Understanding Renewable Energy Certificates

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What are RECs?

• Renewable energy certificates (RECs) are received by generating energy from a renewable source, with 1 REC = 1 MWH

• Renewable energy sources include:
  – Solar
  – Geothermal
  – Biomass
  – Hydrogen fuel cells
  – Wind
  – Small run-of-river hydro
  – Biodiesel
  – Landfill methane capture

• RECs can be bundled and sold with power, sold separately from delivered power, or used to meet renewable obligations
What are RECs? *(cont.)*

- Have a unique serial number…
  - …but no national registry exists
  - RECs are instead tracked by organizations like WREGIS and ERCOT
- Certifiers include Green-e and The Climate Neutral Network
Renewable Portfolio Standards

- 32 states have compliance markets covered by Renewable Portfolio Standards
- RECs exist in both compliance and voluntary form
- Renewables targets and included technologies vary by state

Source: U.S. Environmental Protection Agency
REC Price Trends

Prices vary considerably by state-level RPS:

Source: “Renewables Portfolio Standards in the United States”, Lawrence Berkley National Laboratory, April 2008
The ERCOT Market for RECs

- REC Trading Program meant to increase cumulative installed generating capacity
- As administrator, ERCOT duties include:
  - Awarding RECs (useful life=3 compliance periods)
  - Verifying that retail entities meet compliance requirements
  - Audit MWh production data
  - Establish and maintain “REC accounts” to track REC production, sale/purchase, transfer and retirement
- Retire RECs by April 1 following the compliance period or pay a penalty of $50 per MWh
General Accounting Considerations

- Treatment as intangible assets, with possible impairment based on remaining useful life
- Possible treatment as inventory
- REC asset recognition issues:
  - Earned over the compliance period
  - Timing of recognizing REC obligation and recognition of acquired or generated REC assets
  - Consider impacts on awarded RECs based upon generating asset “decertification”, adjustments based on use of fossil fuels, repowerment, etc.
General Accounting Considerations (cont.)

- Sale recognition if transferred to another entity (in ERCOT, transfer via ERCOT notification)
- Packaged with power- multiple element considerations?
- Forward trading considerations vary by market
Accounting Considerations for Generators

• Current practice is generally to allocate zero value to generated RECs
• Incremental cost model- no additional cost to generate, so no value allocated to RECs
• Other alternatives may require change in accounting model:
  – Fully allocated cost model?
  – Allocate fair value to RECs with credit to cost of power generation expense?
Other Incentive Programs

- Emission allowances: Issued or auctioned by governments and represent the right to emit one ton of CO2
- Emission offsets: Represent the destruction or avoidance of one ton of CO2 through a project outside the scope of the emissions being offset; May or may not be for compliance uses
Other Incentive Programs (cont.)

• Domestic trading markets emerging:
  – Other regional initiatives under development: California AB 32, Western Climate Initiative, Midwestern Greenhouse Gas Accord
  – Continued Congressional debate around nationwide programs

• More significant activity internationally (European Emissions Trading Scheme; UN-sponsored CDM/JI program)