

## **The Cooperative Alternative**

### **Case Study: The First Urban Electric Coop.**

*Edward Yaker, 1<sup>st</sup> Rochdale Cooperative Group, Ltd.*  
*Fredric S. Goldner, Energy Management & Research Associates*  
*Thomas Thompson, 1<sup>st</sup> Rochdale Cooperative Group, Ltd.*

#### **ABSTRACT**

This paper describes the efforts undertaken to establish the first Urban Electric Cooperative; 1<sup>st</sup> Rochdale Cooperative Group of New York City. It discusses the concept of "Cooperation Among Cooperatives" as the basis for a consumer aggregation initiative and as the launching point for creating an energy commodity and service company. The paper discusses the value of "Cooperation Among Cooperatives" in linking 1<sup>st</sup> Rochdale with an existing customer network as well as in building the administrative, regulatory & technical foundation needed to bring this concept to life.

1st Rochdale is a consumer owned, non-profit energy cooperative. The organizations that founded 1st Rochdale's have over 70 years experience with New York City's housing cooperatives. In addition, 1<sup>st</sup> Rochdale has created linkages with the National Rural Electric Cooperative Association & it's members throughout the U.S. who have over 60 years experience as energy providers. From the time 1<sup>st</sup> Rochdale was conceived, its mission has been to: lower members total energy bills through comprehensive energy management; develop energy conservation and generation strategies, and renewable energy sources. The cooperative is interested in providing the best energy solution for its members for the long term.

This paper is intended to provide a model for others to use to create new and expand existing energy cooperatives. The cooperative exists to insure that residential customers benefit from utility restructuring. It is not seeking to make a profit to pay investors based on commodity sales. It is seeking to increase membership & market share by focusing on reducing its' members overall consumption of energy & energy bills - through efficient technologies and renewable forms of energy - while also contributing to a cleaner environment.

Finally, this paper discusses how 1<sup>st</sup> Rochdale, in its first year and a half of operation, has begun to provide a variety of services, (such as audits, EEM (energy efficiency measures) financing and implementation, new technology deployment, and development of distributed generation plans), to achieve these goals.

#### **Background**

1<sup>st</sup> Rochdale Cooperative Group, Ltd. was established by Coordinated Housing Services, Inc. (CHS). CHS is a business corporation set up more than twenty years ago to provide services to New York City's cooperative housing community. CHS is closely associated with the Coordinating Council of Cooperatives (CCC).

The CCC was established thirty-four years ago by leaders of NYC's family of housing cooperatives. CCC's original members were limited equity housing cooperatives. They were built to provide housing for people of moderate means. Today, CCC consists of large, multi-building co-ops, ranging from several hundred to several thousand families.

The mission of the CCC is to:

- serve as a clearinghouse where local co-ops can exchange information and experiences in governance and operations;
- be a sounding board for new ideas and a forum for discovery, discussion and dissemination;
- be a springboard and, as necessary, a vehicle for initiating and implementing plans and programs for joint economic, social and political action.

One of the common concerns of CCC members has been energy consumption. Most CCC members' buildings are master-metered for electricity. Each facility's Board of Directors sees and is responsible for the electric bill as well as the heating fuel bill. Energy costs may be more than twenty percent of the overall budget.

Over the years, CCC members have taken steps to reduce energy costs and consumption. They were among the first to switch over to florescent lighting fixtures. Some have converted buildings that were electrically master-metered into sub-metered buildings. Sub-metering encourages lower consumption and lower bills. Some hold appliance fairs to promote the purchase of energy efficient appliances. Through the exchange of information, members learn from the experience of other members and are quick to adopt energy saving techniques. In 1994, CCC became aware of electric utility restructuring. By mid 1997, CCC was actively involved in the restructuring issue.

For its record of promoting energy conservation, in 1997 the CCC received the Corporate Energy Management of the Year award from the New York City Chapter of the Association of Energy Engineers. "Cooperation Among Cooperatives" is one of the guiding principles of the co-op movement, and has long been practiced by both the CCC and CHS.

### **Cooperation Among Cooperatives**

"Cooperation Among Cooperatives" is one of the seven basic principles of the international cooperative movement. It has manifested in a number of ways that have been crucial to the development of 1<sup>st</sup> Rochdale. These are discussed below. For example, cooperation expands the political base for making our voice heard on local, state and national energy policies. Most importantly, the commonality of cooperation provides a basis of trust for starting a new relationship.

Leaders of different housing cooperatives have been working together on issues of common concern for more than thirty years. Their recognition of the importance of reducing energy costs is what led to the creation of 1<sup>st</sup> Rochdale. Cooperative connections over the years put co-op housing leaders from New York City in touch with rural electric cooperatives, especially the North Carolina Electric Membership Corporation (NCEMC). This electric cooperative provided start-up funding for 1<sup>st</sup> Rochdale as well as the expertise necessary for 1<sup>st</sup> Rochdale to operate an energy company. The bank of the nation's rural electric cooperatives, the Cooperative Finance Corporation (CFC), provided the second stage

financing needed for a new cooperative enterprise is to succeed. As the world's first urban electric cooperative, 1<sup>st</sup> Rochdale provides market opportunities that would otherwise be denied to rural electric co-ops. 1<sup>st</sup> Rochdale also serves as an example for others interested in creating energy cooperative opportunities.

From housing and community services to financial and energy services, cooperation among cooperatives has facilitated the relationship building necessary to make 1<sup>st</sup> Rochdale a viable player in the NYC electricity marketplace. Evidence of this concept is found throughout this paper in the formation of relationships that have led to the creation of 1<sup>st</sup> Rochdale.

## **Formation**

When restructuring began, the leaders of what became 1<sup>st</sup> Rochdale thought of simply aggregating the buying power of cooperatives. By aggregating the load of a large number of consumers, common wisdom held that the aggregator could get a lower price from suppliers. CCC represents 50,000 cooperative households in 20 complexes. In addition, through years of working together on common issues affecting housing cooperatives, CCC has close ties to other organizations representing cooperative housing in New York. Altogether, New York City has 500,000 households living in cooperatives. CCC also has close, substantive ties to a range of institutions, businesses, individuals, other housing organizations, etc. Its potential for aggregation was virtually limitless.

Through cooperative connections, CCC also began working with existing and emerging energy cooperatives in Massachusetts, Vermont, and New Hampshire. The idea was to aggregate cooperative energy loads throughout New York and New England.

The idea began to grow. In addition to electricity, other commodities and services were under consideration. Beyond mere aggregation, there would be economies of scale on backroom operations and certain staffing needs. Besides, the benefits of being a simple aggregator appeared to be of less value than originally promised. As such, the concept of creating a competitive energy services and supply company was brought forward.

During this time period, CCC was meeting with the National Rural Electric Cooperative Association (NRECA). NRECA represents almost 1000 rural electric cooperatives in 87% of the counties of the United States. NRECA saw the possibilities in expanding cooperative energy services to areas of the country not already served by electric cooperatives.

In 1997, NRECA provided staff to assist 1<sup>st</sup> Rochdale in preparing a response to the NYS Public Service Commission's (PSC) request for proposals for pilot programs to demonstrate how restructuring might work. Working with NRECA staff, 1<sup>st</sup> Rochdale submitted the only proposal in the Con Edison service territory. Though the PSC decided to award the proposal to Con Edison, 1<sup>st</sup> Rochdale gained from the experience. It learned what responsibilities it would have to meet to become an ESCO (Energy Service Company)<sup>1</sup>, and

---

<sup>1</sup> The New York State Public Service Commission (NYS-PSC) has defined those organizations who are registered (with the NYS-PSC) to supply electricity to end users in the state as an Energy Service Company (ESCO). This has created confusion, particularly in the energy industry, where such a company is generally referred to as an ESP or Energy Service Provider. An ESCO is the more general term that is most often used to describe organizations that furnish either technical and/or financial services related to energy efficiency.

learned that by working with experienced cooperative organizations, it could indeed meet those responsibilities. From this experience, 1<sup>st</sup> Rochdale was born.

### **1<sup>st</sup> Rochdale's Objectives**

1<sup>st</sup> Rochdale's Mission is to:

- Lower members total energy bills through comprehensive energy management;
- Develop energy conservation and generation strategies, and renewable energy sources.

1<sup>st</sup> Rochdale incorporated in November, 1997 as a non-profit organization in New York State. Its Board of Directors consists of leaders in New York City cooperative housing, each with many years of co-op experience. Choosing housing cooperators to serve on its Board was tangible evidence of 1<sup>st</sup> Rochdale's belief in the concept of "cooperation among cooperatives."

However, by the time it incorporated, it was clear that there would be little savings for consumers, at least at first, as a result of lower energy rates. If 1<sup>st</sup> Rochdale were to achieve its mission, savings for members would have to come from increased efficiency and conservation. That is, comprehensive energy management. It also became clear that distributed generation could potentially reduce costs by providing electricity directly to the user, thus eliminating transmission costs. Finally, 1<sup>st</sup> Rochdale recognized that once established, it could provide more than electricity. Heating fuel and telecommunications offered strong possibilities.

In December of 1997, working with the New England group to seek a partner to supply electricity, the group met with leaders of two Generation and Transmission electric cooperatives. North Carolina Energy Membership Corporation (NCEMC) saw the advantages of working with consumers in the northeast. Following several discussions, 1<sup>st</sup> Rochdale and NCEMC agreed that for reasons of efficiency and local control, and because of the size of 1<sup>st</sup> Rochdale's potential market, there would be a direct link between 1<sup>st</sup> Rochdale and NCEMC. This would separate 1<sup>st</sup> Rochdale from the rest of the New England group.

NCEMC provided start up financing for 1<sup>st</sup> Rochdale, as well as technical expertise. Now in operation, 1<sup>st</sup> Rochdale partners with NCEMC on a variety of activities. For example, NCEMC has taken responsibility for load scheduling services, billing and call center services. 1<sup>st</sup> Rochdale also works with NCEMC to procure electricity from the wholesale markets through a consortium of four Generation and Transmission electric cooperatives in the Midwest.

By partnering with electric cooperatives, which have vast experience in supplying electricity, 1<sup>st</sup> Rochdale offers a unique combination of commodities and services to its members. 1<sup>st</sup> Rochdale has a greater understanding of New York and its consumers than other electric companies, and an ability to deliver energy that is lacking in most consumer/grassroots organizations.

"Cooperation among cooperatives" has also facilitated a relationship between 1<sup>st</sup> Rochdale and the National Rural Utilities Cooperative Finance Corporation (CFC). By virtue of our cooperative history, CFC has provided 1<sup>st</sup> Rochdale with substantial development financing with limited collateral.

## **Start-up Activities**

### **Electric Markets**

Con Edison's pilot program was designed to allow consumers to purchase electricity from alternate suppliers. It began in 1998. In Phase I, Con Edison made 1,000 megawatts available for alternate suppliers. Consumers wishing to switch could do so on a first-come, first-served basis, depending on their rate category. Different megawatts of load were available for different rate classes.

1<sup>st</sup> Rochdale was eligible but chose not to participate in Phase I of Con Ed's pilot. There were too many variables and too many unknowns. The rules for the program were being rewritten even as the program was beginning. 1<sup>st</sup> Rochdale considered it more prudent to strengthen its foundation and observe the process in the first year.

In the second year of the pilot (Phase 2), though there were still some unknowns and shifting rules, 1<sup>st</sup> Rochdale decided it was time to enter the field as an ESCO, an energy supplier. An additional 1,000 megawatts of load were opened to alternative electricity providers. 1<sup>st</sup> Rochdale signed up customers throughout the Con Edison Service Territory of New York City and Westchester County. While 1<sup>st</sup> Rochdale's initial focus was its core constituency of CCC and CHS member coops, it has also reached out to other co-ops, housing organizations and businesses with which it has long-time relationships. It has also been open to others who have learned about it, particularly through its website, [www.1stRochdaleNYC.net](http://www.1stRochdaleNYC.net).

Today, 1<sup>st</sup> Rochdale supplies electricity to more than 10,000 families and businesses, including housing cooperatives, banks, unions, office buildings, restaurants and other businesses, as well as individual residents. It anticipates substantial growth in Phase 3 of NYC restructuring set to begin in early 2000, and much greater growth when retail choice becomes available for all consumers in the Con Edison territory in November of 2000.

### **Energy Efficiency & Energy Management: The Foundation of 1<sup>st</sup> Rochdale's Mission**

Even before beginning to supply electricity, 1<sup>st</sup> Rochdale took steps in accordance with its philosophy of comprehensive energy management and alternative generation strategies. 1<sup>st</sup> Rochdale utilized matching funds available through the New York State Energy Research and Development Authority's (NYSERDA) Flex-Tech program to provide detailed energy audits and distributed generation feasibility studies for two cooperatives in 1999. 1<sup>st</sup> Rochdale selected Energy Management & Research Associates (EMRA) to perform these audits, based upon its knowledge of the energy management field and the cooperative community.

One of the audits was performed for almost 1500 families at Amalgamated Housing in the Bronx. The audit at Amalgamated Houses produced several recommendations that are being implemented by Amalgamated and by 1<sup>st</sup> Rochdale. The housing cooperative is replacing motors and is installing a new gas-absorption, steam chiller, and is installing efficient light bulbs and ballasts to replace all (2200+) fixtures in the co-op's public spaces. Another aspect of the energy audit at Amalgamated was a feasibility study for photovoltaic energy on the roofs of two Amalgamated buildings. EMRA's study concluded that given current cost and tax law, solar power was not yet financially viable at Amalgamated Housing. However, that was not the end of the exploration.

1<sup>st</sup> Rochdale, working with the CCC in the interests of housing cooperatives, made recommendations (to the cognizant local government agency) for changes to real estate tax law that would promote photovoltaics. New York City has a real estate tax abatement program, known as J51, which provides an abatement for building owners who make capital investments in particular aspects of their property (such as new boiler, roofs and non-energy related improvements). With 1<sup>st</sup> Rochdale providing technical assistance, the CCC submitted a proposal to NYC government to allow J51 benefits for photovoltaics. If adopted, the economics of PV would become highly attractive in many applications.

### **1<sup>st</sup> Rochdale's "Green Apple" Renewable Energy & Distributed Generation Program**

In response to a NYSERDA Program Opportunity Notice, 1<sup>st</sup> Rochdale has received approval for its proposal to install over 75 kW of photovoltaics in commercial and large residential applications. This program will combine PV with comprehensive energy management in & on cooperatives in New York City and is intended to accelerate the development of a commercial marketplace for PV. It will act as a launching point for 1<sup>st</sup> Rochdale's "Green Apple" Renewable Energy and Distributed Generation Program. The NYSERDA proposal commits 1<sup>st</sup> Rochdale to install PV systems, on customer/member facilities over the next 3 years. NYSERDA will provide a 50% match (up to \$5/kWp) for these installations.

In addition to installing PV on buildings in the boroughs of NYC, the "Green Apple" program will include considerable outreach and educational activities to inform policy makers and electricity buyers of the benefits of PV, especially when combined with energy efficiency. Energy management, as described above, is key to 1<sup>st</sup> Rochdale's effort to both reduce overall bills and create cost-effective opportunities to integrate distributed generation technologies in and on our member/customers' premises. Importantly, 1<sup>st</sup> Rochdale sees efficiency and distributed generation to provide the most prudent and commercially viable means of reducing customer costs and meeting NYC's electric demand (a significant issue for NYC at this time) while actually improving the reliability of the NYC grid.

While the keystone of the "Green Apple" Program is PV, this initiative will also serve as the umbrella for 1<sup>st</sup> Rochdale's broader Distributed Generation Services which include microturbines, small gas turbines and fuel cells. In order to test the applicability of microturbines, one of its early members was chosen for the first commercial deployment of this exciting new technology. The site is sub-metered. It is a 6 building, 754-unit apartment complex. Negotiations are underway with a microturbine manufacturer to provide 3, 30 kW (nominal) generating units. This installation shall be carefully monitored to determine the effectiveness of this equipment, and the information used to target other applications in the future. This will be the first commercial installation of a microturbine in New York City.

### **1<sup>st</sup> Rochdale: A Comprehensive Energy Provider**

Recognizing the opportunity to provide other energy commodities to cooperative buildings (further building upon the principle of cooperation among cooperatives), 1<sup>st</sup> Rochdale entered the fuel supply business. In 1999, 1<sup>st</sup> Rochdale purchased and is operating a fuel oil storage depot under the name of Twin Pines Fuels LLC, a wholly owned subsidiary of

1<sup>st</sup> Rochdale. Twin Pines is an important part of 1<sup>st</sup> Rochdale's foundation for the future. It will be supplying fuel oil to cooperative customers throughout the New York - Westchester area. Twin Pines is also engaged in a fossil fuel trading business, with oil delivery contracts serving New York, New England, and the Mid Atlantic states. 1<sup>st</sup> Rochdale is committed to supplying clean fuel oil to its customers. This is no small matter in New York, where fuel oil is often tainted with waste oil. Tainted oil creates a host of problems, including boiler problems, pollution, and fewer BTU's per gallon.

1<sup>st</sup> Rochdale will also supply natural gas, so that it can provide service to any customer without bias as to the source of energy. Ultimately, margins in the fossil fuel business are greater than in electricity, and will allow 1<sup>st</sup> Rochdale to better serve its customers. Finally, as part of its energy management philosophy, 1<sup>st</sup> Rochdale will educate building staff on the efficient operation and maintenance of its heating equipment.

### **Participation in the Regulatory Process**

1<sup>st</sup> Rochdale and CHS have been actively involved in electric industry restructuring proceedings before the New York State Public Service Commission since 1996 and before the Federal Energy Regulatory Commission since 1998. Primary issues addressed by 1<sup>st</sup> Rochdale and CHS include disclosure and consumer protection, the fair allocation of costs associated with new, physical infrastructure, and the elimination of barriers to entry for new energy providers as the existing monopoly is restructured. 1<sup>st</sup> Rochdale has been successful in these areas. For example, 1<sup>st</sup> Rochdale has strongly advocated at FERC that all participants – including New York State's existing major utilities – should pay their fair share of NYISO start-up costs, so that new entrants and consumers are not unfairly burdened.

1<sup>st</sup> Rochdale has also been an active participant in the evolution of the New York Independent System Operator ("NYISO"), where 1<sup>st</sup> Rochdale maintains a seat on the Management Committee. Because of New York City's intense electric load requirements and unique geography (encompassing three islands and a peninsula), the City is in the heart of an electric load pocket. Limited transmission line capacity exists to import electric energy from outside of the metro area. Sub-pockets within the City further exacerbate the problem. As a result of these load pockets, capacity and energy prices in the summer time are very high while the reliability of the network is diminished.

Given the localized blackouts in New York City in the summer of 1999, continued load growth, and the absence of new power sources since last summer, capacity and energy prices are expected to be overheated for the next four to five years before possibly settling into some type of equilibrium as new plants come on line. One strategy being implemented by 1<sup>st</sup> Rochdale is the evaluation of potential in-City sites for construction of small power plants that will alleviate load pocket constraints and enhance the reliability of NYC's electricity network.

### **Long Term Plans**

1<sup>st</sup> Rochdale intends to continue building on the concept of "cooperation among cooperatives" to become a "full service" Energy Service Company. Our goal is to create an

organization that provides the full range of products and services necessary to reduce member's energy use and costs, now and into the future.

As its members' "energy company", 1<sup>st</sup> Rochdale will build on the basic set of services it has begun to provide. The services shall include:

- Energy Opportunities Assessments - to determine what EEMs might be applicable and would result in some measure of savings;
- Detailed (investment-grade) Energy Audits – to identify and analyze EEMs that meet the member's investment criteria;
- Technology Specific Feasibility Studies – to evaluate opportunities for those members that are not interested in whole building treatments;
- Project financing designed to meet the consumer/member's needs,
- Project Management to assure the quality installation of the EEMs and other facility improvement projects (through its cooperative partners CFC and NCEMC),
- Ownership and operation of distributed generation, cogeneration and local boilers on behalf of our members.

1<sup>st</sup> Rochdale will also continue to take advantage of programs like NYSERDA's Standard Performance Contract program. This program provides incentives to ESCOs for EEMs implemented.

In addition to the traditional ESCO services, 1<sup>st</sup> Rochdale is interested in serving as an Energy Manager for the facilities we serve. Since 1<sup>st</sup> Rochdale is a cooperative, it has both the desire and trusting relationship with its members to undertake the less capital intensive, but often more effective 'soft' efficiency practices.

Becoming an energy manager means taking responsibility for reviewing and analyzing the monthly energy (electric, gas, oil) and water bills. 1<sup>st</sup> Rochdale will install web-based monitoring devices on the major energy using systems, (such as the boiler plant and heat and hot water distribution systems in multi-family buildings, or chiller plant in commercial sites) and will monitor the various parameters on a virtual 'real-time' basis. Training sessions will be run to instruct staffs on how to better operate their systems. When problems or less than optimum operations are observed, we can contact the customer/member's building manager to alert them. This will enhance the energy maintenance and management between 1<sup>st</sup> Rochdale and each of our members.

## **Conclusion**

The success of efforts to establish the first Urban Electric Cooperative can best be attributed to the relationships established within and among cooperative organizations. In this paper, this concept has been articulated as, "Cooperation Among Cooperatives". Cooperation among cooperatives brought the organizational and technical components necessary to assist cooperative housing organizations (and other end-users) in New York in creating a 'consumer-focused' entity that could effectively participate in the energy deregulation process. By joining the existing network of New York housing cooperatives with the 60 years of electricity experience provided by the nation's rural electric cooperatives, 1<sup>st</sup> Rochdale has been created with a mission to benefit consumers, their community and the environment. 1<sup>st</sup> Rochdale's unique combination of community involvement and business/energy skills gives us



a greater understanding of the New York City marketplace, its energy infrastructure and its people than other energy companies. From inception, 1<sup>st</sup> Rochdale's mission has been to lower members total energy bills through comprehensive energy management. These goals have begun to materialize. We hope that others across the country can learn from the efforts of 1<sup>st</sup> Rochdale and use this as a basis to create similar entities in their own areas.

