

# GHG Reductions with Green Power: An Overview for Climate Leaders

*Blaine Collison*

*US EPA Green Power Partnership*

*October 7, 2008*

*(202) 343-9139*

*[collison.blaine@epa.gov](mailto:collison.blaine@epa.gov)*

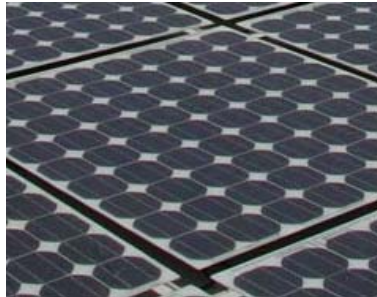


# The Key Questions

- **Why should my company buy green power?**
- **What are my green power options?**
- **How do I buy green power?**
- **How much will green power cost?**

# What Is Green Power?

- Green power is an “environmentally-differentiated” electricity product from:
  - solar
  - wind
  - geothermal
  - biomass
  - biogas
  - small hydro



# The Green Power Partnership

- Same EPA climate suite as Climate Leaders & ENERGY STAR

- Program provides:

- **Credibility -**

- Definition of eligible renewables
- Purchasing requirements
- Purchasing guidance

- **Recognition -**

- Top 25 and Top 10 lists
- Green Power Leadership Awards
- Partnership logo
- Promotional opportunities
- Green power locator
- Environmental impact information



# Purchasing Requirements

Annual Electricity Use (MWh) *	Minimum Purchase Requirements**	Leadership Club Requirements
> 100,000	2%	20%
100,000 to 10,001	3%	30%
10,000 to 1,001	6%	60%
< 1,000	10%	N/A

Note: A Partner must meet the purchase requirements for all of its U.S. facilities to be in the Leadership Club.

\*Customers with annual load less than 1,001 MWh are not eligible for the Green Power Leadership Club. EPA will recognize Partners separately who fall in this size category and purchase 100% green power.

\*\*The Leadership Club purchase requirement must be met with “new” renewables.





# Green Power Value Proposition

- **Green power reduces indirect emissions**
- **Fixed-price products offer hedging benefits**
- **Delivers high-impact/low-cost value**
  - More than 400 Partners using 100% green power
- **Deploys quickly & scales up easily**
  - Most Partners increase green power purchases over time
- **Resonates with customers, senior management, employees, media & other stakeholders**
  - Clean technology
  - Energy independence
  - New U.S. jobs



# Buying Green Power

## What Are My Product Options?

### 1. Green Power Electricity Products

- Buy electricity from utility green pricing programs or green power retail marketers that is all or partially generated from renewable sources



### 2. Renewable Energy Certificates (REC)

- Buy only the “attributes” associated with the electricity generated (1 REC = 1MWh)



### 3. On-site Generation

- Install renewable energy system on site, e.g. solar panels



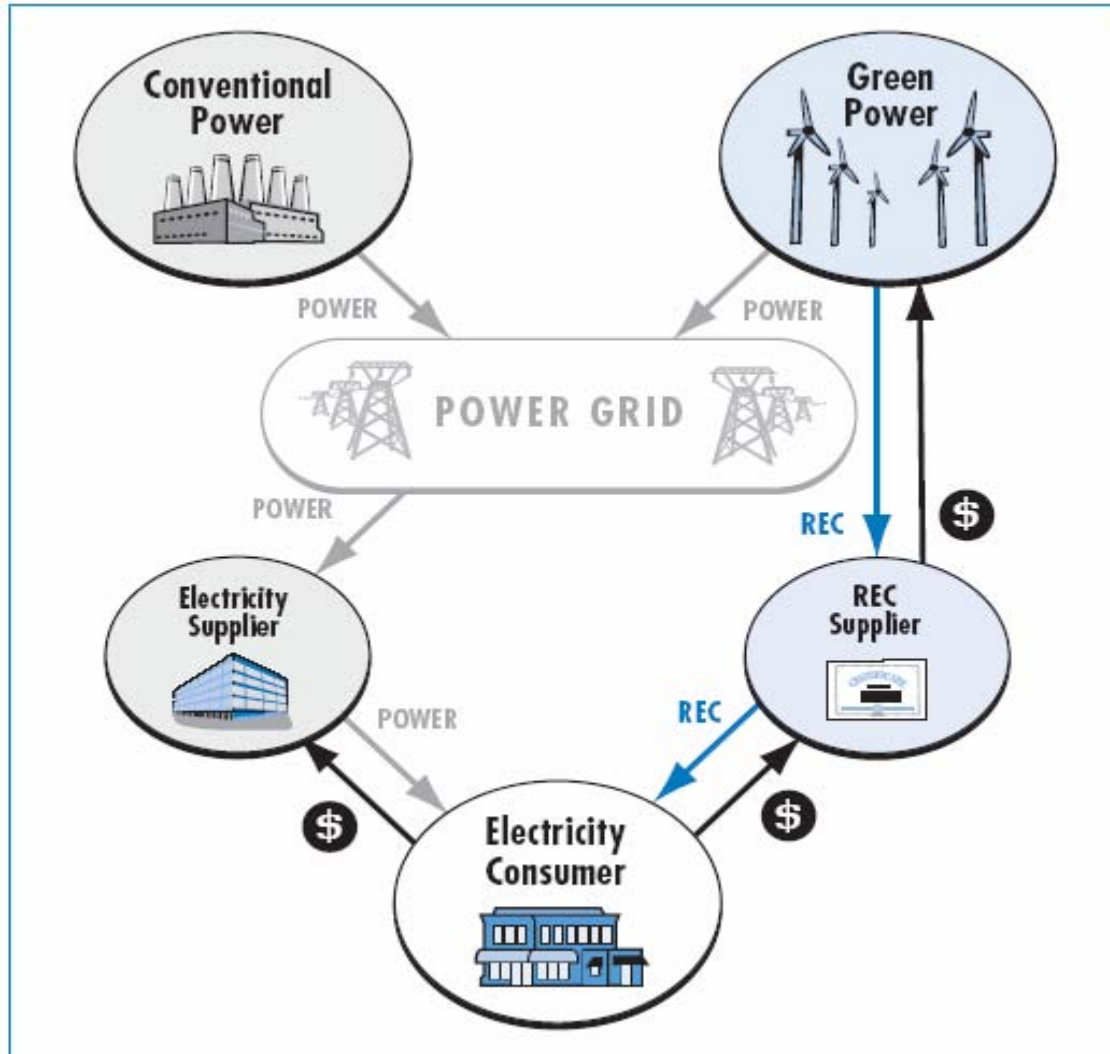
# RECs Market Growth

<b>Market Sector</b>	<b>2004</b>	<b>2005</b>	<b>2006</b>	<b>2007</b>	<b>% Change 2004/2005</b>	<b>% Change 2005/2006</b>	<b>% Change 2006/2007</b>
Utility Green Pricing	1,800	2,500	3,400	4,300	33%	39%	25%
Competitive Markets	2,700	2,200	1,700	3,200	-19%	-20%	88%
REC Markets**	1,700	3,900	6,800	10,600	126%	75%	55%
<b>Retail Total</b>	<b>6,200</b>	<b>8,500</b>	<b>11,900</b>	<b>18,100</b>	<b>37%</b>	<b>41%</b>	<b>53%</b>

Source: NREL 2008 - *Draft Figures*



# The REC Transaction Process



# RECs Opportunities

## ■ Availability

- Even if local utility has no green power options
- Preserves existing supply relationships

## ■ Flexibility

- Type of renewable resources
- Location of resource
- Leased space
- Central procurement for multiple facilities

## ■ Skips physical supply issues

- Does not impact contract with current provider

## ■ Attribute ownership

- Buyers should specify ownership of attributes in contract

## ■ Certification

- Recommended but not required
- Green-e (CRS), EcoPower (ERT)

# Green Power Partners: Who's Buying & How Much?

Industry	Partners	Average MWh	Total MWh
Information Technology	38	52,227	1,984,622
Food & Beverage	34	54,521	1,853,701
Govt. (Federal)	15	109,647	1,644,708
Retail	64	22,565	1,444,166
Govt. (Local, Municipal)	76	18,839	1,431,799
Education (Higher)	81	14,604	1,182,886
Banking & Fin. Svcs.	21	48,122	1,010,565
Health Care	36	13,400	482,386
Travel & Leisure	57	6,116	348,584
Govt. (State)	10	30,749	307,488
Green Power Community	13	22,908	297,809
Consumer Products	30	7,886	236,576
Restaurants & Food Svcs.	26	8,437	219,354
Non-Profit (NGO)	59	3,238	191,031

# A Few of EPA's 1,000+ Partners

*- Purchasing + 15 Billion kWh*

