

The Los Angeles Department of Water and Power

Green Power for a Green LA Program



2003 Annual Report



The Los Angeles Department of Water and Power

Green Power Program

Dear Green Power for a Green LA Customer:

The Los Angeles Department of Water and Power (LADWP) wants to thank you for being our partner and supporting the Green Power for a Green LA (Green Power) program. Your continuing support of the Green Power program will assist in ensuring a cleaner, greener Los Angeles for future generations.

The enclosed program report covers the 2003 calendar year. In this report we have also included information about the future direction of the Green Power program. We anticipate that in 2004 and future years all of the renewable energy supplied to customers of the Green Power Program will be from newly developed local renewable resources or from open market renewable energy purchases.

The LADWP has demonstrated vision and responsible environmental stewardship for over 100 years. Through your participation in the Green Power program, you have demonstrated a similar commitment to bringing clean, renewable energy to the City of Los Angeles. It is very rewarding to see customers such as you embrace these important environmental programs.

The City of Los Angeles is extending its commitment to a clean environment by developing a Renewable Portfolio Standard to achieve 20% renewable energy by 2017. The LADWP plans on maintaining the Green Power program that is coordinated with and complementary to any Renewable Portfolio Standard adopted by the City of Los Angeles.

Again, we want to thank you for your continuing support of the Green Power program and for your vision and leadership.

Lillian Kawasaki
Assistant General Manager
Environmental Affairs and Economic Development

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There are many options for producing energy from renewable resources, including wind, geothermal, hydroelectric, biomass, and solar. The Green Power Program is seeking a mix of strategies, including developing locally and regionally produced renewable resources and renewable energy purchases. The program will focus on the following types of renewable generation:

Hydropower

Hydropower facilities provide electricity by channeling water through a turbine linked to a generator. Using pressure drops within LADWP's water system provides an efficient and cost effective means of generating hydropower.



Biomass Energy

Organic matter, called biomass, is found at landfills or wastewater treatment plants, and as it degrades, it creates gases that can be collected and burned in a power plant or used in a fuel cell to create electricity.



Solar Power

Solar photovoltaic cells, which are made of silicon, convert the sun's energy into electricity without air pollution emissions or noise, cleanly powering homes and businesses. Some solar panel components are manufactured in Los Angeles, thereby providing economic as well as environmental benefits. Solar thermal, another use of solar power, uses the sun's energy to generate heat that can be used in heating or cooling applications.



Wind Energy

Wind turbines (windmills) use strong, steady wind to create electricity. Wind power emits no pollution and has very little impact on the land. Wind energy can be produced where the wind blows with consistent force.



Geothermal energy

Geothermal energy is generated by converting hot water or steam from deep beneath the Earth's surface into electricity. Geothermal plants emit very little air pollution.

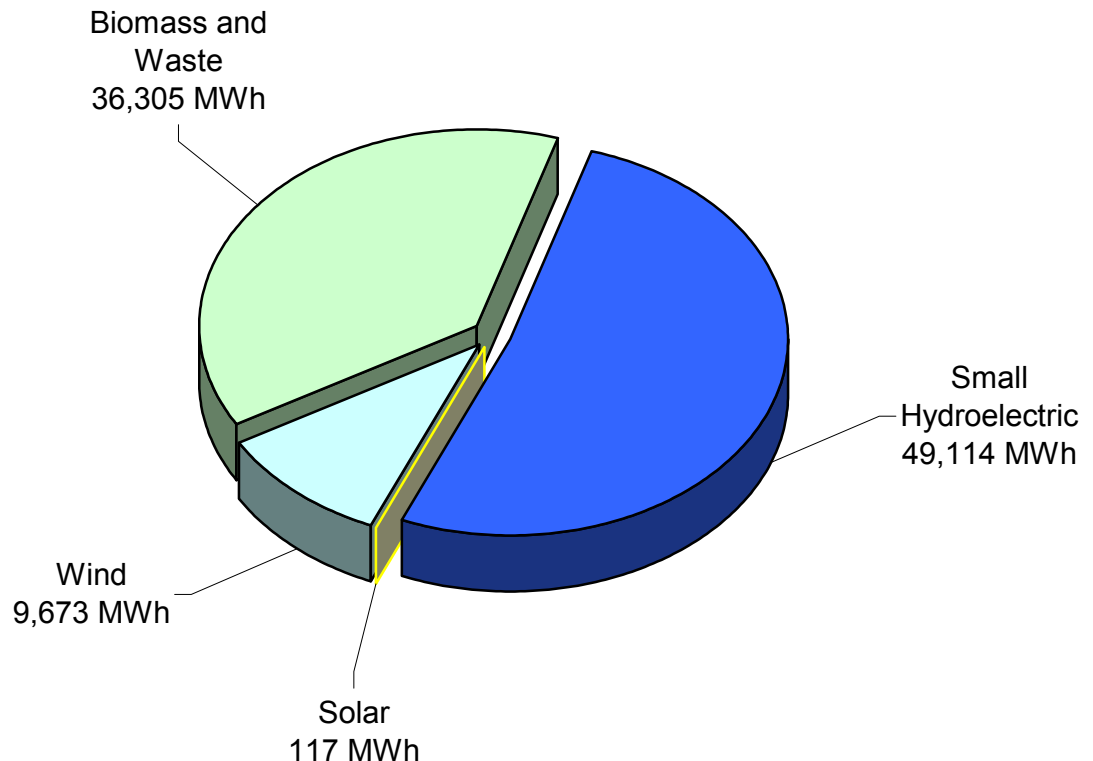


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The year 2003 represented the fifth year of operation for the Green Power program. The program has increased customer participation to over 94 thousand megawatt-hours of renewable energy, which is a growth of 7% over 2002. This is enough energy use for over 15,000 homes in one year and which avoids 162 million pounds of greenhouse gas emissions if generated by conventional means. In 2003, program demand was met by LADWP's existing small hydroelectric, solar, and biogas energy, as well as a purchase of wind energy. The chart below shows the Green Power Program energy mix for 2003.

As local and regional renewable energy sources have been identified and developed, the focus of the Green Power program will be to add capacity with new local and regional renewable energy projects instead of using existing resources. We anticipate that in 2004 and future years all of the renewable energy supplied to customers of the Green Power Program will be from newly developed local renewable resources or from open market renewable energy purchases.



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Background

On May 13, 1999, the LADWP launched the Green Power program. Through this Green Power program, customers voluntarily pay a premium on their monthly utility bills to help promote renewable energy in Los Angeles.

LADWP's Green Power program is the second largest program in the country in terms of number of customers participating in 2003. The Green Power program gives Los Angeles residents, businesses, and governmental agencies a stake in helping to preserve and protect our environment through their purchases of green power. The use of green power provides electricity from sources that are clean, renewable, and environmentally friendly. Available energy-efficiency products and services provided by other LADWP programs may offset the slightly higher costs of choosing green power for many customers.

LADWP's Green Power program is funded through a voluntary premium, known as the Renewable Energy Adjustment Factor (REAF), collected from LADWP customers choosing to pay the premium. All funds collected through the REAF support the development and/or purchase of renewable energy and includes the administration of the Green Power program. For the first three years, the Green Power program received a subsidy from the LADWP's Public Benefits program in order to help cover its startup costs. For the past two years, the Green Power program has been completely self-sufficient and no longer receives the subsidy.

The continued success and impact of the Green Power program will benefit generations to come by reducing air pollution and global warming, while preserving the earth's limited natural resources. The program also raises awareness of the importance of protecting our environment, and attracting new industries and jobs to the Southern California region.

The City of Los Angeles is extending its commitment to a clean environment by developing a Renewable Portfolio Standard to achieve up to 20% renewable energy by 2017. The LADWP plans on maintaining the Green Power program that is coordinated with and complementary to the Renewable Portfolio Standard.

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Green Power Program Revenue and Expenses

Green power revenues and expenses are determined by the Renewable Energy Option (REO) service rider as applies to customers served under Schedules R-1, A-1, A-2 and A-3. The REO specifies what must be included in the REO surcharges (the additional charge per kilowatt hour), and how that money can be used. The REO also stipulates that the program must be self-funded, that all program costs must be borne by participants, and that the program cannot be subsidized by general ratepayers.

In 2002, LADWP discontinued reporting low-income program participants (who were never charged the surcharge). The resulting customer totals for 2003 reflect the numbers of both of the commercial (367) and residential (29,310) program participants that are paying the premium.

Table 2 shows the Statement of Operations for the Green Power for a Green LA Program for the Calendar Year ending December 31, 2003. The statements were prepared in accordance with the REO service rider rate ordinance with data provided by LADWP's Financial Services Organization.

For 2003, the Green Power Program collected approximately \$2.8 million in revenue and had a net expenditure of approximately \$0.9 million, including the purchase of over 9,000 MWh of wind energy. There was a carry over in the Green Power Cumulative Account Balance of approximately \$1.1 million from 2002. Adding the 2002 Balance to the 2003 Net Income of approximately \$1.9 million brings the amount of the 2003 Green Power Cumulative Account Balance to approximately \$3 million. This is a carry forward balance that will be utilized for future Green Power program projects or renewable energy purchases.

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Looking Forward

To target clean renewable energy sources as close to Los Angeles as possible, a number of potential projects have been identified, as shown in Table 1 below. Other renewable projects may also be identified through a Request for Proposal process in fiscal year 2004/2005. Funds collected from Green Power customers were placed in a Green Power Cumulative Account as shown in the financial disclosure statement, to support the development of these resources. We anticipate that in 2004 and future years all of the renewable energy supplied to customers of the Green Power Program will be from newly developed local renewable resources or from open market renewable energy purchases. Please visit our website at www.LADWP.com for updates on these and other projects. This Annual Report is also available on-line at www.LADWP.com.

Table 1
Potential Local Renewable Energy Sources

Project	Estimated Capacity (MW)	Estimated Annual Energy (MWh)	Expected Completion Year
Terminal Island Fuel Cell	0.2	2,000	2005
Upper Franklin Energy Recovery	1	5,000	2006
Terminal Island Renewable Energy	5	30,000	2007-2013
Small Hydro	4	15,000	2008-2014
Landfill Gas	6	42,000	On-Going
Solar Photovoltaic	0.8	1,000	2004-2011
Total Potential	17.0	95,000	

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Looking Forward

The potential projects as shown in Table 1 on the previous page include the following:

- The Terminal Island Digester Gas Project will add gas-processing units to process the digester gas from the Terminal Island Wastewater Treatment Plant for use in an existing state-of-the-art 250 kW fuel cell power plant installed last year. The cost will be approximately \$900,000, and the unit should be in service by 2005.
- The Upper Franklin Energy Recovery System will add a 1 MW hydro generating station, which will be installed to replace an existing LADWP water pressure regulating station near the Upper Franklin Reservoir in the Hollywood Hills. The cost will be approximately \$3 million, and the unit should be in service in 2006.
- The Terminal Island Renewable Energy Project (TIRE) will add an additional 3 to 5 MW of capacity using methane gas recovered from a proposed bio-solid injection process in either a fuel cell or in an engine. This project will be implemented in three phases, and the first phase should be completed in 2007. Approximate total cost will be \$5-7 million.
- The solar projects include adding over 200 kW of solar panels to City of Los Angeles and DWP facilities, which will be completed by the end of 2004. The cost for these projects will be approximately \$2.5 million.
- These projects have the added benefit of increasing local renewable energy capacity with its corresponding air quality, jobs and economic development opportunities.

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Table 2

**Los Angeles Department of Water and Power Green Power for a Green LA
Statement of Revenues, Other Credits, Expenses For the Calendar Year Ending
December 31, 2003.**

Participants	
Residential consumption (MWh)	35,968
Non-residential consumption	58,754
Residential meters	29,310
Non-Residential meters	1081
Revenue and Other Credits	
Renewable energy adjustment factor revenue	\$2,841,671
Avoided cost credit	\$386,085
Public benefits subsidy	-
Total Credits	\$3,227,756
Expenses	
Purchased green power	\$455,639
Marketing	\$204,136
Administration	\$611,686
Total Expenses	\$1,271,461
Program operating income	\$1,956,295
Additional charge per ordinance	\$44,269
Totals	
2003 Net Income	\$1,912,026
2002 Green Power Cumulative Account Balance	\$1,098,994
2003 Green Power Cumulative Account Balance	\$3,011,020

In 2003, renewable energy to meet program sales was obtained through operation of LADWP's California Energy Commission certified renewable energy facilities and wind purchases.