



Solar Power: Public Claims and Reporting

October 5, 2016





Agenda

- Role of RECs in claims
- Review of solar claims based on green power options
- Best Practices and additional resources
- Reporting solar use/generation to Second Nature's Climate Leadership Commitments
- Q and A
 - Speakers:
 - Christopher Kent
Program Manager, EPA's Green Power Partnership
 - Brett Pasinella
Senior Manager of Innovative Services, Second Nature

Webinar Logistics

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Webinar Objectives

- Understanding the roles of Renewable Energy Certificates in making renewable energy use claims
- Identify best practices and additional resources to help in solar power claims
- Learn how to report solar power use/generation



Green Power Partnership Overview

- Summary
 - The U.S. EPA's Green Power Partnership is a **free, voluntary** program that encourages organizations to use green power.
- Objectives
 - Reduce U.S. greenhouse gas emissions
 - Expand the voluntary green power market
 - Standardize green power procurement as part of best practice environmental management
- Program Activities
 - Provide technical assistance and tools on how to procure green power
 - Provide recognition platform for organizations using green power in the hope that others follow their lead
- +1,400 Partners are purchasing >35 B kWh annually



Higher Education Partners



Middlebury



Colby-Sawyer College

Southern New Hampshire University



THE OHIO STATE UNIVERSITY



UNIVERSITY of WASHINGTON



BABSON

IOWA STATE UNIVERSITY



THE UNIVERSITY of TENNESSEE KNOXVILLE



BENTLEY
www.bentley.edu

Carnegie Mellon University

University at Buffalo
The State University of New York

BOSTON ARCHITECTURAL COLLEGE

WESTERN WASHINGTON UNIVERSITY

EMERSON COLLEGE



OHIO UNIVERSITY



GEORGETOWN UNIVERSITY

THE UNIVERSITY OF UTAH

WELLESLEY

UNIVERSITY OF COLORADO AT COLORADO SPRINGS



The UNIVERSITY of OKLAHOMA

Penn UNIVERSITY of PENNSYLVANIA

University of Missouri



NORTHWESTERN UNIVERSITY



WISCONSIN UNIVERSITY OF WISCONSIN-MADISON

Bunker Hill Community College
imagine the possibilities



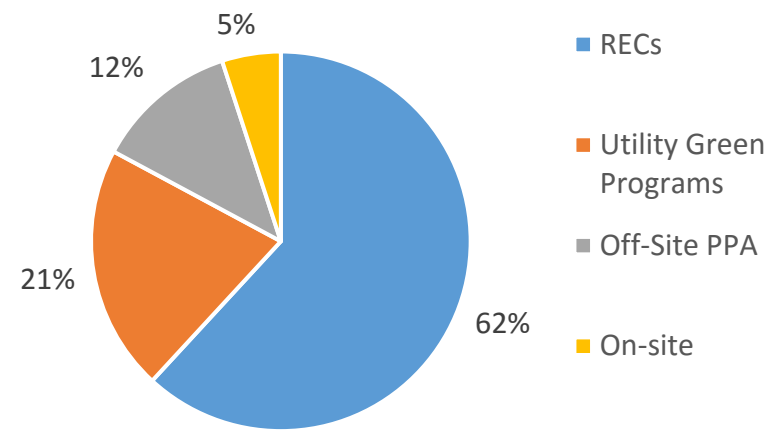


Current Status: Green Power in Higher Education

EPA's Green Power Partnership

- 138 College & University Partners
 - 71 have REC contracts
 - 53 have utility contacts
 - 116 on-site systems (163 million kWh, 90 owned, 26 on-site PPAs)
 - 10 have off-site PPAs
- College & University Partners Using Nearly 3.3 billion kWh
 - Equivalent to the annual electricity use of 298,000 average American homes

College & University Partners' Green Power Use



Procurement Options

1. Renewable Energy Certificates (RECs)

- The environmental “attributes” of electricity generated from renewable resources (1 REC = 1 MWh)
- Attributes are based on the generation technology type and age, geographic location, and time of generation
- Does not include the underlying electrons – “unbundled”



2. Utility Supplied Green Power Products

- Green power offered by utility suppliers generated from renewable sources
- “Bundled” product that includes both the RECs and underlying electrons



3. Self Generation

- Install a self-owned renewable system (e.g. solar panels, wind turbine)
- Produces both electricity and RECs from the on-site source

4. Power Purchase Agreement (PPA) for Renewables

- Usually a long-term contract to procure RECs and underlying electrons from a specific project, can be signed pre- or post-project development
- Can be from onsite or offsite project
- PPA can be “physical” or “virtual”



5. Virtual Net-metering / Community Solar

- Allows utility customers to share the electricity output from a single power project, typically in proportion to their ownership of the shared system.



Why Are Schools Looking to Solar?

- Become solar powered
- Reduce carbon footprint
- Save money and/or reduce variability in price of power
- Meet stated environmental commitments
- Demonstrate leadership
- Attract students
- Hands-on educational and research tool



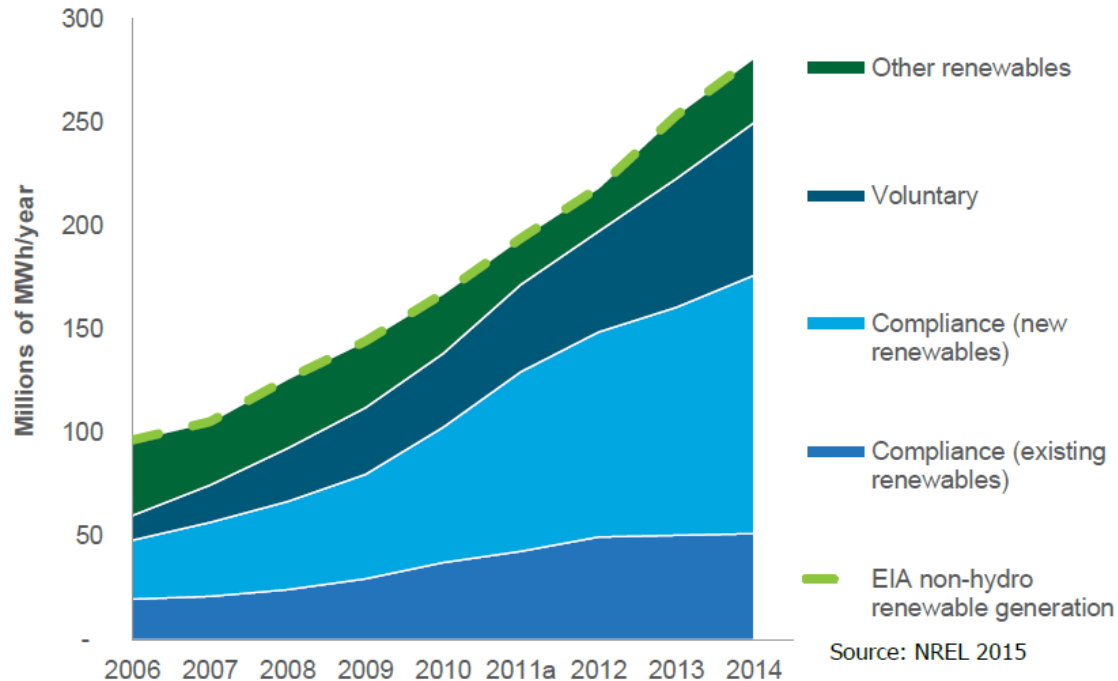
What is a Renewable Energy Certificate?

- A REC is the legal instrument that conveys to its owner the exclusive right to claim the associated environmental attributes of a generating resource
 - In essence RECs represent the “renewable-ness” of the power
 - Claims of using renewable electricity must be substantiated
 - Analogous to patents, both convey ownership of something that is intangible and are a market incentive
- A REC is created for every Megawatt-hour of renewable electricity generated and delivered to the utility grid
- A REC includes the following information:
 - Type of renewable resource
 - Location of renewable resource
 - Date stamp or vintage of generation
 - Emissions profile of the generating resource
 - Unique identification number



REC Overview

- Currency of renewable energy markets
 - Both compliance & voluntary markets
 - Allow access to, allocate, and claim use of renewable generation on a shared grid





Why are RECs important?

- Instrument through which renewable energy and environmental claims are substantiated
- Tool used for meeting corporate goals for greenhouse gas reporting as well as for state policy mandates under Renewable Energy Portfolio (RPS) standards
 - They are used by organizations as a tool to reduce their scope 2 emissions
- Influence electricity market dynamics by allowing the expression and aggregation of consumer preferences for specific forms of electricity generated from renewables
 - REC procurement reduces available REC supply sending a demand signal to the market to develop more supply
- Incent new renewable energy project development
 - Voluntary users can qualify their preference for specific renewable technologies
 - States can spur development through mandated programs (SREC programs)



Difference between REC and Offset

	REC	Offset
What it conveys	Represents attributes from energy generation (eg, tons CO ₂ /MWh)	Represents tons avoided emissions
Purpose	For suppliers and consumers to characterize their electricity consumption	Qualify avoided or reduced emissions from a project
Market	Country–specific or regional	Global
Scope application	Only applicable to electricity emissions (Scope 2)	Can be used to offset emissions from any scope
Additionality	Not required but companies often aim to use certificates from new RE projects that they helped happen	Required



REC Video

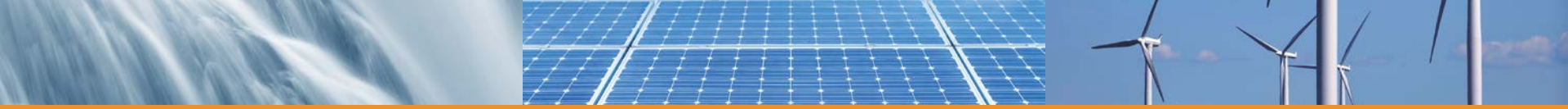


<https://www.epa.gov/greenpower/green-power-partnership-videos>

or

https://www.youtube.com/watch?v=_12VYXms6-c





What are Solar Energy Use Claims?

- This university is using solar energy.
- We are powered by solar energy.
- Our solar panels are helping reduce our campus's carbon footprint.
- This college purchases electricity from a solar facility.



What are Solar Energy Use Claims?

- This university is using solar energy.
- We are powered by solar energy.
- Our solar panels are helping reduce our campus's carbon footprint.
- This college purchases electricity from a solar facility.

You must have ownership of the REC to make these types of express claims!



Federal Trade Commission's Green Guides

- The Green Guides were first issued in 1992 and were revised in 1996, 1998, and 2012.
- The guidance they provide includes:
 - general principles that apply to all environmental marketing claims;
 - how consumers are likely to interpret particular claims and how marketers can substantiate these claims; and
 - how marketers can qualify their claims to avoid deceiving consumers.
- A claim is deceptive if it likely misleads reasonable consumers. Therefore, the Green Guides are based on how consumers reasonably interpret claims, not on technical or scientific definitions.



Federal Trade Commission's Green Guides

PART 260 – GUIDES FOR THE USE OF ENVIRONMENTAL MARKETING CLAIMS

- § 260.15 Renewable Energy Claims

(d) 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.

- <https://www.ftc.gov/sites/default/files/attachments/press-releases/ftc-issues-revised-green-guides/greenguides.pdf>



Direct or Express Claims

- FTC Example: A toy manufacturer places solar panels on the roof of its plant to generate power, and advertises that its plant is “100% solar-powered.” The manufacturer, however, sells renewable energy certificates based on the renewable attributes of all the power it generates. Even if the manufacturer uses the electricity generated by the solar panels, it has, by selling renewable energy certificates, transferred the right to characterize that electricity as renewable.
- The manufacturer’s claim is therefore deceptive.



Implied Claims

- A toy manufacturer places solar panels on the roof of its plant to generate power....
- It also would be deceptive for this manufacturer to advertise that it “hosts” a renewable power facility because reasonable consumers likely interpret this claim to mean that the manufacturer uses renewable energy.



Implied Claims, continued

- A university issues a press release about its recent power purchase agreement for a on-campus, 1 MW solar array
- Press release highlights:
 - University's goal of achieving carbon neutrality by 2030
 - University's new purchase of fixed price electricity from the on-campus solar facility.
- Both claims are technically accurate.
- However, reasonable consumer would interpret as the university is using solar to reduce its carbon footprint.



Determining REC Ownership

- Review power purchase agreement (PPA) contracts, interconnection and net-metering agreements, state and utility incentives, and other solar contracts.
- Look for “renewable energy certificates”, “renewable energy credits”, “environmental attributes”, “green tags”, or similar.
- Solar Energy Industries Association’s Solar Business Code
 - Guiding Principles
 - 5.12: Renewable Energy Certificate (“REC”) ownership is a Material Term in a solar contract, regardless of ownership structure (e.g., purchase, lease, power purchase agreement).
 - 5.14: Many Consumers are unfamiliar with RECs and their characteristics.... The Company must take steps to educate its Consumer about RECs, including providing ...: Guidelines for Renewable Energy Claims: Guidance for Consumers and Electricity Providers, Center for Resource Solutions (Feb. 26, 2015) [<http://resource-solutions.org/site/wp-content/uploads/2015/07/Guidelines-for-Renewable-Energy-Claims.pdf>]



Determining REC Ownership

Environmental Attributes and Environmental Incentives

Unless otherwise specified on Exhibit 1, Seller is the owner of all Environmental Attributes and Environmental Incentives and is entitled to the benefit of all Tax Credits, and Purchaser's purchase of electricity under this Agreement does not include Environmental Attributes, Environmental Incentives or the right to Tax Credits or any other attributes of ownership and operation of the System, all of which shall be retained by Seller. Purchaser shall cooperate with Seller in obtaining, securing and transferring all Environmental Attributes and Environmental Incentives and the benefit of all Tax Credits, including by using the electric energy generated by the System in a manner necessary to qualify for such available Environmental Attributes, Environmental Incentives and Tax Credits. Purchaser shall not be obligated to incur any out-of-pocket costs or expenses in connection with such actions unless reimbursed by Seller. If any Environmental Incentives are paid directly to Purchaser, Purchaser shall immediately pay such amounts over to Seller. To avoid any conflicts with fair trade rules regarding claims of solar or renewable energy use, Purchaser, if engaged in commerce and/or trade, shall submit to Seller for approval any press releases regarding Purchaser's use of solar or renewable energy and shall not submit for publication any such releases without the written approval of Seller. Approval shall not be unreasonably withheld, and Seller's review and approval shall be made in a timely manner to permit Purchaser's timely publication.

"Environmental Attributes" means any and all credits, benefits, emissions reductions, offsets, and allowances, howsoever entitled, attributable to the System, the production of electrical energy from the System and its displacement of conventional energy generation, including (a) any avoided emissions of pollutants to the air, soil or water such as sulfur oxides (SO_x), nitrogen oxides (NO_x), carbon monoxide (CO) and other pollutants; (b) any avoided emissions of carbon dioxide (CO₂), methane (CH₄), nitrous oxide, hydrofluorocarbons, perfluorocarbons, sulfur hexafluoride and other greenhouse gases (GHGs) that have been determined by the United Nations Intergovernmental Panel on Climate Change, or otherwise by law, to contribute to the actual or potential threat of altering the Earth's climate by trapping heat in the atmosphere; and (c) the reporting rights related to these avoided emissions, such as Green Tag Reporting Rights and Renewable Energy Credits. Green Tag Reporting Rights are the right of a party to report the ownership of accumulated Green Tags in compliance with federal or state law, if applicable, and to a federal or state agency or any other party, and include Green Tag Reporting Rights accruing under Section 1605(b) of The Energy Policy Act of 1992 and any present or future federal, state, or local law, regulation or bill, and international or foreign emissions trading program. Environmental Attributes do not include Environmental Incentives and Tax Credits. Purchaser and Seller shall file all tax returns in a manner consistent with this Section 5. Without limiting the generality of the foregoing, Environmental Attributes include carbon trading credits, renewable energy credits or certificates, emissions reduction credits, emissions allowances, green tags tradable renewable credits and Green-e® products.



Potential Consequences of Deceptive Claims

- Legal: Federal Trade Commission and state attorney general offices
- Contractual & Financial: Breach of contract
- Brand & Reputation: Issuance of clarifying statement
- Renewable Energy Market: Double “use” claim on the same renewable electricity
- GHG Accounting: Double accounting for same zero emission resource



REC Arbitrage

- REC arbitrage
 - Monetize the RECs from the onsite system into the local market to meet the required project economics
 - Use some of the value of the monetized RECs to seek and buy lower cost replacement RECs to offer your organizations a renewable electricity claim and lower your carbon footprint
- REC price varies based on many factors (supply, demand, location, resource type, size of purchase, timing, market application)
- Arbitrage still changes your claims – slightly!
- Why is there such a price disparity between RECs used for state compliance claims verses RECs used for voluntary claims?
 - Price distortion is due to Alternative Compliance Payments placed on regulated entities



Appropriate claims under various scenarios

Scenario	Appropriate Claims	Using Zero-Emissions Electricity
College has onsite solar system and owns associated RECs	<ul style="list-style-type: none"> • We are using solar power • Our solar panels reduce our carbon footprint • We are powered by solar energy • Our electricity comes from solar panels 	Apply the zero emissions rate conveyed by the REC to your purchased electricity consumption under Scope 2
College has onsite solar system but does not own associated RECs	<ul style="list-style-type: none"> • We generate solar energy but sell it to another party • Our solar panels are helping to reduce our energy costs and generate revenue through the sale of the RECs • We are not using solar power but our solar system is helping to green the grid • By selling the RECs from our solar system to our utility we are helping it fulfill its state-mandated renewable energy targets 	In the absence of an emissions rate from RECs or electricity supplier, apply either a residual mix or grid average emissions rate to calculate your unspecified purchased electricity use.
College has onsite solar project and does not own associated Solar RECs, but purchases wind RECs equal to 100% of power needs	<ul style="list-style-type: none"> • We generate solar energy but sell the RECs to another party. However, we purchase 100% wind power and have zero scope 2 emissions. 	The replacement wind RECs allow you to apply a zero emissions rate to your purchased electricity, but not claim it to be of solar origin.



Claims: Best Practices

- If you are claiming to use solar electricity, ensure you either own, or have exclusive contractual rights to, the RECs associated with the solar electricity you are claiming to use.
- If you don't own the RECs associated with your onsite system, don't make public claims about using renewable electricity.
- Avoid making unqualified claims. Be specific and clearly define RECs and who owns them in any public communication.
- Avoid making implied claims.
- Ask for communications assistance from industry experts and key stakeholders.
- Ensure individuals throughout your organizations understand importance of accurate claims and have multiple stakeholders review communications materials.



Why Are Schools Looking to Solar?

- Become solar powered (REQUIRES REC OWNERSHIP)
- Reduce carbon footprint (REQUIRES REC OWNERSHIP)
- Save money and/or reduce variability in price of power
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Claims: Additional Resources

- Visit Green Power Partnerships' Claims web page:
<https://www.epa.gov/greenpower/making-environmental-claims>
- National Association of Attorneys General (NAAG)
Environmental Marketing Guidelines for Electricity
http://apps3.eere.energy.gov/greenpower/buying/pdfs/naag_0100.pdf
- Vermont Attorney General's Office
Guidance for Third-Party Solar Projects
<http://ago.vermont.gov/assets/files/PressReleases/Consumer/Guidance%20on%20Solar%20Marketing.pdf>
- RE100
Making credible renewable energy usage claims
<http://media.virbcdn.com/files/62/53dc80177b9cc962-RE100CREDIBLECLAIMS.pdf>



Questions and Answers

If you have additional questions for the Green Power Partnership, contact:

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If you have additional questions for Second Nature, contact:

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