

Center for



**RESOURCE SOLUTIONS**

## **RECs: The Good, the Bad, and the Ugly**

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# Center for Resource Solutions

**A nonprofit organization working nationally and internationally** to fight climate change by building policies and consumer-protection mechanisms in renewable energy, greenhouse gas reductions, and energy efficiency.

Developed and manage three **certification programs** for environmental markets:



**Green-e Energy:** Launched in 1997 to provide consumer protection for the green power markets in North America.

**Green-e Marketplace:** Launched in 2005 to verify green power claims made by companies purchasing renewable energy for their operations.

**Green-e Climate:** Launched in 2008 to provide consumer protection for the carbon offset market.

# Join the RECs Revolution

## How RECs Changed the Renewable Energy Marketplace

RECs break down traditional barriers in electricity service by defining a set of environmental attributes that can be traded separately from the generated electrons.

**Physical:** RECs are not tied to delivery on transmission grid.

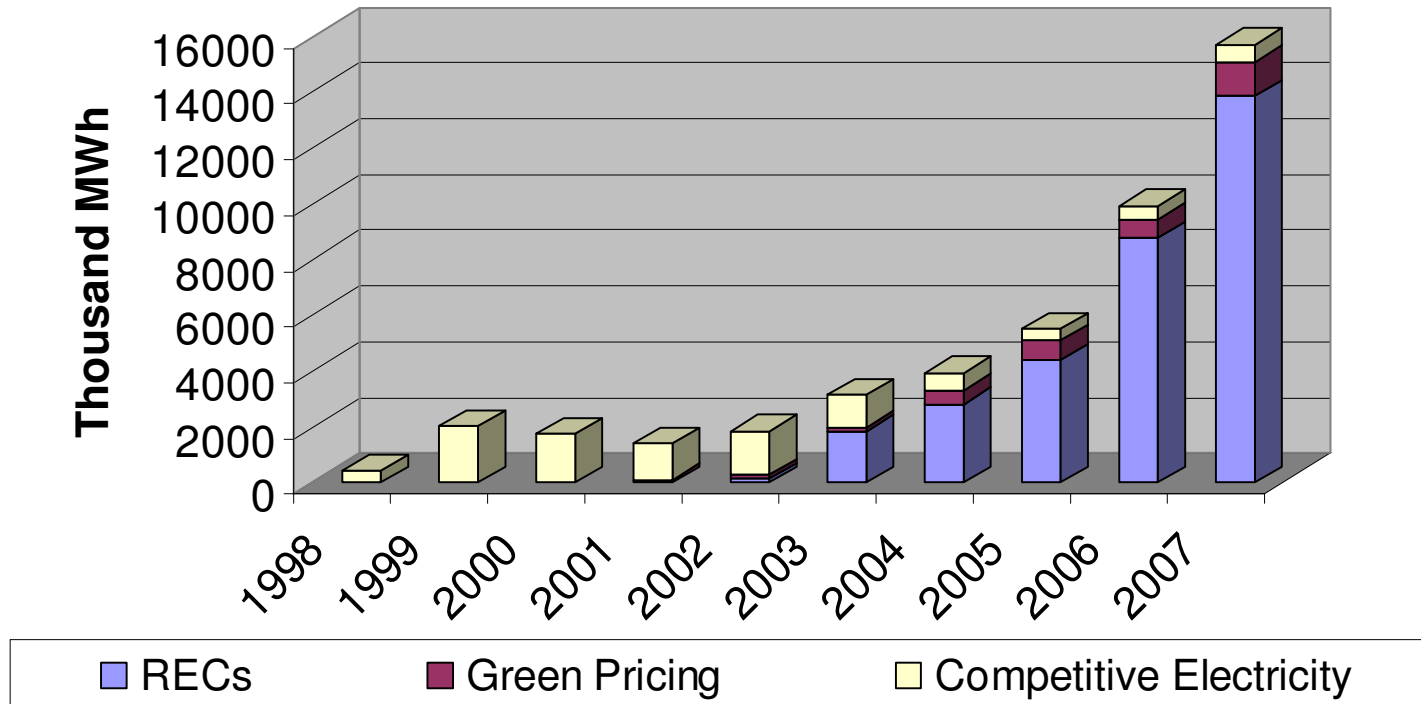
**Temporal:** RECs can be banked for future or sold to meet past obligations.

**Market:** RECs transactions can bypass traditional utility-customer relationship, even in monopoly territories.

**Value:** RECs sales add value to enhance project financeability above and beyond value of electricity.

# Growth in Green-e Markets - Verification Report 2007

FIGURE 1: **Green-e Energy Certified Sales by Product Type, 1998-2007**

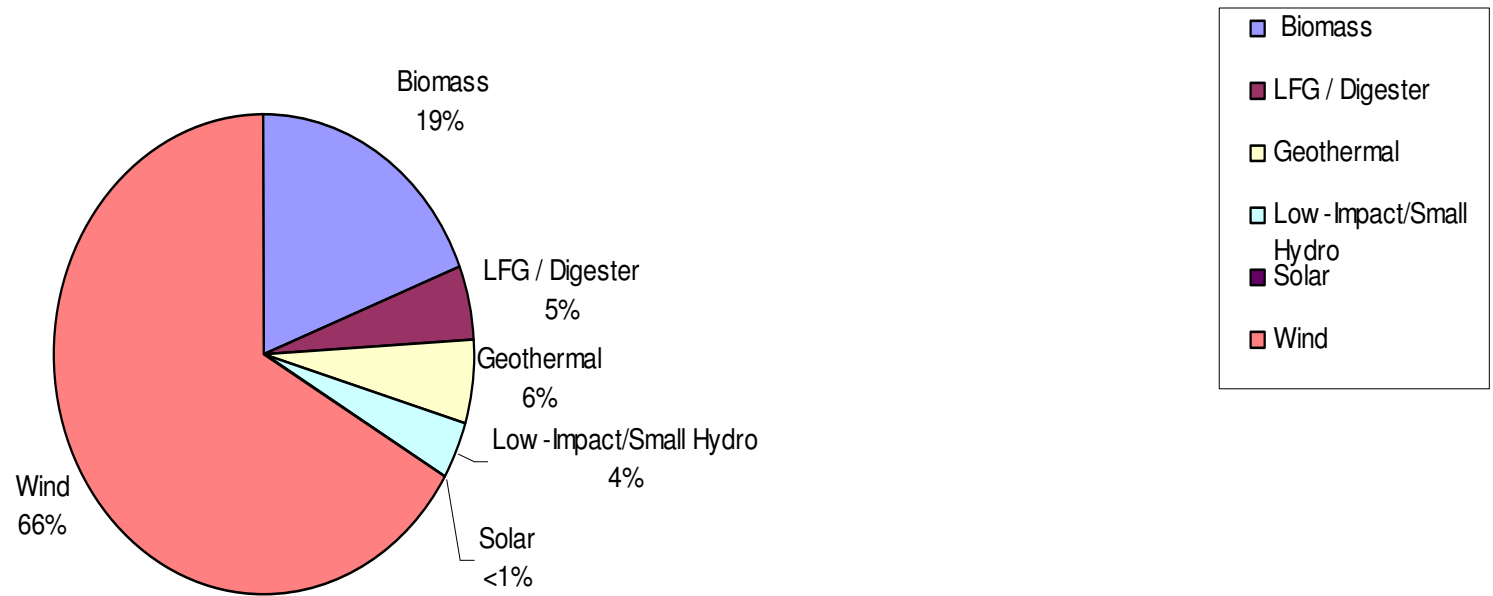


# Sales of Green-e Energy Certified RECs by Customer Type 2007

	<b>MWh Sales Volume</b>	<b>Increase from 2006</b>	<b>Percent of Total REC Sales</b>	<b>N</b>	<b>Average MWh</b>
<b>Res.</b>	81500	108%	1%	17800	5
<b>Comm.</b>	7305000	109%	53%	2100	3500
<b>WS</b>	6468000	24%	47%	160	41500
<b>Total</b>	<b><u>13854500</u></b>	<b><u>58%</u></b>	<b><u>53%</u></b>	<b><u>20060</u></b>	<b><u>691</u></b>

# Green-e Energy Market Verification Report 2007

Figure 6: **Contribution of Renewable Resource Types to Green-e Energy Certified RECs**



## RECs for RPS Compliance

- Of 26 states with Renewable Portfolio Standards, only 4 do not currently allow use of unbundled RECs to meet mandates.
- California is the most important of these markets, has gone through a long process to define RECs and rules.
- Regulators worry about double counting, so conditioned RECs use on functional WREGIS tracking system (now up and running).
- A proposed decision expected in Nov. 2008.

## “RECs as carbon offsets”

**Is a REC an offset?**

NO

**Can a renewable energy project generate an offset?**

Sometimes

# PAVER for Renewable Energy facilities in the US

## What are the characteristics of a high quality offset?

**P**ermanent - must last in perpetuity – not an issue with RE, once the energy is generated it cannot be reversed

**A**dditional – must be spurred by the carbon market, “beyond business as usual” – more to follow

**V**erifiable - must result from projects whose performance can be readily monitored and verified – tracking systems

**E**nforceable - must be backed by contracts or legal instruments that define their creation and ensure exclusive ownership – tracking systems and contractual documents

**R**eal - must represent actual emission reductions and are not artifacts of incomplete or technically flawed accounting – tracking systems and EIA reporting

# Additionality

## How do you prove a renewable energy facility is additional?

Methodology	Timing Test	Regulatory Test	Other Additionality Tests
CCX	1999	Required	Sector Based
Green-e Climate	2005	Required	Sector Based
Gold Standard	2006	Required	Financial Test
VCS	2002	Required	Financial Test or Sector Based

# Renewables under a Cap-and-Trade System

## Can renewable energy or RECs sold in the voluntary market claim emission reductions under future cap and trade?

Under a cap, when a renewable generator produces emissions-free electricity, a fossil-fuel plant produces less electricity, but the number of allowances in circulation remains the same unless there is an accounting mechanism.

Cap should act as a floor for emission reductions, not a ceiling.

**“Off-the-top” Rule** – A certain number of allowances are retired and taken out of circulation on behalf of reported voluntary renewable energy sales.

# GAO report questioned value of RECs as offsets

## Credibility of Offset Projects (31 responses)

Ag Methane	3.41
Fuel Switching	3.39
Landfill Methane	3.25
Coal Mine Methane	2.82
Industrial Gas	2.82
<b>Non-REC renewable energy</b>	<b>2.67</b>
Energy Efficiency	2.57
Afforestation	2.5
Reforestation	2.5
Avoided Deforestation	2.25
Ag Soil Carbon	1.86
Range soil carbon	1.81
<b>RECs</b>	<b>1.26</b>

source GAO-08-1048



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