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The Clean Power Plan: Interactions and Implications for Renewable Energy Markets

Ed Holt, Ed Holt & Associates, Inc.

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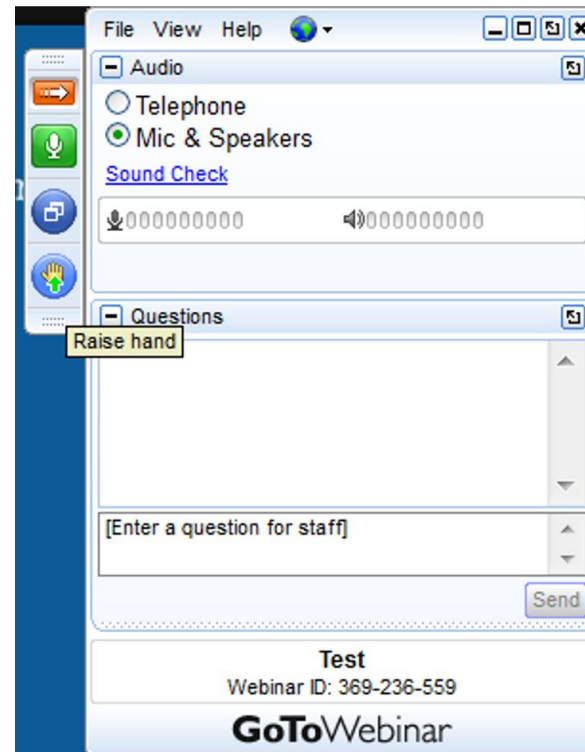
Todd Jones, CRS

November 19, 2015

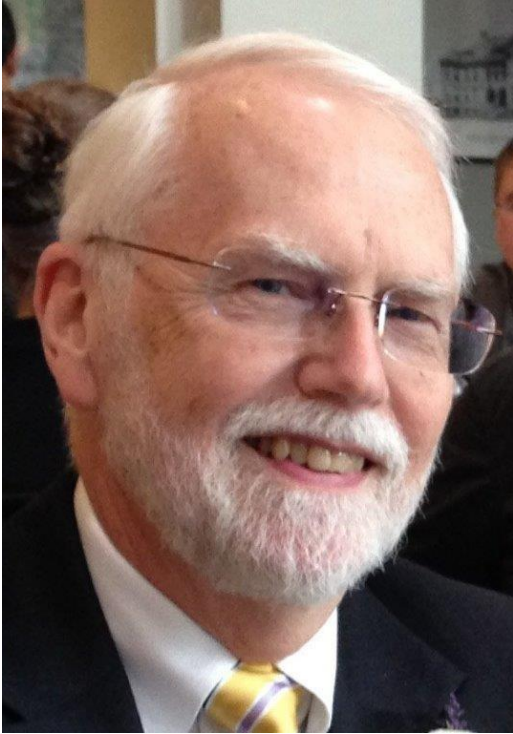
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Housekeeping

Please send questions through the Questions pane.



Our Experts



Ed Holt



Todd Jones



Dave
Farnsworth

Clean Power Plan Overview

1. Regulation
2. Implementation
3. Start/end
4. Targets
5. Compliance

Accounting for Renewable Energy in a Mass-based CPP Compliance Program

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*Under a mass-based system, there is no need for tracking or accounting of RE specifically. There can be allowance allocation to RE. RPS can be included in mass-based state measures plan.

Accounting for Renewable Energy in a Rate-based CPP Compliance Program

$$CO_2 \text{ emission rate} = \frac{\sum M_{CO_2}}{\sum MWh_{op} + \sum MWh_{ERC}}$$

Definition • Issuance • Tracking • Trading

Renewable Energy Markets in the U.S.

Markets that deliver
renewable energy to
customers

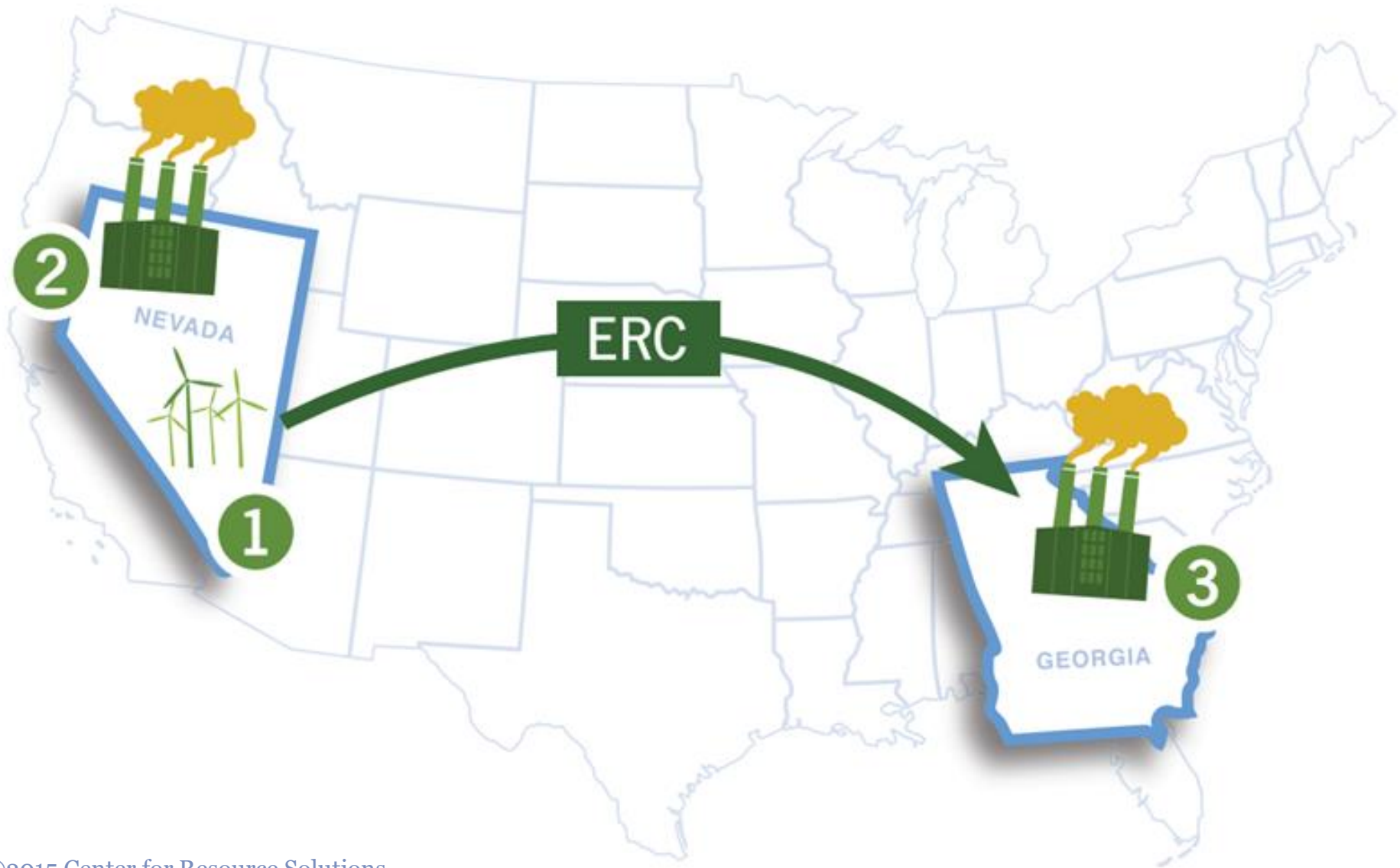
Consumption-based RE markets

The Clean Power Plan

Markets for GHG
emissions and avoided
emissions at existing
power generation

Generation-based carbon markets

ERCs and RECs are different.

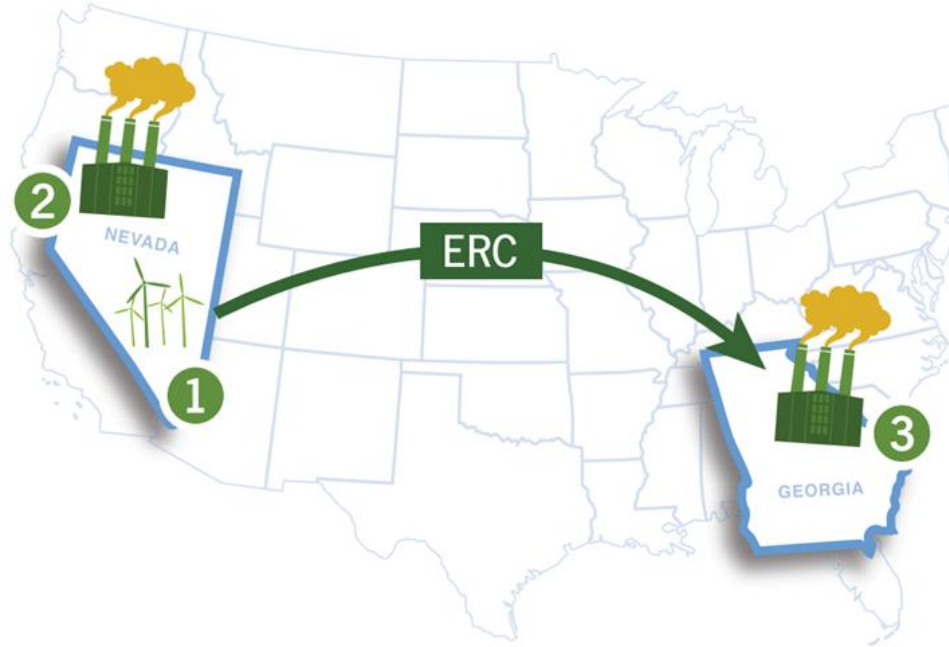


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REC



ERC



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CPP and the Voluntary RE Market

ERCs and RECs are different.

Avoided grid emissions

“Regulatory Surplus”

CPP and RPS Compliance Markets

CPP and RPS: Separate compliance programs

1. Different goals
2. Separate compliance instruments
3. Different obligated entities

RPS can be complementary to or can be incorporated into state CPP plans

CPP and RPS

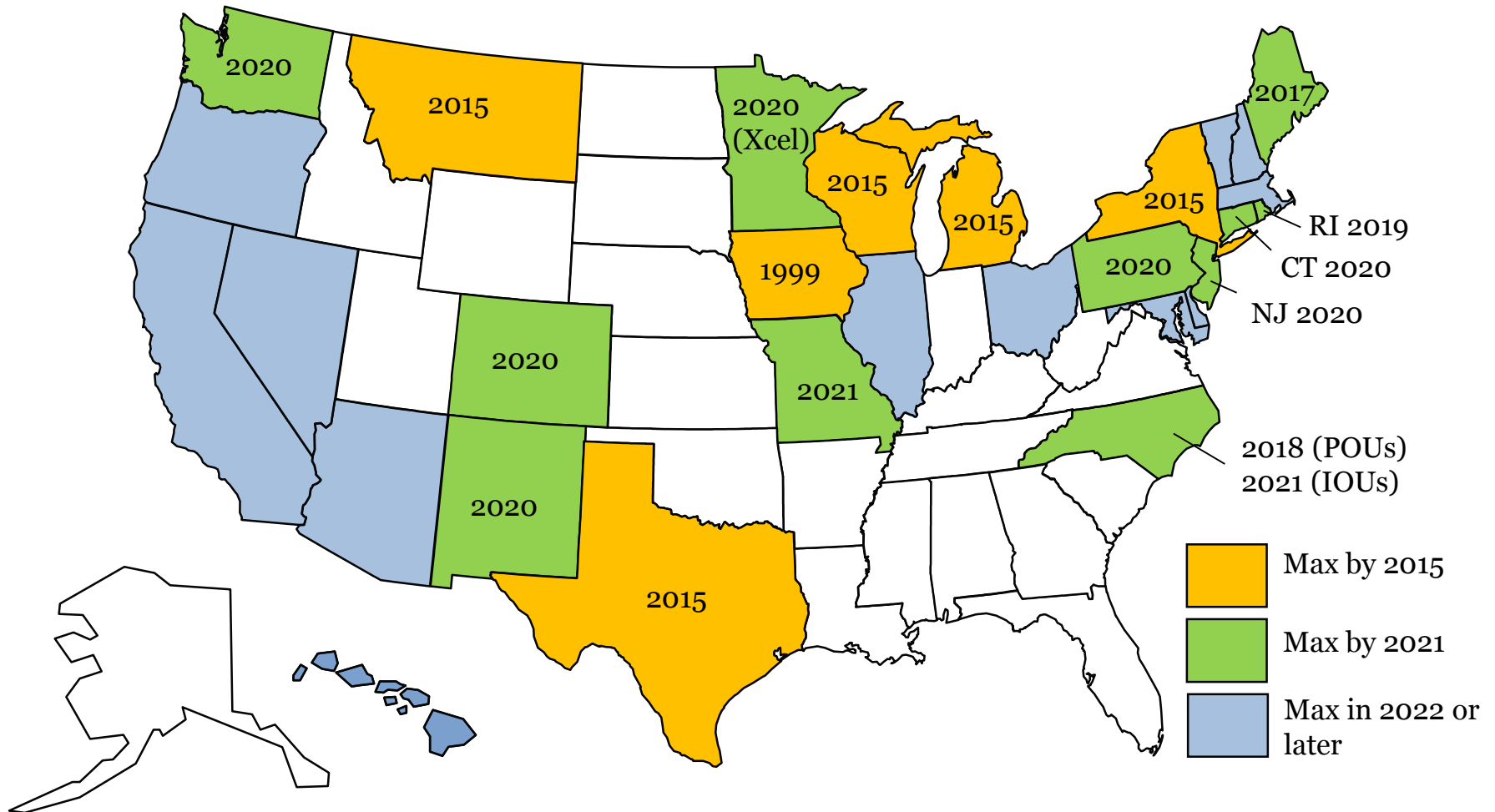
	Rate-based	Mass-based
Emission standards approach	Obligation on affected EGUs	Obligation on affected EGUs
State measures approach	N/A	<u>State-enforceable measures*</u> with federally enforceable emission standards backstop

No need to describe complementary measures

e.g. RPS

* State measures will lead to reductions in emissions by affected EGUs

RPSs that Max Out Before CPP Begins



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Note: CPP compliance period: 2022-2030

RPS Considerations

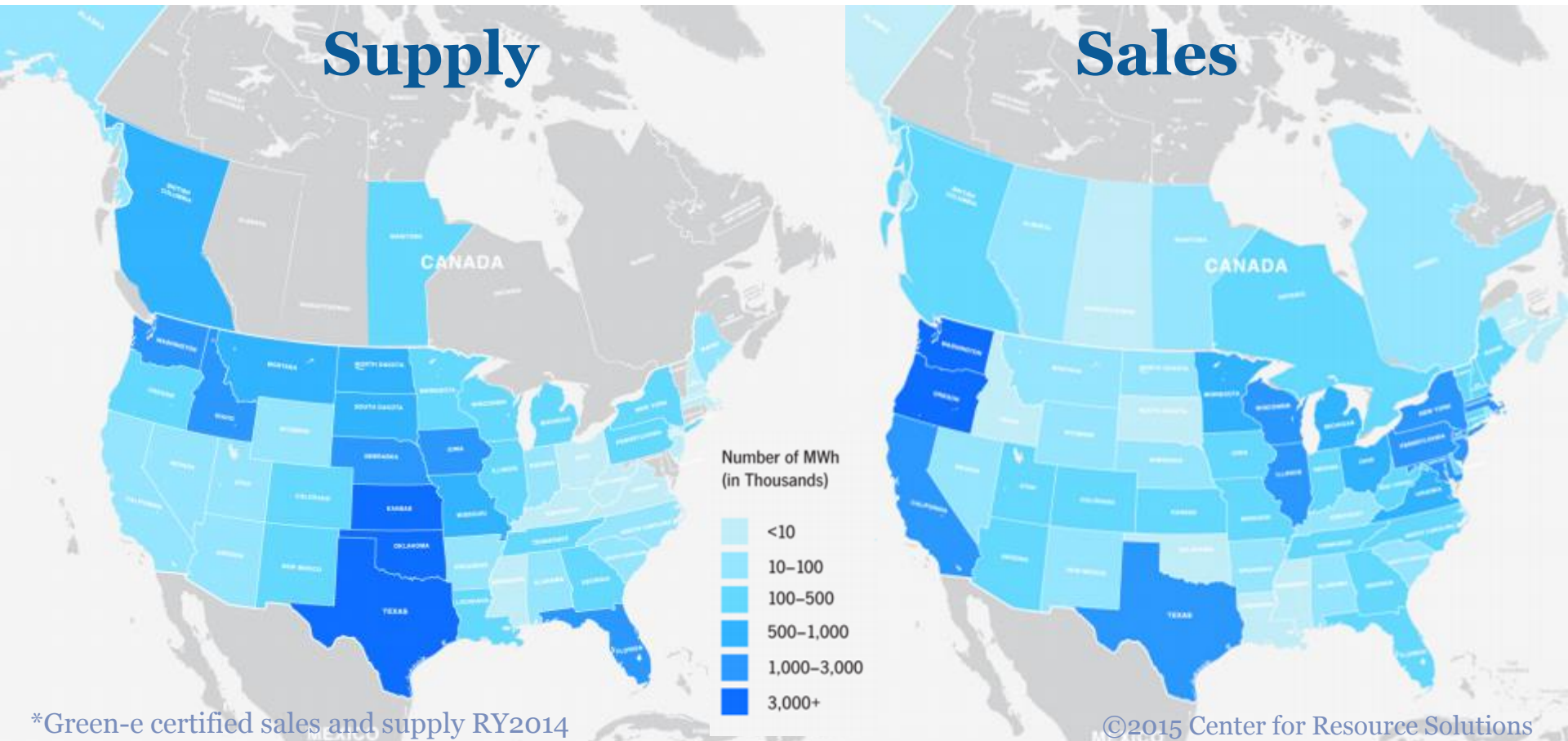
Does the state want its RPS to help meet CPP goals,
or create incremental clean energy impacts?

How will state track ERCs or allowances?

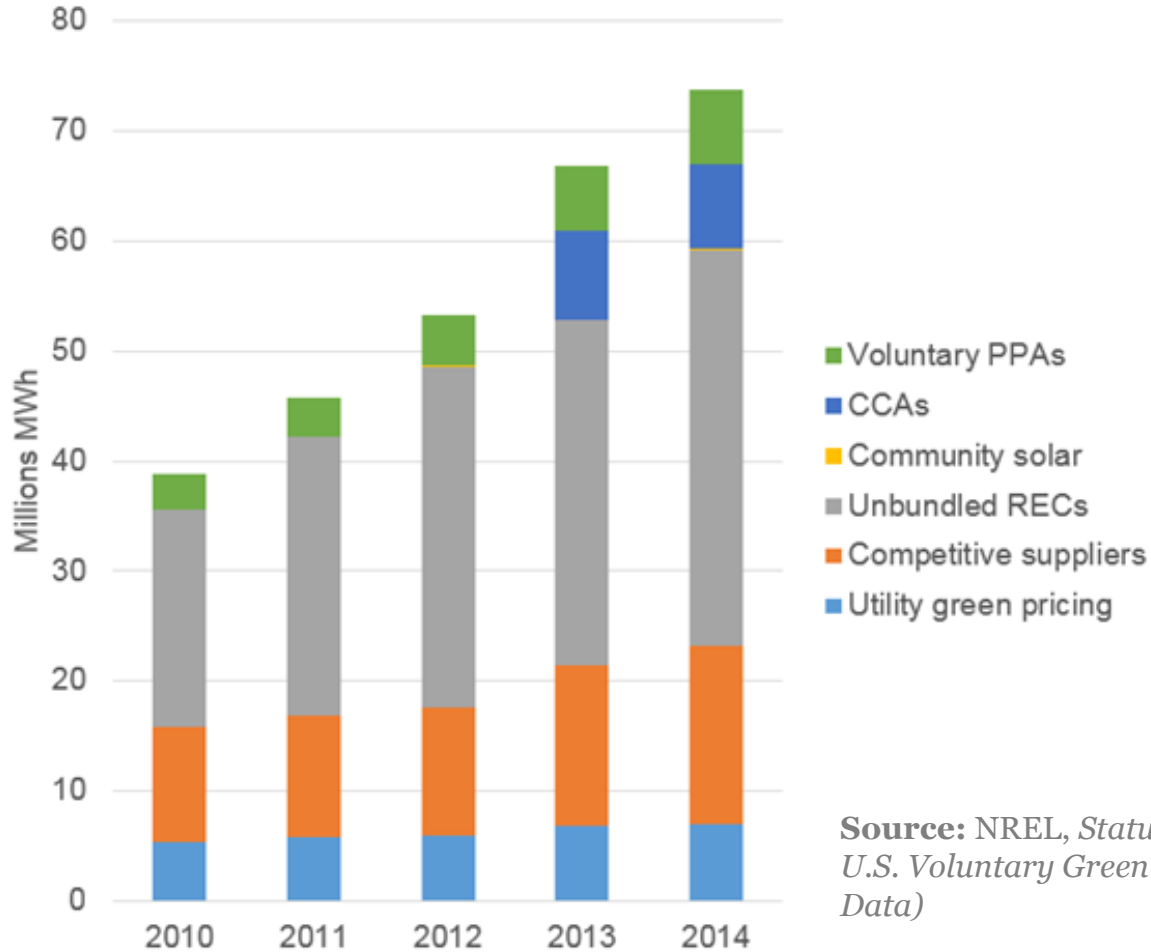
General Guidance for States

1. Support and enhance the existing voluntary RE market.

Voluntary Renewable Energy: Impact in Every State



Voluntary RE Market Growth



Source: NREL, *Status and Trends in the U.S. Voluntary Green Power Market (2014 Data)*

General Guidance for States

2. Comment on the federal plan and model rules.

Comment Deadline: Jan. 21, 2016

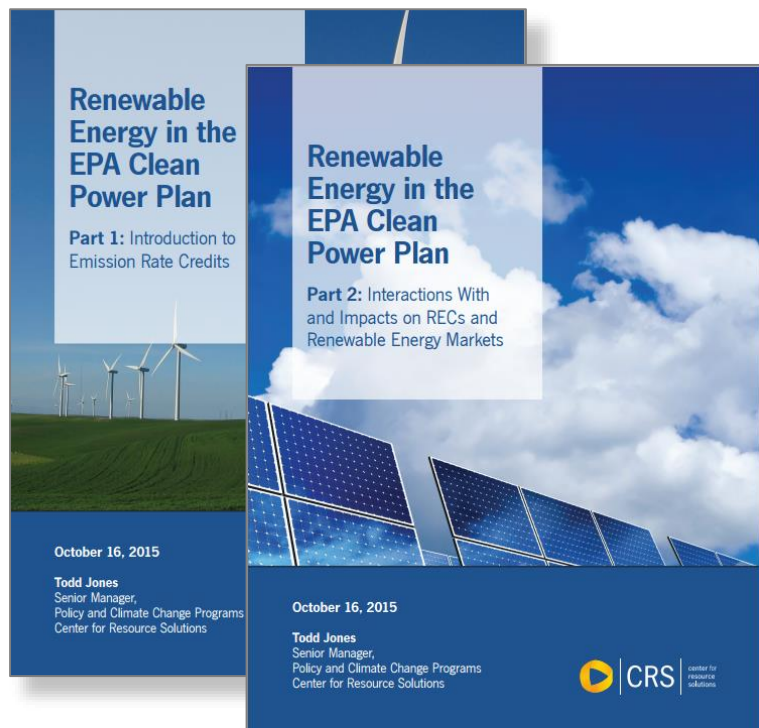
General Guidance for States

3. Decide role of RPS in CPP compliance.
4. Determine future of RPS.
5. Consult with RE tracking systems about allowance and ERC tracking options.

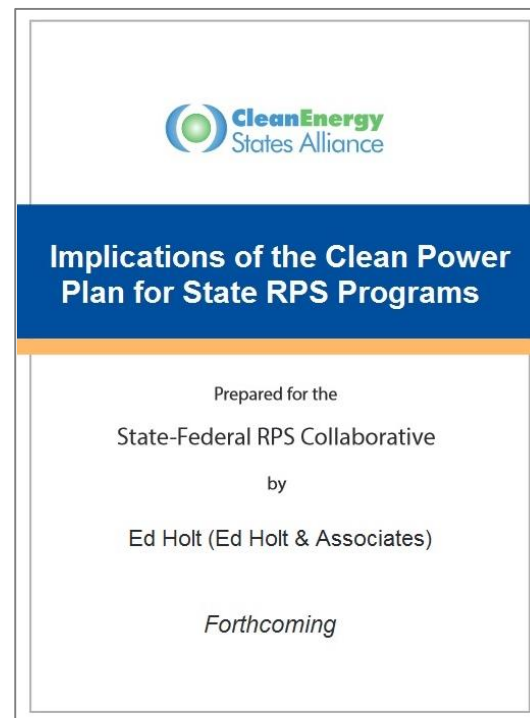
Conclusions

1. CPP creates generation-based carbon markets for electricity sector, not consumption-based markets for RE.
2. RE has an important role in CPP compliance.
3. CPP creates a new ERC market for RE in rate-based states.
4. REC markets are separate but still important.
5. RE lowers emissions to meet the cap, but doesn't lower the cap.
6. RPS can help states meet their emission goals indirectly or directly.
7. Loss of regulatory surplus in the voluntary RE market can be avoided using proven regulatory mechanisms.

Resources



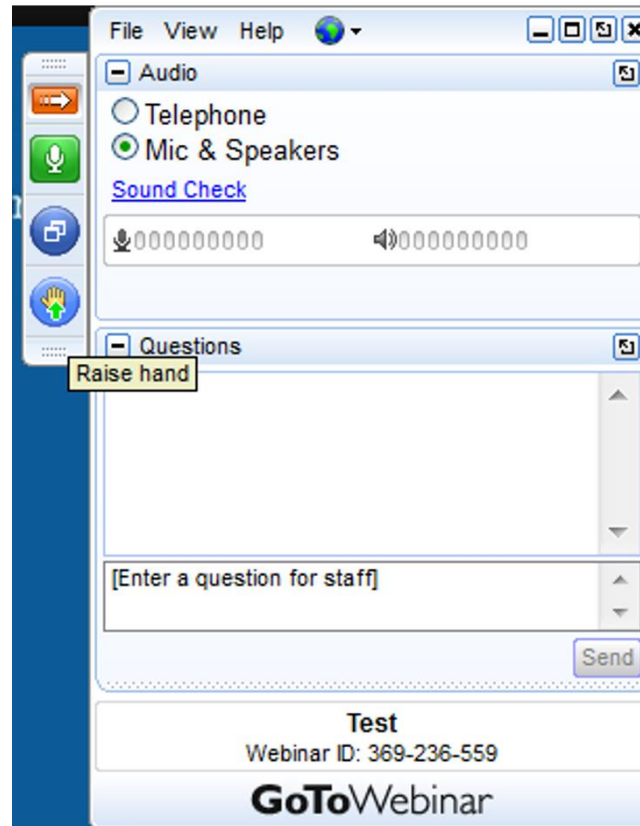
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Questions?

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Additional Questions? Contact info

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Final Thoughts

- Renewable energy has a key role in CPP State Plans
- Consultation and coordination among regulators and tracking systems will ensure:
 - Effective State Plans and
 - Continued enjoyment of the benefits of renewable energy