Green Power Use and Opportunities for Congregations: *EPA's Green Power Partnership*



April 29, 2014 1:00 - 2:00 pm ET

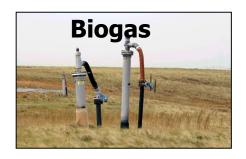
Agenda

- Green Power Market and Products
- EPA's Green Power Partnership
- Other Considerations



What is Green Power?

- Electricity generated from natural resources that replenish themselves over short periods of time, including the sun, wind, moving water, organic plant and waste material (biomass), and the Earth's heat (geothermal).
- From facilities built in last 15 years.















Green Power Markets

- **Mandatory markets** exist because of policy decisions, such as state Renewable Portfolio Standards (RPS).
- Voluntary markets are driven by consumer preference.





Green Power Procurement Options

- Renewable Energy Certificates (RECs)
 - The technology and environmental attributes of electricity generated from renewable resources (1 REC = 1 MWh)
 - Does not include the underlying electrons "unbundled"
 - Available to all electricity users



- Green power offered by utility suppliers that is all, or partially, generated from renewable sources
- "Bundled" product that includes both the RECs and the underlying electrons
- On-site Generation
 - Renewable energy system installed on-site (e.g. solar panels, wind turbine)
 - Produces both electricity and RECs from the on-site source
 - Self-financed installation or via a third-party PPA
 - To claim use of green power, host must retain/retire RECs
- Green Power Locator Tool:

http://www.epa.gov/greenpower/pubs/gplocator.htm









More on RECs

Renewable Generation Source

Electricity Pathway

Placing renewable electricity on the grid has the impact of reducing the need for fossil fuel-based electricity generation to serve consumer demand

Electrons that make up commodity electricity are physically the same and cannot be tracked independently

> Since all electrons are equal, it is difficult to know what source produced your electricity

RECs help address this challenge

Electricity and RECs can be, and often are, sold separately 1 REC = 1000 kilowatts-hours (or 1 megawatt-hour)

> Electricity and RECs can be distribute over diverse geographical areas

RECs reduce net greenhouse gas emissions associated with purchased electricity

RECs Pathway

RECs represent the right to claim the attributes and benefits of the renewable generation source

RECs are tracked through contract arrangements, or REC tracking systems

Certified and verified products ensure that only one buyer can claim each 1000 kilowatt-hours (REC) of renewable electric generation

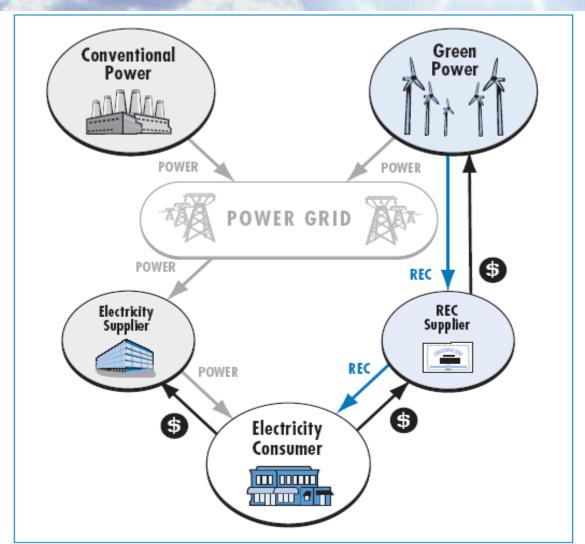
RECs represent the same attributes at the point of generation as they do at the point of use

Point of Use

Once your organization makes a claim, your REC cannot be sold. Your organization must retire its RECs to prevent double claims in the future



REC Transaction Process





Solar Power Purchase Agreements (SPPA)

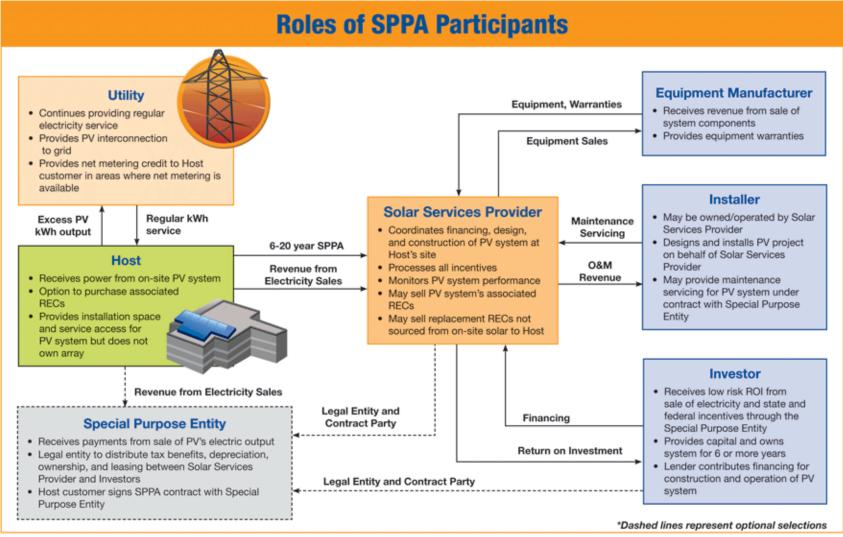
- SPPA is a financial arrangement in which a third-party developer owns, operates, and maintains the photovoltaic (PV) system, and a host customer agrees to site the system on its property and purchases the system's electric output for a predetermined period
- Addresses many of the traditional barriers to adoption for organizations looking to install solar systems:
 - high up-front capital costs
 - system performance risk
 - complex design and permitting processes
- Learn more at:

www.epa.gov/greenpower/buygp/solarpower.htm





SPPA Process & Participants



Benefits & Challenges for Host

Benefits

- No upfront capital cost
- Predictable energy pricing
- No operating risk
- Projects can be cash flow positive from day one
- Demonstrable environmental commitment
- Potential to make claims about being solar powered
- Potential reduction in carbon footprint
- Potential increase in property value
- Support for local job market

Challenges

- May experience more complex negotiations than buying PV system
- Administrative cost of paying two separate electricity bills if system does not meet 100 percent of demand
- Site lease that may limit ability to make changes to property that would affect PV system performance or access to the system
- Understand tradeoffs related to REC ownership/sale



Aggregated REC Purchasing

- Helps accelerate the adoption of green power
- Enables participating organizations to purchase renewable energy in a simple and efficient manner
- Ensures that participating organizations are receiving competitively priced RECs through demand aggregation and administrative efficiencies
- Demonstrate leadership within the church community and establish a standard that will influence and guide the use of renewable energy in congregations across the country
- Green Schools Alliance Purchasing Consortium:
 - Faith-based schools are welcome to join the Consortium and purchase RECs. Visit <u>www.greenschoolsalliance.org/programs/green-power-program/join-green-power-consortium</u> for more information.



EPA's Green Power Partnership

- Voluntary program encouraging use of green power as a way to reduce environmental impacts of electricity use
 - > 1,300 partners
 - Partners include Fortune 500® companies; small and medium sized businesses; local, state, and federal governments; and colleges and universities.
 - Partners use >28 billion green power kilowatt-hours annually
 - Carbon avoidance equal to that created by the electricity use of more than 2.7 million American homes



Partnership Requirements

- EPA supports Partners' procurement of green power by offering advice, technical support, tools and resources, and recognition.
- Partners agree to procure green power and provide an annual update.
- In return, EPA commits to:
 - Provide public recognition
 - Provide procurement and communications assistance, as requested
 - Provide a brief description of the Partner's green power use on EPA's website

	Partnership Benchmark	Leadership Benchmark
If your annual electricity use is:	You must, at minimum, use this much green power:	You must, at minimum, use this much green power:
Over 100,000,000 kWh	3% of your use	30% of your use
10,000,001-100,000,000 kWh	5% of your use	50% of your use
1,000,001-10,000,000 kWh	10% of your use	100% of your use
Under 1,000,000 kWh	20% of your use	N/A

EPA's Green Power Partnership:Helping You Leverage Your Green Power Use

Credible Benchmarks & GHG Quantification

- Metrics for "How much green power is enough?"
- Definition of eligible renewables & products
- GHG reduction guidance and calculations

Planning & Implementation Resources

- Green power locator
- Purchasing strategy guidance
- Marketing and communications support

Recognition

- Top Partner Lists
- Use of the Partner mark →
- Green Power Leadership Awards
- Promotional opportunities

Best Practices & Innovation

Collaborative procurement









Recognition & Promotional Opportunities

- Press release templates
- Quotes from EPA
- Partner Mark
- Green Power Leadership Awards
- Quarterly Top Partner Lists
- Special Advertising Supplements Bloomberg Businessweek
- Monthly Partner Spotlight piece
- Green Power Equivalency Calculator
- Guidance on making environmental claims





Partner Recognition

Quarterly Top Partner Rankings include National Top 100, Top 30 Retail, Top 30 Tech & Telecom, and more.

Current Top 10:

Intel Corporation

Koh's Department Stores

Microsoft Corporation

Whole Foods Market

Google

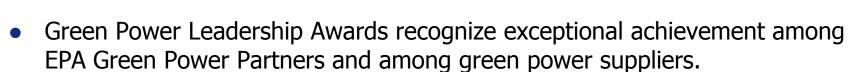
Wal-Mart Stores, Inc.

Staples

Apple

City of Houston, TX

U.S. Dept. of Energy



Awards presented at the Renewable Energy Markets Conference in the fall.



TOP 100

Green power use is a positive news story, great for outreach to stakeholders.



EPA's 1,300+ Green Power Partners

































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STATE STREET.



















GPP Updates

- GPP Webinar series:
 www.epa.gov/greenpower/events/index.htm
- April 21: Quarterly Top Partner Rankings released: <u>www.epa.gov/greenpower/toplists/index.htm</u>
- Sign up for our monthly program updates and other GPP news on our website: www.epa.gov/greenpower/contactus.htm
- GPP LinkedIn group: 500+ members



Want to Know More?

- Basic Information
 - Overview of the Green Power Partnership: <u>www.epa.gov/greenpower</u>
 - Full details of program requirements:
 www.epa.gov/greenpower/documents/gpp partnership reqs.pdf
 - EPA's Green Power Locator:
 www.epa.gov/greenpower/pubs/gplocator.htm
- More Questions?
 - Mollie Lemon, 202.343.9859, lemon.mollie@epa.gov
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