





Credits Trading

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GovEnergy
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Who is World Energy?

- World Energy operates leading online exchanges for energy and environmental commodities. Our proven approach enables our customers to transact with confidence and seek a highly competitive price by:
 - Providing market intelligence
 - Promoting liquidity
 - Creating price transparency for all market participants
- Recently selected by the *Regional Greenhouse Gas Initiative (RGGI)* to provide services related to the design and implementation of the first legislatively mandated regional U.S. greenhouse gas cap-and-trade program in the U.S.

WorldEnergy





World Energy Knows Green

- WorldGreen Exchange – Online auctions for environmental commodities
 - Transacted nearly 1 billion kwh of green power / RECs since 2003
 - First NJ Solar REC auction Dec '06
 - First VER auction Oct '07
 - First North American Carbon Offset Compliance Auction Jan '08
- World Energy's clients are at the forefront of green:



100% green power for the NPS's Statue of Liberty & Ellis Island accounts since 2003



The State of MD purchased 100 MWh of green power at no cost premium to conventional power based on dynamic auction processes and price competition



GSA Has Won Three EPA Awards for Green Power Procurements including up to 100% Wind Power



Three Choices for Going Green

	REC (renewable energy certificate)	VER (verified emission reduction)	Bundled Energy
What are they for?	To green an electricity portfolio that has already been locked in	To offset carbon emissions	To green an electricity portfolio yet to be purchased
Example	You have an agreed upon price for electricity through 2009	You know your carbon footprint and want to be carbon neutral	You are currently in the market for electricity
Unit of measure	1 REC = 1 MWh	1 VER = 1 metric tonne of reduced carbon emissions	Same as a REC, but usually refers to greening a percentage of your consumption, e.g., 5, 10, 25%...
What do they cost?	Typically \$4.00-8.00. Although solar is much higher	Based on the project. Prices vary from \$4.00-10.00	Varies, but the right procurement method can allow greening a portfolio at a small premium or even a discount
Emissions reduced per unit	US Rule of Thumb: 1 REC offsets 1363 lbs of carbon emissions	1 VER is the equivalent of reducing ~2200 lbs of carbon emissions	Same as a REC



Green Commodities 101 - RECs

- What are Renewable Energy Certificates (RECs)?
 - RECs (also known as green tags, green energy certificates, or tradable renewable certificates) represent the environmental attributes of power generated from renewable electric plants.
- Why buy Renewable Energy Certificates?
 - Whether or not you have access to green power through your utility or a competitive electricity marketer, you can purchase renewable energy certificates (RECs).

– Guide to Purchasing Green
<http://www.eere.energy.gov/greenpower/buying/index.shtml>





Green Commodities 101 - VERs

- What are Verified Emissions Reductions?
 - A Commodity that symbolizes a reduction in carbon output
- Why Should I Purchase VERs?
 - You want to voluntarily reduce your carbon footprint.
- Why do VERs get a bad rap?
 - Lack of regulated standards
 - Quality is subjective





Green Commodities 101 – Bundled

- What is Green Power?
 - Generally refers to electricity supplied in whole or in part from renewable energy sources, such as wind and solar power, geothermal, hydropower, and various forms of biomass.
- Why Buy Green Power?
 - By choosing to purchase a green power product, you can support increased development of renewable energy sources, which can reduce the burning of fossil fuels, such as coal, oil, and natural gas.





RECs vs. Carbon Offsets

RECs

- RECs are an attribute of power produced by renewable power generation
- RECs are avoided emissions through clean renewable power generation
- Displaces conventional generation
- 1 MWh of Green Power = 1 REC
- Verification/ certification services available

Carbon Credits

- Carbon offsets are the result of mitigating greenhouse gas emissions
- Carbon Credits are emission reduction units
- Offset examples include tree-planting and methane collection
- 1 Ton of CO₂ = 1 Carbon Credit
- No validation or certification process in place as of yet



How do I know what I've purchased is legitimate?

- Standards for Renewable Energy Programs and Credits
 - Green-e - <http://www.green-e.org>
 - RECs
 - VERs
 - Gold Standard - <http://www.cdmgoldstandard.org>
 - VERs
 - Voluntary Carbon Standard - <http://www.v-c-s.org/>
 - VERs
- If the credits aren't standardized, are they still viable?
 - Yes, but ensure you do your due diligence
 - There is more risk – determine your risk tolerance
- VERs are a credible, viable solution for greening portfolios

How do commodities work to green energy portfolios?

- Indirectly – cleaning up electricity consumption by purchasing:
 - Bundled Green Power – Sourced from wind, hydro, solar, biomass
 - RECs – green attribute from power generated from renewable electric plants
- Directly – measurement of carbon reduction
 - Carbon Credits, e.g. VERs – measured directly in terms of avoided carbon
- Ultimately, both approaches arrive at the same outcome – helping the environment!





The Big Picture – Cap & Trade

- International - European Union Emission Trading System (EU ETS) Largest multi-national, emissions trading scheme in the world
 - Covers 10,000+ installations in the energy & industrial sectors
 - Emission allowances are allocated freely 1st and 2nd EU ETS Trading Periods (2005-2007, 2008-2012)
 - Proposed change to the 3rd EU ETS Trading Period is to auction a share (60+ %) of the emission allowances
- United States - Regional Greenhouse Gas Initiative (RGGI)
 - Cooperative effort by Northeastern and Mid-Atlantic states to create a multi-state cap-and-trade program
 - Participating States Include: CT, DE, MA, MD, ME, NH, NJ, NY, RI & VT
 - Majority of the emission allowances will be auctioned
 - The initial regional cap is 188 million short tons of CO₂ per year



Why is RGGI Important to You?

- First legislatively mandated regional U.S. greenhouse gas cap-and-trade program in the U.S.
- *Applies to fossil fueled plants rated 25 MW or more and will impact roughly 605 units representing 215 plants, 80GW and 120 owners
 - » * Source: New Carbon Finance
- Caps emissions to same level from 2009 – 2014; requires reduction in emissions by 2.5% per year from 2015 through 2018
- The initial regional cap of 188 million short tons of CO₂ per year is substantial in comparison to CO₂ traded in the U.S. voluntary markets
- Will likely serve as a model for any Federally mandated national cap-and-trade program



Is a National Cap & Trade Program the Future?

In the 110th Congress, nine bills have been introduced that include provisions to impose or permit some form of market-based controls on emissions of greenhouse gases

• Bill	Implementation Strategy	Auction of Allowances
• S. 280, Lieberman	Tradeable Allowance System	Yes
• S. 309, Sanders-Boxer	Tradeable Allowance System	Yes
• S. 317, Feinstein-Carper	Tradeable Allowance System	Yes
• S. 485, Kerry-Snowe	Tradeable Allowance System	Yes
• S. 2191, Lieberman-Warner	Tradeable Allowance System	Yes
• S. 1766, Bingaman-Specter	Tradeable Allowance System and/or a Compliance Payment	Yes
• H.R. 620, Olver	Tradeable Allowance System	Yes
• H.R. 1590, Waxman	Tradeable Allowance System	Yes
• H.R. 4226, Gilchrest	Tradeable Allowance System	Yes



Presidential Candidates Stand on Auctioning Allowances

- Senator Obama and Senator McCain both support mandatory reductions in carbon emissions
- Senator Obama and Senator McCain both support cap-and-trade system
- Senator Obama's position
 - Supports 80% reductions by 2050
 - Wants all the allowances auctioned to the highest bidder
- Senator McCain's position
 - Supports 65% reductions by 2050
 - Probably would support a mix of giveaways and auctions



Summary

Your Green Procurement Plan Should Include:

- Risk Management Strategy
 - Fiscal Policy
 - Energy Strategy & Any Mandates (EPA Act)
 - Media Relations Strategy
 - Environmental Strategy
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- Bundle Renewable Energy Certificates w/ Brown Power
 - Simple to facilitate through auction process
 - Review existing contracts and usage requirements
 - Evaluate % mix of renewable power
 - Purchase the Appropriate Green Commodity as Needed

 - Be aware of updated legislation or state approval of regional greenhouse gas cap and trade programs and how they may impact your energy costs or change your green procurement requirements in order to meet Federal renewable mandates



Would you like to know more about this session?

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