



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



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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 →





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1,300 Green Power Partners Purchasing 18 Billion kWh/year



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

Industry	# Partners	Average MWh	Total MWh
Retail	81	37,828	3,064,059
Information Technology	74	36,012	2,664,910
Local Gov't	109	20,281	2,210,595
Education (Higher)	100	14,741	1,474,075
Banking & Fin. Services	29	50,166	1,454,828
Health Care	48	15,153	727,367
Travel & Leisure	72	6,596	474,883
Consumer Products	47	7,552	354,933
Industrial Goods & Services	46	7,208	331,570
Telecommunications	7	36,006	252,045
Food & Beverage	50	4,890	244,479
Printing	107	2,110	225,826
Non-profit (NGO)	71	2,846	202,079



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Top 10 Green Power Partners

- **Largest Green Power Purchasers (Sep. 2010)**

- Intel Corporation 1,433,200 MWh
- Kohl's Department Stores 1,367,376 MWh
- Whole Foods 817,658 MWh
- City of Houston, TX 438,000 MWh
- Dell Inc. 431,058 MWh
- Johnson & Johnson 416,511 MWh
- Cisco Systems 400,996 MWh
- Commonwealth of Pennsylvania 400,000 MWh
- U.S. Air Force 339,660 MWh
- City of Dallas, TX 333,660 MWh



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What Is The Difference Between Renewable Energy And Green Power?

- Renewable energy is derived from energy sources which are not depleted when their energy is harnessed, such as sunlight, wind, waves, water flow, biological processes such as anaerobic digestion (e.g., landfill gas), and geothermal
 - Renewable energy sources are distinct from fossil fuels and nuclear power, which must be consumed to release energy
- Green power is a subset of renewable energy that meets green criteria and has been marketed to customers for its particular environmental and greenhouse gas benefits
 - Effectiveness of green power market is based on credibility and consumer acceptance - products must be viewed as green



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Is WTE Green Power?

- No, WTE does not meet the general criteria for green power
- Why?
 - Conventional WTE is a non-renewable power source
 - The MSW stream includes both fossil-fuel derived materials (such as plastics) and biogenic content (e.g., paper and wood)
 - Conventional WTE facilities cannot accurately meter or separate the renewable portion of their MSW stream, and therefore the green power market tends to treat WTE as non-renewable
 - WTE contributes to a net increase in carbon emissions
 - WTE facilities were constructed prior to 1997*
 - EIA knows of 4 plants with operational date of 1997 or later



Sources: U.S. EPA. *Compilation of Air Pollutant Emission Factors (AP-42)*. IWSA correspondence. Nov 2005

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What Is The Criteria For “Green Power” Under EPA’s Green Power Partnership?

- EPA’s Partnership has not explicitly set its own criteria for defining green power, but has historically referenced Green-e’s stakeholder-based criteria for “green power”
- General criteria:
 - renewable resource
 - no facility-level net carbon emissions (not counting displaced grid emissions)
 - lower environmental, wildlife and water impacts than those associated with traditional power generation
 - facility began operating after 1/1/1997



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Energy Sources & Green Criteria

Resource	Energy source not depleted	No facility-level net carbon emissions	Lower environmental impact than traditional fossil fueled power generation
Wind	✓	✓	✓
Solar PV	✓	✓	✓
Geothermal	✓	✓	✓
Hydro – large scale	✓	✓	LIHI-cert. only ¹
Hydro – small scale	✓	✓	LIHI-cert. only ¹
Biogas	✓	✓	✓
Biomass	✓	✓	✓
Fuel Cell	Biogas fuel only	Biogas fuel only	Biogas fuel only
WTE	X	X	✓
Nuclear	X	✓	X
All fossil-fuels	X	X	X

Notes: 1. LIHI (Low Impact Hydro Institute) certifies hydropower facilities that have reduced environmental and wildlife impacts



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What Are The Conditions Under Which WTE Can Be Considered "Green"?

- New national Green-e standard considers the power from a WTE facility using a non-combustion thermal process to convert MSW to a clean burning fuel to be green power
 - The technology is designed to produce no discharges of air contaminants or emissions, including greenhouse gases.
 - The technology produces no discharges to surface or groundwaters.
 - The technology produces no hazardous wastes.
 - To the maximum extent feasible, the technology removes all recyclable materials, including plastics, and marketable green waste compostable materials from the solid waste stream prior to the conversion process and the owner or operator of the facility certifies that those materials will be recycled or composted.
- Third-party verification of facility compliance is required



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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
 - To see EPA's Green Power Locator, please visit: <http://www.epa.gov/greenpower/pubs/glocator.htm>
- More Questions?
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