

Making Sense of Renewable Energy Certificates

(Why do building owners and consumers want them?)



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USGBC
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Meeting

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RECs 101: What is a REC?

RECs 101: REC Terminology

“Renewable Energy Credits” (RECs)

**“Renewable Energy Certificates”
(RECs)**

“Green Tags”

**“Tradable Renewable Certificates”
(TRCs)**

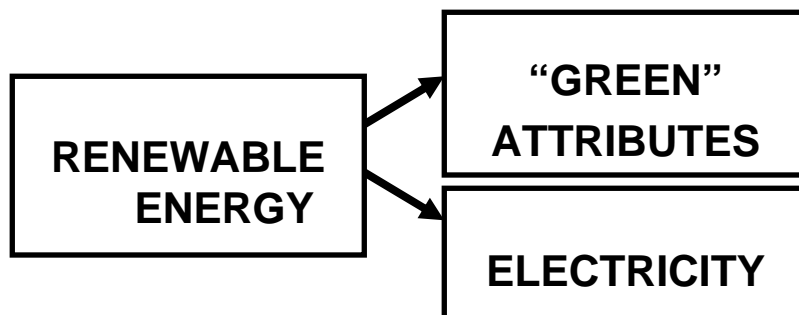
“Renewable Energy Attributes”

...they're all the same thing!

RECS 101: A History Lesson



RECs 101: Additional Terminology



- “Unbundled RECs” – RECs traded separately from the underlying electricity
- “Bundled Power” – Grid power plus RECs
- “Green Energy” – Electricity generated from a renewable generation facility that includes the REC

RECs 101: Why do we have RECs?

- Renewable energy has many benefits over traditional energy sources
- In many instances, the physical location of Renewable Energy Generation is not located within proximity to Renewable Energy Buyers.
- By separating the Renewable attribute from the underlying electricity (RECs), Renewable Energy Buyers can support the growth of renewable energy regardless of physical location.
- RECs represent the environmental, social, and other benefits of renewable energy generation.
- 1MWH = 1 REC (Unless otherwise stated)
- In theory (if not always in practice) the additional revenue from REC sales gets renewable energy projects built.

RECs 101: REC legally defined

- One REC represents the attributes associated with one megawatt hour (MWH) of energy from a renewable source
- RECs are assigned a “vintage” based on the year in which they were generated
- RECs are quoted by resource type and/or the market eligibility
- Example:
 - 100,000 vintage RY 2007-2012 Missouri Wind RECs

RECs 101: What does a purchase mean?

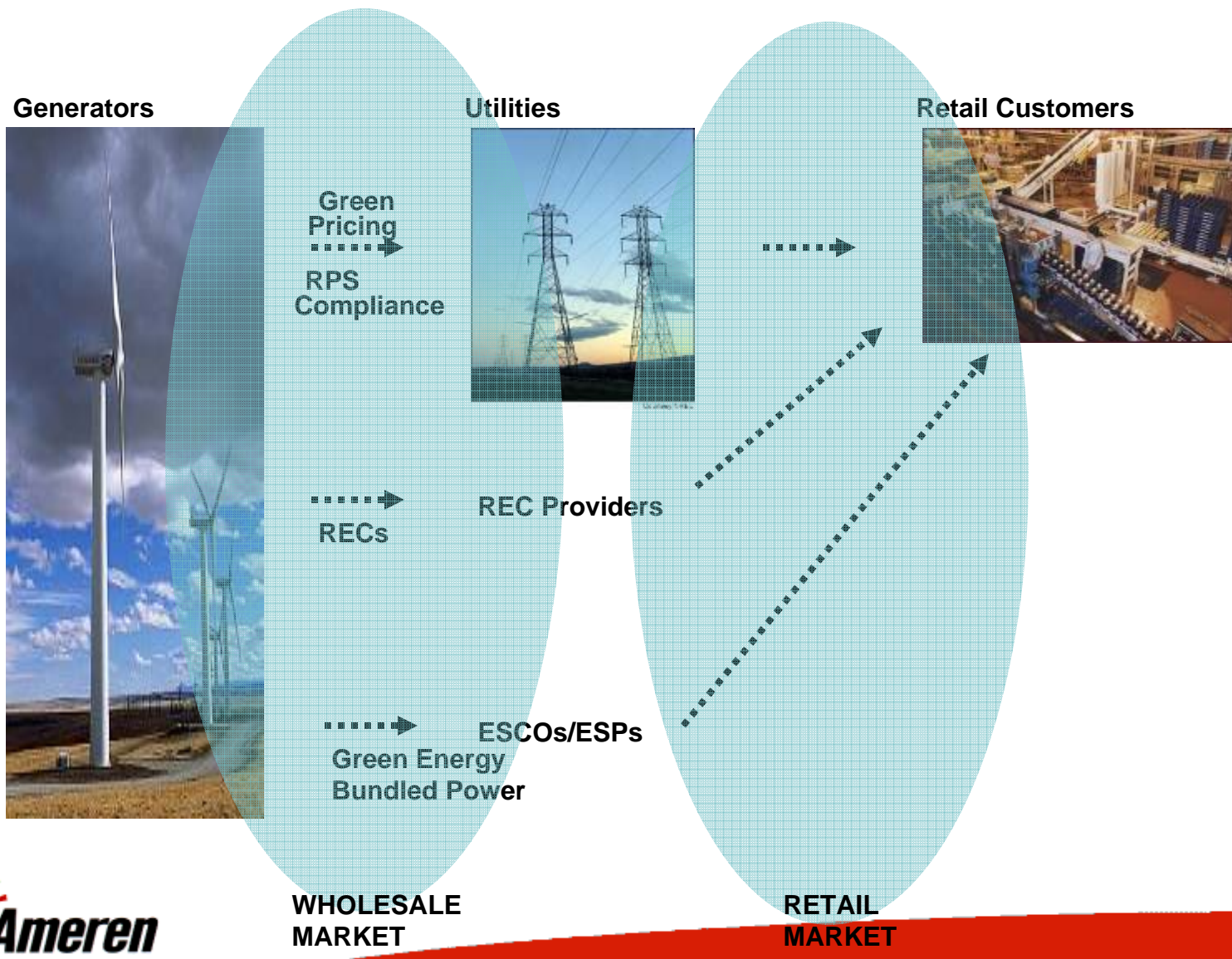
- Purchasing certified RECs ensures that renewable energy in the exact amount of a customer's purchase is delivered to the national, regional or local power pool.

The bottom line.....

- Whether a customer buys RECs and/or renewable power the impact **is the same**: more renewable energy is produced because of their purchase.

REC Market

REC Market: Who is Involved?



What Solutions Exist?

Direct Competition (Grid-Based Options)

● **Utility Green Pricing Programs – “REC” programs**

Renewable Energy Certificates

ESP/ESCO Green Energy, Bundled Power

Adjacent Competition (Onsite Options)

● Demand Side Management

Demand Response

Onsite Renewable Generation

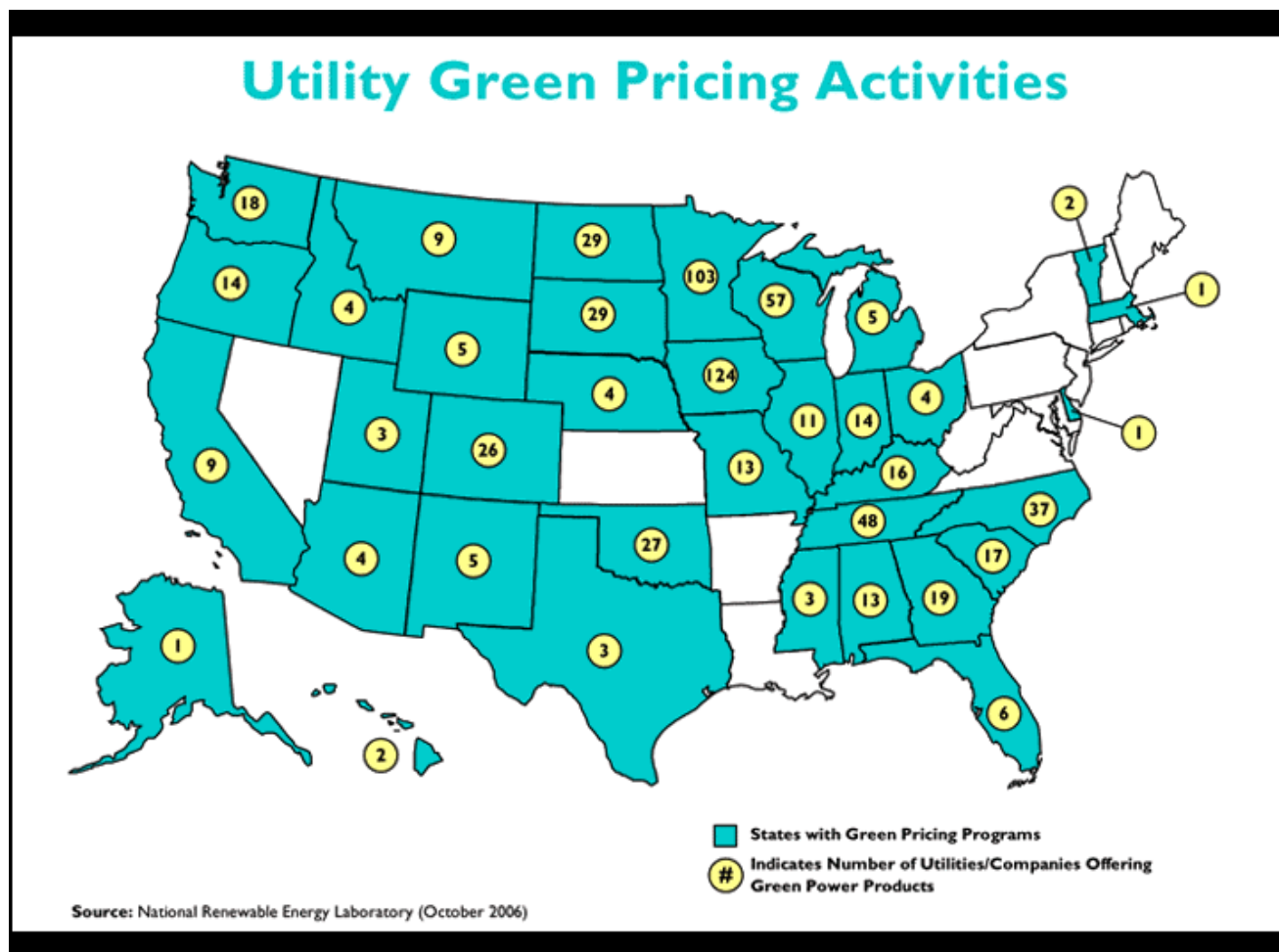


U.S. Voluntary Green Power Sales are Steadily Growing

	2003	2004	2005	2004-2005 Growth (%)
Utility Green Pricing	1,280,000	1,840,000	2,450,000	33%
Competitive Markets	1,900,000	2,650,000	2,150,000	-19%
REC Markets	660,000	1,720,000	3,890,000	126%
Retail Total	3,840,000	6,210,000	8,490,000	37%

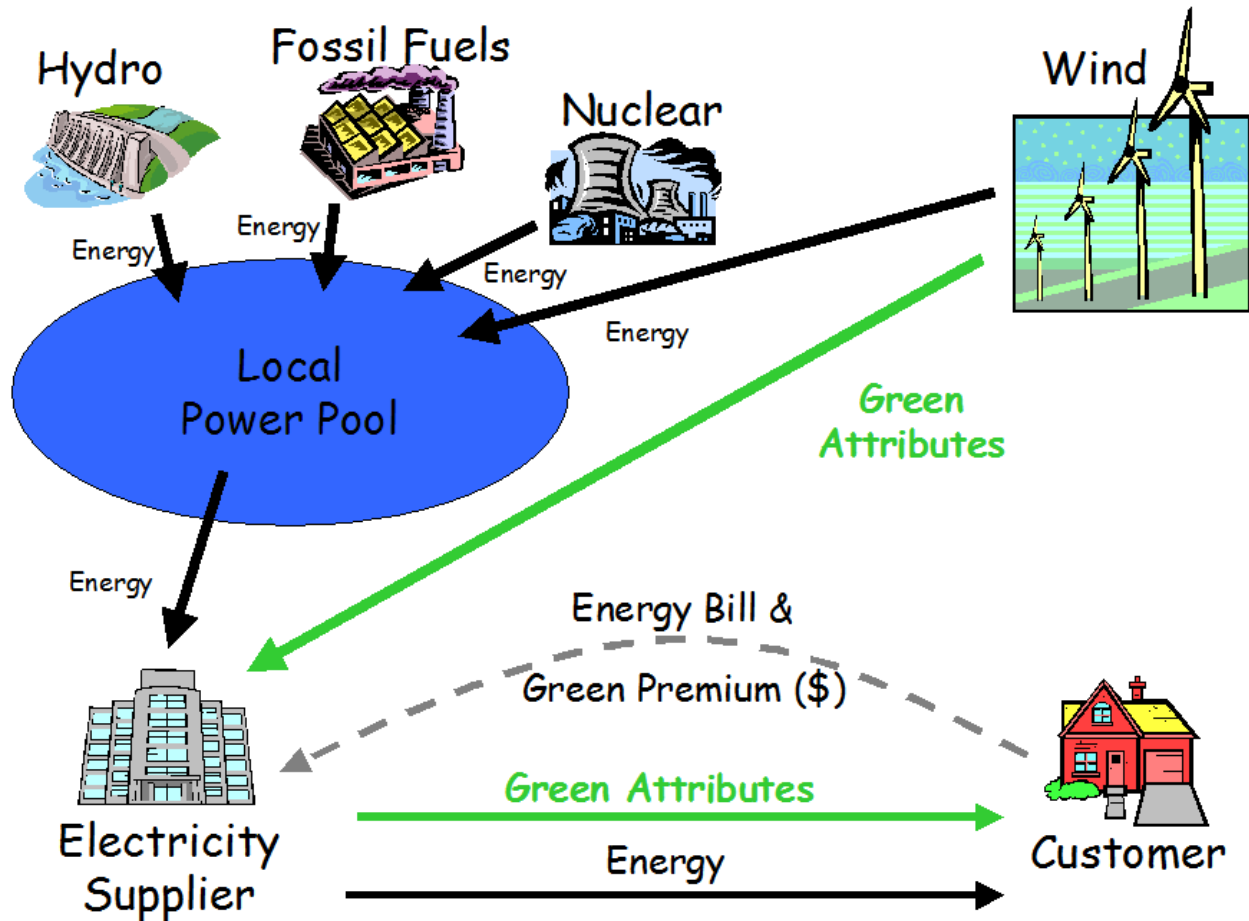
600,000 customers nationally buy green power

Utility Voluntary REC Programs



- 455,500 customers nationally
- 613 utilities nationally
- Serving 40% of U.S. population
- Average cost 2.3 cents per kWh
- 40% growth in kWh 2005/2006

How does a voluntary REC program work?



Consumer Protection: Green-e



- National symbol to help consumers identify superior, certified renewable energy products
- Independent certifier of renewable energy ensuring products meet strict environmental quality and consumer protection standards
- Informed by National Association of Attorneys General (NAAG) and Federal Trade Commission (FTC) guidelines
- Conducts audit annually of Green-e Certified® renewable energy suppliers
- RECs and Utility Green Pricing Programs can both be Green-e certified.

Voluntary REC purchase – The Case for Business

Why do Businesses Care?



Who Cares When a Business Goes Green?



They Do!

- Customers
- Channel Partners
- Employees
- Communities & the Media
- Investors

“Corporate reputation is a more important measure of success than stock market performance, profitability and return on investment.”

World Economic Forum survey of world's leading CEO's and organization leaders

Businesses are Already Driving Change

- For many businesses, “green energy” expense is viewed as an essential part of their marketing and communications budget – not as an operational expense.

- Leading Corporate Green Power Purchasers:**

Toyota, IBM, Agilent, Starbucks, HSBC, Johnson & Johnson, Whole Foods, Cisco, Kinko's, Coca-Cola, and over 600 other organizations.

- 745 corporations and organizations** (over 40 Fortune 500 companies) purchase 9.1 Billion kWh of Green Energy annually.



August 2004



December 2005

Opportunity: Add Brand Luster

- Brand luster describes not just the product, but the company associated with the product.
- This includes the linkages consumers make with brand quality, attitude, innovation and corporate responsibility.....
- and with *Their* constituents
 - Customers, Channel Partners, Employees, Communities, Media, Investors, Regulators/Government

Opportunity: The Consumer Stated Preference

In a nationally representative poll of 1,000 adults **70%** said they are more likely to buy a product from a company *known to implement environmentally friendly practices in its operations*.



Source: American Demographics "Eco Friend or Foe" (October, 2003)
Representative poll of 1,000 adults, fielded online during August 2003

"You would be amazed at how many customers stop and read that (sign about us buying green power on the counter) and thank us for being environmentally aware"

-Mike Exinger, **Zingers Ice Cream**
Oregon "Blue Sky" (green power) Participant

Opportunity: Alignment with the Channel

Among surveyed companies found to be ‘financial leaders’ “94% have practices in place to ensure that their values are aligned with their suppliers, distributors, and partners, compared with 64% for other public companies”

Booz | Allen | Hamilton



Opportunity: LEED Certification

LEED certification is recognized nationwide as proof that a building is environmentally responsible, profitable, and a healthy place to live and work.

Purchasing RECs can help a business earn LEED points toward achieving LEED building certification.



Voluntary REC purchase – The Case for Residences

The Most Likely Green Power Customer also Shops for the Family:

The Residential REC customer may also be a renewable energy customer who votes with her dollar.

She is aged 30-45 years old, married with children under 18 at home, white collar, middle/upper income, college educated, informed, sometimes with advanced degrees.



She often recycles and at times eats organic foods and purchases goods from environmentally friendly companies.

She is a member of a church or synagogue and donates to public TV and environmental causes.

Sources:

E Source/Platts, NREL, Green-e®, and Ameren partners - experience in utility green power marketing



Why she cares...(and he does too!)

- It's an option she's asked for.
- It leads to the reduction of the upstream and downstream environmental impacts from fossil fuel extraction, refining, transport and waste disposal.
- It creates regional economic development through the development of new, local renewable energy sources....increased employment, and revenue to local land owners and towns.
- It helps reduce US dependence upon foreign energy sources.
- It's something she can do over and above recycling, driving a hybrid car, and conserving energy that allows her to make a difference and feel good about her contribution.

Summary: What constitutes a credible and successful Voluntary REC Program?

- Available to all customer classes
- Program demand met by a significant portion of **local** renewable generators.
- Affordable premium
- Renewable energy supported is in addition to any current or future mandates.
- Not a contribution program
- Green-e Certification

Thank you!
Want to learn more?
www.ameren.com/purepower

