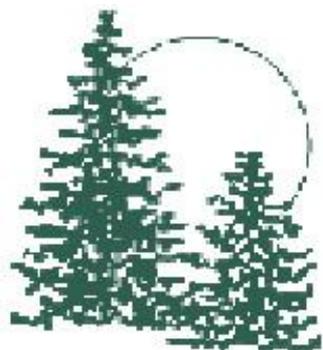


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# Implications of EPA's Section 111(d) Proposed Rules on Renewable Energy Markets



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# Overview

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- Double counting
  - ▶ How double counting can occur
  - ▶ How to avoid it
- Rate-based vs mass-based plans
  - ▶ Differences, and implications
- Multistate plans (briefly)
- Tracking systems
- Voluntary markets
  - ▶ Double counting
  - ▶ Regulatory additionality

# EPA Proposes...

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- “...a state could take into account all of the CO<sub>2</sub> emission reductions from renewable energy measures implemented by the state, whether they occur in the state or in other states. This proposed approach...acknowledges the existence of RECs that allow for interstate trading of RE attributes...”
- It’s good that EPA see RECs as a basis for verification, but some concerns remain

# Double Counting Can Occur

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- To achieve RPS compliance, State A accepts RECs from State B
- The RPS is included as a measure in State A's Clean Power Plan
- State B proposes to track in-state emission reductions, and claims the emission reduction from the same MWh that State A is using to satisfy its RPS and its CPP
  - ▶ State A is claiming based on consumption or use of the emissions attributes that are part of the REC
  - ▶ State B is claiming based on production and resulting emissions
- This seems to be a clear case of double counting

# Rate-based Approach

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- States are given a goal of lbs/MWh and can propose measures, like an RPS, to help lower the emissions rate
- Each proposed measure must demonstrate a linkage, or cause and effect, to resulting emission reductions

# Mass-based Approach

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- States can choose to convert its lbs/MWh goal to total emissions goal—a cap in tons
- To show progress, states simply measure emissions at the stack and add them up
  - ▶ Demonstration of causation is not required
  - ▶ RE and EE can still help, but a link doesn't have to be demonstrated
  - ▶ What happened, where, and why isn't relevant

# Rate-based vs Mass-based

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- Mass-based is easier and simpler, but states have less flexibility—it's all on the affected EGUs
- Rate-based offers more flexibility but it's more complicated to demonstrate the linkage
- What happens when some states choose mass-based and others choose rate-based?

# Another example

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- State A with a rate-based goal proposes to use its RPS and RECs to verify goal achievement
- State B, has surplus RECs for its RPS, and proposes to use a mass-based approach and measure stack emissions in state
  - ▶ State B doesn't need RECs to demonstrate emission reductions
  - ▶ Emission reductions at affected EGUs in State B result from greater RE generation (both in-state and out) that is sold (with RECs) to State A

# Is this Double-Counting?

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- REC is not being claimed in State B, BUT
  - ▶ RE generation in State B helped affected EGUs reduce direct emissions
  - ▶ State B may be selling RECs from its RE generation to State A that is claiming them
  - ▶ And because of grid operations, State B emissions may be reduced in part because of RE generation in other nearby states that are claiming RECs
- Some suggest that states using mass-based reporting should also own and retire the RECs for in-state generation, or else adjust their mass emissions upward for any RECs sold out of state

# EPA asks for comments 34922

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- How to avoid double counting emission reductions?
- Whether a state should be able to take credit for emission reductions out of state due to [RPS] if the state can demonstrate that the reductions will not be double counted?
- What should a “no double counting” demonstration entail?

# Comment

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- To avoid double counting, EPA may need to compromise on flexibility and impose some consistency among state approaches
- Any state meeting its emissions goal with an RPS should show compliance using RECs
- RECs are essentially based on consumption, so this should be the basis for counting RE for compliance

# Multi-State Plans

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- EPA provides for states to work together
  - ▶ Allocate emissions and actions among participating states
- What happens if some states in region join a multi-state plan while others go alone?
- States A-F constitute a regional grid
  - ▶ States A, B, C and D submit a multistate plan
  - ▶ States E and F submit single state plans
- Bound to be some leakage by trade of electricity or RECs between A-D and E and F
  - ▶ No problems within the multistate plan
  - ▶ But the same double counting scenario discussed earlier could occur between the group and the individual states unless they all use RECs as the basis for counting progress towards goals

# Tracking Systems

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- Existing tracking systems have proven their reliability and credibility in preventing double counting
  - ▶ They should be used for quantifying and verifying the contribution of RE to emission reductions
- Attribution of lowering a state's emission rate due to RE should be based on ownership and retirement of the certificate by a state-regulated entity
- Tracking systems might also be used to track overall emissions, not just renewable energy
  - ▶ NEPOOL and PJM and NY track all generation attributes, whereas other tracking systems track only renewables
  - ▶ States in other regions may want to consider expanding tracking systems to all generation

# Voluntary Markets

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- VRE should not be included in state plans
  - ▶ Customers want to incent actions above and beyond what's already required
  - ▶ VRE may not be enforceable by EPA
- 111(d) can be implemented without doing harm to the voluntary market
  - ▶ As long as 111(d) compliance is verified by retiring RECs—the same method used to verify voluntary claims—no double counting occurs
  - ▶ As long as VRE is surplus to 111(d) requirements

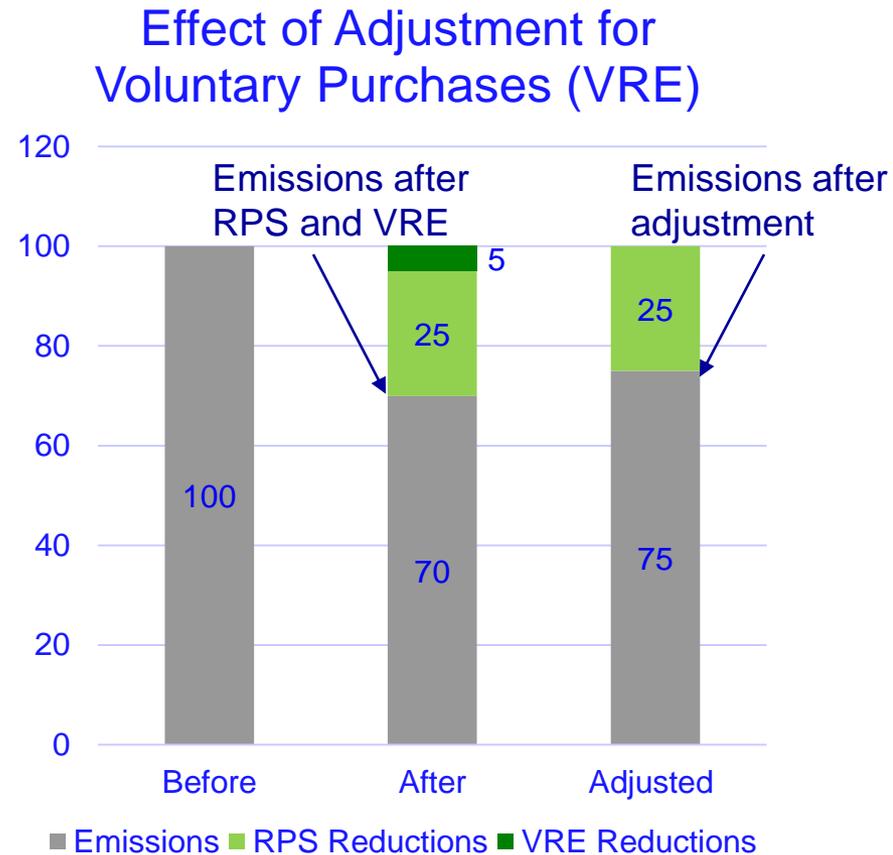
# Regulatory Surplus

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- A key part of the voluntary market is credibility—knowing that your purchase is making a difference above and beyond what is otherwise required (sometimes called “regulatory surplus”)
  - ▶ Part of this making a difference is reducing your carbon footprint
- If a voluntary purchase is included in state emission calculations, either directly or indirectly, that purchase, even if no one else claims the REC, is not “above and beyond”
  - ▶ May have a chilling effect on the voluntary market

# Example

- The goal is to reach 70 tons (or say 70 lbs per MWh) by 2030
- States should consider an adjustment mechanism to pull VRE out of the calculation of emissions and emission rates



# Advice

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- Create a plan that addresses the fact that other states may try to claim reductions resulting from actions you have purposefully incentivized
- Work with neighboring states to determine who gets credit for what type of action
- Create a consistent policy using RECs that ensures that you are the only party taking credit
  - ▶ Or risk EPA rejecting your plan due to potential double counting
- Read Section VIII State Plans (pp. 34900-34928) carefully, and respond to the EPA questions

# Summary

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- Using RECs for 111(d) accounting is consistent with RPS compliance methods
- RECs are the existing and most effective instrument to track RE for the purposes of 111(d) and prevent double counting
- Using RECs is fair in that the state paying for a REC gets to count it for compliance
- EPA should specify a single consistent way to count RE for all states