

Green Power Purchasing as a Climate Change Strategy

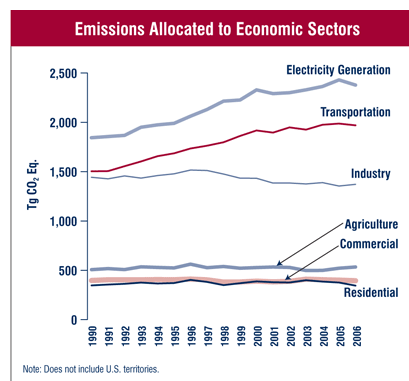
EPA Green Power Partnership/ Association of Climate Change Officers Webinar
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U.S. Greenhouse Gas Emissions

- Total U.S. emissions have risen by 17% from 1990 to 2007
- CO₂ from fossil fuel combustion accounts for 80% of GWP-weighted emissions
- Electricity generators emitted 42% of the CO₂ from fossil fuel combustion



What is Green Power?

- Green power is an “environmentally-differentiated” electricity product from:
 - solar
 - wind
 - geothermal
 - biomass
 - biogas
 - small hydro



Green Power Benefits

- **Environmental**
 - Reduce greenhouse gases (GHGs)
 - Reduce criteria pollutants*
 - Water conservation
- **Energy Price Stability/Reliability**
 - Reduced demand for natural gas lowers prices
 - Electricity price stability
 - On-site systems can reduce T&D requirements
- **Economic Development**
 - Job creation
 - Landowner lease payments (\$2000-\$5000/wind turbine)
 - Tax revenues (often in rural areas that need them)



Green Power Value Proposition

- **Delivers high-impact/low-cost value**
- **Deploys quickly & scales up easily**
 - Most Partners increase GP purchase over time
 - More than 500 Partners using 100% green power
- **Resonates with customers, management, employees & other stakeholders**
- **Captures favorable media attention**
 - Clean technology
 - Domestic energy supply
 - New U.S. jobs
- **Addresses indirect emissions**

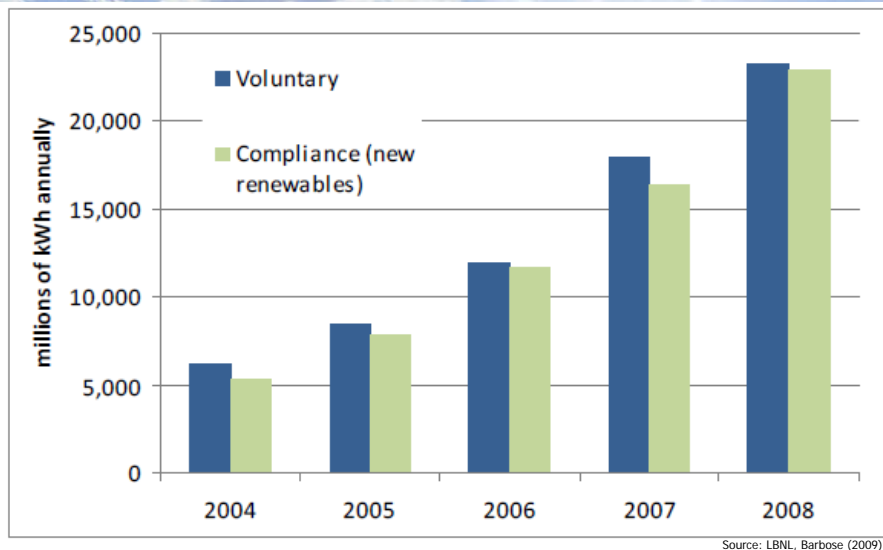


Buying Green Power – Product Options

- **On-site Generation**
 - Install renewable energy system on-site (e.g., solar panels, wind turbines)
- **Green Power Electricity Products**
 - Buy electricity from utility green pricing programs or green power retail marketers that is all, or partially, generated from renewable sources
- **Renewable Energy Certificates (REC)**
 - Buy only the environmental “attributes” associated with the electricity generated (1 REC = 1 MWh)



Compliance & Voluntary Markets



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 1,100 Partners**, including Fortune 500 companies, states, federal agencies, local governments, and colleges and universities.



Green Power Partnership's Goals

- **Reducing GHG 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



Program Accomplishments

- **1,185 Partners with green power purchases totaling more than 17.5 billion kWh**
- **Purchases avoid ~ 14 million tons of CO2 emissions, which is equivalent to:**
 - The greenhouse gas emissions from 2.3 million passenger vehicle cars
 - The CO2 emissions from 29 million barrels of oil consumed
 - The CO2 emissions from the electricity use of 1.7 million average American homes for one year



Partnership Offerings & Benefits

- Credible Benchmarks
 - Metric for “How much green power is enough?”
 - Definition of eligible renewables
- Planning & Implementation Resources
 - Green power locator www.epa.gov/greenpowerpubs/gplocator.htm
 - Purchasing guidance
 - Marketing and communications support
 - Environmental impact information www.epa.gov/greenpower/pubs/calculator.htm
- Recognition
 - Top Partner Lists
 - Green Power Leadership Awards
 - Promotional opportunities



Use of the Partner logo



Top Partner Lists

- National Top 50
- 100% Purchasers
- Top 20 Retail
- Fortune 500
- Top 10 Federal Government
- Top 20 Local Government
- Top 20 College & University
- Top 20 Printers
- Top 20 On-site



Screenshot of GPP's current “National Top 50” list

Annual Green Power Usage (kWh)	GP % of Total Electricity Use*	Organization Type	Providers	Green Power Resources
1. Intel Corporation				
1,301,300,000	48%	Information Technology	On-site Generation, PNM, Sterling Planet	Biogas, Biomass, Geothermal, Small-hydro, Solar, Wind
2. PepsiCo				
1,226,403,121	100%	Food & Beverage	3Degrees, Sterling Planet	Various
3. Whole Foods Market				
790,459,000	105%	Retail	Austin Energy, Renewable Choice Energy	Solar, Wind
4. Kohl's Department Stores				
600,990,000	50%	Retail	3Degrees, City of Dover, Sacramento Municipal Utility District, Sterling Planet, SunEdison, WM Renewable Energy	Biogas, Biomass, Small-hydro, Solar, Wind
5. Dell Inc.				
553,708,000	158%	Information Technology	3Degrees, Austin Energy, Constellation NewEnergy, Greenhouse Gas Services, Idaho Power, MidAmerican Energy, TXU Energy	Biogas, Solar, Wind
6. City of Houston, TX				
438,000,000	34%	Govt. (Local, Municipal)	Reliant Energy	Wind
7. U.S. Air Force				
426,274,291	5%	Govt. (Federal)	3 Phases Renewables, Basin Electric Power Cooperative, Bonneville Power Administration, Colorado Springs Utilities, Constellation NewEnergy, Georgia Power, Minnesota Power Cooperative, NextEra Energy Resources, <small>Additional PPA & Electric Power Purchase</small>	Biogas, Biomass, Solar, Wind

How Much Green Power to Join?

	Partnership Benchmark	Leadership Benchmark
If your annual electricity use is...	You should, at minimum, use this much green power	You should, at minimum, use this much green power
Over 100,000 MWh	2%	20%
100,000 - 10,000 MWh	3%	30%
10,000 - 1,000 MWh	6%	60%
Under 1,000 MWh	10%	N/A

Note: 100% of minimum green power purchase benchmark should be met with "new" renewable energy.



EPA's 1,100+ Partners: Purchasing + 17 Billion kWh



Want to Know More?

- **Basic Information**

- An overview of Green Power Partnership is available on EPA's Web site www.epa.gov/greenpower
- To see full details of program requirements, please see: www.epa.gov/greenpower/documents/gpp_partnership_reqs.pdf
- To see EPA's Top 50 national green power purchasers, please visit: www.epa.gov/greenpower/toplists/top50.htm
- To see EPA's Green Power Purchasing Guide, please visit: www.epa.gov/greenpower/documents/purchasing_guide_for_web.pdf

- **More Questions?**

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