



PART TWO

AN ANALYSIS OF OPT-OUT AGGREGATION IN MASSACHUSETTS AND OHIO

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Ohio
Massachusetts

Executive Summary

Half of the states in the U.S. have enacted laws to open their energy markets to competition since 1996. Yet, with only a couple of exceptions, these laws brought about the dramatic price reductions and competitive energy markets that many policymakers anticipated. Those exceptions are notable, however, and offer lessons about keeping electricity costs low while bringing the benefits of competition to a large number of small customers.

Ohio and Massachusetts -- recently followed by Rhode Island -- enacted laws that allow a process known as opt-out aggregation. This is a public process that allows a municipality, county or other local branch of government to assemble the electric load of all or a part of the customers within its jurisdiction, and bid that load out to the best bidder. The citizens of the aggregating entity become part of the buying group unless they affirmatively “opt-out” by saying that they do not want to be part of the group. Opt-out aggregation is a low-cost way to pool the buying power of a large number of customers.

Part Two of this study examined aggregation programs in Ohio and Massachusetts, which are the two states that have allowed opt-out aggregation and have programs in operation. The two case studies provide data that reflect significant savings and a high participation rate and also provide some conclusions and lessons learned:

1. Aggregation can produce savings and can benefit green power.

Aggregation appears to have given all participating Ohio customers in the aggregators’ jurisdictions at least some access to competitively determined electricity prices. Price reductions have not been dramatic, although the benefits to participants in Ohio’s Northeast Public Energy Council (NOPEC) group have been broad, including access to green power. The Massachusetts program has served as a new way to offer a portfolio of green products to consumers and to offer a new set of efficiency programs to the consumers.

In Ohio, aggregation accounts for:

- * 85 percent of residential customer switching
- * 50 percent of commercial customer switching and
- * 25 percent of industrial customer switching
- * a 17 percent discount on power prices in one town in northern Ohio
- * discounts of from 1 percent to 15 percent, as well as a guarantee of a “greener” power mix for another aggregated group of more than 300,000 people in northern Ohio.

It is important to note that the circumstances in Ohio were unique. For example, Parma, Ohio, a town of 90,000 in northern Ohio, was able to take advantage of MSG power, a special limited allocation of low-cost power made available to marketers in northern Ohio, both for city-owned facilities and town residents. Opt-out aggregation



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gave the citizens of Parma a 17 percent discount on their power prices, equivalent to some \$60 to \$75 per year for most residential households, depending on their usage. Without an equivalent discount, such a deal would have been impossible to replicate elsewhere in the Ohio power market of the time.

NOPEC is the nation's largest aggregated group. It took advantage of the Ohio restructuring law's aggregation provisions by combining not only the load of the citizens of a single municipality, but the combined load of many municipalities. It is now a buying group representing 97 cities or townships and more than 300,000 people. Green Mountain Energy serves this buying group on a six-year contract that offers a single price option at a discount from what customers would otherwise pay for power. The savings vary from one customer to another, ranging from a high of 15 percent for a few customers to as low as 1 percent for others. Green Mountain's product is guaranteed to be cleaner than the average Ohio electricity product. It is a combination of 98 percent natural gas and nuclear and 2 percent green power, such as wind.

In Massachusetts a smaller scale pilot aggregation program has yielded:

- * approximately 45,000 participants
- * discounts of 11 to 22 percent, or \$3.50 to \$7 for an average customer
- * a set of green power options available to participants

Because municipal aggregators in Massachusetts were required to provide prices lower than the below-market standard offer, aggregation did not take off until mid-2002, when a pilot project began for the state's default supply customers. The story of aggregation in Massachusetts demonstrates difficulties in wholesale power markets, the problems that can result from very low regulated retail prices and the importance of having a persistent and knowledgeable advocate.

Through the state's Cape Light Compact, some 40,000 customers are served in Cape Cod and Martha's Vineyard by Mirant, a non-regulated affiliate of the Southern Company. This represents the single largest block of residential customers served by a single non-utility provider anywhere in Massachusetts or New England. Customers pay 4.89 cents per kWh as of August 2002 and will pay 4.79 cents per kWh beginning in January 2003. Savings range from 11 to 22 percent, or between \$3.50 to \$7 for an average customer. In addition, the Compact offers its customers three green products designed to support both existing renewable energy facilities and new facilities.

2. The success of aggregation is tied to regulated retail prices, and wholesale prices remain an important determinant of how successful aggregation can be.

Aggregation is likely to be most successful in higher priced areas, just as retail competition has been more successful in the parts of the country with the highest electric rates. Wholesale power markets affect aggregation, just as they affect any retail power market. Massachusetts' situation demonstrates that rising or volatile wholesale prices can make it as difficult for a marketer to serve an aggregated group as it can be to serve an individual customer.

3. Questions remain about what will happen when the aggregation period ends.

The NOPEC contract with Green Mountain Energy runs for six years. It is still unclear what will happen to the customers when the six-year period ends, or when and if NOPEC and Green Mountain elect to stop being in the electric business. Will the utility be required to take all of those customers back? What rate will it charge those customers? What terms will govern the rate at which those customers purchase power?

4. Aggregation requires expertise and patience. It is not an easy process, and it is not necessarily a guarantor of success without a set of complementary state policies.



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Opt-out aggregation is a new concept in power markets and, like any new concept, encounters policy and other barriers. The efforts in Ohio and Massachusetts have required tremendous patience, sophistication and dedication on the part of its organizers. Aggregation, in general, requires that policymakers make what can be controversial decisions about how to manage their competitive power markets. It does, however, offer a possibility of bringing the benefits of competition to smaller power users, who thus far have not seen much benefit to choosing a new power provider.

5. Segregating the low-income from other customers may delay benefits to low-income customers. Benefits have been delayed for some low-income customers in Ohio because the bids for their aggregation have not been completed. This may be an argument for combining the low-income customers load with that of everyone else.

6. Aggregation is not without its detractors. Although aggregation has produced somewhat lower prices and access to green power, there have been some complaints to Public Utility Commission of Ohio (PUCO) staff. Most have been of “municipal slamming.” According to PUCO staff, some people did not realize that they had been switched to a new provider until they received their first bill from the new provider.

Opt-out aggregation’s benefit as a low-cost way to pool a large group of customers is also fodder for its critics. Some suggest that opt-out aggregation is too easy and too inexpensive a way to pool the smaller customers and that, as a result, it is an unfair advantage to the municipal aggregators.

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Almost half of the states have opened their power markets to competition, and a few early results are becoming clear. One is that the retail power market has not produced much competition for small power users, whether they be typical residential customers, low-income customers, or small commercial customers. With a couple of exceptions across the country, small power users have tended to stay with their old utility and to pay a rate regulated by the state’s public service commission rather than a price set by the competitive market. By contrast, many large power users, particularly industrial customers, now buy power from competitors of their former utility.

There are a few exceptions to this general trend. One example is Cleveland, Ohio, where more than half of the residential customers now buy power at competitively determined rates. Pennsylvania has also seen larger numbers of customers change providers.

The purpose of this paper is to outline a strategy that has given some smaller customers access to competitive prices and product choices in Ohio and in part of Massachusetts. That strategy is known as opt-out aggregation.

What is Opt-out Aggregation?

Opt-out aggregation is a public process that allows a municipality, county or other local branch of government to assemble, or aggregate, the electric load of some or all of the customers within its jurisdiction and seek bids for the best available price for those customers. The citizens of the municipality, township, county or other government aggregator are assumed to be part of the buying group unless they formally declare that they do not want to be part of the group. The citizens of the municipality have the opportunity to participate in the public process



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that determines whether or not the town will actually act as an aggregator. They can then participate, or not participate, in the aggregated group. Usually they do so by returning an opt-out postcard within, for instance, 21 days. Opt-out aggregation is a low-cost way to pool the buying power of a large number of customers because of the low marketing costs involved in signing up a large group of customers.

Opt-out aggregation is distinct from opt-in aggregation, in which an aggregator, such as a church, a union, a not-for-profit or a for-profit group, arranges a power purchase on behalf of its members. Such aggregation requires the aggregator to persuade each customer to formally agree to be a part of the buying group. For example, the Retail Merchants Association in Virginia is setting up a bulk purchase for its member companies who choose to participate. Opt-in aggregation is a more expensive means of assembling a large group of customers than opt-out aggregation.

Opt-out aggregation is also different from municipalization, in which a municipality either generates or purchases power in order to sell it to customers within its boundaries. (Some parties, particularly investor-owned utilities, claim that municipalization often involves significant tax advantages because the government builds the power plants or takes title to power.) Opt-out aggregation is an entirely different matter and places the government in the position of no more than a buying agent for its citizens. The transaction and payments are between a power marketer (selected by the government aggregator) and individual customers. The government is neither buyer nor seller.

State law must authorize opt-out aggregation, and only Ohio and Massachusetts have enacted such a law.

Opt-out aggregation addresses two of the fundamental problems associated with states' attempts to create competition in the market for retail power customers: Few marketers offer product to small customers, and few customers have shown a great deal of interest in switching providers. Three factors are at work: 1) the cost to acquire a retail customer is high, 2) the profits margins involved in serving those customers are low, and 3) the dollar savings for most residential customers are low.

The cost to acquire a customer

Estimates vary, but the range of costs for acquiring a new customer is as low as \$50 to as high as \$200 and above. The New York Times reported that the average cost of acquiring a cell phone customer was approximately \$200.

Margins on serving customers: Marketers report that the profit margins on selling power to a residential customer are typically about one penny per kilowatt hour.

Typical savings for residential customers: Residential customers do not use a great deal of electricity - typically about 700 kilowatt hours each month. Because savings generally range up to 10 percent of the generation portion of the electric bill, typical savings are unlikely to amount to much money. See the table below.

A Typical Residential Customer's Bill:	\$70.00
40% of Typical Bill is For Power Delivery	<u>(\$28.00)</u>
Portion of Bill Subject to Competition	\$42.00

Typical savings for a residential customer have tended to be from 2% to 10%. Savings will range from 84 cents to \$4.20.



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Opt-out aggregation dramatically reduces the transaction cost for the aggregator/marketer. Instead of a large ad campaign, the aggregator and marketer need only meet statutory requirements for contacting customers. Marketers do not have to conduct direct mail or other marketing activities.

As long as the price that the government aggregator arranges is less than the price the customer was previously paying (as is required by both Ohio and Massachusetts state laws), the customer has to do very little to change providers. Opt-out aggregation is an inexpensive way for customers who might not otherwise participate in the competitive power market to gain some benefit from competition. Opt-out aggregation works because it is such a low-cost way to switch large numbers of customers. It is not without its critics, however, who point out that it does not give the customer a real choice. Such critics complain of “municipal slamming.”

Like any retail market activity, aggregation is subject to the workings of the wholesale power market and to the rules that states set out for the retail market. A volatile wholesale power market makes it difficult for a marketer to bid on an aggregator’s request for proposals because the marketer must know what the costs of power supply will be, in order to commit to a multi-year power supply.

Aggregation can also be successful only if the regulated prices that the aggregator/marketer must beat are set so that the marketer can make money. If regulated prices, meaning the prices paid by every customer who does not switch providers, are set well below wholesale market rates, aggregation will be difficult, just as below-market prices make it difficult for any marketer to participate in the market.

Two case studies — one from Ohio, the other from Massachusetts — illustrate how aggregation has functioned thus far.

Ohio Case Study

Ohio enacted electric industry restructuring legislation that incorporated its own version of opt-out aggregation. Ohio’s law requires aggregators and marketers to follow several steps in order to qualify.

- * Government aggregators must register with the Public Utilities Commission of Ohio (PUCO).
- * Marketers must register with the PUCO.
- * Government aggregators must file a business plan with the PUCO detailing, among many other items:
 - * the charges (if any) that a customer would be required to pay for leaving the aggregated group
 - * the amount of time a customer has to respond to the opt-out notification (usually 21 days)
 - * the procedure and pricing for signing up new customers to the aggregation group
 - * any other fees that the customer should expect to pay
- * The government aggregator must hold a referendum to determine if the city, town or other jurisdiction may begin the process of negotiating for the purchase of power on behalf of the citizens.
- * The government aggregator must negotiate a price that is below the comparable price already being paid by the citizens of the town.
- * The government aggregator must notify the citizens within its jurisdiction of its intention to switch their electricity provider if the citizens do not opt out of the aggregated group.
- * Customers must have an opportunity to leave the aggregated group once every two years.



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Ohio's aggregation effort encompasses several smaller efforts and should be seen in the broader context of four unique factors in the state:

Special power allocation: The state created an allocation of "market support generation" power (MSG) to jump-start the market. MSG power was low-cost power available only in the northern Ohio, First Energy territory. First Energy made an allocation of 1,170 MW of power at a discounted price of 3.1 cents per kWh, which was available on a first-come first-served basis to marketers with a specific list of retail customers who would receive the power. The allocation of the MSG power created some controversy, since many marketers and government aggregators claimed that they did not have enough time to assemble a list of potential retail customers before the allocation disappeared.

MSG power was available only in Ohio and affected the discount levels that some aggregators were able to offer. The largest aggregation efforts were completed without MSG power.

Utility incentives to shed customers: The Ohio restructuring law gave investor-owned utilities in Ohio a strong incentive to shed customers: The utilities can recover their stranded costs only if they lose 20 percent of their customers to competitive electric providers within a certain period of time. This affected First Energy, in particular, because it had the highest stranded cost levels.

This stipulation may have minimized political resistance to opt-out aggregation in Ohio.

Low-Income Customers: Low-income PIPP (percentage of income payment plan) customers are treated differently from other customers in Ohio. Their load has not yet been aggregated and bid out as a separate unit.

Geography: Ohio's power system has two distinct areas. The average cost of power in northern Ohio, First Energy territory, is considerably higher than in the rest of the state.

As a result of these cost differentials, most aggregation activity and most retail activity have taken place in the northern part of the state. Since mid-May of 2002, several municipalities outside of northern Ohio have passed opt-out referendums, and the success of those efforts will indicate how attractive aggregation is outside of the more expensive northern Ohio region.

In its April 2002 report on the progress of electric industry restructuring, the PUCO notes that aggregation accounts for approximately:

- * 85% of residential customer switching
- * 50% of commercial customer switching
- * 25% of industrial customer switching

Two aggregation efforts in Ohio illustrate the state's progress.

Ohio Close-Ups: Parma and NOPEC

Parma is a city of 90,000 in northern Ohio that was able to take advantage of MSG power both for town citizens and for city-owned facilities. Seven percent of the households opted out of the arrangement. Opt-out aggregation gave the citizens of Parma a 17 percent discount on their power prices, equivalent to some \$60 to \$75 per year for most residential households, depending on usage.



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The discounts that Parma's citizens received were larger than those available to many other aggregated groups because the city was able to take advantage of MSG power. Some complaints later emerged that Parma had not fully complied with the rules for receiving the MSG power, and had not passed through all the steps required to qualify for the allocation. However, the PUCO decided that the evidence behind these complaints did not warrant revoking Parma's power allocation. Although Parma is sometimes cited as an example of how well aggregation can work, it is important to note that without an MSG-equivalent power discount, the town's significant discount would have been impossible to replicate in the Ohio power market of the time.

It is also worth noting that Parma apparently spent close to \$200,000 in acquiring and paying for the expertise to negotiate its power supply deal.

The Northeast Public Energy Council (NOPEC) is the nation's largest aggregated group. It took advantage of the Ohio restructuring law's aggregation provisions by combining not only the load of the citizens of a single municipality, but the combined load of many municipalities. It is now a buying group representing 97 cities or townships and more than 300,000 people.

NOPEC distributed a request for proposals and received nine bids in early 2001. It pursued negotiations with two of the bidders, and eventually selected Green Mountain Energy. Green Mountain Energy serves this aggregated group of communities through a six-year contract that offers a single price option that is less than what customers would otherwise pay for power. The savings vary from one customer to another, and are as high as 15 percent for a few customers and as low as one percent for others. Typical discounts are approximately two percent. In addition to the price discount, Green Mountain's product is guaranteed to be cleaner than the average Ohio electricity product. It is a combination of 98 percent natural gas and nuclear and two percent green power such as wind. The company has also agreed to put one photovoltaic demonstration facility in each of the participating counties and to build one 10-megawatt wind farm.

Massachusetts Case Study

Massachusetts was the first state to put opt-out aggregation provisions into its electric industry restructuring statute. Yet less than one-half of one percent of customers signed up with competitive suppliers, largely as a result of the state's low, regulated standard offer prices. Because municipal aggregators were required to provide prices lower than the below-market standard offer, aggregation did not really take off until mid-2002, when a pilot project began for the state's default supply customers. The story of aggregation in Massachusetts demonstrates the difficulties in wholesale power markets, the problems that can result from very low regulated, retail prices, and the importance of having a persistent and knowledgeable advocate.

Aggregation in Massachusetts involves several steps:

- * All aggregators must have an aggregation plan approved by the Massachusetts Department of Telecommunications and Industry (DTE).
- * A town may initiate a process to aggregate electrical load after a majority vote of a town meeting or town council.
- * The government aggregator must develop a plan that details the organizational structure of the program, its operations, funding, costs and fees to customers. The DTE must review the plan and approve it only if the price for energy is lower than the standard offer price or, if the price for energy is higher than the standard offer, the higher price results from the purchase of renewable energy.



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After Massachusetts passed its restructuring legislation with language allowing opt-out municipal aggregation, the Cape Light Compact began an effort to buy power on behalf of all customers in a 21-county area encompassing Cape Cod and Martha's Vineyard.

Cape Light's efforts began in the late 1990s, but it was not until 2002 that the Compact finally worked out an arrangement with state policymakers and power marketers to offer product to customers. The protracted start up was due largely to a combination of wholesale and retail market issues. The Cape Light Compact's electric aggregation effort occurred in three stages.

Stage One: Cape Light assembled its load and put it out for bid in 1998, but no qualified marketers bid for the load. At the time, the standard offer price (the price that any non-choosing customer would pay) was set at 3.5 cents per kilowatt hour, but wholesale market prices were higher. Marketers were unable to offer a price lower than the standard offer. The total number of customers who would have been served totaled 180,000.

Stage Two: Stage two, beginning in January of 1999, produced a responsive bidder (Select Energy) out of four bidders. Each of the bidders offered a price below the standard offer, which the DTE had set to gradually increase during the transition period from March 1998 to March 2005. But wholesale prices rose between the time the Compact selected Select Energy and the time service was set to begin. The start date of service had been delayed because a third party intervened and objected to the Cape Light/Select Energy agreement during the DTE's proceeding to approve the agreement. As a result of the delay, the Compact lost its price lock.

The agreement finally signed with Select Energy includes a "trigger clause" that allows the contract to be implemented when standard offer prices exceed market prices. Massachusetts law requires the aggregator to provide power at a price lower than the standard offer price, and Cape Light was unable to meet this requirement. The contract with Select Energy could take effect once the standard offer in Massachusetts rose above the Select Energy price.

Stage Three: The Cape Light Compact's third attempt at aggregation took advantage of language in the Massachusetts legislation that allows development of a pilot project. Default service in the state is offered by the investor-owned utilities at prices that more closely reflect market prices than the standard offer price. It is the only service available to customers who are new to a service territory or who have left their utility but are no longer served by the competitor. Default service applies to all classes of customer. Default customers now total approximately one-third of customers in the state. In the Cape Light area, there are approximately 45,000 default service customers.

The DTE approved the Cape Light plan, partly because it may offer a model for continuation of service to small power users after 2005, when standard offer service ends and all customers are subject to a default service rate.

As of August 2002, about 40,000 customers in Cape Cod and Martha's Vineyard are being served by Mirant, a non-regulated affiliate of the Southern Company. This represents the single largest block of residential customers served by a single non-utility provider anywhere in Massachusetts or New England. Customers pay 4.89 cents per kWh as of August 2002 and will pay 4.79 cents per kWh beginning in January 2003. This equates to savings that range from 11 to 22 percent, or between \$3.50 to \$7 for an average customer. In addition, the Compact offers its customers two "green" products designed to support both existing renewable energy facilities and new facilities:

* New Green: An additional 1 penny per kWh supports development of local renewable energy facilities.



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* Blue-Green: Customers pay to support existing renewable supply equivalent to 50 percent of their monthly usage at 7.185 cents per kWh; 0.5 cents per kWh of this is applied to support of new local renewable energy facilities.

It is too early to tell how popular these products will be.

Massachusetts law also allowed the Compact to develop and run a regional energy efficiency program, transforming a utility-run program into a community-based program. The program supports the efficiency program with funds that the region's consumers pay under the state-authorized public benefits fund. Reported savings are \$2 million in the first six months of the program at a 2:1 benefit cost ratio.

The Compact is also advocating increased enrollment in utility low-income discount programs. (As noted in Part One, Massachusetts distribution utilities are required to fund low-income discounts or rate reduction programs; the distribution utility for the Cape area is NSTAR Electric.) Currently, an estimated 27 percent of eligible consumers receive discounts, amounting to \$200 per year for customers with electric heat and \$170 for customers with gas heat. The Compact has begun working with social service agencies, state regulators and the utility in order to identify ways to boost enrollment in the program.

Lessons from Aggregation in Ohio and Massachusetts

Aggregation can produce savings and can benefit green power: Aggregation appears to give all participating Ohio customers at least some access to better, competitively determined electricity prices. Price reductions have not been dramatic, although there are other benefits to participants in the NOPEC group, including access to green power. The citizens in areas like Parma, who gained access to MSG power, received greater discounts. These relatively large discounts will not be available to other communities without some other allocation similar to the MSG power.

The Massachusetts program has served as a new way to offer a portfolio of green products to consumers, and to offer a new set of efficiency programs.

Segregating low-income from other customers may delay benefits to low-income customers: Benefits have been delayed for the PIPP customers in Ohio because no bids to serve these customers have been completed. This may be an argument against separating the low-income customers from everyone else. In Massachusetts, and in contrast to Ohio, all customers in the aggregated group have benefited, including low-income customers.

The success of aggregation is tied to regulated retail prices: Northern Ohio, where prices are highest, has seen the greatest interest in aggregation. The rest of the state, where prices are lower, has seen much less interest, although new aggregation referendums passed there in mid-May 2002. Aggregation is likely to be most successful in higher priced areas, just as retail competition has been more successful in those parts of the country with the highest electric rates.

The standard offer price has remained an extremely important factor in determining the success of the aggregation effort. Massachusetts aggregation law requires that the aggregator offer a price lower than the price that customers would otherwise pay. A very low standard offer price can make it difficult for aggregators to get an acceptable bid.



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Wholesale power markets affect aggregation, just as they affect any retail power market: Wholesale prices remain a very important determinant of how successful aggregation can be. Massachusetts' situation demonstrates that rising or volatile wholesale prices can make it as difficult for a marketer to serve an aggregated group as it can be to serve an individual customer.

Aggregation is not without its detractors: Although aggregation has produced somewhat lower prices and access to green power, there have been some complaints. Most of the complaints received by the PUCO have involved "municipal slamming." According to PUCO staff, some people did not realize that they had been switched to a new provider until they received their first bill from that provider. Despite Ohio's double safeguard of a referendum followed by an opt-out period, it is difficult to reach all customers and to make certain that they open and read their mail, and comply with the 21-day opt-out period.

The Massachusetts program may have been more successful with its education efforts; it has received far fewer complaints and a one percent opt-out rate.

One way to address some of these concerns may be a well-organized education campaign. However, even a very effective education program is not going to reach every customer, and complaints are still likely to surface.

Opt-out aggregation's benefit as a low-cost way to pool a large group of customers is also fodder for its critics. Some suggest that opt-out aggregation is too easy and too inexpensive a way to pool the smaller customers and that, as a result, it is an unfair advantage to the municipal aggregators. Supporters of opt-out aggregation counter that it is one of the only ways to bring the benefits of competitive markets to smaller customers, since the profit margins of serving those customers are too small to justify spending the money on marketing to them.

Questions remain about what will happen when the aggregation period ends: The NOPEC contract with Green Mountain Energy runs for six years. It is still unclear what will happen to customers when the six-year period ends, or when and if NOPEC and Green Mountain elect to get out of the electric business. Will the investor-owned utility be required to take back all of these customers? What rate will it charge these customers? What terms will govern the rates?

These questions are now being considered by the PUCO, and they are critical to the success of aggregation in the future. They are also part of a much larger debate about how small customers are going to continue to buy their power, a debate that goes beyond an isolated discussion of aggregation.

Aggregation requires expertise and patience: Opt-out aggregation is a new concept in power markets and, like any new concept, has encountered policy and other barriers. The efforts in both Ohio and Massachusetts have required tremendous patience, sophistication and dedication. Not all aggregators are likely to have the level of patience that the Cape Light Compact and its organizers demonstrated. One of the major benefits of the NOPEC aggregation effort was that any government jurisdiction could join the group simply by paying a fee. This fee entitles them to the NOPEC group's expertise and negotiating power. Cities like Parma, Ohio, made a significant investment to buy the expertise needed to negotiate a power supply agreement.