



RENEWABLES INFOGRID

The Renewables InfoGrid charts information on announced generation construction, completed power projects/plants and completed sales of renewable power plants in the U.S. Data on completions, prices, and purchasers will be inserted as such information becomes available. A manufacturers appendix can be found at the bottom of this InfoGrid.

<u>Fuel Types</u>
Biomass
Fuel Cell
Geothermal
Hydro
Solar
Wind

Date revised 10/1/2003

Company Name (including partners or associates)	Name and location of facility	Size	Type of Energy	Price	Construction or Sale Information
Alternative Energy, Inc. (Bangor, ME)	Beaver-Ashland plant; ME	40MW	Biomass wood	ND	1992/1993 ; Plant construction takes place. Operations began August 1993; Wisconsin Energy is power purchaser.
	Beaver-Livermore Falls; ME	40MW	Biomass wood	ND	1991/1992 ; Plant construction takes place. Operations began August 1992; Constellation Power, power purchaser.
	Chester facility; ME	17MW	Biomass wood	ND	1985/1986 ; Plant construction takes place. Operations began October 1986; Bangor Hydro Electric Co. is power purchaser. <i>(Completed)</i>

RENEWABLES INFOGRID

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American Electric Power (Columbus, OH)	-Berrien Springs, MI -Buchanan, MI -Buck; VA -Byllesby; VA -Constantine, MI -Elkhart; IN -London; WV -Marmet; WV -Mottville ; MI -Niagara ; VA -Ruesens ; VA -Twin Branch ; IN -Winfield; WV	3000kW 2000kW 10000kW 20000kW 1000kW 1000kW 16000kW 16000kW 1000kW 3000kW 12000kW 3,000kW 19000kW	Hydro Hydro Hydro Hydro Hydro Hydro Hydro Hydro Hydro Hydro Hydro Hydro	ND ND ND ND ND ND ND ND ND ND ND ND	1908 -Berrien begins operations 1919 -Buchanan begins operations 1912 -Buck begins operation 1912 -Byllesby begins operation 1921 -Constantine begins operations 1913 -Elkart begins operation 1935 -London begins operation 1935 -Marmet begins operation 1923 -Mottville begins operations 1906 -Niagara begins operation 1903 -Ruesens begins operation 1904 -Twin Branch begins operation 1938 -Winfield begins operation <i>(Completed)</i>
American Electric Power (Columbus, OH)	Desert Sky Wind Farm AKA Indian Mesa and Clear Sky; TX	160.5MW	Wind	ND	5/3/02 ; Official dedication held for purchase of plant by AEP. <i>(Completed)</i>
American Electric Power (Columbus, OH) and TXU Corporation (Dallas, TX)	Trent Mesa Wind Project; TX	150MW	Wind	\$160M	11/14/01 ; Plant expansion – 13 turbines added. <i>(Completed)</i>
American Electric Power (Columbus, OH) and Zilkha Renewable Energy	Blue Canyon Wind Power; OK	74.25MW	Wind	\$80M	3/9/03 ; Towering more than 300 feet above the Slick Hills northwest of Lawton, 38 giant windmills soon will produce enough electricity to meet the needs of 20,000 homes. The turbines will be turning by the end of this year and will comprise the state's first wind farm. The power generated by the Blue Canyon Wind Farm is already under contract to be sold to Western Farmers Electric Cooperative, which supplies electricity to distributors throughout western Oklahoma 7/24/03 ; Construction of the Blue Canyon Wind Farm has begun. <i>(Construction)</i>

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American National Wind Power , an affiliate of International Power, PLC (London, UK)	Garrett facility; PA	10MW	Wind	\$10M	12/1/99 ; Plant in commercial operation. <i>(Completed)</i>
Appalachian Power (Roanoke, VA)	Claytor Hydro Project; VA Unit 1 Unit 2 Unit 3 Unit 4	76000kW	Hydro	ND	1939 – All four units go online. <i>(Completed)</i>
Appalachian Power (Roanoke, VA)	Smith Mountain Project; VA Unit 1 Unit 2 Unit 3 Unit 4 Unit 5	605000kW Total	Hydro	ND	1965 ; Year of 1965 ; construction 1980 ; for each 1966 ; plant 1966 ; <i>(Completed)</i>
Arizona Public Service Company (Phoenix, AZ) a division of Pinnacle West Capital	Prescott Airport Solar Power; AZ	450MW	Solar	ND	10/30/02 ; APS dedicated the first phase of the Prescott Airport Solar Power plant. Upon its opening the plant will distribute 450 kW of solar-generated electricity onto the SPA system. By march of 2003 Phase 1 will be complete with 1.5 megawatts (1,500 kW) available to APS customers. Within the next three to five ears, APS plans to expand the facility's capacity to 5 megawatts, providing enough power for more than 2, 000 homes. <i>(Construction)</i>
Arizona Public Service Company (Phoenix, AZ) a division of Pinnacle West Capital Corporation (Phoenix, AZ)	Flagstaff solar plant; AZ Glendale solar plant; AZ (Phase I & II) Gilbert solar plant; AZ Ocotillo Prescott solar plant; AZ Scottsdale solar plant; AZ Tempe solar plant; AZ Yuma solar plant; AZ	82MW 172MW 125MW 190MW 34MW 182MW 100MW	Solar Solar Solar Solar Solar Solar	ND ND ND ND ND ND ND	-Flagstaff built in 1997 -Glendale built in '00/01 -Gilbert dedicated in 4/2001 -Ocotillo dedicated 1998 -Prescott dedicated 4/2001 -Scottsdale built in 2002 -Tempe was built in 2 phases: Phase 1 – 82kW in 1998 and phase 2 – 100kW in 1999 -Yuma being built at Yucca Power Plant location <i>(Completed)</i>

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Atlantic Renewable Energy Corp. (Richmond, VA) thru its subsidiaries Backbone Mountain Ltd. (Richmond, VA) and Zilkha Renewable Energy (Co-owner) (Houston, TX)	Backbone Mountain Wind Project; WV	70MW	Wind	ND	<p>12/28/01; Plant begun in 1998; projected completion Dec. 2002.</p> <p>Plant sold to FPL Energy, LLC – see Mountaineer Wind Energy Center under FPL</p> <p><i>(Completed)</i></p>
Atlantic Renewable Energy Corp. (Richmond, VA) thru its subsidiaries Canastota Windpower LLC and Madison Windpower LLC	<p>-Fenner Project; NY (PG&E Generating, Bethesda, MD is a co-owner)</p> <p>-Madison Project; NY (CHI Energy, Inc., Stamford, CT is a co-owner)</p>	30MW	Wind	ND	<p>12/28/01; Status of plants: Fenner project begun in late 1998 and put into operation late 2001.</p> <p>Madison plant begun in mid-1998 and put into operation September 2000.</p> <p><i>(Completed)</i></p>
Atlantic Renewable Energy Corp. (Richmond, VA) thru its subsidiaries Mill Run Wind-power LLC and Somerset Windpower LLC and Zilkha RenewableEnergy (Houston, TX)	<p>Mill Run Project; PA</p> <p>Somerset Project; PA</p>	15MW	Wind	ND	<p>9/2000; Mill Run and Somerset projects both built in summer 2001 and were put into operation Oct. 2001. Exelon Generation Co. purchasing output under a long-term power purchase agreement.</p> <p><i>(Completed)</i></p>
Basin Electric Power Cooperative (Bismarck, ND) and Central Power Electric Cooperative (Bismarck, ND)	Minot; ND	2.6MW	Wind	\$2.9M	<p>11/6/02; Dedication ceremonies were held for the two wind turbines jointly developed by Central Power and Basin Electric.</p> <p><i>(Completed)</i></p>
BioEnergy LLC (Atlanta, GA)	Taylor County Landfill; TX	4.24MW	LFG	ND	<p>11/19/02; Four units should be completed in 2003.</p> <p><i>(Construction)</i></p>
Biomass Energy (Nicholasville, KY)	South Point, OH	138MW	Biomass	ND	<p>10/28/02; Kentucky-based Biomass Energy plans to start construction in January 2003 on a 138-MW sawdust-fired power plant along the Ohio River at South Point in Lawrence County, Ohio. Biomass had hoped to begin construction in October.</p> <p>12/23/02; Biomass Energy has set June 2004 as the new projected on-line target for a 138-MW sawdust-fired power plant the energy development company plans to construct at South Point, Ohio.</p> <p><i>(Construction)</i></p>

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BMW Manufacturing Corporation	Palmetto Landfill; SC	ND	Biomass	ND	5/5/03 ; BMW began recycling methane gas drawn from the landfill near Spartanburg as energy to source supply the company's manufacturing facility with 25 percent of its energy needs. BMW's landfill project is the only project that co-generates electricity an hot water for use at an industrial location remote from the landfill. In order to use the gas, a 9.5-mile pipeline was build from Palmetto Landfill to BMW Manufacturing Corp. <i>(Completed)</i>
Bonneville Power Association (BPA) (Portland, OR) and SeaWest WindPower, Inc. (San Diego, CA)	Condon Wind Energy Project; OR	49.8MW	Wind	ND	11/15/01 ; Plant under construction. Phase I expected to be operational by Dec. '01; Phase II to be ready by May '02. BPA to buy/market entire output over a 20-year period. <i>(Completed)</i>
Brady Power Partners (Sparks, NV)	Brady Hot Springs plant; NV	21.1MW	Geo	ND	1992 ; Plant construction is completed and plant becomes operational. <i>(Completed)</i>
Caithness Operating Company/Sequa (New York, NY)	-Steamboat 1 power plant; NV -Steamboat 1A power plant; NV -Steamboat 2 power plant; NV -Steamboat 3 power plant; NV -Steamboat Hills power plant; NV	6.0MW 1.1MW 14.0MW 14.0MW 14.4MW	Geo Geo Geo Geo Geo	ND ND ND ND ND	1986 ; Construction completed; operations begin 1988 ; Construction completed; operations begin 1992 ; Construction completed; operations begin 1992 ; Construction completed; operations begin 1988 ; Construction completed; operations begin <i>(Completed)</i>
CalEnergy Company, Inc. (Omaha, NE) and Utah Power & Light (Now PacifiCorp) (Portland, OR)	Blundell No. 1 power plant; UT	23MW	Geo	ND	1984 ; Construction completed; operations begin. <i>(Completed)</i>
CalEnergy Company, Inc. (Omaha, NE)	Desert Peak power plant; NV	8.7MW	Geo	ND	1985 ; Plant construction is completed and plant becomes operational. Energy is sold to Sierra Pacific Power Company. <i>(Completed)</i>

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Calpine Corporation (San Jose, CA)	Fourmile Hill Geothermal Project located in the Glass Mountain Known Geothermal Resource Area; CA Calpine owns 19 geothermal plants in all which are located in The Geysers, CA.	49.5MW 824MW	Geo Geo	ND ND	10/31/01; The Fourmile Hill Project is in advanced development and is projected to be online by late 2004. Power from the project is committed to Bonneville Power Administration (BPA) under a 20-year contract and will be delivered within BPA's northern California service territory.
Catamount Energy Corporation (Rutland, VT), (subsidiary of Central Vermont Public Service Corporation)	Appomattox Cogeneration Facility; VA	40MW	Wood & coal	\$71M	Brought online in 1982 and jointly owned by Tractebel Power, Central Illinois Power Service Co. & Catamount. <i>(Completed)</i>
Catamount Energy Corporation (Rutland, VT), (subsidiary of Central Vermont Public Service Corporation)	Glenns Ferry Cogen Facility; ID Rupert Cogen Facility; ID	10MW 10MW	Cogen Cogen	\$14.8M \$14.3M	Both plants came online in December 1996 and are owned by Glenns Ferry Cogen Partners, Ltd. And Rupert Cogen Partners, Ltd., respectively. Limited partners are Catamount and Bloomfield Idaho, Inc. for both. <i>(Completed)</i>
Catamount Energy Corporation (Rutland, VT), (subsidiary of Central Vermont Public Service Corporation)	Rumford Cogeneration Facility; ME	85MW	Wood & coal	\$188M	Plant began operations in May 1990 and is jointly owned by Mead Paper, UtilCo Group, Dominion Energy, TriStar Ventures, Nichimen Corp. and Catamount. <i>(Completed)</i>
Catamount Energy Corporation (Rutland, VT), (subsidiary of Central Vermont Public Service Corporation)	Ryegate Power Station; VT	20MW	Wood Waste	\$46.3	Plant came online in November 1992 and is jointly owned by Tractebel Power, Inc. and Catamount. <i>(Completed)</i>
Catamount Energy Corporation (Rutland, VT), (subsidiary of Central Vermont Public Service Corporation)	Summersville Hydroelectric Power Station; WV	80MW	Hydro	\$55M	Catamount is sole owner but will need to sell at least 50% interest prior to commercial operations in order to maintain the plant's QF status. <i>(Completed)</i>
Catamount Energy Corporation (Rutland, VT), (subsidiary of Central Vermont Public Service Corporation)	Sweetwater 1; TX	37.5MW	Wind	ND	7/22/03; Catamount Energy Corp. announced the closing of its first U.S. wind project, a 25-turbine, 37.5MW wind farm. Catamount is an equity investor in the project with Babcock & Brown LP and another major financial institution. The initial 25 wind turbines, provided by GE Wind Energy, should be in place by year's end. The power will be sold under a power purchase agreement with TXU Energy. <i>(Construction)</i>

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Chevron Energy Solutions, LP (subsidiary of ChevronTexaco) and United Solar Systems Corporation (subsidiary of Energy Conversion Devices)	Solarmine; CA	500KW	Solar	ND	6/5/03 ; Chevron Energy Solutions, LP completed the installation of the first solar photovoltaic facility in California to help power oil field operations. <i>(Completed)</i>
CHI Energy Inc. (Stamford, CT)	Fenner; NY	30MW	Wind	ND	10/31/01 ; Wind power plant to be completed by Nov. '01. <i>(Completed)</i>
Cinergy Global Power (Cincinnati, OH) (subsidiary of Cinergy Corporation) (Cincinnati, OH)	Peetz Table Wind Power Plant; CO	30MW	Wind	ND	10/16/00 ; Start-up of wind farm operations; Xcel Energy to purchase 77 gigawatt hours of power per year from Peetz facility. <i>(Completed)</i>
City of Summersville, WV	Summersville Hydroelectric Facility; WV	80MW	Hydro	ND	7/31/01 ; Commercial operations start. Facility to be operated by Gauley River Power Partners for the City of Summersville. <i>(Completed)</i>
Clipper Windpower (Carpinteria, CA)	Garrett Country; MD	101MW	Wind	ND	2/17/03 ; Clipper Windpower will build a plant in Garrett County, MD, near the town of Oakland. Clipper has requested authority to extend the proposed project site by a two-mile long southern extension so that it can achieve the flexibility to move 10 turbines from the northern portion of the site to mitigate potential viewshed or avian problems raised by intervenors. <i>(Construction)</i>

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ComEd and Illinois Wind Energy and Tomen Power	Crescent Ridge; IL	51MW	Wind	\$55M	<p>11/19/02; Plans announced for the first commercial wind farm in Illinois. ComEd will purchase the entire output.</p> <p>12/5/02; The Bureau County Board decided to hold off for at least 30 days on a decision whether to build 34 turbines.</p> <p>1/21/03; The Bureau County Board was approving individual applications late Tuesday for the Crescent Ridge project, which calls for 34 windmills intended to power about 20,000 Illinois homes each year.</p> <p>8/25/03; Illinois Wind Energy President Stefan Noe said construction of the 32 turbine project will be deferred until the federal wind energy production tax credit is extended. The project would have to be completed by Dec. 31 to qualify for the current \$2.5 million tax credit per year for 10 years.</p> <p><i>(Construction)</i></p>
Constellation Operating Services (Fallon, NV)	Soda Lake 1 plant; NV Soda Lake 2 plant; NV	10MW	Geo	ND	<p>1987; Soda Lake 1 completed; operations begin</p> <p>1991; Soda Lake 2 completed; operations begin</p> <p><i>(Completed)</i></p>
CMS Generation (subsidiary of Consumers Energy) (Detroit, MI)	Genesee Power Station; MI	35MW	Biomass	\$80M	<p>1995; Began operation.</p> <p><i>(Completed)</i></p>
Dairyland Power Cooperative (DPC) (La Crosse, WI) and Microgy (a subsidiary of Environmental Power)	Dairy and swine farms within the DPC system, WI	5MW	Biomass	ND	<p>4/8/03; DPC has signed a Letter of Intent with Microgy to produce "waste-to-energy" renewable electricity at dairy and swine farms. Manure will be the resource and methane, its byproduct through anaerobic digestion, will be the fuel used to generate electricity for DPC members. The project will begin with 5MW with the planned growth of up to 25MW in five years.</p> <p><i>(Construction)</i></p>

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Duke Solar Energy LLC (Charlotte, NC)	Eldorado Valley; NV	50MW	Solar	ND	<p>12/21/02; Duke Solar plans to start generating electricity at the site by March 2005. The solar power plant will enable the two utilities to satisfy state law on solar power use in 2005 and 2006, according to the utilities, which are subsidiaries of Sierra Pacific Resources.</p> <p><i>(Construction)</i></p>
East Kentucky Power Cooperative (Winchester, KY)	<p>-Bavarian Landfill; KY</p> <p>-Laurel Ridge Landfill; KY</p> <p>-Green Valley Landfill; KY</p>	<p>3.2MW</p> <p>4MW</p> <p>3.2 MW</p>	Biomass	\$12M	<p>3/18/03; East Kentucky Power Cooperative has been granted final approval to proceed with construction of Kentucky's first plants to produce electric power from decaying municipal trash.</p> <p>5/15/03; East Kentucky Power Cooperative was granted final approval to proceed with construction of Kentucky's first plants to produce electric power from decaying municipal trash.</p> <p><i>(Construction)</i></p>
East Kentucky Power Cooperative Inc. (Winchester, KY)	E.A. Gilbert Generating Unit; KY	268MW	Clean-Coal	\$400M	<p>10/7/02; Elected officials and community leaders gathered at the future site of a coal-fired power plant on Monday. The East Kentucky Power Cooperative touts its new plant as the cleanest coal-generating unit in the country.</p> <p><i>(Construction)</i></p>
El Paso Electric Company (El Paso, TX)	Hueco Mountain Wind Ranch; TX (2, 660 KW, V-47 Vestas turbines)	1.32 (1300kW eventual capacity)	Wind	\$2.2M	<p>March 2001; Plant is owned by Cielo Wind Power; is near completion and will provide EPE with energy. Project funded by Palo Verde performance reward funds given to EPE by the Texas Public Utility Commission.</p> <p><i>(Completed)</i></p>
Empire Geothermal (Empire, NV)	Empire plant; NV	3.6MW	Geo	ND	<p>1987; Plant construction finished; commencement of operations.</p> <p><i>(Completed)</i></p>

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Energy Northwest (Richland, WA)	Nine Canyon Wind Project; WA (The largest publicly owned wind project in the U.S. to date).	48MW	Wind	\$70.7M	<p>3/11/02; Plant commissioning is held. Project expected to be operational in late 2002.</p> <p>10/11/03; Plant dedicated</p> <p>5/20/03; Energy Northwest's Executive Board voted unanimously on April 30, 2003, to approve the issuance of municipal bonds to finance the 15.6 MW Phase II expansion of Nine Canyon Wind Project, located near Kennewick, Washington.</p> <p><i>(Plant Expansion)</i></p>
Energy Northwest (Richland, WA)	Packwood Lake, WA	27MW	Hydro	ND	<p>1964; Plant begins operations. The Environmental Foundation group and BPA will be marketing green power from the plant.</p> <p><i>(Completed)</i></p>

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FPL Energy, LLC (Juno Beach, FL) (subsidiary of FPL Group, Inc.)	High Winds Energy Center; CA	162MW	Wind	ND	<p>10/21/02; Output will be sold to PacifiCorp Power Marketing Inc. with commercial operation expected during the summer 2003.</p> <p>7/23/03; FPL announced plans to expand on the High Winds Energy Center bringing the total capacity of the facility to 162MW. The output will be sold to PPM Energy, Inc. under a long-term contract.</p> <p>9/18/03; FPL Energy, LLC and PPM Energy, Inc. joined about 150 guests near Rio Vista to dedicate FPL Energy's High Winds Energy Center located along the Montezuma Hills.</p> <p><i>(Completed)</i></p>
FPL Energy, LLC (Juno Beach, FL) (subsidiary of FPL Group, Inc.)	King Mountain Clean Energy Center; TX	278MW	Wind	ND	<p>1/7/02; Plant begins operations.</p> <p>Woodward Mountain; TX</p> <p>160MW</p> <p>Wind</p> <p>ND</p> <p>8/2001; Plant begins operations.</p> <p><i>(Completed)</i></p>
FPL Energy, LLC (Juno Beach, FL) (subsidiary of FPL Group, Inc.)	Lake Benton I and II Wind Farm; MN	104MW	Wind	ND	<p>7/10/00; I begin operations in 1998 and II in 1999. Power from plant committed to NSP under a 25-year contract.</p> <p><i>(Completed)</i></p>
FPL Energy, LLC (Juno Beach, FL) (subsidiary of FPL Group, Inc.)	Montezuma; KS	112.2MW	Wind	ND	<p>12/2001; Began operation, power being bought by UtiliCorp United.</p> <p><i>(Completed)</i></p>
FPL Energy, LLC (Juno Beach, FL) (subsidiary of FPL Group, Inc.)	Montfort Wind Farm; WI (20 each 1.5 MW turbines)	ND	Wind	ND	<p>6/25/01; Plant operations begin. Sales of generation to be made to WI Gas & WI Electric and Alliant Energy-WI Power and Light.</p> <p>8/23/01; Plant dedication ceremony held.</p> <p><i>(Completed)</i></p>

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FPL Energy, LLC (Juno Beach, FL) (subsidiary of FPL Group, Inc.)	Mountaineer Wind Energy Center; WV	66MW	Wind	ND	<p>6/26/02; Plant construction to begin in mid-July 2002 with completion targeted for year's end. Plant acquired from Atlantic Energy Renewable Corp. and Zilkha Renewable Energy.</p> <p>10/21/02; Output from the facility will be sold to Exelon Power team with commercial operation expected by the end of 2002.</p> <p>1/7/03; Exelon Power Team, the wholesale energy marketing division of Exelon Corporation, signed a 20-year agreement to purchase the output of the 66 MW facility. The Mountaineer Wind Energy Center is owned and operated by FPL Energy. Exelon Power Team will jointly market the output of the facility with Community Energy, Inc. of Wayne, Pa.</p> <p>7/9/03; Customers of Washington Gas Energy Services and Community Energy, Inc. joined the dedication ceremony of the largest wind farm east of the Mississippi River.</p> <p><i>(Completed)</i></p>
FPL Energy, LLC (Juno Beach, FL) (subsidiary of FPL Group, Inc.)	Meyersdale Wind Energy Center; PA	30MW	Wind	ND	<p>7/15/03; FPL Energy LLC will build the wind farm in Pennsylvania with the capacity to power about 12,000 homes. The company expects to complete construction by the end of 2003.</p> <p><i>(Construction)</i></p>
FPL Energy, LLC (Juno Beach, FL) (subsidiary of FPL Group, Inc.)	New Mexico Wind Energy Center; NM	204MW	Wind	\$200M	<p>10/21/02; Output will be sold to Public Service Company of New Mexico, with commercial operation expected in 2003.</p> <p>7/22/03; PNM will start using wind-generated electricity in a few weeks after tests are completed.</p> <p>10/1/03; Gov. Bill Richardson, executives of FPL Energy and Public Service Company of New Mexico, area ranchers, and hundreds of other New Mexicans gathered to dedicate the opening of the wind generation facility.</p> <p><i>(Completed)</i></p>

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FPL Energy, LLC (Juno Beach, FL) (subsidiary of FPL Group, Inc.)	North Dakota Wind Energy Center; ND	40MW	Wind	ND	10/21/02 ; Output will be sold to Basin Electric Power Cooperative with commercial operation of both projects expected by the end of 2003. <i>(Construction)</i>
	South Dakota Wind Energy Center	40MW	Wind		
FPL Energy, LLC (Juno Beach, FL) (subsidiary of FPL Group, Inc.)	Oklahoma Wind Energy Center; OK	102MW	Wind	ND	6/15/03 ; FPL Energy LLC announced a 51-MW expansion of it Oklahoma Wind Energy Center new Woodward and an agreement with Oklahoma Gas and Electric to purchase the entire output from the expansion un a long- term agreement. 8/17/03 ; About 50 of the 68 wind turbines planned for construction have been completed. <i>(Construction)</i>
FPL Energy, LLC (Juno Beach, FL) (subsidiary of FPL Group, Inc.) and Central and South West Corporation (Dallas, TX)	Southwest Mesa Wind Project; TX	75MW	Wind	\$82M	4/20/99 ; Completion of first wind turbines at new facility. CSW holds a 20-year power purchase agreement with the facility. 7/1/99 ; Plant dedication held. <i>(Completed)</i>
FPL Energy, LLC (Juno Beach, FL) (subsidiary of FPL Group, Inc.)	Stateline Wind Project; WA	263MW	Wind	ND	1/7/02 ; Plant operations begin. 1/29/02 ; Stateline generated more electricity than any other wind power producer in the world last year. <i>(Completed)</i>
FPL Energy, LLC (Juno Beach, FL) (subsidiary of FPL Group, Inc.)	Vansycle Wind Ridge Farm; OR (38 wind turbines)	24.9MW	Wind	ND	12/3/98 ; Commencement of commercial operations. <i>(Completed)</i>
FPL Energy, LLC (Juno Beach, FL) (subsidiary of FPL Group, Inc.)	Waymart Wind Project; PA	50MW	Wind	ND	5/02 ; Plant currently under construction and will include approx. 40 wind turbines each rated at 1.3 MW. Operations expected to begin in spring 2002. 1/7/03 ; Exelon Power Team also has a 20-year agreement for the Moosic Mountain Wind Farm, now known as the Waymart Wind Project in Scranton, Pa. The Waymart Wind Project is expected to bring close to 70 megawatts of wind energy to the Northeast region as it is expected to be in operation in Spring 2003. <i>(Construction)</i>

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FPL Energy (Juno Beach, FL) (a subsidiary of FPL Group)	Wyoming project, not named yet; WY	144MW	Wind	ND	<p>7/23/03; FPL Energy, LLC announced it will build, own and operate the largest wind project in Wyoming. FPL will construct 80 1.8MW wind turbines at a site in Uinta County, approximately 10 northeast of Evanston in southwestern Wyoming.</p> <p>9/10/03; PPM Energy Inc. agreed to purchase 144 megawatts of power from FPL Group Inc.'s Wyoming wind project.</p> <p><i>(Construction)</i></p>
FuelCell Energy, Inc (Danbury, CT)	DFC300A Power Plant		Fuel Cell	ND	<p>2/19/03; FuelCell Energy, Inc. announced that it has received notice from the California Energy Commission (CEC) that its DFC300A Direct FuelCellII (DFCI) power plant is certified for grid interconnection under California's "Rule 21" standard.</p> <p><i>(Construction)</i></p>
GE Wind Energy (division of GE Power Systems) (Tehachapi, CA)	<p>Altamont Pass; CA -1985 Zond Windsystem Partners Series 85C</p> <p>San Gorgonio Pass; CA -Painted Hills B&C</p> <p>-Zond-PanAero Windsystems -Cabazon (repower) -GE Wind/Earth Smart/Green Power</p> <p>Tehachapi; CA -Zond Systems -Victory Gardens, Phase IV -Sky River -Zond Systems -Zond Systems -Oak Creek Phase 2 -Victory Gardens (repower)</p>	<p>18.0MW</p> <p>3.97MW 15.3MW 29.9MW 39.75MW 16.5MW</p> <p>0.2MW 22.05MW 76.95MW 23.99MW 64.08MW 23.1MW 6.75MW</p>	<p>Wind</p> <p>Wind</p> <p>Wind</p>	ND	<p>Turbines have been built from 1980's – present. Replacement of older turbines underway.</p> <p><i>(Completed)</i></p>
GE Wind Energy (division of GE Power Systems) (Tehachapi, CA)	<p>Fort Davis/Central Southwest Wind Power Facility; TX</p> <p>Delaware Mtn. Wind Power Facility AKA Culberson County facility; TX</p>	<p>6MW</p> <p>30MW</p>	<p>Wind</p> <p>Wind</p>	<p>ND</p> <p>ND</p>	<p>June 1999; Delaware plant places first 30 of proposed 250 MW into operation.</p> <p><i>(Construction)</i></p>

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GE Wind Energy (division of GE Power Systems) (Tehachapi, CA)	Colorado Green wind farm; CO	162MW	Wind	ND	<p>6/16/03; General Electric is developing the project at Gobblers Knob. GE took over the project when it acquired Enron Wind. The new Colorado Green wind farm will be the third-largest in the nation and will produce enough electricity each year to meet the needs of roughly 75,000 homes.</p> <p><i>(Construction)</i></p>
GE Wind Energy (division of GE Power Systems) (Tehachapi, CA)	Green Mountain Power Wind Facility; VT	6MW	Wind	ND	
GE Wind Energy (division of GE Power Systems) (Tehachapi, CA)	St. Mary's; KS	1.5MW	Wind	ND	<p>6/2001; Began operation, power being bought by Western Resources.</p> <p><i>(Completed)</i></p>
Global Energy	Global Energy Wabash River Energy Ltd; IN	2MW	Fuel Cell	\$32.3M	<p>11/29/02; Federal officials have approved plans to shift the site of the world's first fuel cell linked to a clean-coal technology power plant to the 260-MW Wabash River Energy coal gasification, combined-cycle plant owned by Global Energy in West Terre Haute, Ind. By the second half of 2003, FuelCell Energy is expected to ship the fuel cell from its Torrington, Conn., fabrication plant to Wabash River. After it is connected to the coal gas system, the fuel cell will undergo a one-year testing program as part of the \$32.3-million project.</p> <p><i>(Construction)</i></p>
Global Solar Energy, Inc. (joint venture of Advanced Energy Technologies, Inc.) (Tucson, AZ) and ITN Energy Systems, Inc. (Wheat Ridge, CO)	Global Solar PV Station; AZ	1.4MW	Solar	ND	<p>7/30/03 Spire Corporation announced the sale of two SPI-LAMINATOR(TM) 460 machines to Global Solar Energy.</p> <p>3/7/02; Tucson Electric Power Co. owns facility, which is connected directly to the company's existing transmission line network.</p> <p>Global Solar incrementally commissioned the system and began generating electricity for TEP one month after initial start up of the facility in June 2001. The system was commissioned over a period of five months.</p> <p><i>(Completed)</i></p>

RENEWABLES INFOGRID

Company Name (including partners or associates)	Name and location of facility	Size	Type of Energy	Price	Construction or Sale Information
GPU Solar (joint venture of AstroPower, Inc.) (Newark, DE) and GPU Diversified Holdings (Morristown, NJ)	Hopland plant; CA Berkeley plant; CA (Berkeley project is a GPU/Green Mountain Energy partnership)	132kW 100kW	Solar Solar	ND ND	5/22/01 ; Hopland began operations in 1999; Berkeley plant in Dec. 2000. <i>(Completed)</i>
Great Northern Power Development L.P. (GNPD) (Miles City, MT) (privately held power project development affiliate of Great Northern Properties L.P.) and Kiewit Mining Group (Omaha, NE) (wholly-owned subsidiary of Peter Kiewit Sons' Inc.)	Miles City; MT	500MW	Wind with Coal	\$900M	5/6/03 ; GNPD and Kiewit Group announced their intention to proceed with the power plant linked coal and wind project in rural Eastern Montana in the vicinity of Miles City. The project would use lignite from an adjacent mine developed to exclusively serve the plant, and would provide low-cost and renewable power to in-state and Pacific NW customers. <i>(Construction)</i>
Green Mountain Energy Company (Austin, TX) and TXU Energy (Dallas, TX) and being built by Cielo Wind Power, LLC (Austin, TX)	Brazos Wind Ranch; TX	160MW	Wind	ND	7/11/03 Cielo Wind Power LLC, the development arm of Texas Wind Power Company, is preparing to begin construction of the Brazos Wind Ranch in Texas. <i>(Construction)</i>
Green Mountain Energy Company (Austin, TX) and Sun Power Electric Westborough, MA and IKEA (Pittsburgh, PA)	Green Mountain Solar; PA	30kW	Solar	ND	10/30/01 ; Companies unveiled 175 solar electric panels atop the IKEA store in Robinson Towne Centre, and a special public education display in the store's main entrance. <i>(Completed)</i>
Hawaii Electric Company, Inc. (Honolulu, HI)	HC&S Wailoa Ditch Hydropower; HI	5.8MW (total)	Hydro	ND	HC&S operates three "run-of-river" (i.e., utilizes water flow without dams or reservoirs) hydroelectric facilities to produce electricity when flowing water from rainfall is available. The power generated by these plants is used to satisfy sugar mill power requirements. Electricity that is not used by the mill is distributed to customers by MECO. <i>(Completed)</i>
Hawaii Electric Company, Inc. (Honolulu, HI)	Kamaoa Wind Farm; HI	9.3MW	Wind	ND	1987 ; Kamaoa plant operations began and is owned by Apollo Energy Corp. HELCO is distributor. <i>(Completed)</i>

RENEWABLES INFOGRID

Company Name (including partners or associates)	Name and location of facility	Size	Type of Energy	Price	Construction or Sale Information
Hawaii Electric Company, Inc. (Honolulu, HI)	Lalamilo Wind Farm; HI	1.6MW	Wind	ND	1986 ; Lalamilo plant operations began. HELCO assumed ownership in 1996. <i>(Completed)</i>
Hawaii Electric Company, Inc. (Honolulu, HI)	Puueo hydropower plant; HI Waiau hydropower plant; HI	2.25MW 1.15MW	Hydro Hydro	ND ND	1910 ; Puueo constructed; upgraded 1941 1920 ; Waiau constructed; upgraded 1947 Plants are both owned and operated by HELCO for its customers. <i>(Completed)</i>
Hawaii Electric Company, Inc. (Honolulu, HI)	Wailuku River Hydroelectric Power Co.; HI	11MW	Hydro	ND	1993 ; Commercial operations began. HELCO also receives power from smaller plants operated by the County Dept. of Water Supply, Wenko Energy Company, and various farms (Hawi Ag & Energy and Hoowaiwai Farms). <i>(Completed)</i>
Jefferson Energy Cooperative (Augusta, GA) and 15 other energy cooperatives across the state	Green Power; GA	9MW	Landfill	ND	9/22/03 ; Jefferson Energy and 15 other energy cooperatives across the state are teaming up to extract the gas out of three landfills and convert the renewable resource into residential electricity. When Jefferson Energy and others start selling their green power, the electricity will be sold at a premium to members who sign up for the program. Jefferson Energy will charge \$4 for each 150-kilowatt-hour block. <i>(Construction)</i>
Kotzebue Electric Association (Kotzebue, AK)	Kotzebue plant; AK ,Phase I (Phase II & III) Wales Wind Energy Project; AK	0.15MW 0.35MW 0.1MW	Wind Wind Wind	ND ND	1997 ; Plant begins operation 5/1999 ; Phase II & III go online. 10/2000 ; Plant goes online. <i>(Completed)</i>
Lamar Light and Power (Lamar, CO)	Lamar, the Town of; CO	4.5MW	Wind	ND	6/16/03 ; Lamar Light and Power plans on purchasing three 1.5 megawatt turbines and placing them three miles south east of the city. <i>(Construction)</i>
Los Angeles Department of Water and Power (Los Angeles, CA) and FuelCell Energy	John Ferraro Building Fuel Cell Power Plant; CA	250kW	Fuel Cell	ND	3/12/03 ; Dedicated <i>(Completed)</i>
Los Angeles Department of Water and Power (Los Angeles, CA)	Lake View Terrace, CA (50 microturbines located at the Lopez Canyon Landfill)	12MW	Biomass	\$4M	8/17/01 ; Dedication of largest microturbine power plant in the world. <i>(Completed)</i>

RENEWABLES INFOGRID

Company Name (including partners or associates)	Name and location of facility	Size	Type of Energy	Price	Construction or Sale Information
Los Angeles Department of Water and Power (Los Angeles, CA)	Lopez Canon Landfill; CA	1.5MW	Biomass LFG	ND	<p>8/16/02; The Los Angeles Department of Water and Power, City Council President Alex Padilla, city officials and community leaders dedicated today, the largest micro-turbine power plant in the world to run exclusively off landfill gas.</p> <p><i>(Completed)</i></p>
Los Angeles Department of Water and Power (Los Angeles, CA) and GE Wind Energy (division of GE Power Systems) (Tehachapi, CA)	Pine Tree Wind Project; CA	120MW	Wind	ND	<p>2/27/03; When completed in the summer of 2004, the Pine Tree Wind Project will produce clean, renewable electricity for LADWP customers. The project is being developed by Wind Turbine Prometheus, LLC, a partnership between Zilkha Renewable Energy, LLC and Prometheus Energy Services, LLC. Wind Turbine Prometheus will utilize GE's well-proven 1.5-megawatt wind turbines. The machines will be installed on approximately 22,000 acres of land located 12 miles north of Mojave, California.</p> <p>9/18/03; The 120-megawatt wind turbine farm proposed for Kern County is moving forward but possibly with some changes to accommodate nearby military bases.</p> <p><i>(Construction)</i></p>
Lower Colorado River Authority of Texas (Austin, TX)	Delaware Mountain Wind Farm	30MW (First phase of 250 MW)	Wind	ND	<p>7/12/99; Inauguration ceremony for the Delaware Mountain Wind Farm are held. LCRA will purchase 7.5 megawatts of the 30-megawatt first phase.</p> <p><i>(Completed)</i></p>
Lower Colorado River Authority of Texas (Austin, TX)	Texas Wind Power Project; TX (A fleet of one-hundred-and-twelve (112) 80-foot-tall wind turbines)	35MW	Wind	\$40M	<p>Quixx Corporation, a subsidiary of Public Service Company of Colorado, Credit Suisse, and Kenetech share ownership of the Texas Wind Power Project.</p> <p><i>(Completed)</i></p>
Madison Gas and Electric Company	Lincoln County; WI	ND	Wind	\$15M	<p>7/1/99; Madison Gas and Electric Co. began generating electricity from the largest wind power farm in the eastern United States.</p> <p><i>(Completed)</i></p>

RENEWABLES INFOGRID

Company Name (including partners or associates)	Name and location of facility	Size	Type of Energy	Price	Construction or Sale Information
Midwest Renewable Energy Corporation (Juno Beach, FL) and Zilkha Renewable Energy (Houston, TX)	The Top of Iowa Windfarm; IA (89 wind turbines)	80MW	Wind	ND	4/17/00 ; Groundbreaking ceremonies for plant construction. 12/4/01 ; Dedication ceremonies held for project begun in summer '00. Output to be sold under a long-term contract to Alliant Energy. <i>(Completed)</i>
MNS Wind (a partnership between Germany-based Siemens Energy and Automation and M&N Wind Power)	Table Mountain Wind Project; NV	90MW	Wind	ND	2/1/01 ; Should be complete by mid 2004. <i>(Construction)</i>
Municipal Energy Agency of Nebraska (Lincoln, NB)	Kimball Wind Farm; NE	10.5MW	Wind	ND	8/30/02 ; Construction completed; commercial operations to start 10/1/02. <i>(Completed)</i>
National Wind Power (Garrett, PA)	Green Mountain Wind Farm; PA	10.4kW	Wind	ND	5/22/00 ; Wind farm power plant dedicated. <i>(Completed)</i>
Navitas Energy, Inc. (Minneapolis, MN)	Allendorf Wind Farm; IA	0.6MW	Wind	ND	2002 ; Plant is operational. Power purchased by IES. <i>(Completed)</i>
Navitas Energy, Inc. (Minneapolis, MN)	Elk River Metro Wind LLC plant; MN	0.66MW	Wind	ND	2/28/01 ; Plant commissioning is held. Power purchased by Xcel. <i>(Completed)</i>
Navitas Energy, Inc. (Minneapolis, MN)	Lakota Ridge Windfarms plant; MN	11.25MW	Wind	ND	2002 ; Plant is operational. Power purchased by NSP. <i>(Completed)</i>
Navitas Energy, Inc. (Minneapolis, MN)	Mendota wind facility; IL	50.4MW	Wind	\$56M	2002 ; Plant scheduled for completion by year-end 2003. <i>(Construction)</i>
Navitas Energy, Inc. (Minneapolis, MN)	NAE Shaokatan Power Partners plant; MN	1.8MW	Wind	ND	2002 ; Planned start-up. Power to be purchased by Xcel Energy. <i>(Construction)</i>
Navitas Energy, Inc. (Minneapolis, MN)	Sibley Hills plant; IA	1.32MW	Wind	ND	2001 ; Plant currently under construction. <i>(Construction)</i>
Navitas Energy, Inc. (Minneapolis, MN)	Sibley Wind Farm; IA	0.6MW	Wind	ND	5/21/96 ; 10/1997 ; First and second turbines installed, respectively. <i>(Completed)</i>
Navitas Energy, Inc. (Minneapolis, MN)	Southern Minnesota Hills plant; MN	0.9MW	Wind	ND	2002 ; Planned start-up. Power to be purchased by SMMPA. <i>(Construction)</i>

RENEWABLES INFOGRID

Company Name (including partners or associates)	Name and location of facility	Size	Type of Energy	Price	Construction or Sale Information
Navitas Energy, Inc. (Minneapolis, MN)	30 MW Dispersed Generation plant; MN	30MW	Wind	ND	Jan/Feb 2001 ; Plant commissioning is held. Power purchased by NSP. <i>(Completed)</i>
Navitas Energy, Inc. (Minneapolis, MN)	Wilmont Hills plant; MN	1.5MW	Wind	ND	2002 ; Plant is operational. Power purchased by Alliant Energy. <i>(Completed)</i>
NedPower Mount Storm Inc.	Mount Storm, WV	300MW	Wind	\$300	4/5/03 ; State regulators have approved construction of the largest wind- powered electric generation project in the state. <i>(Construction)</i>
Northeast Maryland Waste Disposal Authority (Baltimore, MD) and Signal Environmental Systems Inc.	Resource Recovery Facility; MD	60MW	Biomass	\$254M	5/21/85 ; The world's newest and most technologically advanced system for disposing of solid waste and generating electricity officially opened. The power is sold to Baltimore Gas & Electric Co <i>(Completed)</i>
Northern Alternative Energy, Inc. (subsidiary of Navitas Energy, Inc.) (Minneapolis, MN)	Marshall power plant; MN	0.6MW	Wind	ND	1992 ; Plant goes online. Power purchased by Marshall Muni Utilities. <i>(Completed)</i>
Northern California Power Agency	Geothermal 1; CA Geothermal 2; CA	60MW 60MW	Solar Solar	\$165M	1983 ; Plant goes online 1985 ; Northern California Power Agency bought the two geysers from Grace Geothermal. <i>(Plant Sale)</i>
Northern Power Systems (Waitsfield, VT)	Waxdale plant; WI	3.2MW	Biomass	ND	5/7/03 ; Northern Power Systems has been selected by SC Johnson to engineer, build and install a sophisticated cogeneration power at the Waxdale plant. Northern's system will burn methane gas from a nearby landfill to generate a capacity of 3.2 MW of electricity and recover the waste heat from the exhaust to make 17,000 pounds of plant steam per hour. In addition, the new system will reduce the plant's CO2 emissions, the principal greenhouse gas, by 32,000tons per year, or 47%. <i>(Construction)</i>

RENEWABLES INFOGRID

Company Name (including partners or associates)	Name and location of facility	Size	Type of Energy	Price	Construction or Sale Information
Northwestern Wind Power (Goldendale, WA)	Klondike Wind Power; OR	24MW	Wind	\$16.8M	1/20/03 : PPM Energy, Inc. (PPM), ScottishPower's competitive US energy business, has acquired the one-year-old Klondike Wind Power Plant in Oregon for US\$16.8 million. The acquisition from Northwestern Wind Power represents PPM's first purchase of an operating wind plant. <i>(Plant sale)</i>
Northwestern Wind Power (Goldendale, WA)	Sherman County Wind Farm; IA	24MW	Wind	ND	12/01 ; Construction completed <i>(Completed)</i>
Ohio Power (Columbus, OH)	Racine Hydro Project; OH Unit 1 Unit 2	48000kW	Hydro	ND	1983 } Year plant 1982 } went online. <i>(Completed)</i>
Ormat Energy Systems, Inc. and CalEnergy Company, Inc. (Lake Oswego, OR)	Stillwater 1 plant; NV	13MW	Geo	ND	1989 ; Plant construction completed; operations begin <i>(Completed)</i>
Otter Tail Power Company (Fergus Falls, MN) (a division of Otter Tail Corporation)	Buffalo Ridge wind project; MN	900MW	Wind	ND	6/20/01 ; Groundbreaking for wind plant in cooperation with Navitas, the Minneapolis developer. <i>(Construction)</i>
Oxbow Power (Reno, NV)	-Beowave plant; NV	16MW	Geo	ND	1985 ; Beowave completed; plant begins operations. <i>(Completed)</i>
Oxbow Power (Reno, NV)	Dixie Valley plant; NV	66MW	Geo	ND	1988 ; Dixie Valley finished; plant begins operations. <i>(Completed)</i>
Pacific Gas and Electric Company	Kerman; CA	500kW	Solar	ND	1993 ; Plant completed <i>(Completed)</i>
Pacific Power and Eurus Energy America and Aeropower Service Inc.	Combine Hills Turbine Ranch Wind Project; OR	41MW	Wind	ND	8/8/03 ; Developers have started work on a 41-megawatt wind power generation plant in eastern Oregon near the Washington border. <i>(Construction)</i>

RENEWABLES INFOGRID

Company Name (including partners or associates)	Name and location of facility	Size	Type of Energy	Price	Construction or Sale Information
PennFuture (Harrisburg, PA) and Green Mountain Energy Company (Austin, TX)	Rooftop Solar Power Plant at the headquarters of Citizens for Pennsylvania's Future (PennFuture); PA	3.84KW	Solar	ND	6/20/03; Pennsylvania Department of Environmental Protection Secretary Kathleen A. McGinty flipped the switch on a "green Power: Turn It On!" neon sign, launching the rooftop solar power plant at the headquarters of Citizens for Pennsylvania's Future (PennFuture), located directly across the street from the state Capitol in Harrisburg. PennFuture's rooftop power plant includes 32 AstroPower 120-watt modules and two Sunny Boy 1800 string inverters that should generate 3,474 kilowatt hours of electricity per year. The plant is connected to the PPL electric distribution grid. <i>(Completed)</i>
Pepco Energy Services (Washington D.C.) (a subsidiary of Pepco Holdings Inc.) and Commonwealth Green Energy LLC and Fauquier County landfill owners	Warrenton, VA	2MW	Biomass	\$2M	1/10/03; Construction of the 2-MW plant will begin in the first quarter of 2003 and be completed in the third quarter. The power plant is expected to expand to 3-MW in 10 years. <i>(Construction)</i>
PG&E National Energy Group (Bethesda, MD)	Madison Windpower Project; NY	11.5MW	Wind	ND	9/15/00; Start of commercial operations; power to be sold into NE power grid through NYSE&G & NY ISO. <i>(Completed)</i>
Phoenix Industries of Crookston, Ltd. (Crookston, MN)	Crookston power plant; MN	0.75MW	Wind	ND	1987; Plant goes online. Power purchased by Otter Tail Power Company. <i>(Completed)</i>
PowerLight Corporation (Berkeley, CA) and Parker Ranch (Hilo, HI)	Park Ranch power plant; HI	175MW 50MW	Solar and Wind	ND	August 1999- March 2001; Development/operation of plant. <i>(Completed)</i>
PPL Energy Services (Allentown, PA) (subsidiary of PPL Corp.) and FuelCell Energy, Inc. (Danbury, CT)	Ocean County College plant; NJ	250kW	Fuel cell	\$1.65M	8/14/02; Construction is expected to begin winter 2002-2003; anticipated fuel cell will be operational by spring 2003. Fuel will be used for campus needs. The New Jersey Clean Energy Fund will provide \$827,000 in the form of grants for building of the plant. <i>(Construction)</i>

RENEWABLES INFOGRID

Company Name (including partners or associates)	Name and location of facility	Size	Type of Energy	Price	Construction or Sale Information
<p>PPM Energy, Inc. (Portland, OR)</p> <p>(a U.S. energy unit of Scottish Power PLC) and Clipper Windpower (Carpinteria, CA)</p>	Northwest Iowa	44MW	Wind	\$50M	<p>4/16/03; Scottish Power PLC's (SPI) U.S. energy unit, PPM Energy Inc., plans to build a \$50 million wind power plant in northwest Iowa. In a press release Wednesday, PPM Energy said the project will produce 44 megawatts of power to be supplied to regional utility Interstate Power & Light, a unit of Alliant Energy Corp. (LNT), under a 15-year contract.</p> <p><i>(Construction)</i></p>
<p>Princeton Municipal Light Department (Princeton, MA) and Community Energy, Inc.</p>	Mount Wachusett Wind Farm; MA	3MW	Wind	ND	<p>2/12/03; Voter approval will allow Princeton Municipal Light Department and Community Energy, Inc. to replace the eight 40kW turbines currently sited on 100-foot towers at the farm with two new 1.5 MW turbines to be sited on 230-foot towers.</p> <p><i>(Plant Upgrade)</i></p>
<p>Public Service Company of Colorado (Denver, CO)</p>	Ponnequin; CO	10MW	Wind	\$10M	<p>2/28/98; PSCo is developing a \$10-million, 10-MW wind farm at the Colorado-Wyoming state line, known as the Ponnequin Wind Facility. The first of the wind facility turbines will begin delivery to the PSCo grid in March, with the rest to follow in the months ahead. PSCo is building 14 turbines on the 430-acre site.</p> <p>4/98; First turbine becomes operational, more turbines to be up and running in the next year.</p> <p>10/1/00; The Public Service Company of Colorado plans to almost triple its wind generation from 20 MW to 56 MW. The move is in anticipation of customer demand as the "Windsources" programme continues. The PSC intends to enlarge its Ponnequin facility near the Wyoming state line by adding 10 MW in addition to plans for the purchase of 26 MW from enXco Inc.</p> <p><i>(Completed)</i></p>
<p>Rock River I, LLC (Houston, TX) (Portland, OR) (subsidiary of Shell WindEnergy Inc.)</p>	Foote Creek Rim Wind Farm; WY (50 one-MW wind turbines)	50MW	Wind	ND	<p>11/14/01; Plant operations start. A 20-year agreement is made by PacifiCorp to purchase output.</p> <p><i>(Completed)</i></p>
<p>Sacramento Municipal Utility District (Sacramento, CA)</p>	<p>Hedge Substation; CA</p> <p>Solar One; CA</p> <p>Solar Two; CA</p>	200kW	Solar	\$1.6M	<p>5/30/94; Began operation.</p> <p><i>(Completed)</i></p>

RENEWABLES INFOGRID

Company Name (including partners or associates)	Name and location of facility	Size	Type of Energy	Price	Construction or Sale Information
Sacramento Municipal Utility District (Sacramento, CA) and ABB Inc.	Solano County, CA	10MW	Wind	ND	<p>2/21/03; Construction is underway on Sacramento Municipal Utility District's (SMUD) new wind power plant in California. The turbines are scheduled to go online by May.</p> <p>4/15/03; The Sacramento Municipal Utility District (SMUD) reported that its 10-MW wind power plant in Solano County, Calif., is now up and running.</p> <p><i>(Completed)</i></p>
Salt River Project (Mesa, AZ)	Red Mountain Library; AZ	ND	Solar	\$300,000	<p>4/17/03; Salt River Project and Mesa are opening a new chapter in energy production at the expanded Red Mountain Library. SRP is installing a \$300,000 photovoltaic solar energy system on shade canopies in the library's parking lot, which will produce enough electricity to supply the needs of 25 homes while keeping 34 vehicles cool during the summer.</p> <p><i>(Construction)</i></p>
San Geronio Power Corporation (a affiliate of PG&E National Energy Group)	San Geronio Pass; CA Mountain View Power Partners I and II (44.4 and 22.2 respectively)	66.6MW (Total)	Wind	\$102.5M	<p>10/1/01; Commercial operations start.</p> <p>12/20/02; MDU Resources Group announced that its Centennial Power unit will buy the 66.6-MW Mountain View wind farm from San Geronio Power Corporation.</p> <p>1/31/03; MDU Resources Group, Inc. announced that its Centennial Power, Inc. subsidiary has completed the purchase of the 66.6-megawatt Mountain View wind powered electric generation facility, from San Geronio Power Corporation, an affiliate of PG&E National Energy Group for \$102.5 million cash, subject to certain closing adjustments.</p> <p><i>(Completed)</i></p>
Santee Cooper Power (Moncks Corner, SC); Horry County Solid Waste Authority (SC); Horry Electric Cooperative Inc. (SC) – a joint effort	Horry County Solid Waste Authority Landfill; SC	2.2MW	Methane	\$2.5M	<p>9/4/01; Commercial operations begin.</p> <p><i>(Completed)</i></p>

RENEWABLES INFOGRID

Company Name (including partners or associates)	Name and location of facility	Size	Type of Energy	Price	Construction or Sale Information
SeaWest WindPower, Inc. (San Diego, CA)	Altamont Pass; CA -Venture Wind -Altech Energy, Ltd. -C.W.E.S. -SeaWest Energy Group -Viking Energy 83 -SeaWest Energy Group -SeaWest Windfarms	2.89MW 5.76MW 1.32MW 0.065MW 1.69MW 0.975MW 11.57MW	Wind	ND	Turbines have been built from 1980's – present. Replacement of older turbines underway.
	San Gorgonio Pass; CA -Altech 3 (a) -Altech 3 (b) -San Jacinto -Edom Hill	3.3MW 21.708MW 5.0MW 11.0MW	Wind		<i>(Completed)</i>
Shell Solar (Camarillo, CA) and SunWize Technologies (Camarillo, CA)	U.S. Fish and Wildlife Service at Hopper Mountain National Wildlife Refuge; CA	1.76kW	Solar	ND	3/19/03; Shell Solar and SunWize Technologies announce the completion of a 1.76-kilowatt solar power system for the U.S. Fish and Wildlife Service at the Hopper Mountain National Wildlife Refuge in Southern California. The system uses Shell Solar 110-watt solar modules to operate a variety of loads for the research station located at the preserve. <i>(Completed)</i>
Shell WindEnergy (Amsterdam, Netherlands) (subsidiary of Royal Dutch/Shell Group)	-Cabazon Pass Wind Park; CA	41 MW	Wind	ND	5/17/02; Cabazon expected to go online in August 2002. 8/30/02; Cabazon and Whitewater Hill, include 103 wind turbines that can generate electricity for more than 55,000 homes are now online. The electricity will be sold to the state Department of Water Resources under 11 1/2-year contracts worth \$204 million, said Oscar Hidalgo, Water Resources spokesman. <i>(Completed)</i>
Shell WindEnergy (Amsterdam, Netherlands) (subsidiary of Royal Dutch/Shell Group)	Whitewater Hill Wind Park;	61.5MW	Wind	ND	7/23/02; Shell acquires Whitewater Hill Wind project from CPC Development Corp. Generation of power scheduled to start in August 2002. 8/30/02; Cabazon and Whitewater Hill, include 103 wind turbines that can generate electricity for more than 55,000 homes are now online. The electricity will be sold to the state Department of Water Resources under 11 1/2-year contracts worth \$204 million, said Oscar Hidalgo, Water Resources spokesman. <i>(Plant Sale)</i>

RENEWABLES INFOGRID

Company Name (including partners or associates)	Name and location of facility	Size	Type of Energy	Price	Construction or Sale Information
Shell WindEnergy (Amsterdam, Netherlands) (subsidiary of Royal Dutch/Shell Group)	Llano Estacado Wind Ranch; NM	80MW	Wind	\$30M	June 1999 ; Plant begins operations. 1/25/02 ; Plant purchased from Cielo Wind Power; start of plant's commercial operations. <i>(Plant Sale)</i>
Southern California Cities (6 cities) (Southern CA)	Magnolia Power Project (MPP); CA	310MW	Wind	\$234M	6/10/03 ; The mayors and utility officials for six Southern California cities participating in the MPP marked the start of two years of construction work with a ground breaking and tree planting ceremony. When completed in 2005 the plant will serve as a reliable and lower-cost electricity resource or now only Burbank but also Anaheim, Glendale, Pasadena, Cerritos and Colton. <i>(Construction)</i>
Southern California Edison Company (Rosemead, CA)	-San Geronio Pass; CA -Tehachapi facility; CA	421.1MW 620.19MW	Wind Wind	ND	Turbines have been built from 1980's – present. Replacement of older turbines underway. <i>(Completed)</i>
State of California private consortium	Solar Two Power Plant; CA	10MW	Solar	\$48.5M	9/18/01 ; Plant developed by government / private efforts. <i>(Completed)</i>
Tad's Enterprises (Reno, NV)	Wabuska 1 power plant; NV Wabuska 2 power plant; NV	1MW 1MW	Geo Geo	ND	1984 ; Plant completed; operations begin. 1987 ; Plant completed; operations begin. <i>(Completed)</i>
Tanadgusix Corporation (Anchorage, AK)	St. Paul Island plant; AK	0.225MW	Wind	\$900,000	March 1999 ; Plant goes online. <i>(Completed)</i>
Thermo Ecotek Corporation (subsidiary of Thermo Electron Corporation) (Waltham, MA)	Delano Facility; CA (Sale price reflects three plants total as part of the package, two of which were non-renewable fuel and are listed in the Generation Infogrid)	50MW	Biomass	\$257M	7/31/01 ; AES Corporation (Arlington, VA) completes final phase of acquisition. <i>(Completed)</i>

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Company Name (including partners or associates)	Name and location of facility	Size	Type of Energy	Price	Construction or Sale Information
<p>Tennessee Valley Authority (TVA) (Knoxville, TN) and Invenergy (Chicago, IL)</p>	<p>Buffalo Mountain Wind Park; TN</p>	<p>2MW add 27MW more</p>	<p>Wind</p>	<p>ND</p>	<p>1/14/03; TVA signed a 20-year power purchase agreement with Invenergy to add 27MW of wind power to the two-megawatt Buffalo Mountain wind park near Oliver Springs, TN.</p> <p>7/29/03; Plan for a wind farm atop Buffalo Mountain have been changed a bit, and the project has been delayed but is still proceeding. Invenergy is dropping the number of wind turbines it will build from 18 to 15.</p> <p><i>(Construction)</i></p>
<p>Tucson Electric Power Company (subsidiary of UniSource Energy Corporation) (Tucson, AZ)</p>	<p>Springerville Generating Station; AZ</p>	<p>2.4MW</p>	<p>Solar</p>	<p>ND</p>	<p>10/1/01; TEP surpasses the 1 MW capacity milestone in photovoltaic solar generation with the installation of 695 kW of solar panels.</p> <p>12/10/02; Tucson Electric Power Company has activated the most recent additions to its record-setting solar array near Springerville, Ariz., increasing the system's energy output to 2.4 MW.</p> <p>2/10/03; Global Solar Energy recently signed a contract with Tucson Electric Power (TEP) to add more than 1 megawatt (MW) of photovoltaic modules this year to the company's 2.4 MW solar array in eastern Arizona.</p> <p><i>(Completed)</i></p>
<p>U.S. Corps of Engineers Savannah District, GA</p>	<p>Richard B. Russell Hydroelectric Dam; GA</p>	<p>648MW</p>	<p>Hydro</p>	<p>\$620M</p>	<p>8/14/02; Dam scheduled to begin operations; power to be marketed to Southern Company, Duke and Santee.</p> <p><i>(Completed)</i></p>

RENEWABLES INFOGRID

Company Name (including partners or associates)	Name and location of facility	Size	Type of Energy	Price	Construction or Sale Information
U.S. Government/Private Hydroelectric Projects in the Pacific Northwest	LISTED BY STATE:				
	<u>California</u>				
	Belden	125MW	Hydro	ND	Belden-Owned by Pacific Gas & Electric
	Butt Valley	40MW			Butt-Owned by Pacific Gas & Electric
	Caribou 1	185MW			Caribou 1-Owned by Pacific Gas & Electric
	Caribou 2	195MW			Caribou 2-Owned by Pacific Gas & Electric
	Coleman	13MW			Coleman-Owned by Pacific Gas & Electric
	Copco 1	20MW			Copco 1-Owned by PacifiCorp
	Copco 2	27MW			Copco 2-Owned by PacifiCorp
	Hamilton Branch	5MW			Hamilton-Owned by Pacific Gas & Electric
	Hat Creek 1	20MW			Hat 1-Owned by Pacific Gas & Electric
	Hat Creek 2	17MW			Hat 2-Owned by Pacific Gas & Electric
	Inskip	8MW			Inskip-Owned by Pacific Gas & Electric
	Iron Gate	18MW			Iron Gate-Owned by PacifiCorp
	James B. Black	172MW			James-Owned by Pacific Gas & Electric
	Keswick	75MW			Keswick-Owned by U.S. Gov't
	Muck Valley	29MW			Muck-Owned by CHI West
	Pit 1	61MW			Pit 1-Owned by Pacific Gas & Electric
	Pit 3	70MW			Pit 3-Owned by Pacific Gas & Electric
	Pit 4	95MW			Pit 4-Owned by Pacific Gas & Electric
	Pit 5	156MW			Pit 5-Owned by Pacific Gas & Electric
	Pit 6	80MW			Pit 6-Owned by Pacific Gas & Electric
	Pit 7	112MW			Pit 7-Owned by Pacific Gas & Electric
	Shasta	422MW			Shasta-Owned by US Gov't
	Spring Creek	150MW			Spring-Owned by US Gov't
Trinity	106MW			Trinity-Owned by US Gov't	
Volta 1	6MW			Volta 1-Owned by Pacific Gas & Electric	
Volta 2	10MW			Volta 2-Owned by Pacific Gas & Electric	

RENEWABLES INFOGRID

Company Name (including partners or associates)	Name and location of facility	Size	Type of Energy	Price	Construction or Sale Information
U.S. Government/Private (Continued)	IDAHO		Hydro	ND	<p>Albeni-Owned by US Gov't American Falls-Owned by Idaho Power 1950-Anderson begins operation; operated by U.S. Bureau of Reclamation</p> <p>Ashton-Owned by PacifiCorp 1925-Black Canyon begins operation; operated by U.S. Bureau of Reclamation Bliss-Owned by Idaho Power Company Brownlee-Owned by Idaho Power Company 1952-Cabinet built; owned by Avista Corp. Cascade-Owned by U.S. Gov't Cascade private-Owned by Idaho Power CJ-Owned by Idaho Pwr Co Cove-Owned by PacifiCorp Dworshak-Owned by U.S. Gov't Felt-Owned by Fall River Electric Co-op Grace-Owned by PacifiCorp Hells Canyon-Owned by Idaho Power Corp. Idaho Falls-Owned by U.S. Gov't. Low Line-Owned by Twin Falls Canal Co. Lower Malad-Owned by Idaho Power Company Lower Salmon-Owned by Idaho Power Co. Milner-Owned by Idaho Power Co. 1909-Minidoka begin operation; operated by U.S. Bureau of Reclamation Oneida-Owned by PacifiCorp Oxbow-Owned by Idaho Power Co.</p> <p>1957-Palisades begin operation; operated by U.S. Bureau of Reclamation</p> <p>Post Falls-Owned by Avista Corp.</p>
	Albeni Falls	43MW			
	American Falls	92MW			
	Anderson Ranch	40000kW			
	Ashton	6MW			
	Black Canyon	10200kW			
	Bliss	75MW			
	Brownlee	585MW			
	Cabinet Gorge	200MW			
	Cascade	12MW			
	Cascade-private	12MW			
	CJ Strike	83MW			
	Cove	8MW			
	Dworshak	400MW			
	Felt	8MW			
	Grace	33MW			
	Hells Canyon	392MW			
	Idaho Falls	19MW			
	Low Line	8MW			
	Lower Malad	14MW			
	Lower Salmon	60MW			
	Milner	60MW			
	Minidoka	27700kW			
	Oneida	39MW			
	Oxbow	190MW			
	Palisades	176,564kW			
	Post Falls	15MW			

RENEWABLES INFOGRID

Company Name (including partners or associates)	Name and location of facility	Size	Type of Energy	Price	Construction or Sale Information
U.S. Government/Private (Continued)	IDAHO – Continued	12MW			
	Shoshone Falls	14MW			Shoshone-Owned by Idaho Power Co.
	Soda	27MW			Soda-Owned by PacifiCorp
	Swan Falls	9MW			Swan Falls-Owned by Idaho Power Co.
	Thousand Springs	14MW			Thousand Sprgs-Owned by Idaho Power Co.
	Twin Falls	8MW			Twin Falls-Owned by Idaho Power Co.
	Upper Malad	35MW			Upper Malad-Owned by Idaho Power Co.
	Upper Salmon		Hydro	ND	Upper Salmon-Owned by Idaho Power Co.
	<u>Montana</u>				
	Black Eagle	18MW			Black Eagle-Owned by PPL Montana
	Canyon Ferry	50MW			Canyon-Owned by US Govt
	Cochrane	50MW			Cochrane-Owned by PPL Montana
	Fort Peck	185MW			Ft Peck-Owned by US Govt
	Hauser Lake	17MW			Hauser Lake-Owned by PPL Montana
	Holter	48MW			Holter-Owned by PPL Montana
	Hungry Horse	42800kW			Madison-Owned by PPL Montana
	Kerr	168MW			Morony-Owned by PPL Montana
	Libby	525MW			Mystic-Owned by PPL Montana
	Madison	9MW			1959-Noxon built; owned by Avista Corp.
	Morony	50MW			Rainbow-Owned by PPL Montana
	Mystic Lake	12MW			Ryan-Owned by PPL Montana
	Noxon Rapids	460MW			Thompson Falls-Owned by PPL Montana
	Rainbow	35MW			Yellowtail-Owned by U.S. Gov't
	Ryan	60MW			
	Thompson Falls	90MW			
	Yellowtail	250MW			

RENEWABLES INFOGRID

Company Name (including partners or associates)	Name and location of facility	Size	Type of Energy	Price	Construction or Sale Information
U.S. Government/Private (Continued)	OREGON		Hydro	ND	
	Big Cliff	18MW			Big Cliff-Owned by U.S. Gov't.
	Bonneville	1070MW			Bonneville-Owned by U.S. Gov't
	Bull Run	21MW			Bull Run-Owned by Portland General Electric
	Carmen	120MW			Carmen-Owned by Eugene Water & Electric
	Clearwater	41MW			Clearwater-Owned by PacifiCorp
	Cougar	25MW			Cougar-Owned by U.S. Gov't
	Detroit	100MW			Detroit-Owned by U.S. Gov't
	Dexter	15MW			Dexter-Owned by U.S. Gov't
	Faraday	34MW			Faraday-Owned by Portland General Electric
	Fish Creek	11MW			Fish Owned by PacifiCorp
	Foster	20MW			Foster-Owned by US Gov't
	Green Peter	80MW			Green Peter-Owned by U.S. Gov't
	Green Springs	17290kW			1960 -Green Springs begins operation;owned by US Gov't
	Hills Creek	30MW			Hills Creek-Owned by U.S. Gov't
	John Boyle	80MW			John Boyle-Owned by PacifiCorp
	John Day	2160MW			John Day-Owned by U.S. Gov't
	Leaburg	15MW			Leaburg-Owned by Eugene Water & Electric
	Lemolo 1	62MW			Lemolo 1-Owned by PacifiCorp
	Lemolo 2	62MW			Lemolo 2-Owned by PacifiCorp
	Lookout Point	120MW			Lookout Pt.-Owned by U.S. Gov't
	Lost Creek	49MW			Lost Creek-Owned by U.S. Gov't
	McNary	980MW			McNary-Owned by U.S. Gov't
	North Fork	38MW			No. Fork-Owned by Portland General Electric
	Oak Grove	51MW			Oak Grove-Owned by Portland General Electric
	Pelton	108MW			Pelton-Owned by Portland General Electric
	Portland Hydro Project	36MW			Portland Hydro Project-Owned by City of Portland

RENEWABLES INFOGRID

Company Name (including partners or associates)	Name and location of facility	Size	Type of Energy	Price	Construction or Sale Information
U.S. Government/Private (Continued)	OREGON – Continued	6MW	Hydro	ND	Powerdale-Owned by PacifiCorp Prospect 1-Owned by PacifiCorp Prospect 2-Owned by PacifiCorp Prospect 3-Owned by PacifiCorp Prospect 4-Owned by PacifiCorp River Mill-Owned by Portland General Electric Round Butte-Owned by Portland General Electric Slide Creek-Owned by PacifiCorp Soda Sprgs-Owned by PacifiCorp Stone Creek-Owned by Eugene Water & Electric Sullivan-Owned by Portland General Electric The Dalles-Owned by U.S. Gov't Toketee-Owned by PacifiCorp Trail Bridge-Owned by Eugene Water & Electric Walterville-Owned by Eugene Water & Electric Warm Springs-Owned by Warm Springs Power
	Powerdale	44MW			
	Prospect 1	44MW			
	Prospect 2	44MW			
	Prospect 3	44MW			
	Prospect 4	19MW			
	River Mill	247MW			
	Round Butte	18MW			
	Slide Creek	11MW			
	Soda Springs	12MW			
	Stone Creek	15MW			
	Sullivan	1807MW			
	The Dalles	42MW			
	Toketee	10MW			
	Trail Bridge	9MW			
	Walterville	19MW			
	Warm Springs				

RENEWABLES INFOGRID

Company Name (including partners or associates)	Name and location of facility	Size	Type of Energy	Price	Construction or Sale Information
U.S. Government/Private (Continued)	<u>WASHINGTON</u>		Hydro	ND	
	Alder	50MW			1945 – Alder completed; owned by Tacoma Power
	Boundary	1051MW			Boundary-Owned by Seattle City Light.
	Box Canyon	77MW			1956 – Box Canyon completed; owned by Pend Oreille Co. PUD
	Cedar Falls	23MW			Cedar Falls - Owned by Seattle City Light
	Chandler	6.0MW			1956 – Chandler completed
	Chief Joseph	2512MW			Chief Joe - US Gov't owned
	Condit	10MW			Condit-Owned by PaciCorp
	Cowlitz Falls	70MW			Cowlitz-Owned by Lewis Co. PUD
	Cushman 1	43.2MW			1924-Cushman 1 completed; owned by Tacoma City Light
	Cushman 2	81MW			1930-Cushman 2 completed; owned by Tacoma City Light
	Diablo	122MW			Diablo owned by Seattle City Light
	Electron	26MW			Electron owned by Puget Power

RENEWABLES INFOGRID

Company Name (including partners or associates)	Name and location of facility	Size	Type of Energy	Price	Construction or Sale Information
U.S. Government/Private (Continued)	Elwha	12MW	Hydro		Elwha-Owned by James River Corp.
	Glines Canyon	12MW			Glines-Owned by James River Corp.
	Gorge	207MW			Gorge owned by Seattle City Light
	Grand Coulee	see info to right			1942 -Coulee completed with original 1,974,000 kW.
	HM Jackson	112MW			HM owned by Snohomish Co. PUD
	Ice Harbor	603MW			Ice-Owned by U.S. Gov't.
	Koma Kulshan	12MW			Koma-Owned by Koma Kulshan Assoc.
	LaGrande	64MW			1912/1945 -LaGrande completion dates;owned by Tacoma Power
	Lake Chelan	56MW			1928 -Lake Chelan became operational;owned by Chelan Company PUD
	Little Falls	32MW			1910 -Little Falls completed; owned by Avista Corp.
	Little Goose	810MW			Little-U.S. Gov't owned
	Long Lake	70MW			1916 - Long Lake completed;owned by Avista
	Lower Baker	64MW			Lower Baker owned by Puget Sound Power
	Lower Granite	810MW			Lwr. Gr.-U.S. Gov't owned
	Lower Monumental	810MW			Lwr. Mn-U.S. Gov't owned
	Mayfield	162MW			1963 - Mayfield began operation; owned by Tacoma Power
	Merwin	136MW			Merwin-Owned by PacifiCorp
	Monroe Street	15MW			1890 – Monroe completed; re-developed in 1990; owned by Avista Corp.
	Mossyrock	300MW			1968 ; Mossyrock began operations; owned by Tacoma Power
	Naches 2	2MW			Naches 2-Owned by PacifiCorp
	Naches Drop	6MW			Naches Drop-Owned by PacifiCorp
	Nine Mile	12MW			1908 – Nine Mile completed; re-developed in 1993-94; owned by Avista
	Packwood Lake	26MW			Packwood owned by WA Public Power Supply
	Priest Rapids	891MW			Priest-Owned by Grant Co. PUD
	Rock Island	660MW			1933 -Rock Island became operational;owned by Chelan Co. PUD

RENEWABLES INFOGRID

Company Name (including partners or associates)	Name and location of facility	Size	Type of Energy	Price	Construction or Sale Information
U.S. Government/Private (Continued)	Rocky Reach	1287MW	Hydro	ND	<p>1961-Rocky Reach began operations; owned by Chelan Ross-Owned by Seattle City Light 1958-Roza began operation; U.S. Gov't owned Snoqualmie-Owned by Puget Sound Power Swift 1-Owned by Pacific Power & Light Swift 2-Owned by PacifiCorp Tieton-Owned by Yakima-Tieton Irrigation District Twin Falls-Owned by CHI West Upper Baker-Owned by Puget Sound Power Upper Falls-Owned by Avista Corp. Wanapum-Owned by Grant County PUD 1967-Wells placed into service; owned by PUD No.1 of Douglas County White River-Owned by Puget Sound Power 1972-Wynoochee built; owned by Tacoma Pwr Yale-Owned by Pacific Pwr. and Light Yelm-Owned by City of Centralia</p>
	Ross	360MW			
	Roza	12,937kW			
	Snoqualmie Falls	42MW			
	Swift 1	204MW			
	Swift 2	70MW			
	Tieton	13.6MW			
	Twin Falls	24MW			
	Upper Baker	94MW			
	Upper Falls	10MW			
	Wanapum	1017MW			
	Wells	840MW		\$202M	
	White River	70MW			
	Wynoochee	10MW			
	Yale	108MW			
Yelm	12MW				
U.S. Government/Private (Continued)	<u>WYOMING</u>		Hydro	ND	<p>Alcova-Owned by US Gov't Boysen-Owned by US Govt Fontenelle-Owned by U.S. Gov't Fremont-Owned by U.S. Gov't Glendo-Owned by U.S. Gov't Guernsey-Owned by U.S. Gov't Heart Mtn-Owned by U.S. Gov't Kortess-Owned by U.S. Govt Seminoe-Owned by U.S. Gov't Shoshone-Owned by U.S. Gov't</p>
	Alcova	36MW			
	Boysen	15MW			
	Fontenelle	10MW			
	Fremont Canyon	67MW			
	Glendo	38MW			
	Guernsey	5MW			
	Heart Mountain	5MW			
	Kortess	36MW			
	Seminoe	51MW			
Shoshone	3MW				

RENEWABLES INFOGRID

Company Name (including partners or associates)	Name and location of facility	Size	Type of Energy	Price	Construction or Sale Information
U.S. WindForce (Baden, PA)	Savage Mountain wind energy project; MD	40MW	Wind	ND	2/17/03; U.S. WindForce will build the Savage Mountain wind energy project in Allegany and Garrett Counties, MD on a site currently used as a coal strip mine. <i>(Construction)</i>
Utah Municipal Power Agency (Spanish Fork, UT)	Bonnett power plant; UT	10MW	Geo	ND	1985; Construction completed; operations begin <i>(Completed)</i>
Utilicorp United (Kansas City, KS) and FPL Group, Inc. (Juno Beach, FL) (through FPL Energy, LLC)	Gray County Wind Farm; KS (170 wind turbines)	110MW	Wind	ND	8/21/01; Activation of the first operational turbines; completion of remainder expected by end of 2001. 12/17/01; Plant dedication and official opening ceremony held. <i>(Completed)</i>
Vestas American Wind Technology (Portland, OR) (subsidiary of Vestas Wind Systems (Ringkøbing, Denmark)	Portland wind facility; OR	ND	Wind	ND	8/22/02; Negotiations for construction and staffing are in final stages. Plant is expected to begin operation mid-2003 and reach full capacity at the start of 2004. 12/18/02; Vestas Wind Systems indicated late last month that delays by the U.S. Congress in extending tax credits for wind production forced the Danish company to postpone plans calling for the construction of a manufacturing plant that would have opened next year and employed as many as 1,000 workers by early 2004. 4/13/03; With Washington and Oregon suffering from the nation's worst unemployment rates, the Denmark-based company announced it would break ground on a Portland manufacturing plant that would soon employ 1,000 people. <i>(Construction)</i>
Westerville Electric (Westerville, OH) and FuelCell Energy, Inc.	City of Westerville; OH	250kW	Fuel Cell	\$1.3M	2/28/03; Space-age technology will light Westerville homes by autumn, when a fuel cell begins producing pollution-free electricity. <i>(Construction)</i>
Xcel (Minneapolis, MN) and Cielo Wind Power (Austin, TX)	Llano Estacado Wind Ranch; NM	660kW	Wind	ND	11/18/02; Turbines are expected to be completed by April 2003. <i>(Construction)</i>

RENEWABLES INFOGRID

Company Name (including partners or associates)	Name and location of facility	Size	Type of Energy	Price	Construction or Sale Information
York Power Funding (who took control of the plant as a result of the bankruptcy of the York Research Corporation)	Big Spring WindPower Project I; TX	34MW	Wind	ND	1/15/02; ArcLight Capital Partners, LLC announced that it has acquired the 34 megawatt Big Spring electric power generating facility located in Big Spring, Texas. (Plant sale)

MANUFACTURERS APPENDIX

Company	Description of Activity	News, Additional Information
<p>Aluminum-Power, Inc. Toronto, Ontario, CANADA</p> <p>www.aluminum-power.com</p> <p>Manufacture: Aluminum air fuel cells</p>	<p>Developer and producer of aluminum air fuel cell with technology that offers high, sustained power over extended periods.</p> <p>The fuel cell derives its power from a solid-state fuel and because of the relative density of its power source, more energy can be liberated over a much longer period of time at a considerably reduced cost.</p>	<p>7/10/01 <i>Fuel Cell Online</i>, aluminum – the latest fuel in the power revolution.</p> <p>6/22/01 <i>Popular Science</i>, Battery for blabbers.</p> <p>6/22/01 <i>KiplingerForecasts.com</i>, aluminum fuel cells have power to spare.</p> <p>6/19/01 Trimol Group and Aluminum-Power open fuel cell research and development center to further develop aluminum-air fuel cell technology.</p>
<p>Angstrom Power North Vancouver, B.C.</p> <p>www.angstrompower.com</p> <p>Manufacture: Micro-structured fuel cells</p>	<p>Angstrom is a developer of micro-structured fuel cells targeting a variety of applications. The company was formed to commercialize technology developed at the University of Victoria by Dr. Gerard McLean and is applying micro-fabrication techniques to create a fuel cell system using novel architecture and manufacturing techniques.</p>	<p>5/1/02 Vancouver fuel cell developer secures US \$2.85M in financing. Chrysalix Energy and Ventures West lead first round.</p>

RENEWABLES INFOGRID

Company	Description of Activity	News, Additional Information
<p>Astris Energi, Inc. Mississauga, Ontario CANADA</p> <p>www.astrisfuelcell.com</p> <p>Manufacture: Fuel cells</p>	<p>Developer of both mobile and stationary fuel cells, fuel cell power generators and ancillary products for industrial, commercial, educational, scientific, transportation and similar applications.</p> <p>The company's focus is to penetrate existing portable and other small generator markets with quiet, odorless, non-polluting and highly efficient fuel cell generators in those niches in which they can compete economically.</p>	<p>12/19/02 Astris Energi Inc. has been notified that the Superior Court of Justice of Ontario, which last month dismissed a lawsuit against the company, has awarded a net of \$81,000 to Astris after a review of claims for costs submitted by both parties.</p> <p>6/14/02 Astris Energi reports discussions under way with nine foreign fuel cell prospects.</p> <p>5/9/02 Astris Energi wins research grant.</p> <p>3/12/02 Astris Energi introduces production grade alkaline fuel cell stack.</p> <p>2/22/02 Six foreign companies considering Astris Energi alkaline fuel cells.</p> <p>1/14/02 Astris Energi in negotiation on two fuel cell joint ventures.</p>
<p>AstroPower, Inc. (Newark, DE)</p> <p>www.astropower.com</p> <p>Manufacture: Photovoltaics</p>	<p>Utilization of recycled semiconductor wafers to make single crystal silicon solar cells. Apex is the company's proprietary second generation solar power technology, and is being scaled up in the new Pencader plant. A third generation technology is under development and will constitute the next generation of Silicon-Film offering more functionality, lower pricing and better performance than Apex .</p>	<p>8/6/03 AstroPower, Inc. announced a measure designed to align its cost structure with market conditions and current revenues. In an effort to control costs, the company has reduced its workforce by 10% through a layoff of approximately 55 employees. This brings AstroPower's current number of employees to approximately 500.</p> <p>12/19/02 AstroPower, Inc. announced that Standard & Poor's will upgrade the company to a value stock when S&P makes its semi-annual changes to the S&P SmallCap 600 index. The change will be made after the market close on Friday, December 20, 2002.</p> <p>11/12/02 AstroPower, Inc. announced that it has introduced a new line of residential solar electric power systems featuring solar power arrays that fully integrate into a home's roof.</p> <p>11/4/02 AstroPower, Inc. reported financial results for the third quarter ended September 30, 2002. For the quarter ended September 30, 2002, total revenues were a record \$23.0 million, an increase of 25.0% from the third quarter of 2001.</p>

RENEWABLES INFOGRID

Company	Description of Activity	News, Additional Information
<p>Avista Laboratories, Inc. Spokane, WA</p> <p>www.avistalabs.com</p> <p>Manufacture: Fuel cells</p>	<p>Developer of proton exchange membrane fuel cells. The fuel cell generator has the potential to provide many homes, businesses and commercial buildings with a custom, local power source.</p>	<p>11/4/02 Avista Labs and Airgas, Inc., the largest U.S. distributor of industrial, specialty and medical gases, announced an agreement for Airgas to offer a hydrogen fuel supply to Avista Labs' commercial and industrial fuel cell customers.</p> <p>10/22/02 Avista Labs announced it has reached an agreement with SGS Future s.r.l. for distribution of Avista's fuel cells in Italy. The first installation is scheduled to be a mountaintop facility, in recognition of the International Year of the Mountains, being celebrated in 2002.</p>

RENEWABLES INFOGRID

Company	Description of Activity	News, Additional Information
<p>Ballard Power Systems, Inc. Burnaby, BC CANADA</p> <p>www.ballard.com</p> <p>Manufacture: Fuel cells</p>	<p>Development, manufacturing and commercialization of next generation transportation fuel cell engines for buses, cars and trucks; integration of fuel cell stacks into fuel cell stationary power plants; and development of a range of fuel cell power products that provide reliable, clean and high quality power for the below one megawatt capacity market.</p>	<p>8/18/03 Ballard Power Systems introduced the Nexa® RM Series, its hydrogen fueled stationary fuel cell power generator. Developed to meet the needs of the uninterruptible power system (UPS) and telecommunications power markets, the Nexa® RM Series is based on the technology developed from Ballard's first commercial fuel cell product - the Nexa® power module.</p> <p>7/29/03 Ballard Power Systems reported its financial results for the second quarter ending June 30, 2003. Ballard's revenue in the second quarter ending June 30, 2003 was \$29.1 million, up 36% compared to \$21.5 million for the same period in 2002. Revenues for the six months ended June 30, 2003 were \$62.2 million compared to \$33.6 million for the same period in 2002.</p> <p>6/8/03 Ballard Power Systems fuel cell power trains will power a fleet of five Ford Focus fuel cell vehicles, in Vancouver, in a three year field trial program to begin early in 2004. This demonstration is a collaboration between Fuel Cells Canada, Ford Motor Company and the Provincial and Federal Governments.</p> <p>1/16/03 UQM TECHNOLOGIES, INC. announced that it has received a follow-on order from Ballard Power Systems for additional fuel cell compressor drive motors.</p> <p>12/11/02 and 12/18/02 Ballard Power Systems announced that it has successfully completed the issuance of 7.7 million common shares of Ballard to an underwriting syndicate led by RBC Capital Markets and CIBC World Markets, with BMO Nesbitt Burns, National Bank Financial, TD Securities and UBS Bunting Warburg.</p> <p>11/25/02 Ballard Power Systems has received a US \$1.88 million order from a new automotive customer for Ballard's fuel cell engine and support services. The contract will include Ballard's light-duty fuel cell engine, featuring the Mark 902 fuel cell module, application engineering, integration and vehicle launch support.</p>
<p>Bergey Windpower Co., Inc. Norman, OK</p> <p>www.bergey.com</p> <p>Manufacture: Wind turbines</p>	<p>Bergey Windpower is the world's leading supplier of small wind turbines. With installations in all 50 States and more than 90 countries, Bergey wind turbines have proven to be the best-built and most rugged turbines available. Design and manufacture of wind generators in sizes 850, 1,500 and 10,000 watts.</p>	<p>8/4/01 Target begins on-line sales of Bergey Wind Turbine.</p> <p>7/5/01 Federal tax credit proposed.</p> <p>2/13/01 California electricity crisis spurs sales of home wind energy systems.</p>

RENEWABLES INFOGRID

Company	Description of Activity	News, Additional Information
<p>Blue Energy Canada Inc. Vancouver, BC CANADA</p> <p>www.bluenergy.com</p> <p>Manufacture: Hydro turbines/ocean power</p>	<p>Designers and manufacturers of the Davis Hydro Turbine. The system works like an underwater windmill, forming a tidal fence in the water, and is environmentally friendly.</p>	<p>5/4/02 Blue Energy receives Funding Memorandum of Understanding (MOU), notes rising interest in ocean energy sector.</p> <p>5/3/02 BC Scientific Panel highlights potential of tidal-current energy generation.</p> <p>1/10/02 BC Hydro commissions Tidal Current Energy Assessment of British Columbia coast.</p>

RENEWABLES INFOGRID

Company	Description of Activity	News, Additional Information
<p>BP Solar Linthicum, MD</p> <p>www.bpsolar.com</p> <p>Manufacture: Photovoltaics</p>	<p>BP Solar manufactures, designs, markets, and installs a wide range of photovoltaic solar electric products and systems. Our products and solutions are well suited for residential, commercial, and industrial applications for remote and grid-connected systems.</p>	<p>8/20/03 GE Wind Energy GmbH announced on the 30th of July that its design and assembly facility will utilize a new photovoltaic ("PV") system that may be the first of its kind in Germany. Lower Saxony's Minister of the Environment, Hans Heinrich Sander, successfully inaugurated the new system, designed and installed by BP Solar, during a ceremony attended by political, business and media representatives.</p> <p>8/6/03 BP announced the appointment of Steve Westwell as president and business unit leader for BP Solar. He will report to John Mogford, BP group vice president, Renewables and Alternatives who previously held the position.</p> <p>2/4/03 BP Solar announced that it will market to California homeowners a total solar energy solution that will reduce or eliminate monthly electricity bills, enhance energy independence, and help clean the environment through the production of emissions-free electricity using the power of the Sun.</p> <p>6/14/02 Committed to cleaner environment, BP begins selling ultra low sulfur diesel in Calif.; converts ARCO sites to solar.</p> <p>6/10/02 BP brings cleaner gasoline to Colorado.</p>
<p>Cielo Wind Power, LLC Austin, TX</p> <p>www.cielowind.com</p> <p>Manufacture: Wind</p>	<p>Cielo Wind Power, LLC develops, constructs, and maintains utility-grade wind power projects. With field offices in McCamey and White Deer, Texas, Austin-based Cielo Wind Power is the largest wind developer in the Southwest and has the largest development staff dedicated solely to cost-effective and environmentally responsible wind project development.</p>	<p>8/27/03 Caprock Wind, LP plans to install up to 80 MW of wind-driven turbine generators about 20 miles southeast of Tucumcari within the next 12 months—to convert wind energy into electricity that will be sold to customers of Xcel Energy.</p> <p>7/11/03 Leading wind developer Cielo Wind Power LLC, the development arm of Texas Wind Power Company is preparing to begin construction of the 160 Megawatt (MW) Brazos Wind Ranch in Texas.</p> <p>7/24/02 TXU Energy and Cielo Wind Power announced an agreement which will result in the construction of a 240-megawatt wind farm in West Texas. Cielo Wind Power will construct the project and TXU Energy will purchase the power. TXU Energy is a unit of Dallas-based TXU Corp.</p>
<p>Dais-Analytic Corporation Odessa, FL</p> <p>www.daisanalytic.com</p> <p>Manufacture: Fuel cells</p>	<p>Developer/distributor of distributed generation fuel cell systems for homes and small businesses as well as portable fuel cells for backup and standby generators, UPS, and hybrid fuel cell/battery electric utility vehicles. Its patented technologies include low-cost fuel cell membranes that are also being developed for dehumidification applications.</p>	<p>4/8/02 ChevronTexaco Technology Ventures expands organizational capability in fuel cells and fuel processing. Company acquires Dais-Analytic Corporation's fuel cell and fuel processing expertise.</p> <p>11/2/00 Fuel cell developer Dais-Analytic announces joint venture with LG-Caltex Oil, KIPLEX.</p>

RENEWABLES INFOGRID

Company	Description of Activity	News, Additional Information
<p>DCH Technology, Inc. Valencia, CA</p> <p>www.dcht.com</p> <p>Manufacture: Fuel cells and hydrogen technologies</p>	<p>Development of fuel cells; manufacturing of hydrogen gas detectors and monitoring equipment.</p>	<p>5/15/02 DCH ships 5kW fuel cell to Con Edison for testing, customer evaluations.</p> <p>4/11/02 Contract launches DCH H2SCAN™ sensor in semiconductor market.</p> <p>3/27/02 DCH receives key sensors order from major defense contractor.</p>
<p>Duke Solar Energy, LLC Charlotte, NC</p> <p>www.dukesolar.com</p> <p>Manufacture: Photovoltaics</p>	<p>Duke Solar Energy, LLC is the leading provider in the design, manufacturing, integration and deployment of solar thermal renewable energy systems that address the cooling, heating and power needs of residential and commercial markets. By utilizing their unique architectural designs, construction experience, proprietary solar technologies and worldwide experience in the energy and environmental engineering, Duke Solar will deliver highly energy efficient, cost-effective renewable energy products or project.</p>	<p>12/20/02 Sierra Pacific Resources announced that its two Nevada-based utility subsidiaries have signed long-term contracts with Duke Solar Energy LLC to supply 50 megawatts* of electricity generated by solar power from a plant to be located in Eldorado Valley, near Boulder City, Nev.</p>
<p>EnAble Fuel Cell Corporation Valencia, CA</p> <p>www.dcht.com</p> <p>Manufacture: Fuel cells</p>	<p>Development of an air-breathing proton exchange membrane (PEM) fuel cell, a simple, clean and reliable energy device for low power needs.</p> <p>A probable source of efficient and effective power source for many portable electric power requirements.</p>	<p>6/5/01 Zap forms fuel cell partnership with DCH Technology subsidiary, EnAble Fuel Cell Corp.</p> <p>4/5/01 State demonstrates 'energy of the future'.</p>
<p>Energy 2001, Inc. Reno, NV</p> <p>fitzener@nvcbell.net</p> <p>Manufacture: Green energy</p>	<p>A company specializing in green energy from the methane generated in landfills. It has three generating plants:</p> <ul style="list-style-type: none"> -A hydroelectric plant on the middle fork of the American River, Foresthill, CA., utilizing a Pelton Wheel Turbine. -Small power plant at the sewage treatment plant in Auburn, CA. -Small power plant at the Western Regional Landfill in Lincoln, CA, utilizing a modified, cleanburn Enterprise Engine. <p>The company has also applied for, and received a preliminary permit from FERC for a hydroelectric facility on Lake Clementine, Auburn, CA.</p>	

RENEWABLES INFOGRID

Company	Description of Activity	News, Additional Information
<p>Energy Photovoltaics, Inc. Princeton, NJ</p> <p>www.epv.net</p> <p>Manufacture: Photovoltaics</p>	<p>EPV's core product is an integrated manufacturing system for the production of amorphous silicon (a-Si) thin-film photovoltaic modules (a "PV-IMS"). The PV-IMS incorporates a license to utilize EPV's proprietary technology and know-how with all of the manufacturing equipment required to manufacture a-Si PV modules of a high quality at a relatively low cost. EPV also provides the installation, commissioning, training, and warranty for the system. The customer provides the facility and supporting infrastructure to house and operate the PV-IMS, and a program suitable for the local markets to sell the manufactured PV modules.</p>	<p>7/19/01 New Jersey company announces \$22M European joint venture.</p>
<p>Enovo LLC Belmont, CA</p> <p>www.enovo.com</p> <p>Manufacture: Waste-to-energy fuels</p>	<p>Enovo™ is a waste gasification, waste-to-energy/fuels and environmental services company. Enovo's patented & patent-pending "<i>Waste Converters™</i>" enable the environmentally-friendly conversion of carbon-based ("carbonaceous") wastes (solid, liquid & gaseous), hydro-carbons and problematic energy sources like high-sulfur coal into clean fuels: very pure hydrogen or synthesis gas ("syngas"). The fuels can then be used to run low-emission gas turbines, micro-turbines and clean combustion engines to generate "green" energy/electric power (effectively at zero cost); or, the produced fuels can be sold to refiners, and fuel-cell manufacturers, [petro]chemical firms, etc.</p>	
<p>enXco (North Palm Springs, CA)</p> <p>www.enxco.com</p> <p>Manufacture: Wind Turbines</p>	<p>The enXco company has built more than 4,000 turbines in the United States and is working on projects worldwide.</p>	
<p>ERA Power Company Topton, PA</p> <p>www.erapower.com</p> <p>Manufacture: Alternative power generation</p>	<p>An alternative electricity generation company with a unique product, Power Park, designed to extract electricity from a parked hybrid-electric or fuel cell powered vehicle and other conveyances.</p> <p>Part of the electricity may be used to power homes or business with the remainder available for sale back to the grid thus generating revenue for the owner.</p>	<p>Summer 2001: A start-up at the wheel of alternative power. PA company awarded patents to use power from a hybrid electric vehicle to provide energy to homes and businesses.</p> <p><i>Electric World</i>, July/August 2001: The little car that could.</p> <p><i>InBusiness</i>, 8/3/01 A start-up at the wheel of alternative power.</p>

RENEWABLES INFOGRID

Company	Description of Activity	News, Additional Information
<p>EverGreen Solar (Marlboro, MA)</p> <p>www.evergreensolar.com</p> <p>Manufacture: Photovoltaics</p>	<p>Evergreen Solar is a developer and manufacturer of photovoltaic (PV) modules - the engines of solar electric systems - used in remote power and emerging grid-connected markets. The PV modules produced by Evergreen Solar are distinctive in their appearance because they incorporate proprietary crystalline silicon technology known as String Ribbon. This technology, explained further on, enables an innovative approach to manufacturing dependable and cost-effective PV modules.</p> <p>Projects:</p>	<p>7/31/03 Evergreen Solar, Inc. announced results for the second quarter ended June 30, 2003. For the three months ended June 30, 2003, product revenues were \$2.7 million, an increase of \$1.6 million from \$1.1 million for the same period in 2002.</p> <p>6/4/03 Evergreen Solar, Inc. announced that it is the recipient of the Worcester Business Journal's 2003 Environmental Award for making advancements in solar energy.</p> <p>5/15/03 Evergreen Solar, Inc. announced the completion of its previously announced private placement equity financing of \$29.475 million of Series A Convertible Preferred Stock and a warrant.</p> <p>3/24/03 Evergreen Solar, Inc. announced that it has executed a definitive Purchase Agreement for a private placement equity financing of \$29.475 million of Series A Convertible Preferred Stock and a warrant.</p> <p>3/24/03 Beacon Power Corporation announced that to develop strategic relationships in renewable energy, it has invested \$1 million in the Series A Preferred Stock of Evergreen Solar, Inc. on the same terms as the other investors in the financing.</p> <p>12/4/02 Evergreen Solar, Inc. announced that it has developed the latest advancement in its proprietary String Ribbon(TM) technology for manufacturing solar cells that involves simultaneously growing two silicon ribbons, rather than one, from each crystal growth furnace.</p> <p>10/30/02 Evergreen Solar, Inc. announced results for the third quarter ended September 30, 2002. For the three months ended September 30, 2002, product revenues were \$1.5 million, an increase of \$1.0 million from \$424,000 for the same period in 2001.</p>

RENEWABLES INFOGRID

Company	Description of Activity	News, Additional Information
<p>Fuel Cells 2000 Washington, DC</p> <p>www.fuelcells.org</p> <p>Manufacture: Promotion, development and early commercialization of fuel cells</p>	<p>Fuel Cells 2000 is an activity of the Breakthrough Technologies Institute (BTI), a non-profit [501(c)(3)] educational organization formed to promote the development and early commercialization of fuel cells and related pollution-free, efficient energy generation, storage and utilization technologies and fuels.</p> <p>Fuel Cells 2000 does the following:</p> <ul style="list-style-type: none"> - Prepares and disseminates written materials on the benefits and near-term availability of fuel cell technologies; - Conducts informational briefings and meetings to provide policy makers, selected science, environmental and energy reporters, and others a detailed look at the technology, its promise, and related policy choices; - Conducts educational conferences, prepares and distributes educational materials, and develops model policy statements for fuel cells; - Maintains a web site for internet users around the world to have access to information about fuel cell technology; - Maintains a library on fuel cell development projects around the world. 	<p>9/3/02 Fuel Cells 2000 charts out major improvements to www.fuelcells.org.</p> <p>1/9/02 Fuel Cells 2000 lauds Bush Administration for fuel cell support.</p> <p>12/13/01 2001 Fuel Cell Directory is here!</p> <p>5/7/01 Fuel Cells 2000 unveils career center.</p>

RENEWABLES INFOGRID

Company	Description of Activity	News, Additional Information
<p>FuelCell Energy Inc. Danbury, CT 06813</p> <p>www.fuelcellenergy.com</p> <p>Manufacture: Fuel cells</p>	<p>FuelCell Energy, in conjunction with several other affiliates, is focused on developing a new generation of electricity at power stations or in distributed locations near the customer.</p>	<p>9/23/03 FuelCell Energy, Inc. and Caterpillar Inc. have announced their first joint sale of an ultra-low emissions fuel cell power generation plant in the state of California.</p> <p>9/19/03 FuelCell Energy, Inc. announced the addition of one of its 250-kilowatt Direct FuelCell(R) power plants to the Los Angeles power grid.</p> <p>9/9/03 FuelCell Energy, Inc. reported results for the quarter and nine months ended July 31, 2003 and key accomplishments on its 2003 initiatives. FuelCell Energy reported revenues of \$7.3 million in the third quarter of 2003, compared to \$12.0 million in the same quarter of 2002.</p> <p>8/6/03 FuelCell Energy, Inc. announced that its Asia-Pacific strategic partner Marubeni Corporation has released for production its three megawatt order for Direct FuelCell® (DFC®) power plants for new customer commitments.</p> <p>8/4/03 FuelCell Energy, Inc. and PPL EnergyPlus announced the installation of a clean and efficient Direct FuelCell® (DFC®) power plant for Starwood Hotels & Resorts, one of the world's largest hotel and leisure companies.</p> <p>7/15/03 FuelCell Energy, Inc. announced that RWE AG will establish a joint venture with MTU and FuelCell Energy's European technology and distribution partner to market carbonate fuel cells to a broad European market.</p> <p>6/17/03 Zoot Enterprises announced that they have received two fuel cell power plants that will be installed at its Galactic Park high-technology campus located eight miles west of Bozeman. Zoot plans to use the two 250-kilowatt Direct FuelCell® (DFC®) power plants manufactured by FuelCell Energy, Inc. in conjunction with traditional diesel fuel generators and the electric grid to meet the electrical reliability requirements of its building and to support future development for its online credit processing operations at the campus.</p> <p>6/2/03 FuelCell Energy, Inc. has signed an agreement with Alliance Power, Inc. to integrate FuelCell Energy's ultra-low emission Direct FuelCell® (DFC®) power plants into Alliance Power's portfolio of distributed generation solutions.</p>

RENEWABLES INFOGRID

Company	Description of Activity	News, Additional Information
<p>Fuel Cell Technologies Corp. Kingston, Ontario CANADA</p> <p>www.fuelcelltechnologies.ca</p> <p>Manufacture: Fuel cells</p>	<p>Designs, develops and manufactures a wide range of fuel cell and metal-air semi-fuel cell systems and components for various applications. The technology includes solid-oxide fuel cells for residential and off-grid remote area applications; aluminum oxygen power sources for underwater vehicles; integrated power systems for remote locations; alkaline fuel cells.</p>	<p>6/19/02 FCT sells fuel cell system to U.S. National Park Service.</p> <p>5/21/02 FCT announces successful prototype operation.</p> <p>5/3/02 FCT announces AQMD Award.</p> <p>4/3/02 FCT awarded contract for advanced underwater energy system.</p>
<p>Future Energy Resources Corporation (FERCO) Norcross, GA</p> <p>www.future-energy.com (Under construction)</p> <p>Manufacture: Renewable energy sources</p>	<p>Develops and implements solutions that improve the global environment by producing energy from agricultural, municipal and forestry waste and other renewable resources.</p> <p>The company's biomass gasification process converts biomass waste and renewables into clean energy by producing SilvaGas™, a fuel capable of directly replacing natural gas.</p>	<p>1/28/02 US Government funds advanced FERCO® SilvaGas® process applications.</p> <p>8/1/01 Biomass gas process developed by FERCO proves to be an efficient cost-cutter as well as a renewable energy resource.</p>
<p>GE Hydro Tehachapi, CA</p> <p>(Subsidiary of GE Power Systems)</p> <p>www.gepower.com</p> <p>Manufacture: Hydro Turbines</p>	<p>GE Hydro is a world leader in the supply of hydro turbines, generators and related electro-technical equipment for the hydropower production industry. Capabilities include complete water-to-wire solutions for new hydroelectric plants and refurbishment and service for existing plants.</p>	<p>5/16/03 In one of the largest orders ever for wind electricity-generating equipment, FPL Energy has awarded a contract for 315 wind turbines to GE Wind Energy, an upstart unit of electrical equipment behemoth GE Power Systems.</p> <p>3/24/03 GE Hydro has received a contract of more than US\$7 million to upgrade and install two generators at the Jaybird Hydroelectric Powerhouse in northern California.</p> <p>3/10/03 GE Hydro has received a contract of more than \$47 million from the U.S. Army Corps of Engineers for a five-year, seven-unit refurbishment of the John H. Kerr Powerhouse in Boydton, Virginia.</p>
<p>GenSelf Corporation Irvine, CA</p> <p>www.genself.com</p> <p>Manufacture: Photovoltaics</p>	<p>GenSelf Corporation is one of California's leading providers of solar photovoltaic (PV) power systems to homes and small businesses. GenSelf is the largest solar electric retailer in the greater Palm Springs market and the fastest growing solar company in the state. GenSelf's primary offering is a grid-connected PV solar array which provides significant savings on electric bills. GenSelf is committed to providing on-site power generation solutions to customers seeking cost savings, blackout protection, and independence from utilities, as well as those who appreciate the value of generating clean, renewable electricity.</p>	<p>8/15/03 GenSelf Corporation has completed the installation of the largest rooftop residential solar electric power system in the United States. The 44.5kW grid tied system provides approximately 90% of the electricity for a large home in Southern California.</p>

RENEWABLES INFOGRID

Company	Description of Activity	News, Additional Information
<p>GE Wind Energy Tehachapi, CA (Subsidiary of GE Power Systems)</p> <p>www.gewindenergy.com</p> <p>Manufacture: Wind Turbines</p>	<p>GE Wind Energy's commitment is to help their worldwide partners and customers design and implement wind energy solutions for their unique energy needs. The company's core business is the design and supply of reliable, cost-effective commercial wind turbine technology. They also offer their customers a full and unique range of proven wind power capabilities.</p>	<p>9/24/03 GE Wind Energy has been selected by ENERSIS SA to supply 16 wind turbines and construct two turnkey wind farms in Portugal.</p> <p>9/8/03 GE Wind Energy will supply two 1.5-megawatt wind turbines to Coram Energy, LLC for a wind farm in Tehachapi, California.</p> <p>9/8/03 GE Wind Energy has developed a revolutionary new electronic capability that will allow its wind turbines to stay connected to the grid during low voltage events caused by system disturbances.</p> <p>8/20/03 GE Wind Energy GmbH announced on the 30th of July that its design and assembly facility will utilise a new photovoltaic ("PV") system that may be the first of its kind in Germany. Lower Saxony's Minister of the Environment, Hans Heinrich Sander, successfully inaugurated the new system, designed and installed by BP Solar, during a ceremony attended by political, business and media representatives.</p> <p>6/17/03 GE Wind Energy and Airtricity, Ireland's largest renewable energy company, plan to develop a 25-megawatt wind farm in the Irish Sea to provide power for the Irish electricity grid, GE reported today at the European Wind Energy Conference.</p>

RENEWABLES INFOGRID

Company	Description of Activity	News, Additional Information
<p>Global Solar Energy (Tucson, AZ) (Unisource Energy owns 67% and privately held ITN Energy Systems, Inc. owns the remaining 33%)</p> <p>www.globalsolar.com</p> <p>Manufacture: Photovoltaics</p>	<p>Global Solar's large integrated systems and portable, thin-film technology have the power to make a difference around the world. Global Solar's material produces electricity when sunlight passes through the top layer of indium tin oxide and strikes the middle two layers of cadmium sulfide and copper indium gallium deselenide, producing electricity. The top layer and bottom molybdenum layer conduct the current produced by the middle two layers. Supplied the solar panels for the Springerville Generating Station.</p>	<p>7/30/03 Spire Corporation announced the sale of two SPI-LAMINATOR(TM) 460 machines to Global Solar Energy.</p> <p>6/25/03 Global Solar Energy will integrate its flexible thin-film photovoltaic cells into a new line of solar power products bearing the popular Coleman® brand.</p> <p>4/24/03 SunWize Technologies and Global Solar Energy have reached an exclusive agreement to sell flexible folding photovoltaic modules to the United States government. The agreement also gives SunWize the non-exclusive right to sell products built from Global Solar's technology in other domestic markets.</p> <p>3/3/03 ICP signed an exclusive licensing agreement with Global Solar Energy. The licensing agreement includes international rights for the exclusive use of Global Solar's technology for varied solar products.</p> <p>2/10/03 Global Solar Energy recently signed a contract with Tucson Electric Power to add more than 1 megawatt (MW) of photovoltaic modules this year to the company's 2.4 MW solar array in eastern Arizona.</p> <p>3/7/02 Global Solar Energy, Inc. recently joined in commissioning one of the world's largest photovoltaic (PV) power stations. The 1.4-megawatt (MW) ground-mounted system, which converts sunlight directly into electricity, will be expanded to 2.4 MW of generating capacity in 2002.</p>
<p>GPU Solar, Inc. Morristown, NJ</p> <p>(joint venture company owned by GPU Diversified Holdings LLC, a GPU, Inc. subsidiary and AstroPower, Inc.)</p> <p>www.gpusolar.com</p> <p>Manufacture: Photovoltaics</p>	<p>GPU Solar is a developer, owner, and operator of solar electric power plants in the United States. The size of the plants is from 100kW through 1MW. The first plant developed is Solar 2000 – Mendocino, a 100kW plant located in California. A second, Green Mountain Solar Berkeley, owned and operated by GPU Solar, has been commissioned in Berkeley, Calif. Other sites are under development in Pennsylvania, New Jersey, New York and California.</p>	<p>7/30/01 GPU Solar, Inc. announced that California Governor Gray Davis selected PowerLight Corporation's factory in Berkeley, CA for his Friday, July 27 press conference, during which he endorsed a plan to significantly increase renewable electricity generation in California.</p>

RENEWABLES INFOGRID

Company	Description of Activity	News, Additional Information
<p>Green Mountain Energy Company Austin, TX 78704</p> <p>www.greenmountain.com</p> <p>Technology: Renewable energy</p> <p>Start date: 1997</p> <p>Manufacture: Renewable Energy Provider</p>	<p>Developer/provider of clean and renewable energy including wind energy, sun and hydropower.</p>	<p>10/29/002 Give Oregonians new options in choosing renewable energy and they'll rush to buy them. Portland General Electric (PGE) and Pacific Power announced that customer sign-ups for renewable power products have more than tripled in just nine months, after they began offering their customers 99 percent pollution-free electricity supplied by Green Mountain Energy Company in January.</p> <p>10/1/02 Green Mountain Energy Company and one of its executives were selected to receive 2002 Green Power Leadership Awards this year -- the Green Power Beacon Award and Green Power Pioneer Award.</p>
<p>GreenVolt Power Corp. Orillia, Ontario CANADA</p> <p>www.greenvolt.com</p> <p>Manufacture: Fuel cells</p>	<p>Production and commercialization of alternative, efficient and affordable sources of energy through frost-free and emission-free modular alkaline fuel cell ("AFC") systems and products for small to medium applications.</p>	<p>1/16/02 Thomas Faul, President and CEO has announced GreenVOLT's growth strategy for 2002, GreenVOLT's objective is good profitability in 2002 and even better in 2003, creating a modest profit margin, that will also enhance the market value of GreenVOLT shares.</p> <p>10/9/01 Greenvolt Power Corp. has begun shipments of emergency fuel cells.</p> <p>10/9/01 GreenVolt Power Corporation is a development stage company specializing in alternative energy sources.</p>
<p>Hoku Scientific Honolulu, HI 96822</p> <p>www.hokuscientific.com</p> <p>Manufacture: Fuel cells</p>	<p>Hoku Scientific is focused on developing innovative fuel cell technologies that provide both cost savings and an improved level of performance compared to today's leading fuel cell technologies. As an example, the Hoku Membrane will offer Nafion like performance, a higher operating temperature, and 80% cost savings.</p>	<p>8/7/02 Karl Stahlkopf joins Hoku Scientific's Board of Directors.</p> <p>7/23/02 Hoku Scientific renews agreement with University of Hawaii.</p> <p>6/18/02 Hoku Scientific and Hawaiian Electric Industries partner on fuel cells.</p> <p>6/4/02 Hoku Scientific hires top research scientist.</p> <p>5/31/02 HiBEAM selects Hoku Scientific as newest portfolio company.</p>
<p>H Power Corporation Belleville, NJ</p> <p>www.hpower.com</p> <p>Manufacture: Fuel cells</p>	<p>Development of fuel cells, which generate electricity from electrochemical reaction of hydrogen and oxygen. These fuel cells are designed to provide electricity for a wide range of stationary, portable and mobile applications including residential cogeneration products for rural, remote homes, and backup power units for mobile application.</p>	<p>11/12/02 Plug Power Inc. and H Power Corp. announced that they have entered into a definitive merger agreement pursuant to which Plug Power would acquire H Power in a stock-for-stock exchange valued at approximately \$50.7 million.</p> <p>10/16/02 H Power Corp. announced the results of items voted on at its annual shareholders meeting on October 15, 2002.</p> <p>9/18/02 H Power Corp. announced that it has commenced shipments of its direct hydrogen-fueled product lines.</p>

RENEWABLES INFOGRID

Company	Description of Activity	News, Additional Information
<p>HyRadix, Inc. Des Plaines, IL</p> <p>www.hvradix.com</p> <p>Manufacture: Hydrogen generation technology</p>	<p>HyRadix Inc. is a developer and supplier of hydrogen generation technology to the fuel cell and small industrial markets. Using an innovative combination of technology and equipment, the HyRadix fuel processor efficiently and reliably produces a hydrogen-rich gas from natural gas or LPG. HyRadix has fuel processor technology designed for both residential and commercial polymer electrolyte membrane (PEM) fuel cell applications, as well as for fueling stations and industrial applications. HyRadix also has the intellectual property of the Hydrogen Burner Technology (HBT) company.</p>	<p>8/6/02 CDP Capital – Technology Ventures invests in HyRadix.</p> <p>4/9/02 UOP and Sud-Chemie form new company to supply fuel processors for fuel cells.</p>
<p>Hydro Environmental Resources, Inc. Vancouver, WA,</p> <p>www.hydrogenerate.com</p> <p>Manufacture: Hydrogen fuel reactor</p>	<p>The Electrochem Hydrogen Fuel Reactor (ECHFR) is a fuel device that produces a clean-burning hydrogen gas at low pressure using any source of water. Multiple compounds are added to the water producing a reaction which occurs between 60 and 300 degrees F. No electrical power source is required. Electrical activity takes place within the system and the water does not have to be pure or potable.</p>	<p>7/22/02 Hydro Environmental Resources, Inc. (HERI) announces additions to Board of Directors and corporate officers.</p> <p>6/26/02 HERI announces change of Chief Executive Officer and new legal representation.</p> <p>6/26/02 HERI announces pending visit to the U.S. Department of Energy, Washington, DC.</p>
<p>Hydrogenics Corporation Mississauga, Ontario CANADA</p> <p>www.hydrogenics.com</p> <p>Manufacture: Fuel cells and related products</p>	<p>Development and commercialization of test stations and fuel cell components to automotive companies, fuel cell developers, component suppliers and government agencies including General Motors, Plug Power, H Power, 3M and the U.S. Army.</p>	<p>11/12/02 Hydrogenics Corporation announced its financial results for the third quarter 2002 and highlights of its recent corporate activity. Hydrogenics' third quarter 2002 revenues increased 80 percent to \$4.4 million, compared with \$2.5 million for third quarter 2001. Net loss for the third quarter 2002 was \$7.0 million, or \$0.14 per share, compared with a net income of \$0.3 million, or \$0.01 per share, for the third quarter 2001.</p> <p>11/1/02 Hydrogenics Corporation announced that it has secured orders for multiple FCATS(TM) control and test systems from two customers located in Japan and Europe.</p> <p>10/25/02 Hydrogenics Corporation announced that Hydrogenics received a first-time order from European Fuel Cell (EFC) GmbH for multiple fully-featured FCATS H-Series systems and reformer test systems.</p>

RENEWABLES INFOGRID

Company	Description of Activity	News, Additional Information
<p>IdaTech, LLC Bend, OR</p> <p>www.idatech.com</p> <p>Manufacture: Fuel Cells</p>	<p>IdaTech fuel cells use PEM (proton exchange membrane) technology, which generates electricity through an electro-chemical process that creates water and heat as byproducts.</p>	<p>8/27/03 IdaTech announced the installation of a 3.6-kW propane fueled fuel cell system in the Cascade mountain range near Bend to operate in an off-grid telecom application for field test and evaluation.</p> <p>5/21/03 IdaTech will demonstrate its FCS 1200™ fully-integrated fuel cell system at the 2003 Congressional Fuel Cell Expo in Washington, D.C., May 22nd. Also at the Expo, the U.S. Army Communications-Electronics Command (CECOM) will display its military fuel cell / auxiliary power system which incorporates an IdaTech 2 kW fuel cell system.</p> <p>4/7/03 IdaTech unveiled its FCS(TM) NG natural gas fuel cell system at Hannover Fair 2003. The combined heat and power system further demonstrates IdaTech's multi-fuel reforming and system integration capabilities.</p> <p>2/18/03 IdaTech recently received three U.S. patents for the company's multi-fuel fuel processing technology and fuel cell system integration, bringing the company's total number of U.S. patents to sixteen, ten having been issued in 2002.</p> <p>2/10/03 IdaTech participated in the Bush Administration's Hydrogen Fuel Initiative February 6 at the National Building Museum in Washington, DC. President George W. Bush spoke about his proposed \$1.2 billion hydrogen fuel cell initiative included in the Administration's FY 2004 budget submitted to Congress earlier this week.</p> <p>1/13/03 IdaTech has delivered a fully integrated fuel cell system operating on propane to the Propane Education and Research Council as part of a project funded by the Council's grant program which supports the research and development of clean and efficient propane utilization equipment.</p>
<p>IMPCO Technologies, Inc. Cerritos, CA</p> <p>www.impcow.com</p> <p>Manufacture: Hydrogen Fuel Cell Technologies</p>	<p>Designer, manufacturer and supplier of fuel storage, fuel delivery and electronic control systems that allow internal combustion engines and fuel cell vehicles to operate using clean fuels such as hydrogen, propane, natural gas and methanol. These fuel system technologies are designed to optimize efficiency and performance by electronically sensing and regulating the proper proportion of fuel and air used by internal combustion engines and fuel cell systems.</p>	<p>6/12/02 IMPCO's Eclipse achieves 2007 EURO 5 emission levels.</p> <p>4/8/02 IMPCO supplies Coleman Powermate with dressed gaseous fueled engines packages.</p> <p>4/5/02 IMPCO names Brad Garner to lead its GFP division.</p> <p>3/20/02 Quantum, an IMPCO subsidiary, commercializes automotive OEM-grade gaseous fuel injector.</p>

RENEWABLES INFOGRID

Company	Description of Activity	News, Additional Information
<p>Kyocera Solar, Inc Scottsdale, AZ</p> <p>www.kyocerasolar.com</p> <p>Manufacture: Photovoltaics</p>	<p>Kyocera is one of the world's largest vertically-integrated producers and suppliers of solar energy products. Our American solar division is headquartered in Scottsdale, Arizona, with regional sales affiliates in the Americas and Australia. Kyocera Solar, Inc. (KSI), our North American solar products subsidiary, serves thousands of customers in both the developed and developing worlds.</p>	<p>8/25/03 Kyocera Solar Inc. recently supplied solar products and technical support for a unique rural electrification project designed to pump water and power homes, schools, clinics, mosques and local micro-enterprises in Nigeria. Three agriculture-based villages with a population of about 8,000 are now enjoying solar electricity.</p> <p>6/12/03 Kyocera Solar, Inc. has provided a 57.6-kilowatt photovoltaic solar array to West Marine Products of Santa Cruz, Calif.</p> <p>5/22/03 Kyocera Solar, Inc. announced that it will supply solar electric generating systems for satellite-connected public payphones in more than 1,300 Tibetan villages by the end of 2003.</p>
<p>Medis Technologies, Ltd. New York, NY</p> <p>www.medistechnologies.com</p> <p>Manufacture: Clean energy technology</p>	<p>Developer of highly advanced proprietary technologies to satisfy demand for cleaner and more efficient energy</p> <p>The company's primary focus is on direct liquid methanol fuel cell technology. Its product pipeline, in varying stages of development includes:</p> <ul style="list-style-type: none"> -Fuel cell technology -Toroidal technology -CellScan technology -Stirling cycle technology -Water technology 	<p>8/7/03 Medis Technologies Ltd. reported financial results for the second quarter and six months ended June 30, 2003. For the quarter ended June 30, 2003, the net loss was \$2,658,000, or \$.11 per share, based on 23,562,873 weighted average shares, compared to a net loss of \$2,565,000, or \$.12 per share, based on 22,107,863 weighted average shares for the quarter ended June 30, 2002 after giving retroactive effect to Medis' March 11, 2003 rights offering.</p> <p>6/24/03 Medis Technologies Ltd. reported that at the Annual Meeting held in New York N.Y., the shareholders of Medis voted for the election of the eight incumbent directors and to approve a proposal to amend the 1999 Stock Option Plan to increase the number of shares of common stock available for option grant from 3,000,000 to 3,300,000.</p> <p>1/27/03 Medis Technologies Ltd. announced that it filed a registration statement on Form S-3 with the Securities and Exchange Commission for a fixed price rights offering.</p> <p>12/11/02 Medis Technologies Ltd. announced that it has been chosen by the prestigious World Economic Forum as one of a select group of companies world-wide to be named a "Technology Pioneer."</p> <p>11/20/02 Medis Technologies Ltd. announced that it has achieved the technical level in its fuel cell performance to provide continuous power for its first planned commercial product - a Power Pack to provide uninterrupted power to users of cell phones, PDA's and certain hand-held electronic devices.</p>

RENEWABLES INFOGRID

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<p>MesoFuel, Incorporated Albuquerque, NM</p> <p>www.mesofuel.com</p> <p>Manufacture: Fuel Cell</p>	<p>MesoFuel is solving the needs for on-demand hydrogen generation to assist in the creation of a sustainable hydrogen energy industry to ensure an environmentally and economically sustainable world. Hydrogen is the most abundant element on earth. Now MesoFuel will use its proprietary technology to create an on-demand, on-site hydrogen generation system to take advantage of this abundant resource for alternative energy applications. How will MesoFuel remove barriers to entry for alternative energy sources utilizing hydrogen? They will accomplish this by focusing on their proprietary MesoChannel™ reactors, hydrogen purification technology and advanced thermal management technologies to create high efficiency, high throughput, hydrogen generation systems at a cost target that enables the fuel cell industry to be a cost competitive alternative to traditional energy sources.</p>	<p>3/10/03 MesoFuel, Inc. and Jadoo Power Systems, LLC jointly announced a strategic partnership arrangement to integrate MesoFuel's hydrogen generator products with Jadoo's fuel cell products.</p> <p>11/4/02 MesoFuel announced that it had successfully demonstrated the generation of pure hydrogen from light hydrocarbons, such as methane or propane. MesoFuel's ability to produce pure hydrogen (>99.9% pure) marks a dramatic improvement over conventional reformer systems that typically produce diluted hydrogen (40%-60% pure).</p> <p>5/23/02 MesoSystems Technology, Inc. announced the formation of MesoFuel, Inc., a fuel cell-related technology company.</p>
<p>Metallic Power, Inc. Carlsbad, CA</p> <p>www.metallicpower.com</p> <p>Manufacture: Fuel cells</p>	<p>Development of zinc/air fuel cell-based products not requiring a high pressure or temperature environment thereby eliminating the need for fuel reformers. The system's simplicity makes it less costly and a safer approach to renewable energy.</p>	<p>10/21/02 Metallic Power announced that it has been named one of the top five most promising companies by approximately 200 investors who attended Energy Venture Fair III, a capital funding and energy investor conference.</p> <p>10/7/02 Metallic Power announced that it would begin shipping its first products, based on its proprietary zinc fuel cell technology, this month.</p> <p>9/3/02 Metallic Power announced that one of its fuel cells successfully provided backup power to a cell site during power interruptions.</p>

RENEWABLES INFOGRID

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<p>Millennium Cell, Inc. Eatontown, NJ www.millenniumcell.com</p> <p>Manufacture: Fuel Cell-related products and portable energy storage</p>	<p>Development/production of "Hydrogen on Demand" process that generates pure hydrogen or electricity from environmentally friendly raw materials.</p>	<p>8/21/03 The world's first electric fuel cell water taxi powered by Millennium Cell's Hydrogen on Demand™ hydrogen fuel system successfully operated in the Newport Beach, California Harbor, as part of pre-launch testing.</p> <p>7/2/03 Millennium Cell Inc. has been awarded U.S. Patent number 6,586,563 by the U.S. Patent and Trademark Office for a process for making sodium borohydride, a key component in the Millennium Cell Hydrogen on Demand™ fuel system.</p> <p>6/25/03 Millennium Cell Inc. has been chosen to receive a grant from the U.S. Department of Energy (DOE) for hydrogen research and development.</p> <p>6/11/03 A new Harris poll commissioned by Millennium Cell and U.S. Borax Inc. shows that 85 percent of Americans are willing to try a new hydrogen-based fuel for their vehicles. Safety was rated (by 83%) as the most important issue in accepting alternative fuels. The second most important issue was cost (78%), although nearly half of the respondents (44%) said they would be willing to pay at least twice as much as they pay now for gasoline.</p> <p>7/25/02 Millennium Cell and Aperion Energy announce cooperative development agreement for backup power applications. Companies join forces to serve telecom and other stationary power opportunities.</p> <p>6/19/02 Millennium Cell completes \$15 million private placement.</p> <p>5/20/02 Millennium Cell announces support of New Jersey legislation to promote fuel cells.</p>
<p>NanoSolar, Inc. Palo Alto, CA www.nanosolar.com</p> <p>Manufacture: Solar Cells</p>	<p>Nanosolar is bringing to market a new generation of easy-to-handle, very-low-cost solar electricity cells. Nanosolar's leapfrog technology enables efficient solar cells that are simply coated from solution. Based on flexible foils, Nanosolar's solar-electric plastics feature an active layer that is self-assembled at the nanometer scale in a quantum-physically optimal way. With manufacturing based on a series of simple non-vacuum, low-temperature solution-coating steps, Nanosolar can bring the economics of the roll-to-roll web-coating industry to solar electricity. In addition, Nanosolar's cells are light-weight, flexible, and easily adjustable in shape, thus simplifying product handling, including integration, installation, and logistics.</p>	<p>6/19/03 Nanosolar, Inc. announced that it closed \$5 million in Series A funding and \$1.5 million in venture lease financing earlier this year. Led by U.S. Venture Partners (USVP) and Benchmark Capital, the Series A round also included Stanford University and prominent individual investors. In addition, Nanosolar secured an equipment lease financing from Western Technology Investment. The company plans to use the funds to develop its product and establish key supplier, manufacturing, and distribution partnerships. As part of the funding, Bill Gurley of Benchmark Capital and Arati Prabhakar of USVP have joined Nanosolar's board of directors.</p>

RENEWABLES INFOGRID

Company	Description of Activity	News, Additional Information
<p>NRG Systems, Inc. Hinesburg, VT</p> <p>www.nrgsystems.com</p> <p>Manufacture: Wind energy assessment equipment</p>	<p>Developer and manufacturer of wind energy measurement systems that are essential to proper siting of wind turbines, etc.</p> <p>The company's products include sensor instruments, towers and software that measure and analyze wind speed, direction and other data critical to successfully siting and operating wind energy systems.</p>	<p>5/21/02 NRG to attend AWEA 2002!</p> <p>4/2/02 NRG releases Internet-enabled Symphonie data logger!</p>
<p>Nuvera Fuel Cells, Inc. Cambridge, MA</p> <p>www.nuvera.com</p> <p>Manufacture: Fuel cells</p>	<p>Design and development of fuel processors, proton exchange membrane fuel cell stacks and integrated fuel cell systems for stationary and transportation applications.</p>	<p>11/20/02 Nuvera Fuel Cells, Inc. announced that Amerada Hess has purchased the ownership interest in Nuvera held by Dehon, Inc., the surviving entity of the former Arthur D. Little, Inc. By virtue of the purchase, Amerada Hess increased its ownership stake to 53 percent of Nuvera's outstanding shares. The remaining Nuvera shares are held by Gruppo DeNora, a technology licensing, engineering, and manufacturing company headquartered in Milan, Italy.</p> <p>10/7/02 Nuvera Fuel Cells announced the sale of nine proton exchange membrane (PEM) fuel cell stacks to Centro Ricerche Fiat (CRF), a major Italian research organization of the Fiat Group Divisions.</p>

RENEWABLES INFOGRID

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<p>Plug Power, Inc Latham, NY</p> <p>www.plugpower.com</p> <p>Manufacture: Fuel Cells</p>	<p>Development and manufacturing of fuel cells for electric power generation in residential, small businesses and transportation applications.</p> <p>Plug Power, Inc. Latham, N</p>	<p>9/18/03 Plug Power Inc. won the prominent CIO 100 award from IDG's CIO magazine, which recognizes organizations around the world that demonstrate resourceful IT management and practices.</p> <p>9/15/03 Plug Power Inc. announced a \$3.9 million program award from the National Institute of Standards and Technology. The award is part of NIST's Advanced Technology Program (ATP) and is for research and development of stationary fuel cells.</p> <p>7/31/03 Plug Power Inc. reported financial results and accomplishments for the second quarter ended June 30, 2003. Overall both financial and operational accomplishments were in line with company expectations and Plug Power remains on track to achieve its full-year milestones. Total revenue for the second quarter ended June 30, 2003 was \$3.1 million compared to \$2.5 million for the second quarter of 2002. Year-to-date total revenue was \$6.1 million compared to \$5.4 million in 2002.</p> <p>6/3/03 Plug Power Inc. introduced the GenCore(TM)5T, the Company's new 5-kilowatt fuel cell system, designed to provide extended run back-up power specifically for the telecommunications industry in the demanding outside plant (OSP) market.</p> <p>2/6/03 Roger Saillant, President and CEO of Plug Power Inc. was among the fuel cell industry leaders participating in a White-House-sponsored energy independence event led by President George W. Bush at the National Building Museum in Washington, D.C.</p> <p>1/8/03 Plug Power Inc. announced the appointment of David A. Neumann to Vice President and Chief Financial Officer, effective Monday, January 20.</p> <p>11/18/02 Connected Energy Corp. and Plug Power Inc. have signed an agreement to provide Plug Power customers with a web-based system for centrally managing Plug Power GenSys™ fuel cells.</p>

RENEWABLES INFOGRID

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<p>PowerLight Corporation (Berkeley, CA)</p> <p>www.powerlight.com</p> <p>Manufacture: Photovoltaics</p>	<p>Designer, manufacturer and installer of grid-connected solar electric systems.</p>	<p>7/16/03 San Mateo County's on-site solar generation system, which is saving county taxpayers money on energy costs, has earned the county a \$799,890 rebate from Pacific Gas and Electric Company. PowerLight Corporation designed and installed the solar system, which is capable of producing about 200 Kilowatts of power under peak conditions.</p> <p>6/2/03 Shell Solar and its partner, PowerLight Corporation announce the dedication of the largest commercially owned photovoltaic (PV) systems in the U.S. The massive PV project was installed at one of the nation's leading direct mail and business communications companies, Fala Direct Marketing in Long Island, N.Y.</p> <p>4/15/03 New Jersey's largest solar energy rooftop system was dedicated today at Janssen Pharmaceutica. Each day, this system will generate enough energy to power more than 600 homes thereby reducing the energy drawn from the state's power grid by six percent each month. In addition, it is noiseless and will not produce any greenhouse gases such as carbon dioxide. This 500 kilowatt solar electric system was furnished by PowerLight Corporation.</p> <p>4/2/03 PowerLight Corporation announced that they have installed an on-site solar generation system at Domaine Carneros' new Pinot Noir winery in the Napa Valley.</p> <p>10/29/02 PowerLight Corporation has been named one of America's entrepreneurial growth leaders by <i>Inc</i> magazine, which just released its 2002 Inc 500 ranking of the nation's fastest-growing private companies. PowerLight ranked #38 in this year's Inc 500 ranking.</p> <p>4/22/02 Alameda County dedicates the largest solar electric system in the nation. PowerLight provides Alameda County with 1.18 MW of power, making it the largest solar electric rooftop in the USA.</p> <p>4/12/02 U.S. Postal Service dedicates largest federal roof-integrated solar energy project in the nation. 127 KW system furnished by PowerLight and Siemens & Shell Solar with incentives from LADWP.</p>

RENEWABLES INFOGRID

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<p>Proton Energy Systems, Inc. Wallingford, CT</p> <p>www.protonenergy.com</p> <p>Manufacture: Fuel cells</p>	<p>Design, development and manufacturing of proton exchange membrane, or PEM, electrochemical products that are employed in hydrogen generating devices and in regenerative fuel cell systems that function as power generating and energy storage devices.</p>	<p>7/2/02 Proton Energy Systems receives order from U.S. National Oceanic and Atmospheric Administration for hydrogen generators.</p> <p>6/18/02 Proton Energy Systems updates accelerating sales and orders.</p> <p>6/17/02 Proton Energy Systems hydrogen generator to power sustainable energy project.</p>
<p>Renewable Energy Systems North America</p> <p>The group of RES companies in the US includes RES North America LLC, based in Florida, Oregon and California, and RES (USA) Inc, based in Texas.</p> <p>www.res-ltd.com</p> <p>Manufacture: Wind Turbines</p>	<p>Renewable Energy Systems Limited (RES) is one of the largest and most successful wind energy companies in the world. The company has an expanding portfolio of more than 6000 MW of projects at various stages of development around the world, and has developed and constructed wind farms both in the United Kingdom and abroad. To date, RES has built nearly 550 MW of wind capacity in the United States, including the world's largest wind farm at King Mountain in Texas. In September 2002, RES completed construction of the Nine Canyon wind farm in Washington state - RES (USA)'s first project in the Pacific Northwest - and plans are under way for continued expansion into the important North America market.</p>	<p>8/27/02 Renewable Energy Systems (USA) is celebrating the erection of the final turbine of the 48MW Nine Canyon Wind Project, in the state of Washington, USA. The wind farm, the largest public-owned wind project in the USA, has been built on a turnkey contract by RES (USA) for Energy Northwest and will be handed over this week.</p>
<p>Sea Power & Associates Berkeley, CA</p> <p>www.seapower.com</p> <p>Manufacture: Ocean wave power</p>	<p>A renewable energy company that has developed technology to convert ocean wave energy into electricity.</p> <p>Sea Power's technology, Wave Rider, is a device that generates electricity from the up-and-down motion of ocean waves using a system of buoys and hydraulic pumps. It consists of a concrete buoy that floats on the ocean's surface and is connected by a patented, highly efficient hydraulic pump to the ocean floor. The relative motion between the buoy and the ocean floor creates hydraulic pressure, which drives a hydraulic turbine and generates electricity.</p>	<p>8/22/01 Berkeley, CA., company thinks ocean waves may provide renewable energy source.</p> <p>8/21/01 "Ocean waves may provide renewable energy source" – <i>The Daily Californian</i></p>
<p>SeaWest WindPower Inc. San Diego, CA</p> <p>www.seawestwindpower.com</p> <p>Manufacture: Wind Power Projects</p>	<p>SeaWest WindPower Inc. is a leading independent and full service developer, builder, and long-term operator of utility-scale wind power projects around the world. The company has installed over 3,239 turbines totaling nearly 830 MW in the U.S. and Europe. As well as actively developing projects throughout the United States, SeaWest also has nearly 400 MW under operations and maintenance.</p>	<p>1/28/03 SeaWest WindPower Inc. announces the addition of two new senior managers with significant utility industry experience to strengthen its O&M and Data Services businesses.</p> <p>8/21/03 SeaWest WindPower, Inc. and Econergy International Corp. announced a Co-Marketing Agreement to strengthen each company's green power consulting service offerings.</p>

RENEWABLES INFOGRID

Company	Description of Activity	News, Additional Information
<p>Shell Solar Industries Camarillo, CA</p> <p>www.shell.com/solar</p> <p>Manufacture: Photovoltaics</p>	<p>Shell Solar is one of the world's largest manufacturers and marketers of photovoltaics. The company has extensive experience on the design and installation of solar power systems. Shell Solar is part of Shell Renewables, the business established by the Royal Dutch/ Shell Group of Companies to develop commercial opportunities in renewable energy. Shell Solar has cutting edge research, development and production facilities throughout the world. Shell Solar employs about 1,100 people and has partners for its products in over 90 countries.</p>	<p>8/29/03 Shell Solar announced the introduction of two new lines of monocrystalline photovoltaic modules in the USA. The new product lines have a six percent higher power output capacity versus the Shell SP lines and maintain the exact same physical dimensions as the Shell SP lines for mounting compatibility.</p> <p>6/30/03 Shell Solar announced that it is to introduce two new lines of monocrystalline photovoltaic modules in Europe from this Autumn, each with a power output capacity six per cent higher than its predecessor despite the surface areas remaining unchanged.</p> <p>6/24/03 Shell Solar announced that it is to supply 2,400 CIS (copper, indium, selenium) thin film photovoltaic modules to a major construction project in St Asaph, North Wales. The order is the largest yet for the next generation technology which took Shell Solar more than 15 years of research to develop.</p> <p>6/2/03 Shell Solar and its partner, PowerLight Corporation announce the dedication of the largest commercially owned photovoltaic (PV) systems in the U.S. The massive PV project was installed at one of the nation's leading direct mail and business communications companies, Fala Direct Marketing in Long Island, N.Y.</p> <p>5/28/03 Shell Solar and its partner, PowerLight Corporation announce the dedication of the largest commercially owned photovoltaic (PV) systems in the U.S. The massive PV project was installed at one of the nation's leading direct mail and business communications companies, Fala Direct Marketing in Long Island, N.Y.</p> <p>5/13/03 Shell Solar announced that it has supplied the photovoltaic panels for one of the largest commercial solar power installations in the US.</p> <p>3/19/03 Shell Solar and SunWize Technologies announce the completion of a 1.76-kilowatt solar power system for the U.S. Fish and Wildlife Service at the Hopper Mountain National Wildlife Refuge in Southern California. The system uses Shell Solar 110-watt solar modules to operate a variety of loads for the research station located at the preserve.</p> <p>3/11/03 Shell Solar and AE Schmidt Environmental recently celebrated the successful design and construction of a 73-kilowatt solar electric system.</p>

RENEWABLES INFOGRID

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<p>SolarAttic Elk River, MN</p> <p>www.solarattic.com</p> <p>Manufacture: Solar Technology</p>	<p>SolarAttic has harnessed the solar energy contained in attics and invented and patented a revolutionary new solar technology. It uses the massive amount of renewable solar heat energy that is already inside the roof and attic of a home and developed the technology to inexpensively use this solar heat energy.</p> <p>Using SolarAttic's technology also eliminates the need for roof-mounted solar panels for heating swimming pools, hot water and space.</p>	<p>7/18/02 Israel issues SolarAttic's third international patent.</p> <p>7/2/02 SolarAttic founder retreats; plans for 'Energy Independence Day'!</p>
<p>Solar Energy Limited Los Alamos, NM</p> <p>Manufacture: Solar Products</p>	<p>Developer of technologies involving solar use to address water, energy and pollution/global warming problems.</p> <p>The five technologies are:</p> <ul style="list-style-type: none"> -SOLAREC- solar conversion of CO₂ to a fuel and electricity -HTWO-Environmentally friendly production of H₂ for use as fuel in the rapidly increasing fuel cell business. -SPAESS-production of electricity at less than 2 cents/KW using only solar energy. -SUNSPRING-production of fresh water at less than 29 cents using only solar energy and seawater. -MECH-design of an internal combustion engine that is 1/3 the size of/and more efficient than a comparable internal combustion engine. 	<p>6/24/02 SunPower begins international development of its patented SunSpring driven water desalination process.</p> <p>10/29/01 Solar Energy Ltd. concluded agreements with Hyaton Organics, Inc. with Hyaton Organics, Inc.</p> <p>9/19/01 Solar Energy Ltd. has entered agreements with Hyaton Organics, Inc.</p>

RENEWABLES INFOGRID

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<p>Spire Corporation Bedford, MA</p> <p>www.spirecorp.com</p> <p>Manufacture: Photovoltaics</p>	<p>Solar Photovoltaics, the direct conversion of sunlight into electricity, is a rapidly growing technology and increasingly important source of power. Spire Corporation is the world's leading supplier of the manufacturing equipment and technology needed to manufacture solar photovoltaic power. Spire's manufacturing equipment and SPI-LINE™ turn-key production lines are designed to meet the needs of everyone from small manufactures relying on mostly manual processes to the largest photovoltaic manufacturing companies in the world. In fact, more than 90% of the photovoltaic modules on the market today were made using Spire equipment and production lines.</p>	<p>9/18/03 Spire Corporation announced that it has been awarded from National Institutes of Health (NIH) a two-year, \$400,000 Small Business Innovation Research (SBIR) grant to develop a new family of "smart" nanophase ceramic coatings that will enhance bone integration and promote better device fixation of orthopedic implants.</p> <p>8/13/03 Spire Corporation announced that Spire Solar Chicago, a unit of Spire Corporation, has introduced a clear back sheet version of its 75-watt photovoltaic panel.</p> <p>7/30/03 Spire Corporation announced the sale of two SPI-LAMINATOR(TM) 460 machines to Global Solar Energy.</p> <p>6/25/03 Spire Corporation announced that it has been awarded a \$5.2 million cost-shared contract from the U.S. Department of Energy's National Renewable Energy Laboratories (NREL) to develop automated manufacturing processes for fabricating large-scale solar electric modules.</p> <p>12/19/02 Spire Corporation announced that Spire Solar Chicago has provided solar electric systems for Lakefront SRO Holland Apartments and the Children's Place at Vision House Apartments, two affordable multifamily housing developments in Chicago.</p>
<p>SunPower Corporation</p> <p>www.sunpowercorp.com</p> <p>Manufacture: Solar Cells</p>	<p>SunPower designs and manufactures high-performance silicon solar cells based on an interdigitated backside contact design, leaving the entire front surface uniformly dark and free of gridlines that normally block light entry. In 2003 SunPower introduced its new, high-performance silicon solar cell – the A-300. These cells are cost-competitive with conventional solar cells, but are much more efficient. With an efficiency of over 20%, the A-300 is the world's highest efficiency, commercially available solar cell for terrestrial applications.</p>	<p>5/12/03 SunPower Corporation announced sampling of the A-300, the world's most-efficient, low-cost silicon solar cell. Based on a unique rear-contact design—which maximizes the working cell area, hides unsightly wires and makes automated production easier—the A-300 achieves over 20 percent efficiency compared with currently available cells in the 12% - 15% range.</p> <p>4/9/03 SunPower Corporation announced that Richard Swanson, President and CEO of SunPower Corporation will address the Austin Clean Energy Initiative (ACE), scheduled to be held at the Microcomputer Electronics Corporation (MCC) auditorium in Austin, Texas, on April 10, 2003.</p>

RENEWABLES INFOGRID

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<p>TerraSolar, Inc. Brooklyn, NY</p> <p>www.terasolar.com</p> <p>Manufacture: Solar Power Products</p>	<p>TerraSolar develops, manufactures and markets solar power products for residential, commercial, and industrial markets worldwide. TerraSolar's state of the art photovoltaic amorphous silicon (a-Si) technology is the lowest-cost solar electric energy available today and our development of advanced materials ensures the cost/performance advantage into the next generation of solar technology.</p>	<p>6/6/02 TerraSolar is pleased to announce that James Spencer has joined as President and CEO. Mr. Spencer comes to TerraSolar from Sithe Industries, one of the US's leading independent power producers, where he has been a senior executive for the past nine years.</p> <p>7/31/01 TerraSolar acquires the CalSolar amorphous silicon manufacturing plant in Sacramento, CA.</p> <p>7/25/00 Lou Raveson joins TerraSolar USA as president.</p> <p>6/27/01 Gregory Kiss, a renowned expert on photovoltaic technologies and building-integrated solar energy solutions is named CEO of TerraSolar, Inc.</p>
<p>Tidal Electric, Inc. West Simsbury, CT</p> <p>www.tidalelectric.com</p> <p>Manufacture: Tidal power generation</p>	<p>Developer of tidal generator capable of inexpensive commercial-scale electrical power production that utilizes the oceans' tides as its sole power source.</p>	<p>8/19/02 The Government's commitment to achieve 10 renewable energy supply can be met by utilizing the enormous power of the UK's large tidal ranges, the second largest in the world. The offshore tidal power generator developed by Tidal Electric Limited, it capable of producing commercial-scale amounts of renewable energy in a cost-competitive and predictable fashion to be funded by private investors.</p>
<p>WorldWater Corporation Pennigton, NJ</p> <p>www.worldwater.com</p> <p>Manufacture: Solar Technology</p>	<p>WorldWater Corporation is a solar engineering and water management engineering company active in developing countries and around the world.</p> <p>In addition to designing, developing and marketing solar technology, WorldWater Corporation's full-service management capabilities include advising and supplying farms, dairies, ranches and water authorities on all phases of the water cycle, from finding to pumping to delivering this precious resource.</p>	<p>8/18/03 WorldWater Corp. has been awarded a \$300,000 grant by the New Jersey Board of Public Utilities under its new REED (Renewable Energy and Economic Development) Program. The grant will be used to develop power electronics for controlling interaction between the electric grid, solar power, and motors.</p> <p>6/17/03 WorldWater Corporation announced that it has been issued a patent for proprietary technology that enables solar systems to perform multiple functions and to switch automatically between solar and grid-tied power.</p> <p>4/2/03 The International Center for Water Technology (ICWT) has taken another step to partner with industry and encourage wide spread adoption of water and energy technology that is economically and environmentally beneficial by signing a Memorandum of Understanding with solar energy industry leader WorldWater Corporation.</p>