Voluntary Renewable Energy Markets 101

Motivations, Claims, & Standards

Renewable Energy Markets Conference 2014

December 3, 2014

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UNITED STATES ENVIRONMENTAL PROTECTION AGENCY

EPA's Green Power Partnership

- **The Partnership is:**
  - Working to increase organizational demand for renewable electricity
  - Engaging organizations and business sectors to use renewable electricity or expand their usage
- **The Partnership offers:**
  - Market information
  - Purchase requirements
  - EPA recognition of partners, leaders, and award winners
- **1,300 Partners are purchasing 28B kWh annually**

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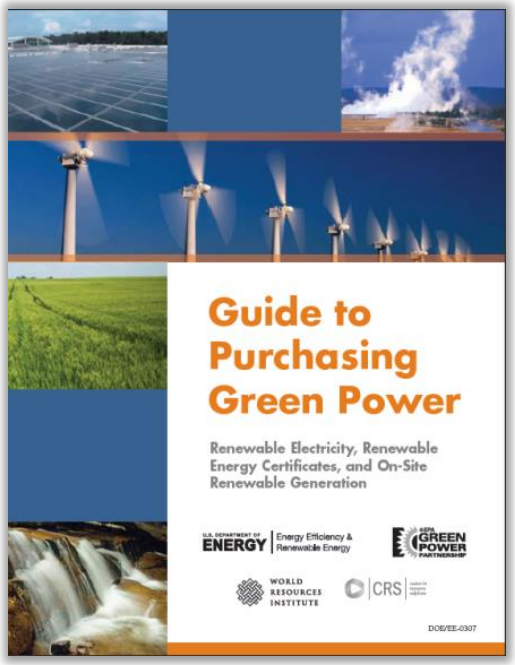
Partnership Offerings & Benefits

- **Benchmarks**
  - Definition of eligible renewables
  - Metric for "How much green power?"
  - Green Power Communities
- **Resources**
  - Purchasing guidance
  - Marketing and communications support
  - Informational webinars
- **Recognition**
  - Top Partner Lists
  - Green Power Leadership Awards
  - Use of the Partner logo



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Key Partnership Activities

- **Top Partners Lists**
  - National Top 50
  - Top 20 Retail
  - Top 10 Federal Government
  - Top 20 College & University
  - Top 20 On-site Generation
  - Long-term Contracts
  - 100% Green Power Users
  - Fortune 500® Partners
  - Top 20 Local Government
  - Top 20 Tech & Telecom
  - Top 20 K-12 Schools
- **College & University Green Power Challenge**
- **Green Power Leadership Awards for Purchasers and Suppliers**

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Topics

- **MOTIVATIONS** — **Why purchase?**
- **CLAIMS** — **What are safe statements?**
- **STANDARDS** — **Where to look for guidance?**
- **SUPPORT** — **Who can help?**

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Partner Motivations

- **Range from basic desires to strategic goals**
- **Basic motivations:**
  - Be a market leader
  - Do the right thing
  - Make an impact
- **Strategic motivations:**
  - Plans to be a more socially responsible organization
  - Seeks to reduce a corporate greenhouse gas (GHG) inventory
  - Desires to differentiate products or services
  - Reduce electricity costs and/or stabilize electricity costs

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Example:
Corporate GHG Accounting

- **Many organizations are accounting for the GHG emissions related to their operations and doing business**
- **Purchased electricity is often a big source of GHGs**
- **Renewable electricity is one way to reduce the emissions associated with purchased electricity**

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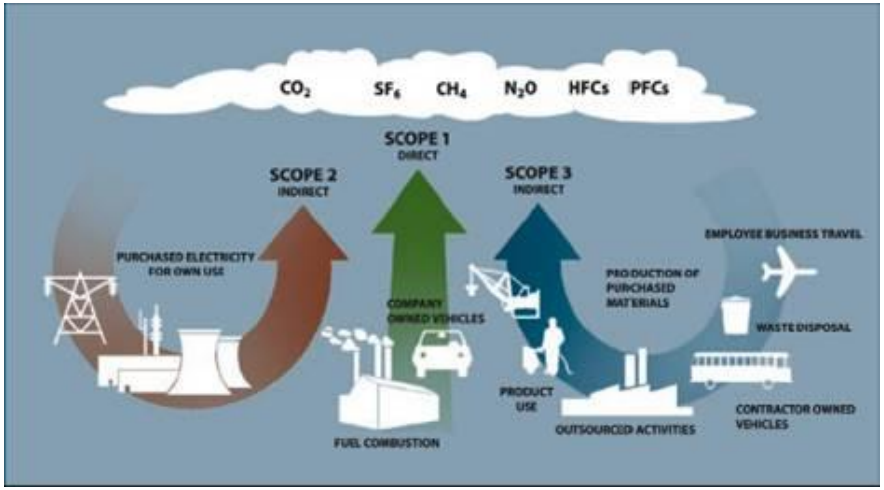
Example: Corporate GHG Accounting

- **Accounting for an entity's GHG emissions footprint**
  - Scope 1 – GHGs from owned or operated facilities and equipment
  - Scope 2 – GHGs from purchased electricity or steam
  - Scope 3 – GHGs from other sources – travel, supply chain, etc.



- **Renewable electricity benefits**
  - Actual emissions of renewable electricity are very low, if not zero
  - When renewable electricity reduces need for electricity from sources that emit GHGs, there are avoided emissions

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Environmental Claims

- **A simple, safe claim**
  - I use renewable electricity which has lower GHG emissions
- **Focus on GHG emission claims, rather than clean air**
  - Environmental regulations for SO_2 and NO_x complicate those claims

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Types of Partner Claims

- **Purchaser claims**
  - Powered in part or wholly by renewable electricity
  - Reducing our emissions associated with purchased electricity
  - Supporting renewable energy

- **Generator claims**
  - Generates renewable electricity
  - Produces zero or low emissions electricity

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Making Environmental Claims

- **Explain green power & the environmental benefits**
  - Most have a limited understanding of green power and its benefits
  - Provide simple information about the difference you will make
- **Make your message tangible**
  - Remember to use EPA's Green Power Equivalency Calculator

More info → www.epa.gov/greenpower/pubs/comm.htm

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Partners' Procurement Options

- **Install a renewable electricity system**
  - Self-generate or have a third-party owned system installed
- **Purchase renewable electricity**
  - Purchase electricity and RECs bundled from an electricity supplier
  - Purchase unbundled RECs from a REC marketer or broker

- ***Renewable electricity use is demonstrated by the ownership and retention of Renewable Energy Certificates (RECs)***

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Renewable Energy Certificates (RECs)

- **A renewable energy certificate (REC) is a tradable commodity generated by renewable electricity sources**
  - 1 REC = 1 megawatt-hour (MWh) of renewable electricity
- **RECs allow one to monetize the renewable attributes and can be sold separately from the underlying power**
- **REC contracts give the buyer the exclusive rights to the renewable and environmental values of renewable electricity**
  - RECs are the mechanism used to track the emissions benefits and environmental attributes of renewable electricity
  - RECs can be formally recognized by bilateral contracts and tracking systems

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RECs Are Not Offsets

Don't confuse RECs with carbon offsets

RECs

- RECs are the environmental benefits of 1 MWh (1,000 kWh) of renewable electricity
- RECs can reduce GHG emissions associated with purchasing and using electricity
- GHG claims pertain to purchased electricity only

Offsets

- Offset is a metric ton of GHG emissions reduced or avoided
- Offsets can offset an organization's GHG emissions
- GHG claims pertain to GHG reductions achieved by the offset project

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Market Standards & Guidance

- **U.S. EPA**
  - Green Power Partnership minimum purchase requirements
- **U.S. FTC revised Green Guides on marketing claims**
- **WRI/WBCSD GHG accounting standards**
- **Third-party certification/verification**
  - Certification is a best practice for voluntary REC markets
  - While certification is not mandatory or necessary for REC generation, the standards used by REC certifiers set expectations for both the compliance and voluntary REC markets

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Market Standards & Guidance: Double Counting

- **Counting RECs for compliance that were bought by a voluntary buyer is prohibited by state RPS rules**
- **Double counting RECs is also prohibited by third-party certifiers, such as Green-e**
  - Overt double counting – selling a REC to more than one party
  - Implicit double counting – having multiple parties unwittingly claim the environmental attributes or benefits
- **Standards (and standard REC contracts) prohibit customer-sited projects from selling hosts 'renewable electricity' if RECs are sold separately**

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Support for Buyers and Sellers

- **US EPA's Green Power Partnership**
- **US DOE's Green Power Network**
  - Current information on green power providers, products, consumer protection issues, & policies affecting green power markets
- **Center for Resource Solutions**
  - Green-e Energy for sellers
  - Green-e Marketplace for purchasers
- **Tracking systems**
  - Tracking systems provide a basis for creating, managing, and retiring RECs, ensuring that each REC is counted only once

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How RECs Help

RE 201: Advanced Material

- **Monetize "attributes" separately from electricity**
- **Provide another revenue stream to support projects**
- **Expand markets for renewables**
  - 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

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How RECs Help

RE 201: Advanced Material

- **Without RECs, buyers would need to …**
  - Contract directly for delivery of the electricity
  - Audit transactions to prove ownership and consumption
- **Which would …**
  - Severely limit the market for green power resources and buyers
  - Increase transmission costs for delivering renewable energy
  - Increase verification and compliance costs

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Market Guidance Examples

RE 201: Advanced Material

- **Green-e asks marketers to investigate statements made by generators about the electricity they are selling before contracting for the sale of RECs**
  - Generators have to attest that they have not made claims on the RECs, but if Green-e determines that RECs are being claimed (in statements made by generators and/or electricity off-takers) the RECs will be rendered ineligible
  - So, check counterparties' statements and educate your suppliers about marketing statements that may create unintentional REC claims and affect eligibility
- **FTC's Revised Green Guides**
  - "If a marketer generates renewable electricity but sells renewable energy certificates for all of that electricity, it would be deceptive for the marketer to represent, directly or by implication, that it uses renewable energy."
    - ✓ p. 223, www.ftc.gov/os/fedreg/2010/october/101006greenguidesfrn.pdf

Market Guidance Examples

RE 201: Advanced Material

- **Green-e Best Practices in Public Claims for Solar Photovoltaic Systems**
  - 'Fundamental to this discussion is the agreed-upon definition of a REC as representing all of the "greenness" of electricity produced from renewable resources like PV. A REC includes everything that differentiates the effects of generating electricity with renewable resources instead of using other types of resources. It is important to remember that a REC also embodies the claim to the greenness attributes of renewable electricity generation, and only the ultimate consumer of the REC has rights to the claim; once a producer or owner of a REC has sold it, rather than consuming it themselves, they have sold the claim and cannot truthfully state that they are using renewable electricity, or that the electricity that was produced with the REC is renewable.'
    - ✓ www.green-e.org/learn_re_claims.shtml

Double Counting Risks

RE 201: Advanced Material

- **Failure to comply with industry standards and expectations may result in the following:**
  - REC ineligibility for use in compliance markets
  - REC ineligibility for independent certification
  - Inability to sell RECs identified as non-compliant with industry standards
  - Reduced interest or higher electricity contract prices from RE developers

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