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# Residential Product Structuring:

## *A Green Power Quiz*

Based on Innovative and Successful National Models

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## 3 Phases Energy

- National renewable energy marketing and development firm
- Serving 7 of the top 10 U.S. EPA Green Power Partners
- The utility green pricing programs supported by 3 Phases Energy have achieved between 4% and 13% participation.
  - National average green pricing participation: 1.2%.
- Utility partners include a selection of the most highly rated programs in the nation:
  - PacifiCorp (4% participation)
  - City of Palo Alto Utilities (13% participation)
  - Silicon Valley Power (4% participation)
  - Roseville Electric (launching December 1, 2005).
- Supporting 230 MW of new renewable energy capacity *representing 10% of national voluntary demand.*



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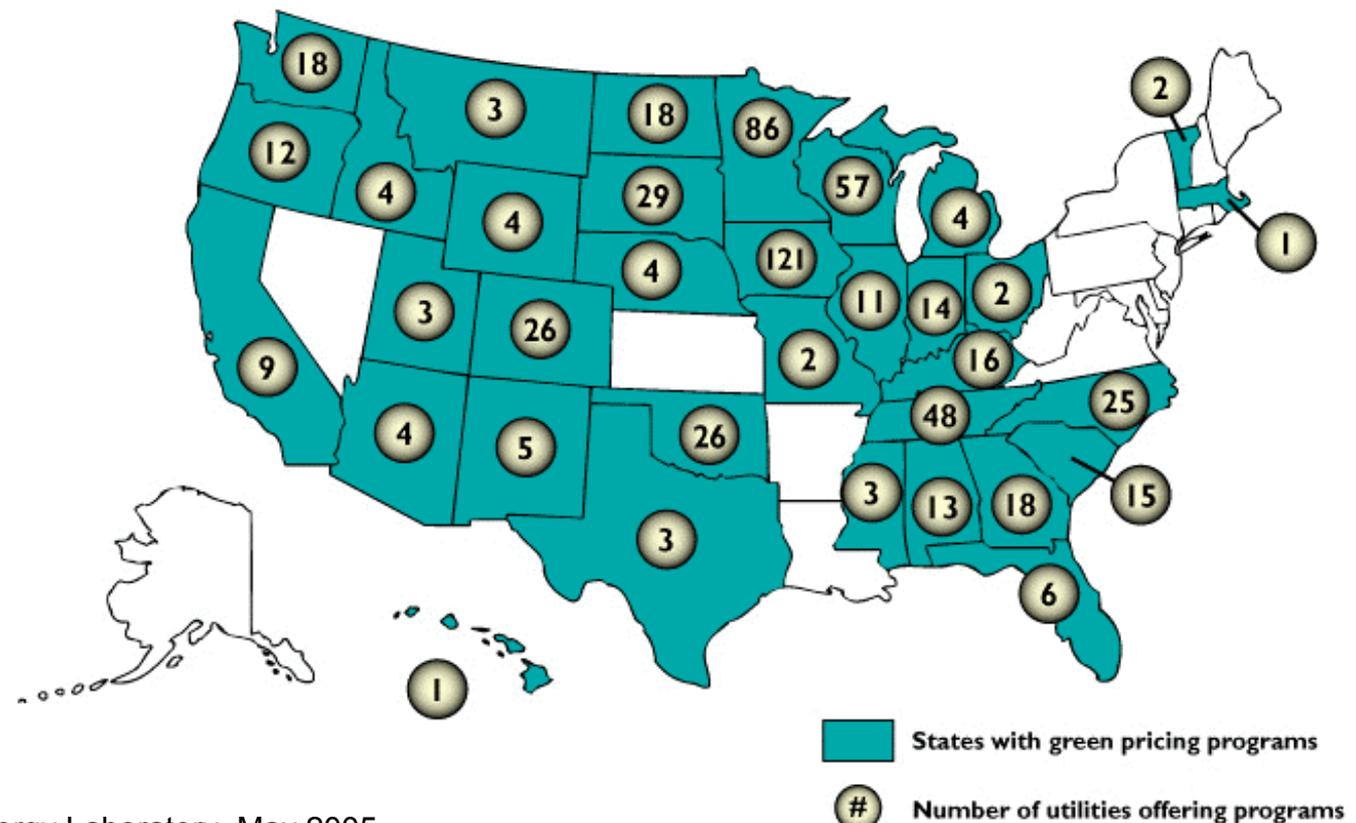
# Question:

How many utilities offer green pricing programs nationwide?

# Answer:

613.

## Utility Green Pricing Activities



Source: National Renewable Energy Laboratory, May 2005.



# Question:

Sales through the Top Ten programs represent what % of *total* MWhs sold through utility programs?

# Answer:



70%.

In addition, just ten programs serve 63% of all customers enrolled in green pricing programs.

*This indicates there are significant, important differences between the most successful programs and the rest.*



# Question:

Who is winning the new renewable development horse race:  
the voluntary or compliance market?

# Answer:



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## Compliance, but not by much.

Voluntary Market New Renewables (2004): 2,233 MW.

Compliance Market New Renewables (2003): 2,325 MW.

Note: Even assuming 100% of wind capacity installed in the United States in 2004 served the compliance market (398 MW), these figures remain close.

Source: Voluntary market data from U.S. National Renewable Energy Laboratory (NREL) utilizing 2004 data, published in September 2005. Compliance market data from the U.S. Energy Information Agency (EIA) *State Renewable Energy Requirements and Goals*, utilizing year-end 2003 data. Wind energy data from the American Wind Energy Association.



# Question:

What portion of Top Ten programs (by total customers) are Green-e® Certified?



# Answer:



## Half.

Xcel Energy *Windsorce* (Colorado service territory)

SMUD *Greenergy*

National Grid Utilities *GreenUp* (Selected products)

Alliant Energy *Second Nature*

We Energies *Energy for Tomorrow*

### ***Key Trend to Watch***

3 Phases Energy estimates 2/3 of NREL Top Ten Programs will be Green-e Certified in the years ahead.



# Question:

How many utilities offer customers price-protection benefits in their renewable energy products?

# Answer:



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## 7, with 1 under development.

**Austin Energy (TX)** *GreenChoice*

**Edmund Electric (OK)** *Pure and Simple*

**Eugene Water and Electric Board (OR)** *Windpower*

**Madison Gas and Electric (WI)** *Wind Power Program*

**Oklahoma Gas and Electric (OK)** *Wind Power*

**Portland General Electric (OR)** *Clean Wind* (currently in final approvals)

**We Energies (WI, MI)** *Energy for Tomorrow*

**Xcel Energy (CO, MN)** *Windsources* (currently a customer credit)

### ***Key Trend to Watch***

All but one program received NREL Top Ten recognition in 2004.  
Stable-rate options will continue to perform well in the future.



# Question:

What percentage of total utility green pricing resource needs (in MWhs) are met using RECs?

# Answer:



# 38%.

REC Purchases	2002	2003	2004
(as a % of Total Green Pricing)	11%	33%	38%

- REC-based programs appear in approximately the same ratio in the NREL Top 10.
- RECs and REC/power blending mitigate risk in utility procurement.
- 30% of utilities purchase all of their supplies using RECs.
- Another 5% of utilities purchase some of their supplies using RECs.

## ***Key Trend to Watch:***

**3 Phases Energy estimates 50+% of utility green pricing resource needs will be met with RECs in 2005.**



# Question:

Are low consumption renewable options more or less subscribed than higher consumption options?

(e.g. 100 kWh blocks/10% usage vs. higher consumption options)

# Answer:



## No Difference.

8 of the Top Ten Programs (by total customers) offer higher consumption products:  $\geq 200$  kWh block or  $\geq 25\%$  of usage.

“A statistical analysis of green pricing data found that utilities offering larger blocks (at least 200 kWh) or higher percent of use offerings (at least 25%) tend to have greater sales to residential customers, with no obvious impact on overall customer participation. In other words, customers may be willing to purchase higher quantities of renewable energy, if that is what is required to participate in the program.”

*NREL Trends in Utility Green Power Programs*, published Oct. 2005

Insufficient data prevents similar analysis at higher consumption levels.



# Question:

How many of the Top Ten programs offer customers exclusively New Renewables?

# Answer:



8 of the Top Ten programs (by MWhs and total customers) offer exclusively New Renewables to customers.

All Top Ten programs (by MWhs and total customers) offer energy-based options to customers, as distinct from contribution-based programs.



# Question:

How many utilities have partnered with renewable energy marketing companies?

# Answer: 25

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CITY OF PALO ALTO  
UTILITIES



# Answer: 25



These 25 programs have an unusually high representation among the NREL Top 10.

Programs managed by utility-marketer partnerships represent:

5 of the Top 10 *by total customers*

4 of the Top 10 *by MWh sales*

These figures are up from 2 of 10 (total customers) and 3 of 10 (MWhs) in 2003.

## ***Key Trend to Watch:***

**Looking ahead, most top-performing programs (7- 8 of 10) nationally will be managed by utility-marketer partnerships.**



# Question:

What is the most cost effective tool for acquiring customers in utility green pricing programs?

# Answer:



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## Bangtails.

tear here ----- tear here ----- tear here ----- tear here

Have you considered supporting renewable energy and reducing your impact on the environment?



**It's Easy**

Just complete the form on the back and return with your bill payment

**It's Reasonable**

Only 23¢ extra per day for the average Santa Clara household (1.5¢/kWh)

**It's Sustainable**

Your choice cleans the air as much as not driving for 2 weeks each month!

Your Community Power

SANTA CLARA  
**greenpower**



# The model green power program will include the following ingredients...

Price-protection benefits

Green-e Certification

Energy-based options

100% New product offering

Higher consumption options

Utility-Marketer partnerships

Utilization of nationally-recognized marketing tools

Power/REC blending to mitigate risk in utility procurement

Ambition to become one of the Top Ten programs nationally



# Final Question:

What would happen if 20 more programs performed at the same level as the Top Ten by MWh sold?

# Answer:

906 more MW in the ground.

This would double the MWs constructed to serve utility green pricing programs nationally.



# A Challenge:

With well constructed programs, we have the power to keep pace with the compliance market.



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