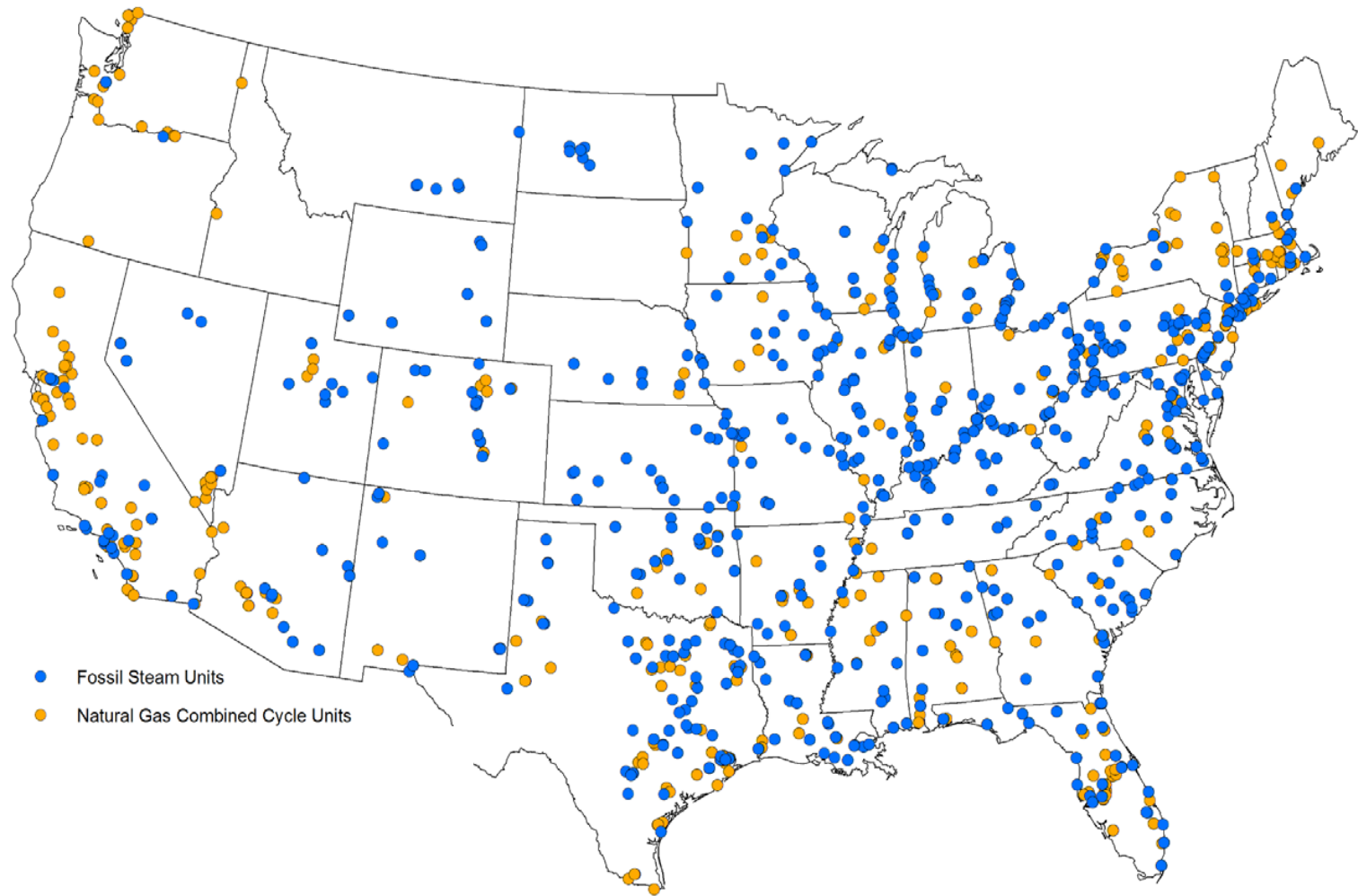


Future of GHG Trading in North America: Clean Power Plan Overview

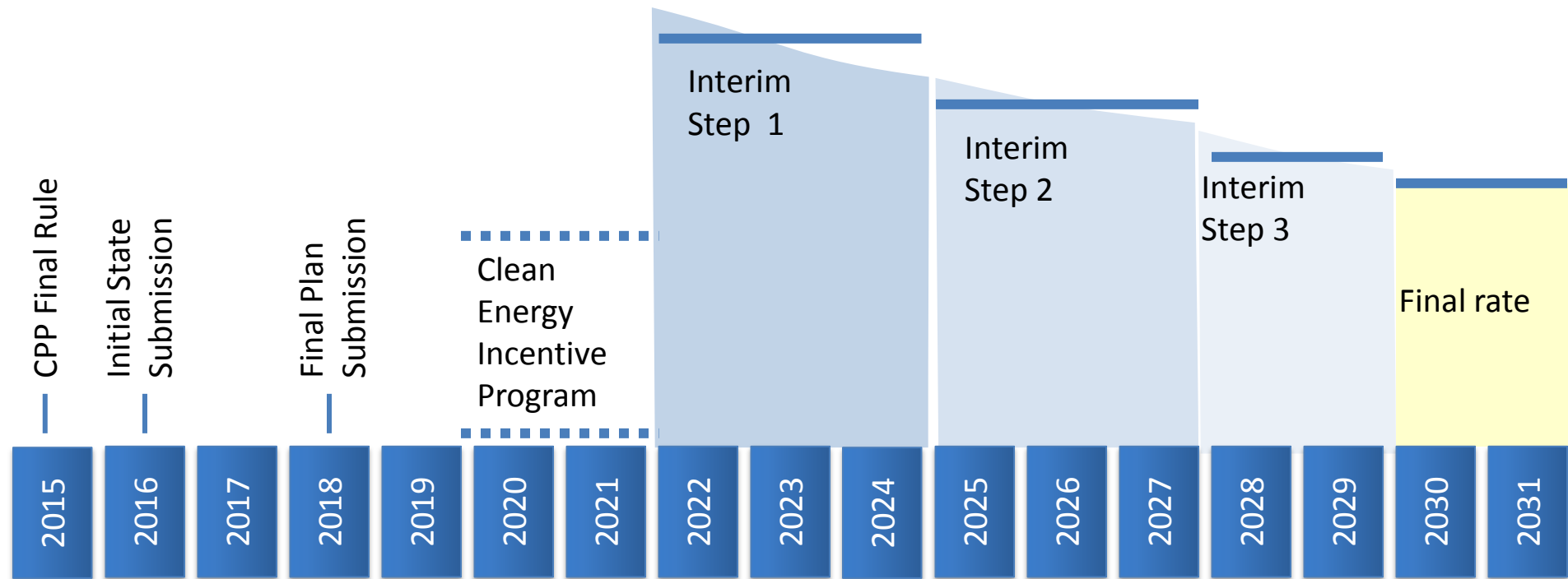
Jonas Monast

September 30, 2015

Clean Power Plan = existing fossil fuel-fired power plants



CPP Compliance Timeline



- EPA is encouraging early action in 2020-2021
- Interim compliance period pushed back 2 years to 2022
- Three interim steps
- Two year compliance periods for final goal

Clean Air Act

- Implications of proceeding under the Clean Air Act
 - New versus existing units
 - Limited to electricity sector
 - Role for federal government and role for state governments
 - Legal uncertainty
 - No offsets

Clean Air Act

“Best system of emission reduction”

- taking into account
 - the cost of achieving reductions
 - any nonair quality health and environmental impact and
 - energy requirements
- The “best system” must be “adequately demonstrated”

“Building Blocks”

BB1: Heat rate improvements at existing fossil steam units (i.e., coal)

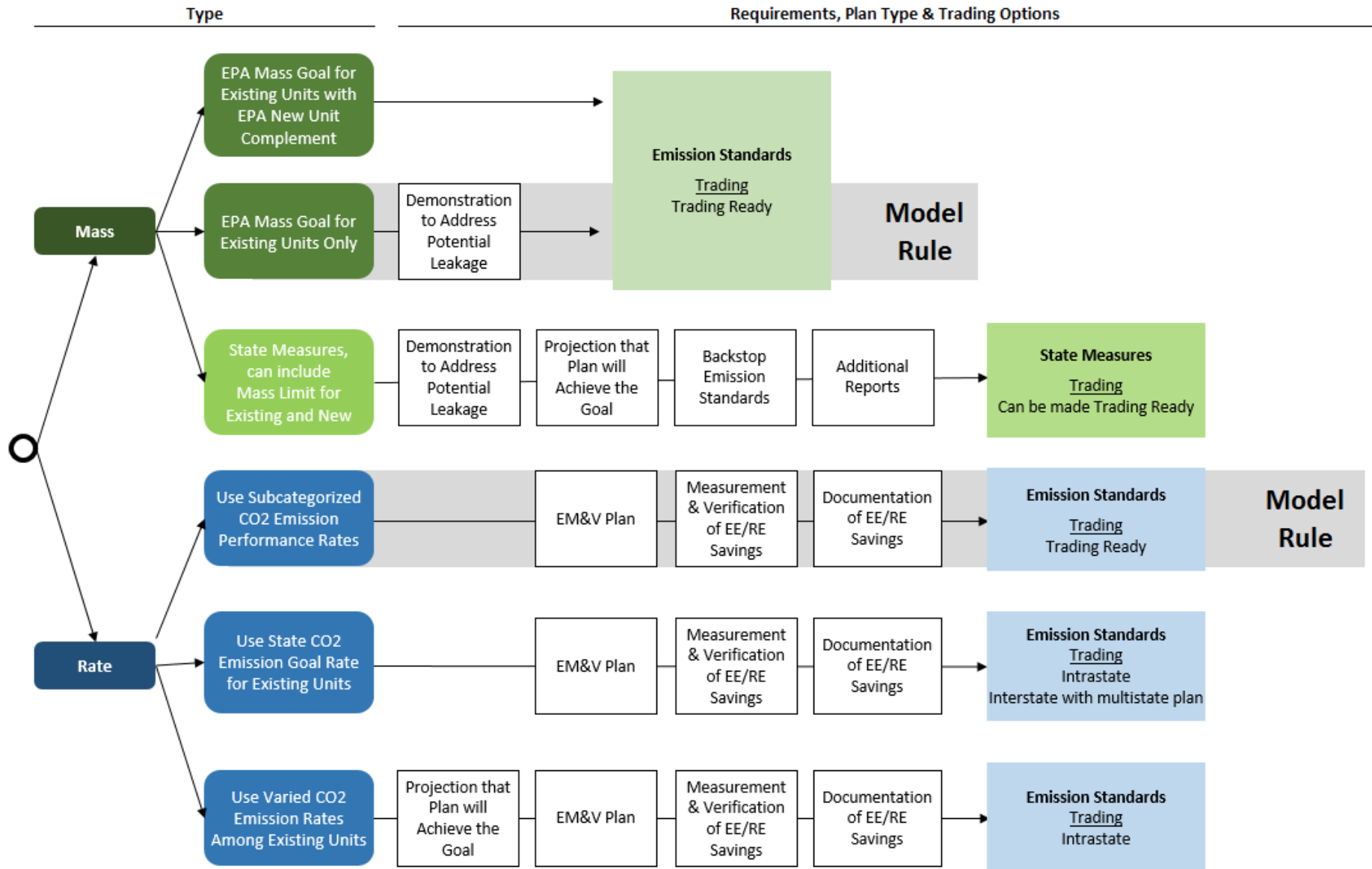
- 1,305 lbs/MWh

BB2: NGCC 75% capacity factor

- 771 lbs/MWh

BB3: Incremental renewable energy

EPA's MAPPING OF THE STATE PLAN APPROACH OPTIONS



Threshold Choice

Mass	Rate
Tons CO ₂	lbs CO ₂ /MWh

“Trading Ready” State Plan Pathways

Allows EGUs and others to trade compliance instruments **with the same definition** with entities in other states without a formal multistate agreement.

Mass	Rate
Allowance representing 1 short ton of CO ₂ emissions	Emission Rate Credit (ERC) representing 1 MWh of zero carbon generation or avoided emissions

Rate-Based Compliance

$$\text{ERC} = \text{Generation} * \frac{(\text{Regulated rate} - \text{EGU rate})}{\text{Regulated rate}}$$

If positive, earn ERCs → subsidy

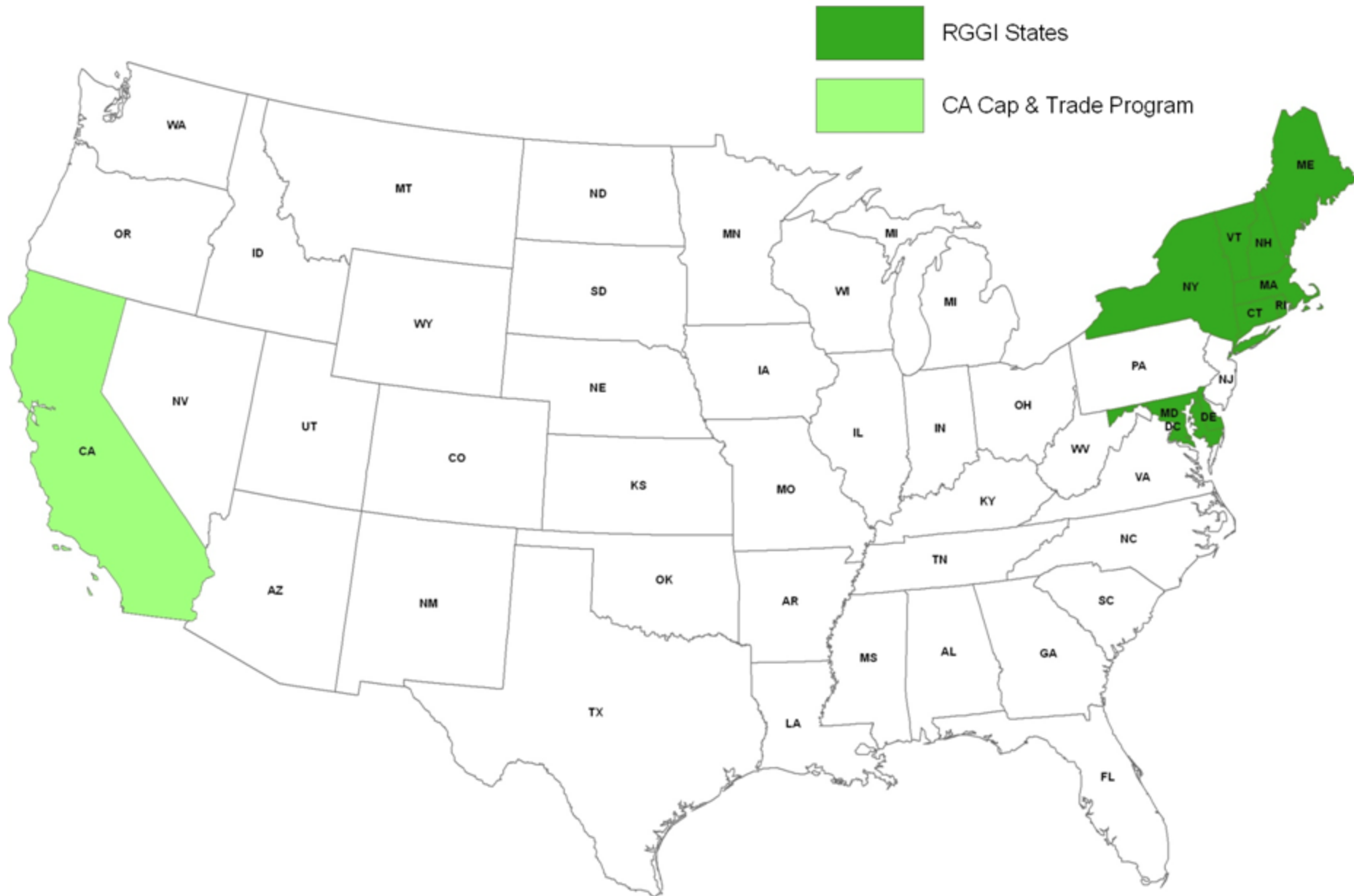
If negative, owe ERCs → cost for emissions above regulated rate

Incremental (post 2012) RE, demand side EE, nuclear earn ERCs based on MWh generation, avoided generation during compliance periods (from 2022 onward)

New NGCC not eligible to earn ERCs

“Trading Ready” Choices

- What trades?
- Who may trade?
- Allocation vs. Auction?
- Model Rule?



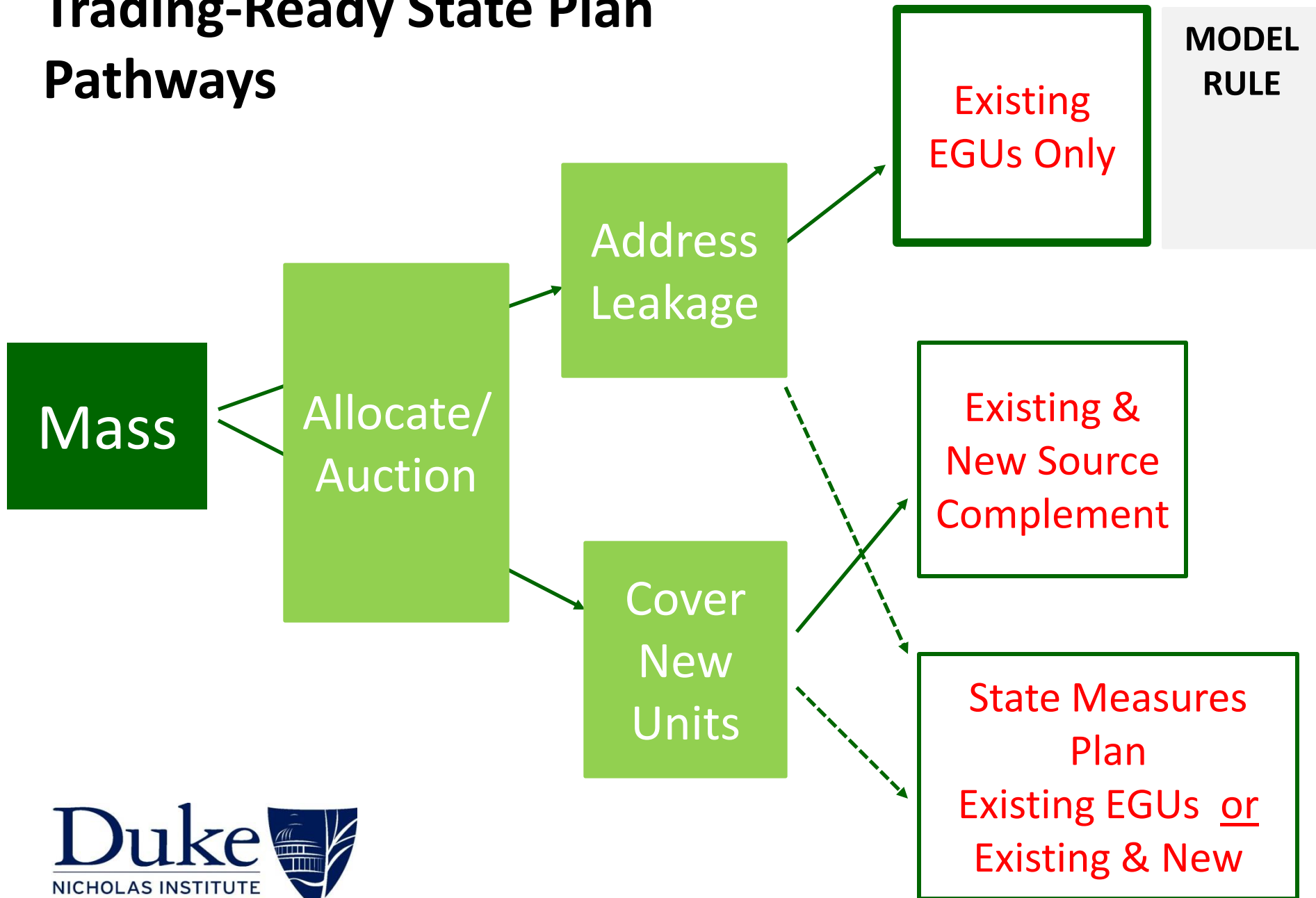
Source: tradingenergy.com

Thank you

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Trading-Ready State Plan Pathways



Trading Ready State Plan Pathways

