

The Intersection of RINS and RECs

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Panel Discussion Overview



- What are RINs?
- How might RINs and RECs overlap?
- Renewable fuel and electricity markets
- Scenarios to consider
- Questions & Answers

Scenarios to Consider



- To clarify the roles of RINs and RECs, we have identified three scenarios for discussion
 1. Producing fuel and electricity at a bio-refinery
 2. Generating electricity with biofuels
 3. Powering vehicles with renewable electricity
- Are there other scenarios to consider with possible overlapping use of RINs and RECs?

What are RECs?



- Renewable energy certificates (RECs) are tradable commodities produced by renewable electricity generators
 - RECs are denominated in megawatt hours (MWh)
 - Attributes include the fuel type, technology type, facility age and location, time of generation, emissions, and program eligibility
- RECs are integral to all renewable electricity generation
- RECs are the basis for renewable electricity usage claims
 - Can be sold with the electricity (bundled), sold separately from the electricity (unbundled), or sold with commodity electricity (bundled)
 - Can be formally recognized by bilateral contracts or a tracking system

How RECs Help



- Monetize “attributes” separately from electricity
- Provide another revenue stream to support projects
- Expand markets for renewable electricity
 - Bypass physical limits of electric grids and renewable electricity
 - Create national voluntary market, overcome lack of utility options
- Lower costs
 - RPS compliance costs
 - Consumers’ transaction costs
 - Green power premiums
 - ... and buyers benefit from added flexibility and liquidity