

GovEnergy 2008 – Credits Trading

Phoenix, Arizona

August 5, 2008

Sterling Planet



Renewable Energy

Solar. Wind. Water. Bioenergy.

Sterling Planet Introduction

- USA's leading retailer of Renewable Energy / Environmental Attributes
 - Nation's leader in renewable kWh sales – 19,064,753,832 kWh or 3,362 in MW load for a year
 - Includes largest two transaction in U.S. green energy history (Intel and PepsiCo)
- Broadest set of environmental attributes products in the marketplace
 - Renewable Energy Certificates (RECs)
 - Energy Efficiency Certificates (White Tags™)
 - Carbon Offsets (Domestic and International)
- Blue Chip customer base and customers in 45 states
 - 1,455 Commercial and Industrial Customers (many the largest purchase in their sector)
- US Renewable Energy and Carbon Market growing at 185% annually and to be worth \$1.2 Trillion by 2012
- Sterling Planet has a \$500,000,000 in carbon projects pipeline based on renewable energy
 - With over \$120,000,000 in final phases of financial closing
- Recently received National Marketer of the Year for 2007 by the Department of Energy.
- Sterling Planet has the largest and most diversified base of renewable energy and energy efficiency suppliers in the USA



Some of Our Clients



Company Background and Clients

- First nationwide green power marketer with 100% green energy choice – Founded in 2000
- Sold over **19,064,753,832** kWh of green energy (equal to **1,834,561** average residential customers or avoidance of **10,417,751** trips between New York City and Los Angeles)
- Nation's leader in renewable kWh sales
- Largest Two Transaction in U.S. green energy history (Intel and PepsiCo)
- Buyer and seller of environmental attributes (RECs, White Tags™ and Carbon Credits)

1,455 Business Clients

Universities (55)

- Harvard 
- Yale **YALE**
- Duke 
- University of Utah 
- Florida State 

Utilities (80)

- FPL 
- Con Edison 
- PEPCO Energy 
- Constellation 
- Connecticut P&L 

Commercial & Industrial (1,166)

- Alcoa 
- Google 
- DuPont  *The miracles of science™*
- Johnson & Johnson 
- Pepsi 
- Cisco 
- UBS 
- Nike 
- Staples 
- Intel  *Leap ahead™*
- Wal-Mart  *Save money. Live better.™*
- 2008 and 2004 Democratic Convention
- 2004 Republican Convention
- NFL (2007 Super Bowl) 
- McDonalds  Ford 

Government (154)

- US Air Force 
- IRS 
- Homeland Security 
- NASA  *National Aeronautics and Space Administration*
- Western Area Power Administration
- US EPA 
- US GSA  *U.S. General Services Administration*
- National Renewable Energy Lab
- Veterans Affairs 
- State of New York 
- State of Illinois 



Sterling Planet is Active in All 3 Markets

REC Markets

Voluntary Markets

- Customers voluntarily pay more for renewable energy
- Participating in 24 (80 Overall) utility renewable marketing programs in:
 - Florida, Massachusetts, New York, Connecticut, New Jersey, Rhode Island and Washington, DC

Mandated Markets

- Sell RECs to utility to satisfy RPS
- Manage RECs exchange among utilities
- Provide RECs to government agencies

GHG Emission Markets

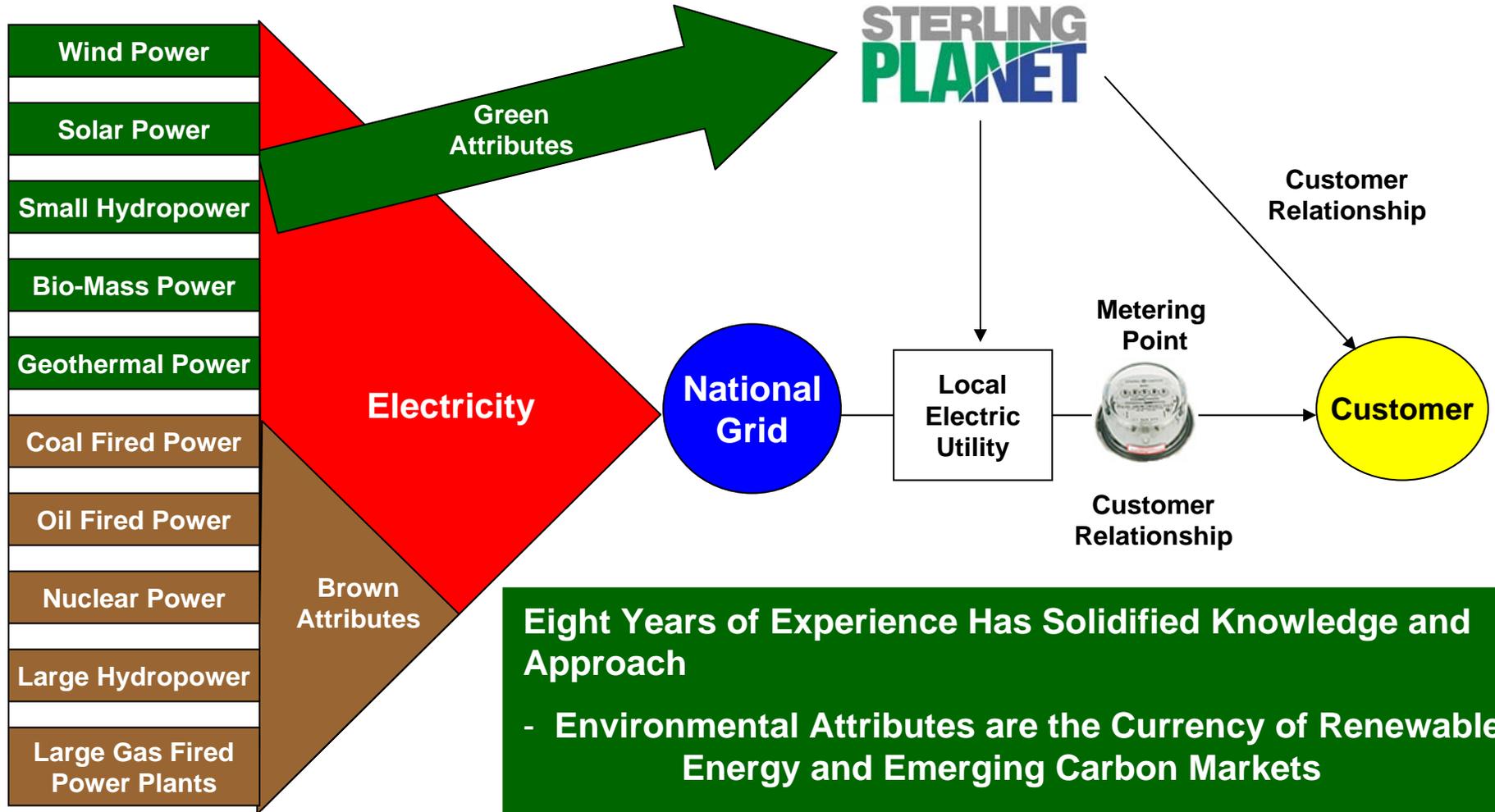
Greenhouse Gas Emission Markets

- Very Early in its Definitions and Rules
- More Advanced in:
 - Europe
 - Japan



How It Works?

Electric Power Plants



Eight Years of Experience Has Solidified Knowledge and Approach

- Environmental Attributes are the Currency of Renewable Energy and Emerging Carbon Markets
- Environmental Market Is Exploding and Becoming "Mainstream"

Connecting The Market / How Are They Created?

U.S. EPA	Intel	Yale	Political Conventions	Mohawk Paper	WAPA	Cisco	Harvard
Nike	St. Columba	U.S. Air Force	IRS	Duke University	Johnson & Johnson	Alcoa	PepsiCo



Residential Customers

Local Utility Companies

STERLING PLANET

Actual Commercial and Industrial Customers
Sterling Planet Markets Attributes
 Leveraging EPA Green Partnership Program



Attribute Contracts (Renewable Energy Certificates)

Attribute Contracts (Carbon Credits)

Attribute Contracts (White Tags™)

Solar Project (FL) I

Wind Project (MN) I

Biomass Project (GA) I

Energy Efficiency Project (OR) I

Carbon Project (TX) I

Electricity (Null Power) Contracts - PPA

Local Utility Companies

Greenhouse Gas Emission Creation



Sterling Planet Business Lines

- Managing/Operating Utility Green Pricing Programs
- Direct Sales of Environmental Attributes (i.e. RECs, White Tags™ & Carbon Offsets) to Businesses and Organizations
- Managing/Operating Conservation Programs
 - ✓ First in the Market to Offer White Tags™
- Direct Sales of Environmental Attributes to Mandated Market Participates (Utilities and Governments)
- Development of Carbon Projects



What are White Tags?

- A new tradable attribute similar to green tags or Renewable Energy Credits (REC)
- Represents the value of energy not used (conserved) at facilities
- Created through the implementation of energy conservation (Demand-Side Management) projects
- Also known as Energy Efficiency (EE) Certificates & White Certificates



Comparison to RECs

White Tags™

Many Ways the Same

- Mandated Market - Same States & Similar Mandates (%)
- Voluntary Market - Same rationale, but larger market share (vs mandated)
- Market Size - Similar, but likely larger with broader scope & faster adoption
- Certification - Similar, but more complex (savings vs generation)

Some Ways Different

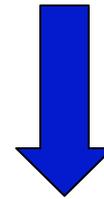
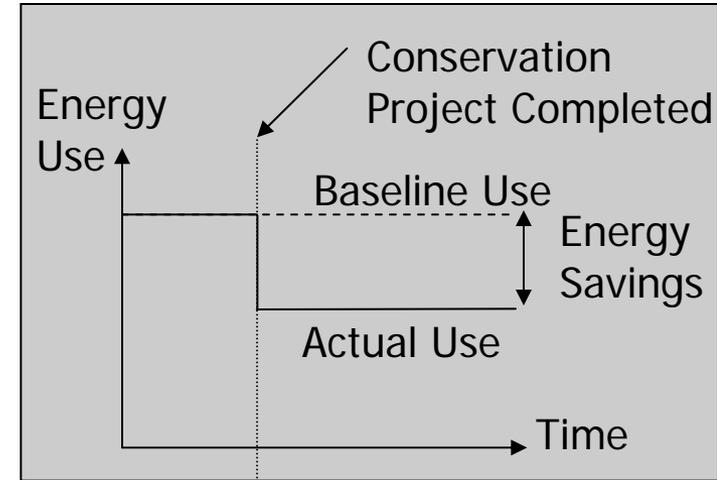
- Regulations - Facility based, not equipment based
- Measurement & Verification (M&V) - Historically problematic



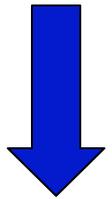
How are White Tags Created?

Implementation of energy conservation projects at a facility, including:

- Equipment upgrades, retrofits, & replacement
- Operational modifications & set point changes
- Energy management and monitoring systems
- Combined Heat and Power (CHP) or cogeneration
- New technologies (e.g. High Efficiency Lighting).



Save \$



Create
White Tag

US Renewable Energy Market

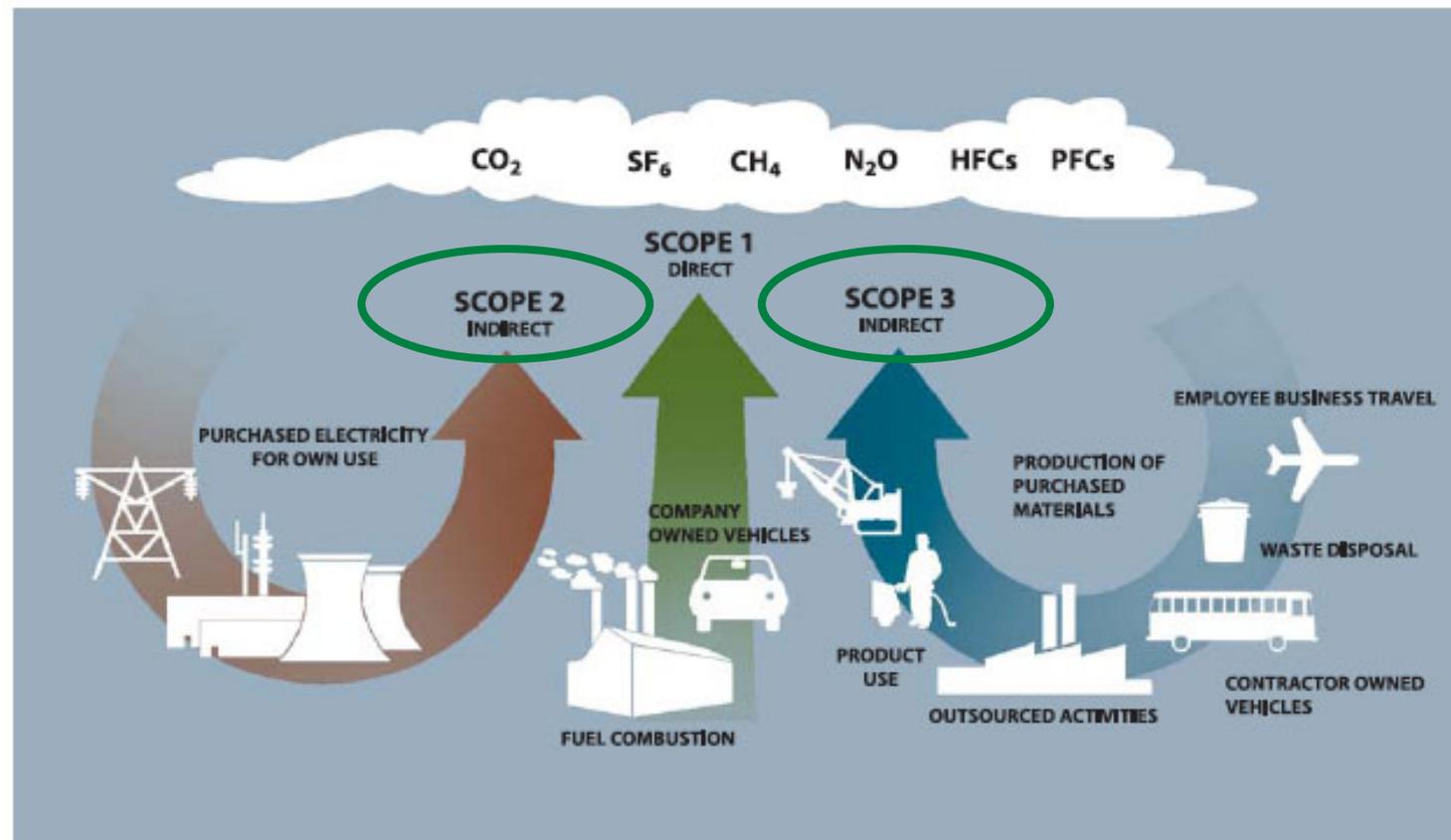
- RECs represent the contractual right to claim the environmental and other attributes associated with electricity generated from renewable energy. Companies apply these to their Greenhouse Gas (GHG) emissions.



- Bank of America pledges to reduce its total U.S. GHG emissions by 9% from 2004 to 2009.
- Eastman Kodak pledges to reduce total global GHG emissions by 10% from 2002 to 2008.
- Gap pledges to reduce its U.S. GHG emissions by 11% per square foot from 2003 to 2008.
- Marriott pledges to reduce U.S. GHG emissions by 6% per available room from 2000 to 2010.
- Pfizer pledges to reduce global GHG by 35% per \$ of revenue from 2000 to 2007.
- Baxter, IBM, NREL and SC Johnson achieved their ambitious 2000 to 2005 goals.

Intersection of RECs, White Tags™ and Carbon Credits

FIGURE 5 | OPERATIONAL BOUNDARIES



Source: New Zealand Business Council for Sustainable Development.

Top 25 Renewable Energy Purchasers

	<u>Ranking</u>	<u>% of Load</u>	<u>Total Annual Volume</u>	
• Intel	#1	46%	1,302,040,000	Sterling Planet
• PepsiCo	#2	100%	1,144,773,154	Sterling Planet
• U.S. Air Force	#3	9%	899,143,000	Sterling Planet
• Wells Fargo	#4	42%	550,000,000	
• Whole Foods Market	#5	100%	509,104,786	
• The Pepsi Bottling Group	#6	100%	470,216,838	Sterling Planet
• Johnson & Johnson	#7	38%	434,854,733	Sterling Planet
• Cisco Systems	#8	51%	373,500,000	Sterling Planet
• City of Dallas, TX	#9	40%	333,569,840	
• HSBC North America	#10	93%	300,000,000	

Sterling Planet Has Sold to 6 of the Top 10 Purchasers

Top 25 Renewable Energy Purchasers (continued)

	<u>Ranking</u>	<u>% of Load</u>	<u>Total Annual Volume</u>	
• U.S Environmental Protection Agency	#11	100%	299,331,375	Sterling Planet
• City of Houston, TX	#12	20%	262,800,000	
• Kohl's Department Store	#13	35%	236,107,000	Sterling Planet
• University of Pennsylvania	#14	46%	192,727,000	
• Starbucks	#15	20%	185,000,000	
• DuPont Company	#16	4%	180,063,500	Sterling Planet
• LA County Sanitation Districts	#17	54%	171,144,000	
• U.S. Department of Energy	#18	3%	157,964,000	Sterling Planet
• Commonwealth of Pennsylvania	#19	16%	157,200,000	
• Pepsi Americas	#20	100%	157,062,875	Sterling Planet
• Vail Resorts	#21	100%	152,000,000	
• New York University	#22	100%	132,000,000	
• NatureWorks	#23	100%	130,000,000	Sterling Planet
• Staples	#24	20%	121,800,000	Sterling Planet
• The World Bank Group	#25	100%	114,735,000	

Sterling Planet Has Sold to 13 of the Top 25 Purchasers

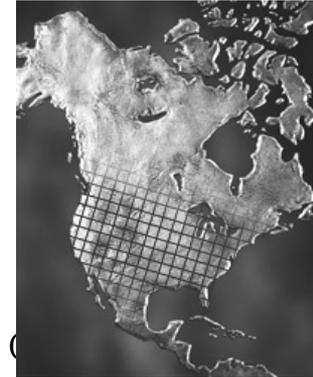
Source – U.S. Environmental Protection Agency

Rapid Growth in US Market

- Mayor's Commitment to Climate Change --- Includes **850** To Date

City Government (20)

- City of Chicago, IL
- City of Syracuse, NY
- City of Somerville, MA
- City of Lebanon, CT
- City of Westport, CT
- City of Manchester, CT
- City of Portland, CT
- City of North Stonington, CT
- City of Bloomfield, CT
- City of Coventry, CT
- City of Pella, IA
- City of Sheboygan, WI
- City of Montgomery, NJ
- City of Norfolk, CT
- City of West Hartford, CT
- City of Stratford, CT
- City of Norfolk Gate Post, CT
- City of Southwood, NY
- City of Wilton, CT
- City of Garratt Park, MD



- University and Colleges President's Challenge --- Includes **558** To Date

Universities (55)

- Harvard
- Yale
- Duke
- University of Utah
- Florida State
- University of California
- Penn State University



Global Renewable Energy Market

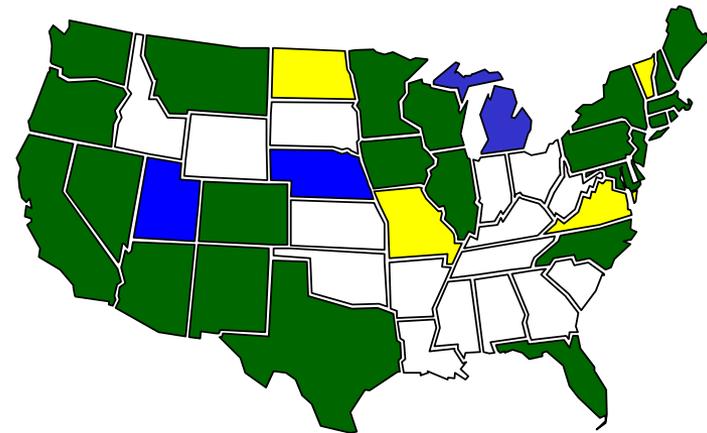
MANDATED MARKET

- 30 states with portfolio standards or goals (green and yellow); 3 states considering (blue)
- Sell RECs directly to the utility to satisfy Renewable Portfolio Standards (RPS)
- Manage RECs sales among utilities
- Provide RECs to government agencies (currently 138)
- In Europe, 27 EU countries are looking at deregulation and renewable portfolio standards
- Europe and Asia much more progressive in the renewable energy area

VOLUNTARY MARKET

- Customers voluntarily pay more for renewable energy
- Sterling Planet participating in 24 utility renewable energy marketing programs in CT, FL, MA, NJ, NY, RI and DC

States with Renewable Portfolio Standards or Goals



- 26 States with Portfolio Standards
Note: Includes Hawaii and D.C.
- 4 States with Renewable Portfolio Goals
- 3 States Considering Portfolio Standards

Global Market for White Tags™

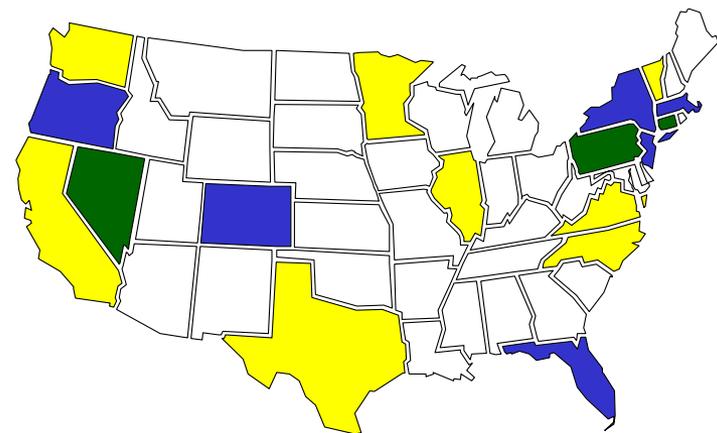
MANDATED MARKET

- Mandated in 3 states – CT, NV and PA
- 9 states with energy efficiency goals likely to move to White Tag™ standards
- Likely in 17 other RPS states
- Each state defining own White Tag™ standard
- Pending federal legislation –
 - House Version of Energy Bill has a 4% of the 15% Federal Renewable Portfolio Standard (27% of RPS by 2020)
- EU considering a 20% Energy Efficiency Standard throughout Europe

VOLUNTARY MARKET

- Sterling Planet offering White Tags™ as Carbon Neutral alternative to RECs for Indirect Customers Scope 2 and 3 emission needs
- EPA and DOE in the process of developing M&V standards for White Tags™

White Tags™ and EE Portfolio Standards States



- 3 States with White Tags™ Portfolio Standards
- 9 States with EE Portfolio Standards Note: Includes Hawaii
- 6 States Considering EE or White Tags™ Portfolio Standards

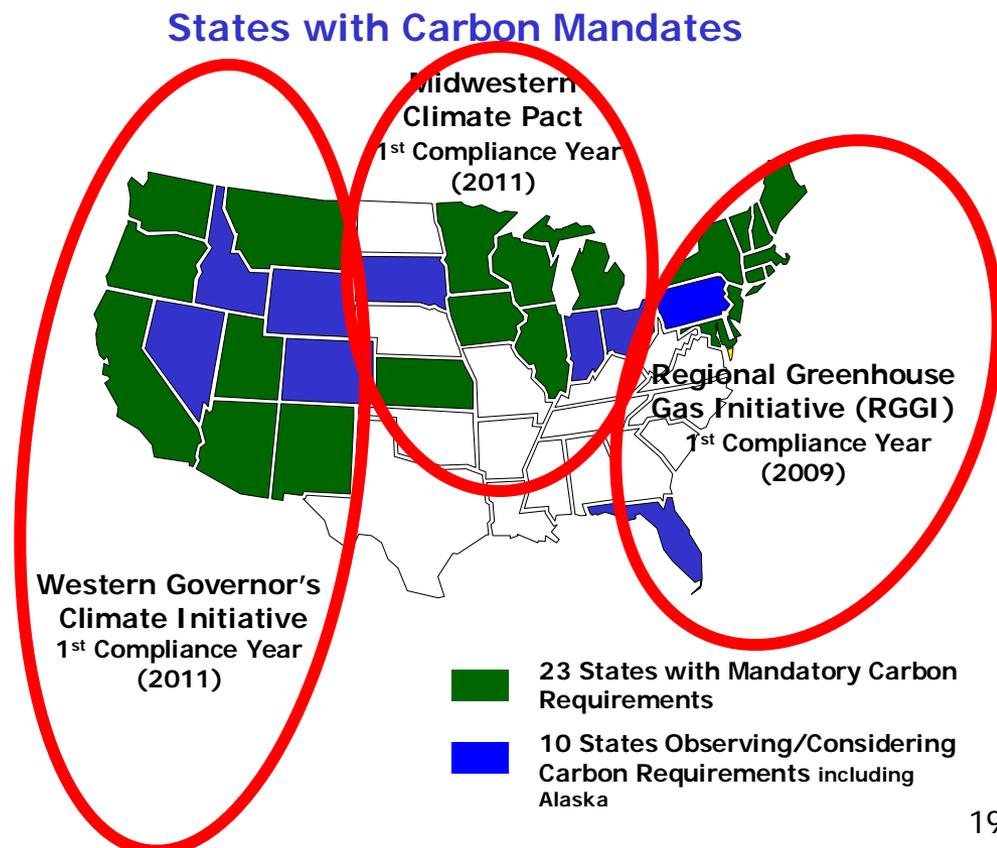
Global Carbon Market

MANDATED MARKET

- 23 states with mandatory carbon commitments (green); 10 states observing/considering (blue)
- All but 3 countries (U.S., China and India) have signed to meet Kyoto Accord
- Meeting in Bali held to look at 15 largest countries greenhouse gas commitments
- Federal legislation looming in not to distant future

VOLUNTARY MARKET

- Customers voluntarily pay more for carbon neutral product
- Businesses, universities and cities have signed on to voluntary commitments



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Mar. 4th, 2008

[Sterling Planet Adopts APX Environmental Markets Registry](#)

Feb. 13th, 2008

[News from our Partner: Western Renewable Energy Generation Information System \(WREGIS\) Issues Certificates with APX Technology](#)

Feb. 11th, 2008

[Western Renewable Energy Generation Information System \(WREGIS\) Issues Certificates with APX Technology](#)

Feb. 7th, 2008

[APX Announces Opening of New York Office](#)

Jan. 31st, 2008

[Brian Storms Joins APX As Chairman And CEO; Goldman Sachs Becomes Minority Investor](#)

Dec. 21st, 2007

[APX Announces an Agreement Regarding an Investment by Goldman Sachs](#)

Nov. 26th, 2007

[APX, Largest Technology Provider For Environmental Markets, To Create Registry For Major Global Standards Group](#)

Sterling Planet Adopts APX Registry

It Tracks RECs, White Tags™ and Carbon Offsets

Current Cumulative Tradable Balance

0

Annual Emissions Tracking

Year	Annual Baseline <i>a</i>	Annual Emissions <i>b</i>	Annual Reductions <i>c = a - b</i>	Cumulative Reductions $\Sigma^t c$
2005				
2004	10,062	4,214	5,848	13,920
2003	14,374	6,302	8,072	8,072
2002				
2001				
2000				
1999				
1998				
1997				
1996				
1995				

Online account summary and transaction logs for each client

Transaction Tracking

Vintage Year	Tradable Reductions <i>j</i>	Acquired (Purchased) Offsets <i>k</i>	Total Additions <i>x = j + k</i>	Transferred Offsets <i>u</i>	Retirement of Offsets <i>v</i>	Total debits <i>y = u + v</i>	Annual Tradable Balance <i>z = x - y</i>
2005							
2004	5,848		5,848	5,848		5,848	0
2003	8,072		8,072	6,572	1,500	8,072	0
2002							
2001							
2000							
1999							
1998							
1997							
1996							
1995							

Questions?

Contact Information:

Mel Jones
President and Chief Executive Officer
3295 River Exchange Drive
Suite 300
Norcross, GA 30092-4238
(404) 513-0259
mjones@sterlingplanet.com

