Basics of Buying Renewable Energy

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Green-e Energy: Renewable Energy Certification

- Established in 1997
- Certification of three RE product types:
  - Renewable Energy Certificates (RECs)
  - Utility green pricing programs
  - Competitive Electricity products
- Covers all 50 states and Canada
Governance

- Independent Governance Board
  - Natural Resources Defense Council
  - Union of Concerned Scientists
  - National Renewable Energy Laboratory
  - Several other environmental and industry leaders
- Standards and policies developed through open stakeholder consultations
- Associate Member of the International Social and Environmental Accreditation and Labeling (ISEAL) Alliance
Presentation Outline

- Background on Renewable Energy
- How to Buy Renewable Energy
- Why Buy Renewable Energy?
- From Purchase to Promotion
- Importance of Certification
- Questions
Renewable Energy Background: National Electricity Mix

National Electricity Mix

How Renewable Energy is Defined

- Wind
- Solar
- Biomass
- Small Hyrdo
- Geothermal
- Wave/Tidal
How Renewable Energy is Defined

- Nuclear Power
- Large Hydro
- Clean Carbon
Who Buys Renewable Energy?

Purchasers of renewable electricity in the United States

**Compliance**
- Utility companies

**Voluntary**
- Fortune 500 companies
- US EPA and Air Force
- Individuals
- Power market traders
RPS Policies

www.dsireusa.org / September 2010

29 states + DC and PR have an RPS
(7 states have goals)

- Renewable portfolio standard
- Renewable portfolio goal
- Solar water heating eligible
- Minimum solar or customer-sited requirement
- Extra credit for solar or customer-sited renewables
- Includes non-renewable alternative resources

- WA: 15% x 2020*
- MT: 15% x 2015
- MN: 25% x 2025 (Xcel: 30% x 2020)
- ND: 10% x 2015
- SD: 10% x 2015
- WI: Varies by utility; 10% x 2015 statewide
- MI: 10% + 1,100 MW x 2015*
- NY: 29% x 2015
- OH: 25% x 2025†
- OR: 25% x 2025 (large utilities)*
- 5% - 10% x 2025 (smaller utilities)
- NV: 25% x 2025*
- CO: 30% by 2020 (IOUs)
  10% by 2020 (co-ops & large munis)*
- IA: 105 MW
- KS: 20% x 2020
- MO: 15% x 2021
- NC: 12.5% x 2021 (IOUs)
  10% x 2018 (co-ops & munis)
- TX: 5,880 MW x 2015
- HI: 40% x 2030
- CA: 33% x 2020
- UT: 20% by 2025*
- AZ: 15% x 2025
- NM: 20% x 2020 (IOUs)
  10% x 2020 (co-ops)
- OK: 15% x 2015
- VT: (1) RE meets any increase in retail sales x 2012;
  (2) 20% RE & CHP x 2017
- ME: 30% x 2000
  New RE: 10% x 2017
- NH: 23.8% x 2025
- MA: 22.1% x 2020
  New RE: 15% x 2020
  (+1% annually thereafter)
- RI: 16% x 2020
- CT: 23% x 2020
- PA: ~18% x 2021†
- NJ: 22.5% x 2021
- MD: 20% x 2022
- DE: 25% x 2026*
- PR: 20% x 2035
- WV: 25% x 2025†
Top 20 U.S. Green Power Purchasers

1. Intel Corporation
2. Kohl’s Department Stores
3. Whole Foods Market
4. City of Houston, TX
5. Dell Inc.
6. Johnson & Johnson
7. Cisco Systems, Inc.
8. Commonwealth of Pennsylvania
9. U.S. Air Force
10. City of Dallas, TX
11. HSBC North America
12. Wal-Mart Stores - CA and TX Facilities
13. U.S. Environmental Protection Agency
14. District of Columbia
15. TD Bank, N.A.
16. Starbucks
17. BNY Mellon
18. City of Chicago, IL
20. University of Pennsylvania
Voluntary Purchases Make a Difference

Note: Compliance market data sourced from Lawrence Berkeley National Laboratory (LBNL) (Barbose 2009)
How to Buy Renewable Energy: Initial Steps

1. Setting Goals (5)
2. Identifying Key Decision-Makers (5)
3. Gathering Energy Data (5)
How to Buy Renewable Energy: Product Options

Renewable Electricity Products

Renewable Energy Certificates

On-site generation
How to Buy Renewable Energy: Choosing Product Options

Choosing Green Power Options (5)

Renewable Electricity
- Developing Screening Criteria (6)
- Collecting Product Information (6)
- Creating a Procurement Plan (6)

RECs

On-site Renewable Generation
- Screening the Technologies (7)
- Obtaining Resources and Assistance (7)
- Creating a Project Plan (7)
- Anticipating Possible Barriers (7)
- Installing and Operating an On-site Renewable System (7)
Renewable Energy: REC + electricity

= standard electricity
(only electricity generated)

+ REC = renewable electricity
(electricity + REC)
Renewable Energy Certificates are renewable energy. RECs are tracked, traded, sold, and retired. You buy a REC, you’re buying renewable energy.
Why Buy Renewable Energy?

- Reduced Emissions
- Lower or Stable Operating Costs
- Stronger Stakeholder Relationships
Electricity = 34% of total U.S. greenhouse gas emissions

Electricity Emissions Profile
# Business Value of Renewable Energy Products

<table>
<thead>
<tr>
<th>RECs or Floating Green power premium</th>
<th>Capped Premium</th>
<th>Tariff with Surcharge Avoidance</th>
<th>Full Value Green Product</th>
</tr>
</thead>
<tbody>
<tr>
<td>Meet CO2, Green goals</td>
<td>Partnership with utility</td>
<td>Avoid fossil fuel volatility</td>
<td>Financial hedge benefits</td>
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</tbody>
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Direct Business Benefits

Upstream Suppliers

Downstream Customers
Wal-Mart Sustainability Index

Sustainability Supplier Assessment Questions

Energy and Climate
Reduce energy costs and greenhouse gas emissions

1. Have you measured and taken steps to reduce your corporate greenhouse gas emissions? (Y/N)
2. Have you opted to report your greenhouse gas emissions and climate change strategy to the Carbon Disclosure Project (CDP)? (Y/N)
3. What are your total annual greenhouse gas emissions in the most recent year measured? (Enter total metric tons CO₂e, e.g., CDP 2009 Questionnaire, Questions 7-11, Scope 1 and 2 emissions)
4. Have you set publicly available greenhouse gas reduction targets? If yes, what are those targets? (Enter total metric tons and target date, e.g., CDP 2009 Questionnaire, Question 23)

Material Efficiency
Reduce waste and enhance quality

- Scores will be automatically calculated based on participation in the Packaging Scorecard in addition to the following:
  5. If measured, please report total amount of solid waste generated from the facilities that produce your product(s) for Walmart for the most recent year measured. (Enter total lbs)
  6. Have you set publicly available solid waste reduction targets? If yes, what are those targets? (Enter total lbs and target date)
  7. If measured, please report total water use from the facilities that produce your product(s) for Walmart for the most recent year measured. (Enter total gallons)
  8. Have you set publicly available water use reduction targets? If yes, what are those targets? (Enter total gallons and target date)

Nature and Resources
High quality, responsibly sourced raw materials

9. Have you established publicly available sustainability purchasing guidelines for your direct suppliers that address issues such as environmental compliance, employment practices, and product/ingredient safety? (Y/N)
10. Have you obtained 3rd party certifications for any of the products that you sell to Walmart? If so, from the list of certifications below, please select those for which any of your products are, or utilize materials that are, currently certified.

People and Community
Vibrant, productive workplaces and communities

11. Do you know the location of 100% of the facilities that produce your product(s)? (Y/N)
12. Before beginning a business relationship with a manufacturing facility, do you evaluate their quality of production and capacity for production? (Y/N)
13. Do you have a process for managing social compliance at the manufacturing level? (Y/N)
14. Do you work with your supply base to resolve issues found during social compliance evaluations and also document specific corrections and improvements? (Y/N)
15. Do you invest in community development activities in the markets you source from and/or operate within? (Y/N)
Opening Doors

Great River Organic

Buywell Coffee

Costco Wholesale

Canada
Prominent National Products
Green Marketing Basics

Consumers want companies to be greener

50% want companies to be more environmentally friendly
54% prefer to buy from environmentally friendly companies
55% want companies to use renewable energy
80% care about the use of renewable energy
Tell your story.
Communicating Your Purchase

- Communication Materials
- On Point-of-Sale Materials
- Promotional Materials
- Company Website
Products

INTELLIGENT NUTRIENTS.
CERTIFIED ORGANIC HEALTH AND BEAUTY.

OUR AWARD WINNING
CERTIFIED ORGANIC
ANTI-AGING SKIN CARE
IS HERE!

Products shown include:
- INNOCALM Infused Chocolate
- Innergize Nutrient Tablets
- Intellimmune Nutrient
- Intellinutri Nutrient

INTELLIGENT NUTRIENTS.
CERTIFIED ORGANIC

HSN: 30600184

CRS: center for resource solutions
Branding

Comprehensive Green Initiative Program

- iStoreGREEN is the first green facility in New York City to participate in the EPA's Green Power Partnership, using 100% certified renewable energy.
- We buy 100% certified renewable energy.
- Our environmental actions have become our customers' environmental actions. By choosing iStoreGREEN, this is how you help the environment:
  - We are a certified EPA Green Power Partner.
  - 100% of our electricity comes from renewable sources, certified by "Green-e.org," the nation's leading renewable energy certification program with the strictest standards.
  - StoreGREEN is the largest green business in all of NYC!
  - StoreGREEN, by size, is the largest green business in all of NYC!
  - Wood reclaimed from the remodel of our building is used to build benches, desks for the offices of the company, and shelving for storage spaces.
  - We offer a unique choice of alternative packing materials like biodegradable packing peanuts and shredded paper from the office paper shredder, and items like clean packing boxes are re-used.
  - We have a room for customers to put discarded items from storage, which allows certain usable goods to go to a local charity; NOT into a dumpster, and then a landfill.
Importance of a 3rd Party Certification

**F1 The importance of certification**

- **General Population**
  - A seal or certification mark indicating a product is environmentally-friendly increases the likelihood I'll buy it: 44%
  - I like to see someone else endorse what a company says it does for the environment or society: 58%
  - Would like to see a non-profit organization endorse what a company says it does for the environment or society: 70%

- **LOHAS**
  - A seal or certification mark indicating a product is environmentally-friendly increases the likelihood I'll buy it: 80%
  - I like to see someone else endorse what a company says it does for the environment or society: 79%
  - Would like to see a non-profit organization endorse what a company says it does for the environment or society: 85%
Figure 1
Green-e Energy Certified Retail Sales by Product Type, 1998–2009 (in MWh)

- RECs
- Green Pricing
- Competitive Electricity

0 5,000,000 10,000,000 15,000,000 20,000,000

Green-e Historic Growth
THANK YOU AND READ THE GUIDE TO PURCHASING GREEN POWER
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