



# Green Power Options for Your Organization

*U.S. EPA's Green Power Partnership*

*Anthony Amato*

*ERG, contractor to U.S. Environmental Protection Agency*

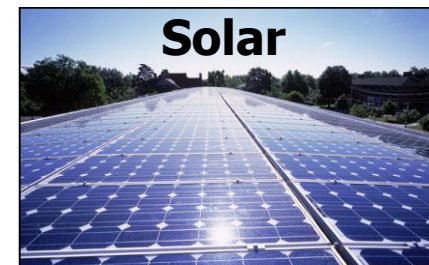
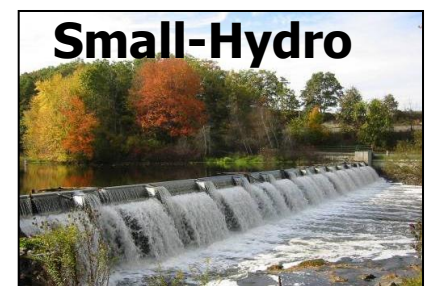


*April 21, 2011*

*A Better City: Challenge for Sustainability Meeting*

# What is Green Power?

- Electricity generated from natural resources that replenish themselves over short periods of time, including the sun, wind, moving water, organic plant and waste material (biomass), and the Earth's heat (geothermal).

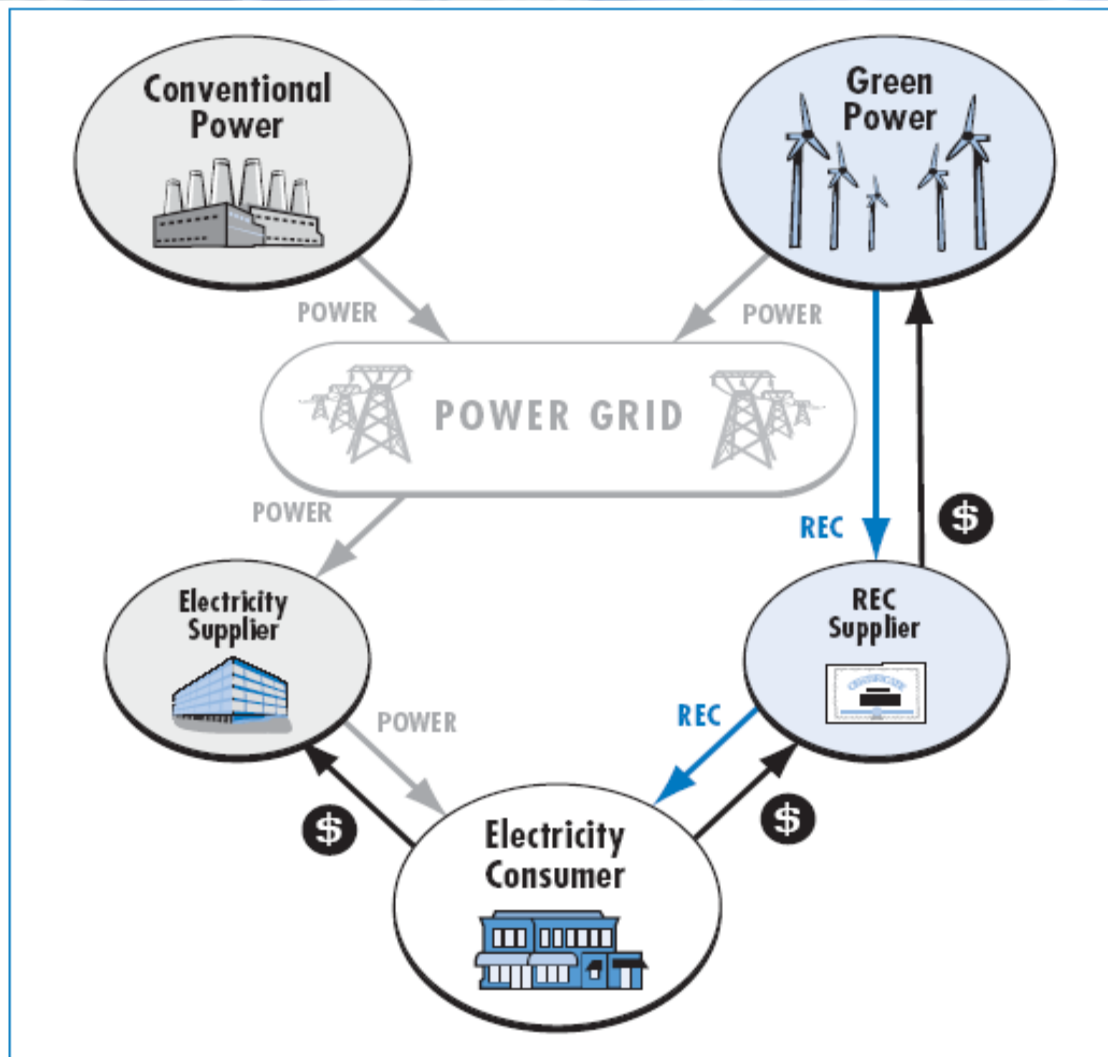


# Buying Green Power – Products

- Renewable Energy Certificates (RECs)
  - The environmental “attributes” of electricity generated from renewable resources (1 REC = 1 MWh)
  - Attributes are based on the generation technology type and age, geographic location, and time of generation
  - Does not include the underlying electrons – “unbundled”
  - a.k.a. Green Tags, Renewable Energy Credits, and Tradeable Renewable Energy Certificates
- Green Power Electricity Products
  - Green power offered by utility suppliers that is all, or partially, generated from renewable sources
  - Is often a “bundled” product that includes both the RECs as well as the underlying electrons
- On-site Generation
  - Install a renewable energy system on-site (e.g. solar panels, wind turbine)
  - Produces both electricity and RECs from the on-site source
  - Self-financed installation or via a third-party PPA



# More on RECs – Transaction Process



# Value Proposition to Companies

- Environmental
  - Addresses indirect GHG emissions (Scope 2 emissions)
- Potential Electricity Cost Savings and/or Stability
  - Reduce exposure to fossil fuel price volatility
- Economic Development
  - Job creation
  - On-site installations can spur local economic growth
- Corporate Image
  - Enhance image
  - Demonstrate environmental leadership
  - Differentiate products/services
  - Improve employee moral
- Capture Favorable Media Attention



# EPA's Green Power Partnership

- The Green Power Partnership is a voluntary EPA program that seeks to reduce GHG emissions by increasing the use of green power among leading U.S. organizations.
- Partners in the program purchase green power in an amount that must meet or exceed the EPA benchmarks and in return receive EPA technical assistance and recognition.
- The Partnership currently has more than 1,300 Partners, including Fortune 500<sup>®</sup> companies, states, federal agencies, local governments, and colleges and universities.



# Green Power Partnership's Goals

- Reducing GHGs Emissions from Electricity Generation by Transforming Markets
  - Building demand through voluntary renewable electricity sales
  - Focusing on non-residential demand
- Providing Carrots, Not Sticks
  - Offering credible benchmarks & market information
  - Promoting Partners' environmental leadership
  - Network of like-minded institutions
- Keeping It Simple
  - Sign agreement and complete purchase within 6 months
  - Provide annual update

# How Much Green Power to Join?

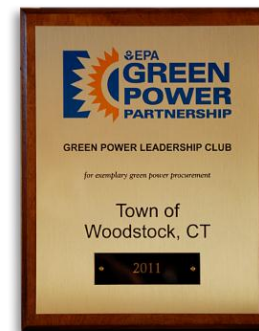
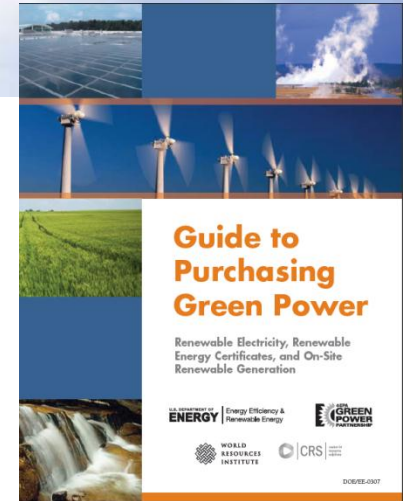
	<b>Partnership Benchmark</b>	<b>Leadership Benchmark</b>
<b>If your annual electricity use is...</b>	<b>You should, at minimum, use this much green power</b>	<b>You should, at minimum, use this much green power</b>
Over 100,000,000 kWh	3%	30%
100,000,000 - 10,000,000 kWh	5%	50%
10,000,000 - 1,000,000 kWh	10%	100%
Under 1,000,000 kWh	20%	N/A





# Partnership Offerings & Benefits

- **Credible Benchmarks**
  - Metric for “How much green power is enough?”
  - Definition of eligible renewables
- **Planning & Implementation Resources**
  - Green power locator
  - Purchasing guidance
  - Marketing and communications support
  - Environmental benefits calculator
- **Recognition**
  - Top Partner Lists
  - Green Power Leadership Awards
  - Promotional opportunities
  - Use of the Partner logo →



# Examples of Outreach

Print Advertisements

Websites

Banners



The U.S. Environmental Protection Agency congratulates Datapipe, Inc. for purchasing 100% wind power and helping to reduce greenhouse gas emissions from the power sector.

**GREEN POWER—ENERGIZING BUSINESS**

**DATAPIPE**  
Managed IT Services

**NONPROFIT CENTER** BOSTON'S HOME FOR PROGRESSIVE SOCIAL CHANGE  
*Developed by Third Sector New England*

**NonProfit Center Uses Only Green Energy**

Third Sector New England is now purchasing more than 1.5 million kilowatt-hours (kWh), or 100 percent of the NonProfit Center's annual power needs with a utility green power product from [DEECO Energy](#).

TSNE, the nonprofit developer of the center, is working in collaboration with the U.S. Environmental Protection Agency's [Green Power Partnership](#) – and is the only nonprofit in Massachusetts to be recognized in the Partnership's [Leadership Club](#).

**Partnership for Long-term Sustainability**

According to Jonathan Spack, executive director of Third Sector New England, powering the center with only green energy demonstrates a proactive choice and a leading commitment to sustainably from traditional sources of electricity generation and support cleaner renewable energy alternatives. He considers being part of the Partnership's Leadership Club a huge honor.

Jackie Cetiba, program coordinator at the NonProfit Center explains that purchasing renewable energy helps the center meet environmental goals. By purchasing through a long-term contract, TSNE is also making a sound financial decision. She believes that if TSNE can work to be one of four organizations in Massachusetts to be in the Green Power Partnership's Leadership Club, other nonprofits can as well.

**Providing Leadership for Our Sector**

Membership in the Leadership Club is a distinction given to organizations that have significantly exceeded EPA's minimum purchase requirements. Green Power Leadership Club members must purchase 10 times the partnership's minimum requirement organization-wide.

[JOICO](#) is generated from environmentally-preferable, renewable sources, such as wind, solar, geothermal, biogas, biomass and low-impact hydro. These sources generate electricity with a net-zero increase in carbon dioxide emissions, offering a superior environmental profile compared to traditional power generation.

Green power purchases support the development of new technologies to promote greater use of renewable energy nationwide.

According to the EPA, TSNE's green power purchase of more than 1.5 million kWh is equivalent to adding the carbon dioxide (CO2) emissions of nearly 130 passenger vehicles per year, or is the equivalent amount of electricity needed to power nearly 130 average American homes annually.

TSNE's NonProfit Center also received the U.S. Green Building Council's [Leadership in Energy and Environmental Design \(LEED\)](#) certification and has been awarded [Energy Star](#) designation.

**About EPA's Green Power Partnership**

The Green Power Partnership is a voluntary program that encourages organizations to buy green power as a way to reduce the environmental impacts associated with purchased electricity use. The Partnership currently has hundreds of partner organizations voluntarily purchasing billions of kilowatt-hours of green power annually.

Partners include a wide array of leading organizations such as Fortune 500 companies, small and medium sized businesses, local, state and federal governments, nonprofit organizations, and colleges and universities. For additional information, please visit the Green Power Partnership section of the [EPA website](#).

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**THE ONLY**  
professional haircare company on the EPA's Top 20 On-Site Generation list.

**EPA GREEN POWER PARTNER**

AND THAT'S NOT ALL.  
JOICO...

**MANUFACTURES WITH ON-SITE WIND POWER.**  
Two wind turbines at Joico's manufacturing plant currently generate enough clean, renewable energy to meet more than 65% of our energy needs.

**VOLUNTARILY OFFSETS CARBON DIOXIDE (CO2) EMISSIONS.**  
We will completely neutralize our carbon footprint in 2013.

**WILL UTILIZE A HYBRID BIOPLASTIC PACKAGING.**  
This revolutionary hybrid bioplastic resin does NOT contaminate recycling streams.

**JOICO**  
THE ART OF HEALTHY HAIR

Learn more about what Joico is doing to help you beautify responsibly.

**Green is in our Nature.**

**TD Bank is committed to environmental responsibility.**

TD Bank is the largest US-based bank to go carbon neutral and the first company to have a North American, closed-loop recycling system which diverts 1,500 metric tons of paper from landfills to the production of recycled paper. In addition, we purchase renewable energy credits for 100 percent of the electricity used by our operations from Maine to Florida.

TD Bank is committed to building environmentally-friendly buildings, and this year, we are building the first "net-zero energy" bank location in the US in Ft. Lauderdale, Florida. To learn more about these and our other green initiatives, visit [www.tdbank.com/green](#).



America's Most Convenient Bank®

# Top 10 Green Power Partners

- **Largest Green Power Purchasers (Jan. 2011)**

■ Intel Corporation	2,502,052 MWh
■ Kohl's Department Stores	1,418,065 MWh
■ Whole Foods	817,657 MWh
■ Starbucks	573,432 MWh
■ Commonwealth of Pennsylvania	500,000 MWh
■ City of Houston, TX	438,000 MWh
■ Johnson & Johnson	416,511 MWh
■ Staples	341,524 MWh
■ City of Dallas, TX	302,880 MWh
■ HSBC North America	300,000 MWh

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

Industry	# Partners	Average MWh	Total MWh
<b>Retail</b>	<b>83</b>	<b>41,286</b>	<b>3,426,791</b>
<b>Information Technology</b>	<b>72</b>	<b>46,553</b>	<b>3,351,844</b>
<b>Local Gov't</b>	<b>118</b>	<b>19,540</b>	<b>2,305,693</b>
<b>Education (Higher)</b>	<b>105</b>	<b>17,093</b>	<b>1,794,773</b>
<b>Banking &amp; Fin. Services</b>	<b>29</b>	<b>44,704</b>	<b>1,296,416</b>
<b>Health Care</b>	<b>50</b>	<b>15,149</b>	<b>757,467</b>
<b>Travel &amp; Leisure</b>	<b>75</b>	<b>6,261</b>	<b>469,649</b>
<b>Consumer Products</b>	<b>50</b>	<b>8,454</b>	<b>422,723</b>
<b>Industrial Goods &amp; Services</b>	<b>52</b>	<b>5,919</b>	<b>307,803</b>
<b>Telecommunications</b>	<b>8</b>	<b>31,706</b>	<b>253,651</b>
<b>Food &amp; Beverage</b>	<b>48</b>	<b>4,854</b>	<b>232,997</b>
<b>Printing</b>	<b>107</b>	<b>2,216</b>	<b>237,128</b>
<b>Non-profit (NGO)</b>	<b>76</b>	<b>2,815</b>	<b>213,984</b>

# Regional Green Power Partners



# Green Power Community Initiative

- EPA initiative that challenges communities to buy green power in an amount that collectively meets the Partnership's green power use benchmarks
- Intended to motivate collective action of a community's local government, businesses, and citizens to reduce the community's carbon footprint by procuring green power



# Green Power Communities



- 37 Green Power Communities
- Collective green power use of ~2.6 billion kWh
  - Avoids ~3.9 million lbs of CO2 emissions
  - Equal to the annual CO2 emissions from ~350,000 cars
  - Equal to the annual electricity use of ~215,000 average American homes



# Individual Community Page on EPA Web Site

- Each Community has own individualized Webpage on EPA site
- Lists green power accomplishments
- Links to Community's Web site on green power use or sustainability efforts
- Lists Green Power Partners located in Community

The screenshot displays the EPA Green Power Partnership website for the Hillsboro, OR Community. The page features a navigation menu on the left with options like 'Clean Energy Home', 'GPP Home', and 'Basic Information'. The main content area is titled 'Community Profile' and includes a table with the following data:

Hillsboro, OR Community	
Percentage Green Power	4.0%
Participation Rate*	8%
Provider(s)	Portland General Electric
Green Power Community Since	June 2010

Below the table, there is a section for 'Community Profile' text and a list of 'Partners Contributing to Community Effort' including BNY Mellon, Bunker Hill Community College, and Carousal Center Company, LP.







# Can We Make Boston the Next EPA Green Power Community?

- Where are we at?
  - Boston's community-wide electricity use is **6.6 billion kWh**
  - Green power use of **198 million kWh** within city-limits needed to total to meet EPA Community requirements (or 3% of total load)
  - The City of Boston is already at Partner purchasing 21 million kWh
  - EPA's other 13 Partners in Boston are purchasing 100 million kWh
- Where do we need to get?
  - Increase green power purchasing within Boston by **30 - 70 million kWh**



The U.S. EPA congratulates the City of Boston for using green power for over 8 percent of its electricity needs – the largest green power purchase by a local government in New England!

**WELCOME TO THE GREEN POWER PARTNERSHIP!**



# Want to Know More?

- Basic Information
  - An overview of Green Power Partnership is available on EPA's Web site [www.epa.gov/greenpower](http://www.epa.gov/greenpower)
  - To see full details of program requirements, please see: [www.epa.gov/greenpower/documents/gpp\\_partnership\\_reqs.pdf](http://www.epa.gov/greenpower/documents/gpp_partnership_reqs.pdf)
  - To see EPA's Green Power Purchasing Guide, please visit: [www.epa.gov/greenpower/documents/purchasing\\_guide\\_for\\_web.pdf](http://www.epa.gov/greenpower/documents/purchasing_guide_for_web.pdf)
  - To see EPA's Green Power Locator, please visit: <http://www.epa.gov/greenpower/pubs/gplocator.htm>
- More Questions?
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