan*
 - *ICF and GE retained*
 - *Report Due mid-2016*
- ◆ **RGGI Program Review**
- ◆ **State Plan/Initial Submittal**
 - *Support Modeling*
 - *Advise on market effects and reliability review*

NYISO Study Plan

◆ Reliability Impacts

- *Estimate Operation Limits resulting from CPP*
- *Project resources available*
- *Identify areas where reinforcements would be beneficial*

◆ Market Effects

- *Compatibility of price signals*
- *Consumer impacts*

◆ Interim Report mid-year

◆ Final review post Initial Submittal

The New York Independent System Operator (NYISO) is a not-for-profit corporation responsible for operating the state's bulk electricity grid, administering New York's competitive wholesale electricity markets, conducting comprehensive long-term planning for the state's electric power system, and advancing the technological infrastructure of the electric system serving the Empire State.

www.nyiso.com