

An Examination of Green Power Aggregations

by
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Think Energy, Inc.

Introduction to Think Energy

Think Energy, Inc. is an environmental consulting firm committed to environmental excellence in the energy sector. Think Energy enables their clients to access the financial, environmental and energy security benefits of renewable and distributed energy systems and products.

- Clients – Rhode Island Renewable Energy Fund, Toyota Motor Sales, U.S.A., Inc., Trammell Crow, The Timberland Company, The World Resources Institute, The World Wildlife Fund. The Center for Energy and Climate Solutions, The Center for Resource Solutions, Environment Northeast, The Tower Company, Fidelity Investments, Shell Solar

Renewable Energy Goals

Think Energy has identified its
own goal for the market:

*“Renewable energy comprises 25% of the
electricity generation assets by 2025.”*

Renewable Energy Today - Barriers

Potential Customers

- Generally unaware of products & services
- Confused by technologies
- Confounded by statements by political and energy business leaders
- Quiet about purchases

Vendors & Products

- Still too few voices
- Products diversifying
- Continue to focus on low-hanging fruit



Basis for Purchasing

- ✓ Relationships
- ✓ Environmental Ethic
- ✓ Energy Reliability/Security
- ✓ Education
- ✓ Profitability
- ✓ Customers
- ✓ Investors
- ✓ Senior Management
- ✓ Product Structure
- ✓ Price

Hypothesis

Large energy user buyer groups can lead to tremendous renewable energy purchases.

Aggregation Flavors

Business & Industry

Energy Cooperatives

Religious Organizations

Local Governments

Government Agencies

Internet Aggregators

Community Choice

Default Generation Service

Buyers' Agents or Brokers

New – Technology Focused
Group

Successful Aggregations with Long Term Value

- ✓ Episcopal Power & Light
- ✓ Maine Interfaith Power & Light
- ✓ Partners for Energy Security & Environmental Benefit

Governments

- Association of Bay Area Governments
- General Services Administration
- State of Pennsylvania
- State of New Jersey
- City of Chicago

Electricity Use and Sales by Sector

- ✓ Roughly 2/3 of electricity goes to C&I
- ✓ Government agencies use approximately 18%
- ✓ Does government lead business or does business lead government?
- ✓ We have to *engage businesses*

Green Power Market Development Group

- Began in July of 2000 by the World Resources Institute with Think Energy
- Members: Alcoa, Inc., Cargill Dow LLC, Delphi Corporation, The Dow Chemical Company, DuPont, General Motors, IBM, Interface, Johnson & Johnson, Kinko's, Pitney Bowes, and Staples.
- Goal: **"to develop corporate markets for 1000 megawatts of new "green" energy capacity over 10 years."**
- Success: **97 megawatts (MW) or 438,000 megawatt hours of Direct Purchases, supporting many indirect purchases**

GPMDG Highlights

- ✓ One member with purchases in 18 states, Kinko's
- ✓ The Dow Chemical Company buys 35 MW of fuel cells from General Motors for stationary use. Fuel is hydrogen produced on-site as byproduct.
- ✓ 36 MW or approximately 162,000 MWH of renewable energy certificates by Alcoa, Cargill Dow, Delphi, Dupont, Interface, J&J, Kinko's, Pitney Bowes, Staples & WRI.
- ✓ 5 MW of landfill gas by General Motors & Interface
- ✓ Over 1.2 MW of photovoltaics

Rhode Island Renewable Energy Customer Aggregation (RECA)

- Funded by the Rhode island Renewable Energy Fund
- Program Design: September – December 2002
- Recruitment: January – February 2003
- Meetings: March 24 – May 2003

RECA Participants

- American Power Conversion
- BJ's Wholesale Club, Inc.
- Blue Cross & Blue Shield of Rhode Island
- Brown University
- Centreville Savings Bank
- Cranston Print Works Company
- Fidelity Investments
- Hasbro, Inc.
- Howard Industrial Park Association
- Johnson & Wales University
- MetLife Auto & Home
- Newport Athletic Club
- OSRAM SYLVANIA Products, Inc.
- PepsiCo, Inc.
- Providence Biltmore
- Rhode Island Hospital
- Roger Williams University
- Swarovski North America Limited
- University of Rhode Island
- Wal-Mart Stores, Inc.

Issues Discussed During Meetings

- ✓ Wholesale power
- ✓ Blackouts
- ✓ Costs of generation assets
- ✓ Renewable energy products
- ✓ Other purchases
- ✓ Environment
- ✓ Public Relations
- ✓ Social Responsibility

RECA Outcomes to Date

- Seven members are now pursuing photovoltaic installations.
- Three are pursuing renewable energy certificates.
- Two are pursuing run of the river hydroelectric systems.
- Four are pursuing on-site wind generation
- One is pursuing full requirements renewable products.
- One global company is now considering a global renewable energy purchasing goal of five percent.

Next Steps

- ✓ Support purchasing efforts of members
- ✓ College & University Workshop
- ✓ Recruit more participants
- ✓ One-day workshop in spring
- ✓ Successful purchases

Keys to a Successful Aggregation

1. Renewable Energy, Sustainability or Carbon Value Proposition
2. Smart & Aggressive Champion
3. Start-Up Funds
4. Identification and Face-to-Face Recruitment of Members
5. High Quality Information
6. Reasonable Product Economics
7. Support Through the Purchasing Process

Think Energy Recommendations

- Develop more forums for customers to learn.
- Offer strong focused leadership.
- Provide opportunity for customers to share successes with non-buyers.
- Make sure you don't create a forum that customers don't attend.
- Try selling to the unwashed masses.
- Keep all options in a positive light.

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