



The city of Chicago has formed an alliance with 47 other local government agencies to increase their reliance on clean energy sources. As part of this effort, Chicago has installed solar electric systems on a number of the city's buildings, including the Chicago Center for Green Technology shown here.

A number of organizations, including municipalities, state and federal agencies, businesses and even religious organizations are leading the way to a renewable energy future by using their collective buying power to purchase green power.

# AGGREGATED PURCHASING—A CLEAN ENERGY STRATEGY

by Lori A. Bird and Edward A. Holt

Power generated from renewable resources, also known as “green” power, is now available to electricity consumers throughout the U.S. More than 300 utilities in 32 states offer green pricing programs through which consumers can purchase green power and support the development of renewable resources. In competitive electricity markets, power marketers offer green energy options in Connecticut, the District of Columbia, Illinois, Maryland, New Jersey, Pennsylvania, Texas and Virginia. In addition, consumers can support renewable energy development by purchasing green energy certificates, which represent the environmental attributes of power generated from renewable electric plants and are typically sold separately from electricity service.

As the market for green energy matures, an increasing number of organizations are forming buying pools or aggregating their demand to purchase green power. Other factors being equal, suppliers prefer dealing with larger groups, because it reduces their transaction costs. At the same time, buying pools have more purchasing leverage with suppliers competing for their business. This purchasing power can be used to negotiate cost savings, a different combination of services or more favorable service terms. In competitive markets, in particular, organizations may be able to purchase green power for a portion of their electricity needs using the savings achieved by switching suppliers. Organizations that have been active in buying green power for aggregated loads include municipalities, state and federal government agencies, businesses and religious organizations.

### **Cities Unite to Buy Green**

A number of municipal governments are leading the way by purchasing green power for city agencies or allowing residents to choose cleaner power options. For example, when the Illinois electricity market opened to competition, the city of Chicago and 47 other local government agencies formed the Local Government Power Alliance to lower electricity costs and increase reliance on clean energy sources. The group—which includes the city of Chicago, the Chicago Transit Authority, the Chicago Park District and selected city colleges—requested bids in July 2000 that would lower costs for each member of the purchasing group and generate 20 percent of the power, or 80 megawatts (MW) from renewable sources by 2005. Under an agreement reached by the Alliance, ComEd will initially supply 10 percent of the group’s aggregated electric-



Community Energy Inc.

*The federal government has purchased green power for a variety of facilities nationwide. The 15-MW Mill Run Wind Farm in southeastern Pennsylvania supplies a portion of the green power for the U.S. Department of Energy’s headquarters facilities in Washington, D.C. and Germantown, Maryland.*

ity needs with renewable power, increasing to 20 percent after five years.

In Ohio and Massachusetts, legislation allows local governments to procure electricity and related services on behalf of the residents of their communities. Residents have the ability to opt-out if they would prefer to select an alternative supplier. So called “opt-out” municipal aggregation policies make it easier for cities to purchase electricity and green power on behalf of their residents, who are automatically included in the aggregation unless they choose not to participate.

The Northeast Ohio Public Energy Council (NOPEC), a buying group of nearly 100 communities in northeast Ohio, was formed to help lower electricity costs for residents. Under an agreement reached in early 2001, the more than 400,000 residents of the participating cities receive a blend of power generated from natural gas (98 percent) and renewable resources (2 percent) unless they opt out of the aggregation. Participants save 6 percent to 8 percent on the generation component of their electric bills. The power supply agreement is expected to save consumers up to \$12 million over six years.

Under a similar arrangement, tens of thousands of residents of Alliance, Sandusky, London and the village of Lagrange, Ohio, are able to buy electricity generated in part from renewable resources. In March 2002, municipal aggregator, AMPO, Inc., reached an agreement with Green Mountain Energy to allow residents of the four cities to purchase power generated from a mix of natural gas (98 percent) and new renewable resources (2 percent).

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In Massachusetts, the Cape Light Compact was created in 1997 to negotiate a power supply contract for the citizens and

businesses of 21 participating towns on Cape Cod and Martha's Vineyard. Earlier this year, the Compact announced an agreement with Mirant Corporation to provide a green power option and default electricity service to 45,000 customers in the Compact. The contract is expected to bring electricity consumers nearly \$2 million in savings in 2002. The contract also provides an option for consumers to enter into individual contracts with Mirant to purchase 50 percent or 100 percent renewable energy and support the development of renewable energy facilities on Cape Cod and Martha's Vineyard.

### **Governments Use Their Buying Power**

As large electricity purchasers, state and federal governments are well positioned to aggregate agency loads to purchase clean electricity. Both federal and state governments typically have purchasing agencies that are responsible for procuring a variety of goods and services for member agencies. Thus, they have procurement methods already in place for buying electricity competitively.

By purchasing power for many or all agencies, state and federal governments can reduce transaction costs, negotiate better rates and purchase power generated from cleaner sources. A growing number of these agencies are using their purchasing power to procure green energy. In some cases, government purchases have kick-started regional markets for green power.

### **States Lead by Example**

Pennsylvania became the first state to purchase green power when the Pennsylvania Department of General Services entered into an agreement to purchase green power for more than half a dozen state government accounts in 1999. The purchase was implemented in response to a March 1998 executive order issued by Pennsylvania Governor Tom Ridge, which established the Governor's Green Government Council to put "environmentally sustainable practices into state government's planning, policymaking and

regulatory operations." Recently, Pennsylvania entered into its third contract for green power, which calls for 50 million kilowatt-hours (kWh) annually, or about 5 percent of the state government's load. The electricity will be supplied from a mix of wind power, landfill gas, hydroelectric and solar energy.

In nearby New Jersey, a number of state agencies and universities are buying electricity generated from renewable sources to meet about 12 percent of their collective electricity needs. Currently, the state is purchasing a total of 113 million kWh of green power from Green Mountain Energy for nearly 200 state facilities, including departments and agencies within the State of New Jersey; 11 state universities; NJ Transit; the Port Authority of New York and New Jersey; and the New Jersey Sports and Exposition Authority.



*The Episcopal Church has been particularly active in spearheading the use of renewable energy technologies. For example, Christ Episcopal Church in Ontario, California, installed solar panels on their church earlier this year.*

And more recently, a number of other states—including Illinois, Maryland, New York and Tennessee—followed suit. In Maryland, Governor Parris Glendening issued an executive order in March 2001 calling for at least 6 percent of the electricity consumed by state-owned facilities to be generated from renewable energy sources. Consequently, the state contracted with Pepco Energy Services for 96 million kWh of green electricity over two years, beginning in July 2002, to supply more than 16 state agencies located in the Annapolis and Baltimore areas.

Shortly thereafter, New York Governor George Pataki issued an executive order calling for state agencies to obtain 10 percent of their electricity needs from renewable sources by

2005, increasing to 20 percent by 2010. The order, which applies to state buildings and quasi-independent organizations such as the State University of New York and the Metropolitan Transportation Authority, also calls for agencies to implement energy efficiency measures, increase purchases of energy-efficient products and follow green building standards.

### **Federal Agencies Encourage Green Markets**

The federal government has also purchased green power for a variety of facilities nationwide. In April 2002, the General Services Administration (GSA), the federal government's purchasing arm, contracted for a total of 24 million kWh of green power to supply the Ronald Reagan Building and a portion of the electricity needs of the U.S. Department of Energy's (DOE) headquarters facilities in Washington, D.C. and Germantown, Maryland. The total green power purchase cost an extra \$230,000, which represented a premium of less than 1¢/kWh. DOE was able to offset the extra cost of the green power with savings realized from the competitive power market.

GSA also recently entered into a contract to purchase green power for eight government accounts in Pennsylvania, including the Liberty Bell Pavilion at Independence National Historical Park and other government facilities operated by GSA, the U.S. Environmental Protection Agency and the National Park Service. This new purchase is a reaffirmation of the agencies' commitment to purchase power generated from renewable sources—they first contracted for green power in the

Richard Wheeler, The Regeneration Project

### **Useful Web Sites**

Cape Light Compact  
[www.capelightcompact.org](http://www.capelightcompact.org)

Green Power Market Development Group  
[www.thegreenpowergroup.org](http://www.thegreenpowergroup.org)

The Regeneration Project  
[www.theregenerationproject.org/index.html](http://www.theregenerationproject.org/index.html)

Partners for Environmental Quality  
[www.peqnj.org/iea.htm](http://www.peqnj.org/iea.htm)



*Green Mountain Energy Company installed a new solar array at Lake Farmpark, 25 miles east of Cleveland to meet the needs of the Northeast Ohio Public Energy Council (NOPEC), a buying group of nearly 100 communities in northeast Ohio.*

spring of 2000 in an effort to comply with an executive order issued by President Clinton encouraging the use of renewable energy. Under the new contract, the facilities will purchase a total of 3.7 million kWh of green power annually.

Federal agencies have also implemented aggregated green power purchases in states with regulated electricity markets. In April 2000, 30 federal agencies located along the Colorado Front Range made commitments to purchase more than 10 MW of wind energy. Most of the agencies are purchasing the power through green pricing programs offered by their local electric utilities. To offset the higher cost of the green power, some of the agencies have worked to identify and implement energy efficiency projects.

### **Businesses Work Together**

Business associations, such as chambers of commerce, universities, technology councils and farm bureaus and associations of retailers, food merchants and manufacturers, were among the first to aggregate loads when electric markets opened to competition. Although many have concentrated on reducing their members' electricity costs, a few have focused on purchasing green power.

One of the most notable business-based organizations focusing on green power is the Green Power Market Development Group (GPMDG), a collaboration of 10 large corporations and the World Resources Institute dedicated to building markets for green power. The participating businesses are Alcoa Inc., Cargill Dow, Delphi Corporation, DuPont, General Motors, IBM, Interface, Johnson & Johnson, Kinko's and Pitney Bowes. The group's goal is to develop markets for 1000

MW of new, cost-competitive green power by 2010. In June 2002, the GPMDG announced that four companies are collectively purchasing 15 MW of green power from various sources. Johnson & Johnson installed a total of 350 kW of PV on three buildings while Kinko's, IBM and GM are purchasing green power from wind, landfill methane and other renewable energy sources for about 50 corporate facilities.

### **Religious Organizations Forge Partnerships**

A number of faith-based organizations are aggregating the loads of both church facilities and individual members to purchase green power. Their interest is based on a belief that they have a responsibility as stewards of all of God's creation, including the natural environment. Global warming and air quality are concerns for many of these groups. The Episcopal Church has been particularly active in spearheading many of these efforts, although several of the aggregation groups formed to date are multi-denominational or interfaith groups.

The Regeneration Project, a San Francisco-based public charity affiliated with the Episcopal Church, was developed to expand and leverage the link between religious faith and environmental responsibility. To achieve this goal, it has established several programs including Episcopal Power and Light (EP&L), a coalition of Episcopal churches aggregated to purchase renewable energy and California Interfaith Power and Light (CIP&L), which plans to promote energy efficiency, energy conservation and the use of rooftop solar to about 8000 congregations in California. Prior to the recent energy crisis in California, EP&L had successfully signed

up more than 70 churches to purchase green power.

Although initially focused in California, the group has worked to initiate similar programs based on these models in other states. In New England, an associated organization—Massachusetts Interfaith Power and Light—encourages members to buy Sun Power Electric's Green-e certified renewable certificate product, called Regen. Nationally, the Regeneration Project has teamed with Native Energy to enable members and congregations to support the development of new wind projects through the purchase of renewable energy certificates, including the associated CO2 offsets.

In New Jersey, Partners for Environmental Quality (PEQ) works with Catholic, Episcopal, Jewish, Lutheran, Methodist, Presbyterian, Quaker and Unitarian churches representing about 50 congregations to encourage the use of Green-e certified green power. PEQ currently has an agreement with Green Mountain Energy, the only green power supplier in the state, under which Green Mountain will pay each congregation \$20 for every household that purchases green power. To date, about a dozen congregations and about 200 individuals associated with PEQ have signed up for green power.

### **Growing the Market for Green Power**

Aggregation has the potential to increase demand for green power. Aggregation groups can act as buying agents for their members, as providers or resellers of green power or they can simply endorse a particular product. Acting in any of these roles, groups can increase access to green power, perhaps lower the cost and offer incentives for members to participate.

In some cases, these groups have helped to establish regional markets for green power. As clean energy markets grow, aggregated purchasing will continue to be an important strategy for increasing access to green power and bringing down the cost for consumers. ☼

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