Can We Just "Rely on the Market" to Provide Energy Efficiency?

AN EXAMINATION OF THE ROLE OF PRIVATE MARKET ACTORS IN AN ERA OF ELECTRIC UTILITY RESTRUCTURING

Martin Kushler, Ph.D. and Patti Witte, M.A.

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EXECUTIVE SUMMARY

With the movement toward restructuring the electric industry, some have argued that energy efficiency would be better accomplished by relying on market forces than by continuing government and regulatory requirements for energy efficiency programs. In response, others have argued that market barriers to energy efficiency are significant, with or without restructuring, and that energy efficiency programs should be continued. Underlying this debate is a key public policy question: To what extent can private market forces be relied upon to achieve energy efficiency in the absence of long-standing utility and government efforts? The purpose of this study was to gather data to help address that question.

This study focused on three key groups of private sector market actors expected to be involved in the provision of energy efficiency services in a restructured electricity market: energy efficiency service companies; electricity commodity providers; and distribution utilities. Furthermore, in order to review market activities that have emerged to their maximum extent, the study specifically focused on nine states that were early implementers of electric restructuring—Arizona, California, Connecticut, Illinois, Massachusetts, Michigan, New York, Pennsylvania, and Rhode Island.

Data collection methodologies included website content analysis, document review, and nearly one hundred detailed telephone interviews (with representatives of each of those three key market actor groups plus a number of "expert" observers of the energy efficiency service industry).

Briefly stated, the key conclusions of this study are as follows.

First, while the energy services company (ESCO) industry performs a very valuable role in delivering energy efficiency in the United States, there are at least two important reasons why this industry could not be expected to step in and replace the role of government/ regulatory policies and programs in providing energy efficiency.

- There are major gaps in the market segments reached by this industry. In particular, ESCOs generally have demonstrated little or no ability (or interest) in serving the residential or small commercial customer markets. To a lesser extent, ESCOs have also had some difficulty reaching the industrial customer market.
- Even in the market sectors where ESCOs perform the best (institutional and larger commercial markets), the ESCO industry is in fact intricately involved with, and supported by, existing government/regulatory policies and funding programs for energy efficiency. Indeed, these policies and programs in substantial part helped create the ESCO industry and continue to play a major role in sustaining its work today.

Second, for a variety of reasons, the retail electricity commodity supplier industry has not demonstrated itself to be an effective vehicle for achieving energy efficiency improvements. Significant challenges include a high failure rate among supplier firms, a mixed interest in energy efficiency among suppliers, a lack of commodity suppliers actually marketing tangible

energy efficiency measures, and a lack of customer interest in obtaining energy efficiency from commodity suppliers (due to perceived conflict of interest and other reasons). Regardless of the specific causes, the vision of a robust supplier industry bundling the electricity commodity and energy efficiency to provide customers with lowest-cost energy solutions has simply not materialized.

Third, absent legislative or regulatory requirements (e.g., system benefit charge-funded programs, shareholder incentives for effective utility energy efficiency programs, etc.), there is strong evidence that in a restructured electric industry, utility companies will not choose to provide substantive energy efficiency programs. Rather, if they provide anything at all, they are much more likely to provide minimal "information" type programs, largely as a customer service and customer relations mechanism.

In summary, this study has found little evidence to support the premise that relying on private market actors to provide energy efficiency would be a superior approach and that government/regulatory policies and funding for energy efficiency can be phased out or eliminated. Indeed, after focusing on nine states that were early adopters of electric restructuring and gathering data from the three private market actors most prominently mentioned as entities that would "pick up the ball" and deliver energy efficiency in a restructured marketplace, this study supports conclusions contrary to that premise. Those private market actors each face significant limitations in their interest and ability to deliver energy efficiency and have thus far demonstrated no realistic capability to replace government/regulatory policies and programs to provide energy efficiency.

Ironically, continued government/regulatory policies and programs to support energy efficiency would actually play an important role in enhancing the ability of those entities to provide energy efficiency in the marketplace. Therefore, it appears that the proper question is not: Can private market actors replace government/regulatory policies and programs? but rather: How can government/regulatory policies and programs help maximize the energy efficiency provided by these market actors?

BACKGROUND

Energy efficiency first surfaced as an area of public policy concern in the United States in the mid-1970s in response to energy price and supply shocks resulting from the first oil embargo. From the very outset, utility companies have played an important role in implementing energy efficiency policy. Initially, certain states developed utility "conservation" programs focused primarily on the residential sector. Typically these programs offered information and financial incentives for customers to take conservation actions such as adding ceiling insulation. By 1978, the federal government had formally required utility involvement in energy conservation through the Residential Conservation Service (RCS) program created as part of the National Energy Conservation Policy Act.

Although that program was later repealed under the Reagan Administration, the trend toward utility involvement in energy efficiency continued to grow. By the mid- to late-1980s, early initiatives to provide "demand-side management" (DSM) by electric utilities in California, the Pacific Northwest, and a few other locations had blossomed into a growing movement toward "integrated resource planning" (IRP), embraced by many states. By the early 1990s, utility DSM energy efficiency activities were both expanding rapidly and truly relied upon as one of the cornerstones of energy efficiency policy in this country. Then electric utility restructuring emerged and fundamentally changed the entire landscape.

In 1994, with the publication of the California Public Utilities Commission's *Blue Book* (CPUC 1994), the movement toward electric utility "restructuring" in the United States was launched. Over the next six years, nearly half of the states in the nation (24 states plus the District of Columbia) formally adopted a policy of electric restructuring. In the process, the perception of energy efficiency, and the role of various parties in its implementation, were significantly altered.

Implications of Restructuring for Energy Efficiency

One of the major underlying themes in the movement toward electric restructuring was the philosophy that the influence of regulation should be lessened in favor of more reliance upon market forces. A direct consequence of this was the widespread regulatory abandonment (either formally or through neglect) of prior strategies of DSM and IRP requirements for utility energy efficiency programs.

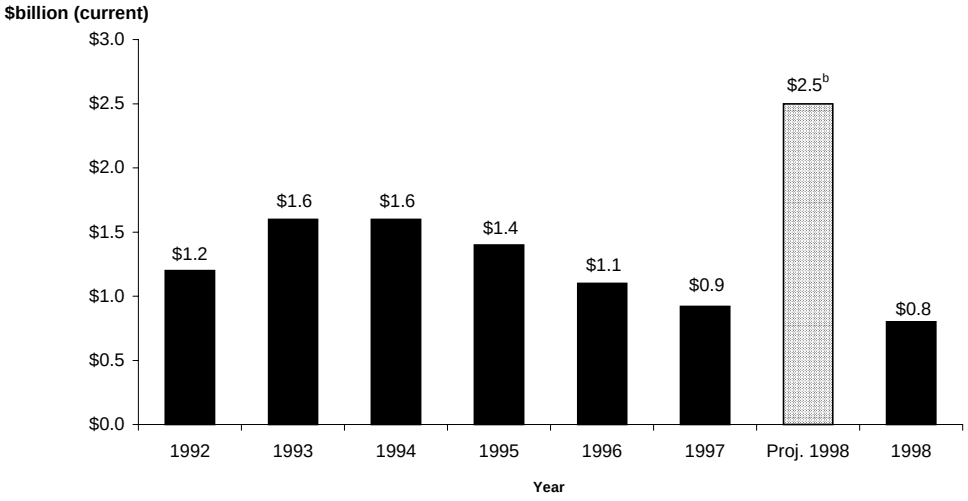
In some cases, the linkage between restructuring and the cessation of utility energy efficiency programs was quite explicit;[1] in others it was less overt.[2] In any case, however, the effects in the industry were striking. Whereas utility energy efficiency spending had been increasing rapidly during the early 1990s, and that growth pattern had been projected to continue, the actual trend

[1] For example, in Michigan, Consumers Power Company sought (successfully) to eliminate its energy efficiency programs in 1995, arguing that "competitive changes in the electricity industry … render mandatory DSM programs outmoded." (MPSC 1995)

[2] See Kushler and Suozzo (1999) for a detailed discussion of the various economic reasons why distribution utilities tend to be averse to providing energy efficiency programs without regulatory encouragement and/or requirements.

abruptly reversed course as restructuring entered the scene. From 1994 to 1998, national utility energy efficiency spending declined by 50%. The decline is even greater (68%) when compared to spending levels that had been projected by the utilities in 1993 (see Figure 1).

Figure 1. Direct Utility Spending on DSM Energy Efficiency Programs by Year[a] (1992-1998)



[a]The U.S. direct annual utility spending on energy efficiency for 1992-1998 is based on data obtained from EIA (1999).

[b] As part of the EIA data collection, utilities were asked to project their future spending levels 5 years out. This is the spending level projected by utilities in 1993, prior to the onset of restructuring.

Moreover, much of the remaining spending on energy efficiency by 1998 occurred in states with temporary legislative and/or regulatory requirements put in place as a trade-off for electric restructuring. Typically the funding was provided through such mechanisms as a "public benefits charge" attached to utility distribution rates (Nadel and Kushler 2000).

The Role of the Private Sector

Consistent with the underlying philosophy, an assertion often accompanying the move toward restructuring in the electric industry was that private market entities (e.g., ESCOs, contractors, energy suppliers, etc.) could be increasingly relied upon to provide energy efficiency services and displace the need for government or utility programs.

Many of the staunchest advocates of restructuring have argued that energy efficiency would be better served by market forces alone and that there should be no public subsidies or programs. For example, the New Hampshire Public Utilities Commission (NHPUC) wrote the following in their original restructuring plan:

> …[requiring] ratepayer funded programs for delivering energy efficiency services is no longer appropriate. The competitive market will be more successful in serving the need…than the ratepayer funded programs of the past. (NHPUC 1997)

The plan mandated a complete phaseout of energy efficiency programs within 2 years of retail access.[3]

In making their case for restructuring, some of the consultants and industry "experts" were rather colorful in their proclamations that regulatory DSM was dead and that competition would produce superior energy efficiency results. The following remarks from a keynote speaker at the "7th National Demand-Side Management Conference in Dallas" in 1995 are illustrative:

> Large scale bureaucratic programs designed to produce negawatts have fallen by the wayside, but now competition provides an opportunity for DSM programs that meet the test of customer understanding and acceptance. Competition is DSM's best friend and DSM is competition's best friend…. In a competitive world, you will not depend on handouts from regulators, or strategic alliances with the bird and bunny folks. (The Electricity Daily 1995)

Even many states that had traditionally been very supportive of regulatory requirements for IRP and DSM embraced the general theme of moving toward reliance on "the market" to provide energy efficiency, albeit after a "transition period." The following comments from the Massachusetts Department of Public Utilities (now the Department of Telecommunication and Energy) are representative:

> In the May 1 Statement at 64, we stated our expectation that, in a fully competitive generation environment, energy efficiency services should be provided by the market, and that any sector of this market that is sufficiently competitive should not require regulatory intervention…. In the May 1 Statement, we indicated that our proposed rules regarding energy efficiency would implement a gradual shift toward energy efficiency services that compete effectively in the open market. We proposed that distribution companies file five-year plans to provide energy efficiency ("energy efficiency plans") that include a transition from traditional DSM retrofit programs toward market-driven and market transformation initiatives…. [In this Order we] maintain our view that a movement toward market-driven and market transformation activities is appropriate. (MDPU 1996)

Massachusetts's subsequent restructuring legislation, signed in November 1997, created a 5-year funding mechanism for energy efficiency, with a funding surcharge beginning at 3.3 mills per kilowatt-hour (kWh) in the 1st year, ramping down to 2.5 mills/kWh in the 5th year. Prior to expiration, the Massachusetts Division of Energy Resources was to review the effectiveness of the programs and make recommendations regarding the need for future support.

[3] In response to appeals from numerous parties, NHPUC backed off from that 2-year phaseout and revised its approach to encompass at least some support for energy efficiency. However, their underlying philosophy remained consistent, as they stated: "We continue to believe that the most appropriate policy is to stimulate, where needed, the development of market-based, not utility sponsored and ratepayer funded, energy efficiency programs." NHPUC (1998)

This general model of temporary funding support for energy efficiency during some type of transition period was fairly widely adopted. Of the 19 restructured states with specific public benefit mechanisms to support energy efficiency, two-thirds created that funding mechanism for a specified period of time, ranging from 3 to 10 years in duration (Kushler and Witte 2000).

However, despite the many pronouncements about the superiority of relying on the competitive market, and the general drift in that direction by many states in their restructuring legislation, a crucial public policy question remains: To what extent can private market forces be relied upon to achieve energy efficiency in the absence of long-standing utility and government efforts? As states and the federal government confront policy choices about whether to support utility- and/or public benefits charge-funded energy efficiency programs, much of the debate will revolve around that key question. Unfortunately, thus far that debate has largely been based on economic theories and anecdotes for there has been little or no good data available to address the issue. The fundamental purpose of this study is to help inform that debate.

STUDY DESIGN

This study focused on three key groups of private sector market actors expected to provide energy efficiency services in a restructured electricity market—energy efficiency service companies, electricity commodity providers, and distribution utilities. Furthermore, in order to review market activities that have emerged to their maximum extent, the study specifically focused on nine states that were early implementers of electric restructuring—Arizona, California, Connecticut, Illinois, Massachusetts, Michigan, New York, Pennsylvania, and Rhode Island. These states were also selected to help provide geographic diversity and a wide range of restructuring policies in terms of public benefit funding for energy efficiency. (Key characteristics of these nine states are summarized in Table 1.)

Procedures

This study utilized both primary and secondary sources of data. Secondary sources encompass a number of related research reports and papers, including some concurrent research being conducted by the Massachusetts Division of Energy Resources. Summaries of relevant information from these secondary data sources are incorporated in the “Discussion” section of this report.

Procedures to obtain primary data included website content analysis, document review, and detailed telephone interviews. Primary data collection focused on four key groups—the three private market actor segments mentioned previously (i.e., energy efficiency service companies, retail electricity commodity providers, and distribution utilities) plus a small group of industry “experts" with extensive experience observing the energy efficiency services market. The subsequent sections of this report are organized so as to provide the results obtained for each of these four key groups. The applicable methodologies employed for each area are discussed in those sections.

Table 1. Description of the Nine Target States

State	Region	Population*	Date Restructuring Policy First Passed	Date of First Choice	Annual Funding for Public Benefit EE	EE (mills/kWh)
AZ	West	5,130,632	12/96—with several rulerevisions through 9/99	1/1/2001—all customers	8.0	0.27
CA	West	33,871,648	9/96	5/31/98—all customers	228.0	1.3
CT	New England	3,405,565	4/29/98	1/1/00—distressed municipalities 7/1/00—all customers	87.0	3.0
IL	Midwest	12,419,293	12/97	10/99—large ind. & commercial 5/1/02—residential	3.0	0.03
MA	New England	6,349,097	11/97	3/1/98—all customers	130.0	3.0
MI	Midwest	9,938,444	12/96—1st MPSC order initiating the restructuring process with legislation signed in 6/00	9/20/99—1st bids submitted in Consumers and Detroit Edison's retail access programs 1/1/02—all IOU customers	0.0	0.0
NY	Northeast	18,976,457	5/96	1998–2002—phasein 2002—all customers	83.0	0.83
PA	Northeast	12,281,054	12/96	1/1/99—a maximum of 33% of the peak load of each customer class 1/1/00—a maximum of 66% of the peak load of each customer class 1/1/01—all customers of electric cooperatives	11.0	0.10
RI	New England	1,048,319	8/96	7/97—commercial and industrial customers 1/98—residential customers	14.0	2.1

* Taken from U.S. Census Department (2000).

RESULTS

Energy Efficiency Service Companies (ESCOs)

One of the major "private market" entities envisioned as assuming a primary role in providing for energy efficiency in a deregulated electricity market is the energy efficiency service company industry. Therefore, the ESCO industry was targeted as one of the key areas of focus for this study.

Methodology

Primary data collection in this area was accomplished through telephone interviews with senior executives (generally presidents, vice-presidents, or regional sales managers) at the various energy efficiency service companies serving the targeted states. These were structured, in-depth interviews with a typical completion time of approximately 30–40 minutes. (See Appendix A for the interview instrument.)

Sample

A sample pool of ESCOs was identified for each of the nine target states. In most cases, lists of registered ESCOs were available from the state. In some states, lists of ESCOs were assembled through contact with local experts. The sample pools ranged from a low of only five identified firms in Michigan to over 50 firms in New York. The original goal was to attain five completed surveys for each state.

In all, a total of 40 interviews were completed, representing 30 distinct companies. (The other 10 interviews represented a total of 7 companies that were identified in the samples of more than one of the targeted states. Since many aspects of the survey were state-specific, interviews were occasionally completed with different state offices of the same corporate entity.) Table 2 presents the number of completed ESCO interviews in each state.

Table 2. ESCO Interviews Completed for Each State

State	Interviews Completed
Arizona	4
California	5
Connecticut	4
Illinois	5
Massachusetts	5
Michigan	2
New York	7
Pennsylvania	5
Rhode Island	3
Total	40

Descriptive Information

Just over half (54%) of the executives interviewed were from ESCOs that were independent companies, one-fourth (26%) were subsidiaries of utilities or other energy suppliers, and the remainder (20%) were subsidiaries of a corporate entity that was not an electricity supplier. The median length of employment in the energy efficiency industry among the executives interviewed was 15 years. Their median length of employment with their current firm was 6 years.

Scope of Services

Just under half (45%) of the respondents classified their company as a full national ESCO offering services in all 50 states. Only 10% were with locally focused companies serving three or fewer states. The remainder could be classified as some form of a regional or semi-national entity. Respondents were asked whether their firm provided service to each of eight different customer segments. Their responses are summarized in Table 3.

Table 3. Percentage of ESCOs Providing Services to Different Customer Segments

Segment	Yes	No
residential single-family	15%	85%
residential multi-family	55%	45%
educational facilities	88%	12%
municipal/state facilities	75%	25%
federal facilities	60%	40%
commercial office buildings	75%	25%
commercial retail	53%	47%
industrial	60%	40%

These results represent a typical pattern for ESCOs, with relatively high service levels to educational and municipal/state facilities and relatively lower service levels to commercial retail and industrial facilities. (Moreover, of those firms that do serve commercial retail, the median percentage of their total business represented by that segment is only 5%. Of those that serve the industrial sector, their median percentage of business in that segment is only 15%.)

Of particular interest is the very small proportion of firms that serve residential single-family housing. In fact, services to that sector are even more limited than it appears in the table because two of the firms are very small (serving only two or three states), two are offices of the same firm in different states, and one large firm only does 1% of its business in the residential area. When these factors are accounted for, only one firm was found that does a significant amount of work with single-family residential dwellings across numerous states.

Respondents were then asked whether there were certain customer segments that were too unattractive or unprofitable to serve, and 60% said yes. Almost all of those cited the residential and/or small commercial customer segments. The most common reasons, given repeatedly, were: "savings too small" and "transaction costs too high."

ESCO Decision-Making

Considerable focus was given to the issue of how energy efficiency service companies make decisions on where to target their business activities. First, respondents were asked in an open-ended manner: "What are the main criteria your firm uses to determine if a state is a good place to target energy efficiency services?" By far the most commonly cited factors were the local utility rates (mentioned by 45% of respondents) and the presence of government/utility programs or legislation to support energy efficiency services (mentioned by 52%).

Later, respondents were asked to "rate the importance of certain factors in your company's decision-making about moving into or expanding its energy efficiency business in any particular state." They were asked to rate eight different factors on a 1 to 10 scale (1=not at all, 10=extremely important). Table 4 summarizes the ratings obtained.

Table 4. ESCO Ratings of Different State Factors Affecting Business Location Decisions

Factor	Average Rating
a. electricity prices	7.90
b. state laws assisting performance contracting	7.42
c. presence of system benefits funding	7.08
d. type and size of businesses in the state	7.00
e. proximity to other states the ESCOs do business with	5.95
f. whether electric restructuring passed	5.95
g. number of competing ESCOs in that state	4.97
h. climate zone	4.56

The results here closely parallel the findings from the open-ended question mentioned previously. In this case, electricity prices is the highest-rated factor, followed by state laws assisting performance contracting and the presence of system benefits program funding as the next two highest rated factors. Interestingly, the issue of whether or not a state has passed electricity restructuring was rated relatively low as a factor affecting business location decisions.

The issue of state/utility program support was then explored further. The concept of “supplemental support” was defined for the respondent as including financial assistance (e.g., rebates, a standard offer, etc.) or technical assistance (audits, funding for technical studies, etc.) and that the support could be from a utility company, a state or federal agency, public benefits charges, or other such sources other than the customer. Respondents were then asked approximately what percentage of their firms’ projects involved some type of supplemental support. The median response across all respondents was 50%.

Respondents were then asked: "In general, how helpful do you feel it is for a state to have some type of program for supplemental support, in terms of the effect on **your firm's** energy efficiency business?" The open-ended responses were coded into four categories, with the results summarized in Table 5 below.

Table 5. ESCO Assessment of the Importance of Supplemental Support

Assessment Category	Percentage of Respondents
Not helpful	2.5%
It depends/sometimes	5.0%
Beneficial/helpful	10.0%
Extremely helpful/crucial/critical/vital	82.5%

The magnitude of positive response on this open-ended item was striking. Over four-fifths of respondents gave what can be characterized as a very strong positive comment on the extent to which such policies of supplemental support are important to their firms' energy efficiency business.

To further explore this concept, an item was included in the survey to assess opinions about different types of support policies. Respondents were asked to rate five different types of supplemental support on a 1 to 10 scale (1=not at all helpful, 10=extremely helpful). Table 6 provides the average rating for each of those policy options.

Table 6. ESCO Ratings of Public Policy Support Options

Policy	Rating
a. rebates for equipment	7.71
b. standard offer payment for savings	7.31
c. customer loans	6.30
d. funding for audits/technical studies	5.90
e. public education	5.85

Perhaps not surprisingly, policies offering financial assistance toward the cost of an energy efficiency project were the highest rated, with an apparent preference for relatively direct payment options (i.e., rebates or payment for savings) over loans as the mechanism for financial assistance.

ESCO Energy Efficiency Business Activity

Finally, the survey contains an interesting behavior-based validation check on the issue of the importance of public policy supplemental support. Early in the interview, respondents were asked to list the states where their firms have major energy efficiency business activity. To properly interpret their responses in the context of the issue of supplemental support, it is useful to first have some background information.

Based on ACEEE's careful monitoring[4] of the status of electric restructuring and public benefits programs over the past several years, it is possible to categorize a total of 11 states as having passed relatively substantial statewide public benefits funding for energy efficiency programs.[5]

[4] See, for example, Kushler and Witte 2001.

[5] "Relatively substantial" is defined as a funding level of at least 1.0 mills/kWh sold in the state. See Appendix B for a table summarizing public benefit funding levels for a total of 21 states (plus the District of Columbia) that have state public benefits requirements. Eight of the nine states targeted in this study are in that table. (Michigan is excluded because it has not established public benefits funding to date.)

These states are California, Connecticut, Maine, Massachusetts, New Jersey, New York, Oregon, Rhode Island, Texas, Vermont, and Wisconsin. Among the nine states focused on in this study, five are in this "substantial" category (California, Connecticut, Maine, New York, and Rhode Island) and four have little or no public benefits funding for energy efficiency (Arizona, Illinois, Michigan, and Pennsylvania). Not surprisingly, the respondents interviewed for this study are almost directly proportional to that 5 to 4 split—60% were sampled from "substantial" category states and 40% from the "little or no" category states.

With that background, it is interesting to note that 81% of all respondents identified 1 of the 11 relatively “substantial" states listed above as their top business state and 89% cited at least 1 of those 11 states among their top two business states. Nearly 60% had both of their top two states from that "substantial" group.

Even more significant is to compare two groups of four states each from the states targeted in this study—the "little or no" states (Arizona, Illinois, Michigan, and Pennsylvania) versus the four states that arguably have the largest public benefits funding for energy efficiency in the nation (California, Connecticut, Massachusetts, and New York).[6] Interestingly, these two groups are not that disparate in terms of factors like population, degree of industrialization, when restructuring passed, etc. What is striking is that, across the entire interviewed sample, only 13% of the respondents mention any of the four "little or no" states as their top business activity state whereas 73% of the entire sample mention one of the four "substantial" states. (If the top two states for business activity are considered, the figures are 22% and 81%, respectively.)

For one last observation, among all 41 states not in the study target group, two stood out for the frequency with which they were mentioned by respondents—New Jersey and Texas. In terms of supplemental support policies, each is noteworthy. Both are on the list of 11 "substantial" states. New Jersey has had one of the largest standard offer programs for ESCOs ever operated, and Texas established an aggressive ESCO-focused performance contracting program requirement as part of its restructuring legislation. Even though none of the respondents in our pool were sampled from either of those states, those two states together were more frequently mentioned in the top two business activity states than Arizona, Illinois, Michigan, and Pennsylvania combined.

In summary, through both subjective ratings by executives and actual company behavior, it is clear that supplemental support policies are very important to ESCO energy efficiency activity.[7]

[6] Funding levels for states with pubic benefits funding for energy efficiency are reported in Appendix B.

[7] Note, however, that even in states with supplemental support policies, ESCOs generally do not target residential and small commercial customers. It would appear that other delivery mechanisms are required for those market sectors.

Retail Electricity Commodity Suppliers

Next to ESCOs, the other private market entity that is perhaps most commonly cited as a major new source for accomplishing energy efficiency in a restructured electricity market is the retail electricity commodity supplier industry. Therefore, that industry was also a major focal point for this study.

Methodology

Primary data collection in this area was accomplished through two principle methodologies. First, a content analysis of the website of each firm in the sample was conducted in order to examine whether, and to what extent, energy efficiency was included in the content of the website. The intent was to assess what messages typical potential customers might be exposed to if they accessed the commodity supplier's website.

Second, interviews were conducted with appropriate personnel (typically executives, sales managers, marketing managers, etc.) to assess whether, and how, energy efficiency services are included in the firms' electricity commodity supply business activities. Structured telephone interviews were conducted, with a typical completion time of 10 to 15 minutes. (See Appendix C for the interview instrument.)

Sample

A sample pool of retail electricity commodity suppliers was identified for each of the nine target states. Again, to mimic the experience of a typical customer, these samples were obtained directly from the registered retail electricity commodity suppliers' lists maintained online by each of the states. For states with relatively short lists, all firms on the list were selected. For states with relatively long lists, a random sample of firms was selected for data collection.

This process resulted in a total initial sample pool of 142 listed firms. This pool of firms was then provided as the initial target sample for both the website content analyses and the telephone surveys.

Website Results

Before discussing the substantive results of the website content analysis, one threshold issue deserves some discussion: the high degree of attrition in the electricity commodity supplier industry. Since the initial exuberance in the early days of restructuring, there has been a significant shake-out in the industry. Although we selected suppliers from state lists being offered to the public in the spring of 2001, our website research found that over 37% of all firms in our sample were either out of business or no longer offering retail electricity commodity services in that state. The following results are for those firms whose website indicated that they are still in the retail electricity commodity supply business.

Inclusion of energy efficiency. The primary focus of the website content analysis was to assess whether, and to what extent, energy efficiency was mentioned in the content of the electricity

commodity supplier's website. As a first simple indicator, the site was checked to see if it mentioned energy efficiency at all. Overall, 61% of firms still in business had at least some mention of energy efficiency.

Promotion of energy efficiency. Next, the websites that mentioned energy efficiency were assessed in terms of whether they actually "promoted" energy efficiency services or simply mentioned the topic of energy efficiency. This was admittedly a rather subjective classification, focusing on such things as the language used in the website (e.g., did it promote an actual service? did it convey a persuasive appeal?, etc.). Using that rather loose definition, we classified approximately 60% of the firms that mentioned energy efficiency as actually promoting energy efficiency actions on their website. (This equates to approximately 37% of all operating firms in the sample.)

Type of energy efficiency service. Finally, those sites promoting energy efficiency on their website were examined in order to: (1) determine whether the reference to energy efficiency was simply informational (e.g., a list of energy "tips," a "do-it yourself audit," etc.) or whether actual energy efficiency services were offered; and (2) identify which customer sectors were targeted for the services.

Overall, about 29% of the operating retail commodity suppliers promoted some type of tangible energy efficiency service (i.e., arranging, installing, and/or financing energy efficiency measures) and another 8% promoted information about energy efficiency. However, while most of those firms promoted energy efficiency services to at least some segments of the commercial and institutional customer markets, only 7% of operating firms promoted energy efficiency services to residential customers (and only 2% offered actual tangible energy efficiency measures to the residential sector.)

Assessing the realistic market barrier to customers. The above results were all expressed in terms of the percentage of active retail electricity commodity firms that offer energy efficiency services. However, to perhaps more appropriately capture the barriers confronting typical customers beginning their search, it is useful to also express these results in terms of the percentage of all firms listed on the state commodity supplier website lists. Table 7 presents the summary results for both sets of percentages.

Table 7. Electricity Commodity Suppliers Overall Website Summary

	Number in Sample	Out of Business/Not Active	Operating	Mentions EE	Promotes EE	Type of EE	
						Info	Actual Measures
number of firms	142	53	89	54	33	7	26
percentage of "operating"				61%	37%	8%	29%
percentage of original sample		37%	63%	38%	23%	5%	18%*

* Only 1% provide these services for residential customers.

Here we see that for a typical customer attempting to use the state list of retail commodity suppliers, less than one in four (23%) of the firms listed will be in business and promoting energy efficiency services and less than one in five (18%) will be providing actual tangible energy efficiency product installation, financing, or other direct assistance in getting energy efficiency measures installed. Although not broken out in the table, for the residential customer the quest is nearly hopeless as only 2 of the 142 firms sampled across these nine states promote residential services involving actual energy efficiency measure installation or financing. (Another four firms promote energy audits for residential customers but no actual measures.)

Green power: rarely offered. Although the focus of this study was on energy efficiency, the website content analysis also provided the opportunity to assess the extent to which "green power" was offered by these electricity commodity suppliers. Somewhat surprisingly, there were very few firms marketing green power to customers on their website. Of the total sample of 142 firms, only 12 (8%) were found to promote green power as a service option.

Telephone Interview Results

As with the website results, an important threshold issue is the extent of attrition among electricity commodity suppliers. Beginning with the same nine state lists of registered retail electricity providers, phone calls were made to a total of 120 firms. The same percentage (37%) as in the website analysis were found to be either out of business (20%) or not offering retail service (17%). In addition, another 31% could not be reached by phone after several tries on different dates and did not return messages. Eventually, interviews were completed with a total of 37 firms that were still engaged as retail electricity commodity suppliers. These data are reflected in Table 8.

Table 8. Electricity Commodity Suppliers Telephone Interview Call Summary

	(a) Number Called	(b) No Response/ No Answer*	(c) Refused Interview	(d) No Longer in Business	(e) Not Offering Retail Service	(f) Operating Retail Service
number (percentage of total)	120	37 (31%)	2 (1%)	24 (20%)	24 (20%)	37 (31%)

* After a minimum of 3 calls on 3 different days.

The initial objective was to obtain approximately 4 or 5 completed interviews for each state. Given the small number of suppliers registered in some states and the high attrition rate of electricity commodity suppliers in general, it was not possible to reach that goal for a few states. The numbers of completed interviews per state are provided in Table 9.

Table 9. Electricity Commodity Supplier Interviews Completed for Each State

State	Interviews Completed
Arizona	1
California	3
Connecticut	3
Illinois	7
Massachusetts	4
Michigan	4
New York	6
Pennsylvania	7
Rhode Island	2
Total	37

Energy efficiency services. The key issue of interest in the interview results was to examine the extent to which electricity commodity suppliers offer energy efficiency services as a part of their electricity supplier business. Summary data on this issue is included in Table 10. As with the website analysis, the concept of energy efficiency services has been separated into information services and more tangible assistance with energy efficiency measures.

Table 10. Electricity Commodity Suppliers
Telephone Interview Energy Efficiency Summary

	(a) Number Called	(b) Operating Retail Service	(c) Offers EE	(d) EE Information Only	(e) Actual EE Measures
number	120	37	11	5	6
percentage of operating retail suppliers			30%	14%	16%
percentage of total number called		31%	9%	4%	5%

On the positive side, the results show that approximately 30% of commodity suppliers could be reached by phone, were still in business, and offered some type of energy efficiency service to their customers. (Roughly half of those reported offering to arrange, install, and/or finance actual measures, while the other half just offered information to customers.)

Comparing Website and Interview Results

The overall magnitude and general pattern of the interview results are fairly consistent with the website data presented earlier, although the information gathered directly by phone indicates that there might be somewhat less energy efficiency being provided than was suggested by the website marketing material. One contributing factor to this result is that a couple of the firms, upon closer inspection, were found to only offer peak load management and load curtailment types of options, not energy efficiency. Also, from the data obtained through the interviews, it

appears that there is relatively more "information only" types of services and relatively less actual energy efficiency measures being provided than was suggested by the websites. These differences are not major, however, and do not affect the basic conclusions from the study.

Considering the Market Barrier to Customers

As in the website results, a more complete assessment of the barriers facing customers would take into consideration the difficulty in reaching an active electricity commodity supplier as a threshold factor. From that perspective, a more pessimistic interpretation of the results in Table 8 would be that over two-thirds (68%) of registered electricity commodity suppliers called either could not be reached by phone, were out of business, or were not offering retail commodity service. Only 9% of the total original list called were found to be in business and offering some type of energy efficiency services. (Of that, only 5% reported offering actual energy efficiency measures, while 4% provided just information.) Once again, the challenge is particularly difficult for residential customers, as only 4% of the total of 120 firms called were found to be in business and offering some type of energy efficiency service for residential customers (with less than 2% offering tangible energy efficiency measures).

Put another way, the average business customers turning to their states' list of registered competitive electricity retail commodity suppliers has about a one-in-three chance of calling a firm that is in business and will answer the phone. The odds of calling a firm that is in business and also offers actual energy efficiency measures are about 1 in 20. For residential customers, the chances of calling a firm that is in business, serves the residential market, and provides some type of tangible energy efficiency measures to residential customers are about 1 in 50.

Energy Efficiency Services to Different Customer Segments

In the interview with operating electricity commodity suppliers, respondents were asked whether they provided a retail electricity commodity product to each of five customer segments, and if so, whether they provided energy efficiency services to that segment. These results are presented in Table 11.

Table 11. Energy Efficiency Services by Customer Segment: Interview Results

Customer Segment	(a) Offers Retail Electricity Product (n=37)	(b) Offers Energy Efficiency, Total (c+d)	(c) Offers Information/ Limited Assistance	(d) Offers Actual Measures, Installation, Financing, etc.
individual residential customers	14 (38%)*	5 (13%)	3 (8%)	2 (5%)
aggregated residential	10 (27%)	5 (13%)	3 (8%)	2 (5%)
small/medium commercial	23 (62%)	9 (24%)	5 (13%)	4 (11%)
large commercial/industrial	24 (65%)	10 (27%)	5 (13%)	5 (13%)
state or local government entities	20 (54%)	9 (24%)	5 (13%)	4 (11%)

* All percentages in the table refer to the full sample of 37 completed interviews.

Not surprisingly, the sector most commonly targeted by commodity suppliers was the large commercial/industrial sector, with two-thirds of respondents providing an electricity commodity product to that group. A much smaller proportion of firms served individual residential customers (38%) or aggregated residential customer groups (27%). Similarly, twice as many firms (about one-fourth of the interviewed firms) provided energy efficiency services to commercial/industrial/government sector customers as to residential customers (about one-eighth of the interviewed firms). Even for the business and government segments, however, no more than 13% of the total interviewed sample offered tangible energy efficiency measures/financing to any of the specific customer segments.

Supplier Attitudes Toward Incorporating Energy Efficiency

Interestingly, the retail electricity commodity suppliers tended to be more upbeat about the concept of including energy efficiency services than their business practices would suggest. When asked whether "the retail electricity commodity business is a good platform for accomplishing energy efficiency improvements," nearly half of the respondents (46%) indicated yes. Only about a fifth (19%) indicated no, with the rest unsure.

The actual responses of the interviewees are informative and reveal an apparent division of opinion within the ranks of electricity commodity suppliers. The responses obtained to the above question are listed below. (Note: "energy efficiency" has been abbreviated as "EE.")

- Yes, believes it is a good platform. (2)
- It is a winning idea to sell EE with electricity commodity… but the price margin is low in Connecticut… success is a matter of education.
- Doesn't believe EE is an effective savings tool.
- Probably as good approach as any… for example, rebates on light bulbs would be beneficial.
- Yes, commodity market is a good platform, but it is hard enough to keep up with the commodity market by itself right now without adding further services.
- Does not think that the retail electricity commodity market is a good platform for EE. Too complex a market, hard enough to keep on top of commodity side.
- EE is key to business. New pricing structures create load shifting, need to evaluate whole production picture. But need an educated customer base.
- I don't know… we are not interested in EE.
- Not our business. Refer them to other companies if customers bring it up.
- A good start towards EE. Can make choice, environmentally good start. Offers EE to all customers.
- Yes, gateway to customer. Bundle commodity and demand management. Real time metering is a good idea too.
- Not sure. Not considering EE at this time. Strictly commodity.
- Good platform. However, most residential customers are not willing to participate unless product breaks before replacing. Possible change with current energy problems.
- The electricity commodity is just one part of the business. Other DSM and supply-side measures are part of the business.
- Perfect place for EE. Important to take a broad view of usage, look at the whole picture, not just electricity commodity—that is just one piece of the pie.

- Only focus is on the commodity.
- Yes, a good platform because when reaching out to customers, they are looking to reduce their rates. This is a wonderful time to give spiel on energy efficiency and conservation.
- There are better approaches. Retail electricity does not have a lot of momentum due to price, not going to reach enough people.
- That approach of using EE is not working. Knows several companies that have gone under. Thinks it could be a good platform, but a good package is yet to be found.
- EE has been around a long time. Deregulation hasn't done anything to improve EE. Doesn't believe that as prices go down people will be interested in EE.
- Haven't given it any thought. It is extremely difficult to do EE when rules change all the time.
- Not interested in EE at this time. Maybe in future when market settles down.
- Thinks it is ideal for larger, more sophisticated customers. Smaller customers are more price sensitive.
- Could be good marriage. Need to open market further and make participation in retail choice less cumbersome.
- Would like to see more of an integrated offer, green plus EE. EE works well with green power.
- Demand-side management is just a management decision. A firm is either going to jump at EE or it will be price sensitive. It's a matter of educating the customer.
- Room for everyone, where it makes sense.
- Maybe, but not being considered at this firm at this time.
- EE is very money intensive. Only a few rate classes pay higher than wholesale, can't compete with good load factor.
- A good way to go. First save money with retail and then with efficiency. Believes it would be an effective platform.
- Energy component keeps us busy enough. Focus is on geographical growth, not product diversity.
- We will design our services to meet the needs of our customers. If energy efficiency measures suit the needs of the customers, that's what we will do. If other actions suit their needs better, that's what we will do.
- Energy efficiency can be delivered either through retail electricity providers or through separate companies offering the service. ESCOs do a good job, for example, in helping big companies become energy efficient. It probably depends on the situation as to who would be the best provider of the EE services.
- I don't think there is any one best way to provide energy efficiency. It can be offered through suppliers, the local utility, nonprofits, etc. I think that retail suppliers are one very good way to offer energy efficiency measures to customers.
- No. The supply side has specific competencies but does not have the skills necessary to evaluate the demand side. The demand side of the equation requires a whole different set of skills. Need more nuts and bolts. There are engineering requirements. Thinks energy efficiency services are better provided by companies that specialize in providing those services.

Gap between concept and practice. Despite a fair amount of backing for the concept of including energy efficiency, actual practice falls somewhat short. To help illustrate the gap between conceptual support and reality, nearly half (41%) of the people who indicated that they believed that the retail electricity commodity market is a good platform for energy efficiency did not offer an energy efficiency product in their own business.

Respondents who indicated that their companies did not offer energy efficiency services in their business were asked: "What are the main reasons your firm does not offer energy efficiency services in connection with the electricity product?" Their responses on this item are also interesting, and are listed below.

- Wasn't part of the business model. We are looking into it.
- Chosen not to offer at this time, market too complex already
- There is a separate branch of the corporation that does EE, not us.
- Concentrating on electricity commodity, not interested in specializing in EE.
- Not focusing on energy efficiency at this point, working on “branding” a green energy product.
- Beginning stages. Less than 1 year in operation. Considering EE, perhaps creating links to EE firms on the company’s website.
- "We are the power plant. We don't do that."
- Phasing EE out. Focusing on green power branding.
- No need, can put customers in contact with another firm if they want that.
- Because it is not considered a hot topic in the company’s area—little interest from customers.
- Based on "price to compare" market, only trying to make money and save customers money on electricity commodity. Might look at EE in future.
- Not considering EE services at this time—strictly a commodity company.
- Not the focus area.
- Changing rules make any product difficult, let alone additional products such as EE.
- Focus is on energy commodity, no side products.
- May not be continuing retail service, was initially offered as a pilot.
- Had interest in EE, reviewed EE options, conducted pilots, found that customers were not really interested.
- Currently not offering retail electricity in any states "because there is no money in it.” Got rid of customers.
- Due to the situation here in California the company is currently in a “wait and see” mode. Needs to know what the price of the electricity is going to be before the company starts offering more services. Believes that EE services only work with large customers. The company will expand to serve those customers if all goes well. Does not believe that the company will offer energy efficiency programs to residential and small commercial segments besides encouraging the efficient use of energy and the use of renewables.

Suppliers' perceptions of customers. Those firms that do offer some type of energy efficiency service (information or tangible services) as a part of their commodity business were asked how they would characterize customer response to having energy efficiency services available in

connection with the retail electricity commodity. Here again, the responses tended to be fairly upbeat—especially regarding larger customers. Individual interviewee responses are listed below.

- Willingness to pay extra varies. The larger the customer, the more likely it will have some budget monies for EE.
- Most customers are interested. They are starting to realize that more money can be saved behind the meter than in front.
- If there were more market activity, then it would be easier to detect if energy efficiency programs distinguish the company's service and make a difference to its sales levels.
- Customers are very receptive. Most customers are willing to pay extra to save energy costs.
- Residential (not commercial) has shown interest to pay a la carte. Feels commercial would be willing if energy and EE were offered a la carte.
- Multifamily buildings are the firm's main focus area. Folks in that area are very cautious, so trying to charge extra for EE is very difficult.
- Customers are very interested, especially in capital improvement assistance and shared savings programs.
- Customers seem very receptive, ultimately looking for savings. Customers anxious to save and conserve.
- Very little interest. Not a service the firm advertises.
- People are not expressing interest to the firm.
- Customers are excited about savings, but the company does free screenings, no-cost services. Not sure how customers would respond to being charged.
- If customers are interested in EE, sends them to other companies.
- Some services have a fee, there has been a large interest from clients.
- Very interested in concept, need to be educated. A function of information available to them and in the media.

These same firms were also asked to estimate what proportion of customers they think are willing to pay an extra fee for energy efficiency services as a part of their electricity commodity arrangement. One respondent optimistically said "100%." The next highest estimate was 33%, and the median estimate was 20%.

Effect of state policies supporting energy efficiency. As discussed in the previous chapter on energy efficiency service companies, it was apparent that state policies providing supplemental support for energy efficiency had a substantial effect on ESCO business activities. While not examined as directly in the assessment of electricity commodity providers, it is possible to make some similar comparisons.

In particular, recalling the distinction in the previous section between states in this study with "substantial" public benefits funding (California, Connecticut, Massachusetts, New York, and Rhode Island) versus states with "little or no" such funding (Arizona, Illinois, Michigan, and Pennsylvania), some interesting results emerge. While the overall set of completed commodity supplier interviews was basically evenly split (49% from states in the "substantial" category and 51% from states in the "little or no" category), the commodity suppliers that reported offering energy efficiency services in this survey clearly tended to be from the states that offer support for

energy efficiency. Nearly two-thirds (64%) of those electricity commodity suppliers reporting that they provided energy efficiency services were from states in the "substantial" support category. Moreover, 83% of the commodity suppliers reporting that they provide actual tangible energy efficiency measures (arranging, installing, or financing) were from states providing substantial funding support for energy efficiency.

While this is just a correlation observation on a relatively small number of firms providing these types of services, it does correspond well to the results observed for the ESCO industry. It also is supplemented by the comments of several electricity commodity suppliers who mentioned that they coordinate their energy efficiency services with the public benefits program for their state.

Summary

In terms of attitudes about the concept of including energy efficiency in the retail electricity commodity business, there appears to be a deep division within the industry. Nearly half of the industry executives surveyed are supportive of the concept, with the other half either opposed or skeptical. Significantly, however, nearly half of those saying they support the concept don't actually offer energy efficiency in their own business. The bottom line is that, thus far, only a very small proportion of the electricity commodity supplier industry includes actual tangible energy efficiency improvements as a service offering in connection with their retail electricity commodity business.

Utility Companies

The third major private market entity projected to assume a meaningful role in providing energy efficiency in a re-structured electricity industry is the electric distribution utility. The theoretical argument is that distribution utilities would likely provide energy efficiency both as a customer service and as a means to lower the costs of meeting their distribution service obligations.

In order to examine this issue, it was necessary to focus on those states in the study where utility decisions on energy efficiency would be relatively open to their own discretion (i.e., "market based") rather than on states where significant utility involvement in energy efficiency programs was required as a part of the state restructuring policy (e.g., as in California, Connecticut, Massachusetts, New York, and Rhode Island). Therefore, this portion of the study focused on the four states with little or no restructuring-related requirement for utility energy efficiency programs (i.e., Arizona, Illinois, Michigan, and Pennsylvania).

Methodology

Primary data collection in this area was accomplished through two methodologies. Similar to the retail electricity commodity supplier examination, a website content analysis was conducted for the utilities to determine whether, and to what extent, energy efficiency information and services were offered. Second, brief interviews were conducted with appropriate personnel (typically division directors in the customer service area) in order to assess what, if any, energy efficiency programs were offered by the utility. (See Appendix D for a copy of the survey instrument.)

Sample

All major electric utility companies in each of the four states (Arizona, Illinois, Michigan, and Pennsylvania) were identified. (The criterion for "major" was serving 10% or more of the customers in the state.) This resulted in a total of 13 utility companies across the four states, each of which were targeted for data collection.

Website Results

Inclusion of energy efficiency. Eleven of the thirteen utilities included at least some mention of energy efficiency services on their website. However, using the subjective type of assessment described previously for the commodity supplier website analysis, only two utilities were classified as actually promoting any kind of tangible energy efficiency measures (and one of those was promoting them through an affiliated corporate subsidiary ESCO, rather than any kind of utility program).

Types of energy efficiency programs/services. Ten of the utilities included energy efficiency "tips" on their website and six of those also offered an online energy audit. Two of those utilities had links to affiliated ESCOs, where information about performance contracting could be obtained, but neither of those utilities provided any utility programs for actual energy efficiency measures. Two other utilities among those ten mentioned special utility weatherization type programs that were available for low-income customers only.

Of the eleven utilities mentioning energy efficiency, only one had actual utility programs to provide financial incentives to customers for energy efficiency measures (and that was the one "public power" utility among the 13 major utilities in the targeted states).

Green power: very limited availability. The three Arizona utilities in the group each clearly mentioned green power options available to customers, although that is apparently required by the public benefits provisions of the restructuring policy in that state. Of the other 10 utilities, only one mentioned a green power option (a very small-scale project) and two others mentioned some small renewable energy demonstration projects sponsored by the utility.

Telephone Interview Results

Telephone interviews were conducted with representatives of each of the 13 major electric utilities in the four targeted states. Once again, the focus was on whether the utility offered any energy efficiency programs, and if so, what types of services were provided.

Energy efficiency programs. Nine of the thirteen utility respondents (69%) indicated that their utility offered some type of energy efficiency program.[8] However, when those nine utilities were asked to describe what services were provided, the program offerings for most of the utilities were fairly minimal.

Types of energy efficiency services provided. Of those utilities indicating that they offered energy efficiency programs, three provided only consumer "tips" and an online energy audit; two provided only low-income weatherization programs (required by settlement agreement in each case); one provided tips, an online audit, and some seed money funding to a community group that was pursuing local energy efficiency and demand-reduction strategies; and two provided tips, an online audit, a low-income program, and a modest residential new construction program. (One of those latter two companies also had an in-school education program and a small tree-planting program.)

Only one utility (which happened to be the only public power entity in the group) provided programs that could be categorized as active program interventions to provide incentives to customers to install energy efficiency measures.[9] That utility's programs included rebates for high-efficiency heat pumps and for refrigerators that exceed ENERGY STAR® requirements (as well as a new construction certification program and commercial online and on-site energy audits).

Reasons for offering programs. As a part of the interview, the utility representatives were asked for "the main reasons why your company offers energy efficiency programs." Most of the responses centered around the general themes of "customer service" or "customer satisfaction," as the following examples illustrate:

[8] The other two utilities that had some mention of energy efficiency on their website (i.e., "tips") did not have any actual service they would consider a "program."

[9] In contrast, 12 of the 13 utilities reported having some kind of financial incentive (interruptible rates, time of use rates, payment for load curtailment, etc.) for customers (usually large commercial and industrial customers) to reduce peak load during high system peak load time periods.

- My company offers the programs as a customer service. In Arizona, we have enough energy to use but not enough to waste.
- Customer satisfaction.
- [Low-income program only] To provide affordable energy. If we can reduce the usage, we can make the energy affordable to the customer. My company wants to educate the consumer as to what the big electricity users are.
- My company believes it's in the customer's interest and ours. The customers want it. We want to promote the efficient use of resources.
- I've worked here for 24 years. My firm offers energy efficiency programs because it's the right thing to do for the customer—also customer loyalty, customer satisfaction.

A couple of utilities did mention the potential for reducing utility costs, although in one of those cases that was only tied to load curtailment rather than energy efficiency.

- To lower peak. My company knows that will save us money.
- Energy efficiency—for customer satisfaction. Curtailment—helps reduce peak load, provides more supply resources. Solar—promotes renewable technologies, experimental.

Finally, two of the utility responses are particularly interesting for what they reveal about the barriers to utilities promoting energy efficiency.

- Because we've agreed to do them [in settlement agreement]. Biggest challenge in the industry is to make sure these types of programs are run. We need the funding though to do that.

(Clearly this utility is not interested in spending its own funds for energy efficiency programs. This illustrates the need to have some kind of regulated cost-recovery for these types of programs.)

- We're in a new era….We do not subsidize energy efficiency programs. Customers have to learn how this thing is going to work and have to realize that there are not going to be rate caps forever.

(This comment reflects the new "hard-nosed" utility business mindset encouraged by restructuring. Basically, the utility has no obligation in this area, it's up to the customer to see their self-interest and act on it.)

Summary

To summarize, although two-thirds of the surveyed utilities indicated that they had some kind of energy efficiency program, the types of programs offered are usually very limited (e.g., energy tips, online audits and/or low-income programs). Only 1 of the 13 major utilities in these four restructured states provides actual financial incentives to customers to install energy efficiency measures and those are just in the residential sector.

It would appear that in the post-restructuring environment, absent a legislative or regulatory mandate (such as exists in California, Connecticut, Massachusetts, New York, and Rhode Island), utilities do not voluntarily engage in substantial energy efficiency program efforts. The primary reason cited by the respondents for engaging in any energy efficiency programs (i.e., "customer service") can apparently be sufficiently addressed in most cases through weak "informational" type programs.[10]

[10] Again, it is interesting to contrast this with load management programs, where utilities apparently do perceive significant financial self-interest. As mentioned previously, 12 of the 13 utilities reported having direct customer financial incentives (through rate design and/or payment for load curtailment) for customers to cut peak demand.

Industry Experts

The final area of focus for direct data collection was to talk to a number of "experts" in the energy efficiency services area in order to obtain their opinions and observations based on many years of involvement in the energy efficiency industry.

Methodology

Primary data collection in this area was accomplished through the use of detailed telephone interviews. These were in-depth, semi-structured interviews that averaged between 45 minutes and 1 hour in length. (See Appendix E for the interview instrument.)

Sample

Based on ACEEE's knowledge of the industry and informal discussions with industry observers, a small group of acknowledged experts involved with the energy efficiency services industry was identified and contacted. All six individuals graciously agreed to participate in an interview. While the names and roles of these individuals would be familiar to most industry observers, the experts were promised anonymity for this study so that they could speak with maximum candor.

As for general characteristics, the group had an average of 22 years of experience in energy efficiency-related work and a diverse set of roles. The group included:

- a former ESCO founder and owner, now a consultant to the National Association of Energy Service Companies (NAESCO)
- a business development consultant and lobbyist for the ESCO industry
- a consultant to private and public sector customers of ESCOs
- a national research expert on the energy services industry
- a director of one of the largest nonprofit energy efficiency service providers in the nation; former state PUC Commissioner
- a manager of a major state “standard performance contracting” program

The group also reflects good geographical diversity, with individuals located in the Northeastern, Midwestern, Southern, and Western regions of the country.

Interview Results

The open-ended format of the interview provided an excellent opportunity to benefit from the wisdom and experience of these individuals. Rather than risking losing some of that richness of information by just attempting to summarize the results, this report will list actual comments for most of the items. [Note that, in order to avoid guessing at who might have said what, the order of responses listed is varied.]

Effects of restructuring on energy efficiency. At the outset of the interview, respondents were asked: "In your opinion, what effect, if any, has the movement toward electric utility restructuring had on the energy efficiency services market?" Their responses are listed below.

- Initially, it confused the market and had a negative effect. Customers thought big rate cuts were coming so didn't have to do energy efficiency. Then came uncertainty. Now, growing belief that prices are going up.
- [My state] never did much DSM. But nationally, it's clear that DSM spending "fell off a cliff" when restructuring came along.
- It's made things more lively. Customers becoming more aware of options. The California experience has absolutely raised concerns about the potential for high costs of energy.
- Initially it caused many companies to think about bundling value-added services with the commodity. Also, the theory was it was a way to get increased attention for energy efficiency. In actual experience, it's been difficult to bundle in the value-added services. Initially caused an influx of companies into retail energy services, but there's been quite a shake-out over time.
- Haven't seen much effect so far.
- In most places it has diminished the amount of business. The withdrawal of prior supportive programs has hurt, and nothing has effectively replaced mandated programs (other than a few states that have put in public benefits requirements).

Effects of the California experience. Although a couple of the respondents made reference to California in the above answers, later in the survey they were specifically asked: "Do you think that the publicity surrounding the energy problems in California has had any effect on the energy efficiency services industry nationally?" Their responses were:

- Oh sure. It's helped sell projects to customers who were sitting on the fence waiting for de-regulation to lower prices. They realize now that isn't going to happen. They're seeing price increases and perceiving they'd better save energy.
- Anecdotally has heard it has increased interest, yes. It has created a general "buzz."
- Yes. And it's also had effects on the consumer side in California. It's heightened awareness in the public consciousness, and demand for energy efficient products is up.
- Definitely in California, and now spreading around the country too.
- Hasn't had too much effect in my region, except has created a much greater emphasis on short-term, "demand response" types of programs.
- Yes, definitely.

Experience of commodity suppliers as a vehicle for energy efficiency. Early in the interview, the respondents were also asked about their observations regarding the role electricity commodity suppliers were playing. They were asked: "To what extent have electricity commodity suppliers been an effective vehicle for delivering energy efficiency improvements?" Their replies were:

- Hasn't been a significant source of replacement for mandated programs. Hasn't been much activity.
- Our SPC (standard performance contracting) program was designed to facilitate companies to do commodity and energy efficiency but by and large it's been the energy efficiency

ESCOs who have participated so far. Of 47 firms participating in the program, only 7 are registered as commodity providers, and several of those don't actually do the commodity.

- ESCOs and commodity suppliers may become indistinguishable. Some suppliers are beginning to see that value-added services are more profitable. Not much services at the residential level. For large customers, starting to add value-added offerings. Often suppliers partner with ESCOs to do the energy efficiency.
- Certain suppliers like ENRON have tried that. So far, has not seen customers do much in that area, especially in the public sector. You don't find companies that are good in all areas. Have commodity brokers that are "energy efficiency wannabees" or ESCOs who could do some simple commodity purchases. But very hard to find a firm that is good at both.
- Many providers (maybe two-thirds) offered some energy efficiency initially, such as audits, energy plans, in some cases specific projects. But relatively few companies have actually pulled it off, doing actual energy efficiency. ENRON is probably one-half to two-thirds of the market.
- Very modest effect. Some talk about it, but really the main focus is on the commodity.

No data on actual energy efficiency activity. As a follow-up to the previous question, respondents were asked: "Do you know of any studies that examine what energy efficiency services are actually being delivered to customers by their electricity commodity suppliers?" None of our experts knew of any publicly available data or studies that quantify what actual energy efficiency services are actually being provided by electricity commodity suppliers.

Opinion of electricity commodity supply industry as a platform for energy efficiency. Our national experts were then asked a parallel question to that asked of our electricity commodity supplier sample: "In your opinion, is the retail electricity commodity business a good platform for accomplishing energy efficiency improvements? Or are there other approaches that would likely be more effective?" Their responses are:

- Still too early to tell for sure, not much retail competition really going on. Unfortunately, energy efficiency becomes more of an afterthought. It’s still a tenuous proposition.
- The potential is greater than what has been realized so far.
- Not sure commodity sales really is a good platform, per se. But restructuring in general has opened up the thinking to get at other services.
- If there was a viable retail market, could potentially be good for large customers. But there isn't really a viable market in any state yet.
- A lot of debate over whether "bundled services" is going to be viable. Definitely hasn't occurred to the extent people thought it would. Customers perceive a conflict of interest in selling commodity versus efficiency. A fair number of utilities trying to get into this, but not very successful yet.
- Other approaches more likely to be effective. The public benefits aspects of energy efficiency don't get reflected in the commodity deal. Better to have programs with specific focus on energy efficiency rather than "bundling" where you lose focus on EE.

Energy outsourcing. To pursue this discussion a little further, respondents were asked specifically about the concept of "energy outsourcing."[11] Three respondents indicated they didn't have much further to say about that, but the other three offered the following comments:

- It may be effective with certain segments, i.e., large industrial and large chain commercial customers, but that's about it. But even there, the concept is not proven yet.
- Even ENRON actually subs out much of the energy efficiency work because they don't have a lot of internal capability to do the work. Others, like Dominion Advantage, have abandoned the energy efficiency side of their package and are going back to just doing the commodity. Firms [commodity suppliers] don't like the uncertainty in projects, the delays in implementation, etc. that create more complex transaction costs.
- There may be a niche of customers where you could accomplish that. But not enough to sustain a competitive market in energy efficiency services.

The importance of state policies of supplemental support for energy efficiency. In an attempt to parallel some of the questions asked in the survey of energy efficiency service companies (described earlier in this report), the experts were then asked some questions about the influence of state policies to provide supplemental support (e.g., financial assistance, technical assistance, etc.) for energy efficiency. To begin, the experts were asked: "Do you believe that the existence or absence of these types of programs has any influence on which states energy service companies tend to target with their services?" Their replies are:

- Yes, definitely. There are important positive effects of the monetary incentives, as well as the informational and "marketing support" effects.
- Absolutely! As examples, in the Boston area, there really was the beginning of the ESCO industry with the early DSM bidding. Also the New Jersey Standard Offer program, and New York and California today. Also Texas.
- Yes. A good example is the many national firms trying to open offices in California. If the program is of sufficient magnitude, it can affect business decisions. Also the earlier New Jersey Standard Offer program. In contrast, the Wisconsin program was too small, so no real effect.
- Absolutely! Texas is a good current example. Companies are flocking in there due to the state policy requirements [for energy savings, using performance contracting type of approach].
- Yes, huge influence. Has direct personal experience. In New York, with a great standard offer program, plus lenient rules for state facilities to get involved in performance contracting, business is booming. Whereas look at places like Iowa, where hardly anything is happening. It's like night and day.
- Yes, there have been major direct effects. Also, SPC programs have helped develop a more vigorous performance contracting industry.

Proportion of energy efficiency service company projects receiving supplemental support. Paralleling the question asked of ESCOs in their survey, the sample of experts was asked: "If

[11] Simply stated, this is the concept where a customer would hire an outside firm to "manage" all of its energy needs, including procuring supply and handling any demand-side modifications or improvements.

you had to guess, roughly what percentage of energy efficiency service company projects in the United States today would you estimate have some type of supplemental support?" Their responses were quite consistent with the ESCO estimates, with the experts' answers ranging from 33 to 80%, and a median estimate of 40–50%. When asked to rate the importance of such supplemental support policies to the energy efficiency service provider industry on a 1 to 10 scale (10 being "extremely important"), the median rating of the experts was a 7.

Ratings of public policy support options. Also paralleling the survey of energy efficiency service companies, the national experts were asked to rate (on a 1 to 10 scale) each of six different public policy options[12] in terms of "how helpful they would be in fostering energy efficiency improvements." The results of their ratings are presented in Table 12, along with the average ratings presented earlier from the interviews with the ESCO representatives.

Table 12. Industry Expert Ratings of Public Policy Support Options

Policy	Rating	ESCO Rating
a. rebates for efficient equipment	7.5	7.7
b. standard offer payment for savings	7.8	7.3
c. customer loans or other financing	4.5	6.3
d. funding for audits/technical studies	6.0	5.9
e. public education	5.5	5.5
f. tax credits for efficient equipment	5.8	——

For the most part, the ratings of public policy options by the national experts interviewed were quite consistent with the ratings given by the energy efficiency service companies. One minor difference was that for the expert sample, the standard offer-type program was the highest rated, followed closely by rebates. For the ESCOs themselves, that order for the two choices was reversed. The most striking difference was a much lower rating for "customer loans or financing" by the industry expert observers, whereas the ESCOs were moderately favorable toward that option. Clearly, however, cash incentives such as rebates or standard offer programs were the preferred choice by both groups.

Response to the "let the market do it" argument. Near the end of the interview, the national experts were asked to respond to the central premise of some restructuring advocates regarding the desirability of relying on markets, rather than policy interventions, to provide for energy efficiency. They were asked: "Some advocates of electric restructuring have argued that under restructuring energy efficiency will be better served by market forces alone, and that there should be no public subsidies or programs…. From your experience in the field, what is your assessment of that argument?" The respondents offered included:

- Doesn't think that is true. The price signals customers get are not accurate. Externalities are not included in the price, so they're not getting true price signals. Energy efficiency has "public good" aspects. Can't capture all that in a private transaction. So that calls for public

[12] This included the same five policy options asked of the ESCOs, plus an additional option: "tax credits for energy efficient equipment."

benefits policy activities. There is an aggregate benefit to those activities, including resource value benefits to the system.

- That's naive and unrealistic. The “market” has always been there, with all of its barriers. Restructuring does not make any fundamental changes to those barriers. Intervention through public policy has had a profoundly positive effect on implementation of energy efficiency, even the major private market actors are highly sensitive and reactive to public policy.
- Am glad my state didn't adopt that philosophy. It's short-sighted.
- Certainly during a transition, even in large customer markets, you need public policies. And we're very far away from fully competitive markets. It's an open question whether under fully implemented restructuring that approach will work. It won't address all the barriers.
- Wrong! Aaannnngt! [buzzer sound] Energy efficiency is a public good. You can't get an optimal amount of efficiency in the “commons” without recognizing the value of energy efficiency and somehow monetizing that.
- That argument is not true either theoretically or practically. The market barriers are real. Energy efficiency benefits are public and private both, not all reflected in the private transaction.

Recommendations for public policy. Finally, at the end of the interview, the expert observers were asked for their recommendations for an "optimal public policy for increasing the impact of the energy efficiency services industry.” The following were their replies:

- A portfolio of the policies discussed previously, really. Incentives, public education, and technical assistance are all important.
- Good policies to promote performance contracting in institutional markets (state, local, and federal); support for emerging technologies and demonstrations to support new products; public policies to provide education and information about energy efficiency and performance contracting; rebates and other financial incentives, especially to accelerate new products and services; and, if environmental externalities are still not internalized, you can justify more aggressive financial incentives.
- Good technical assistance, aggressive incentives for energy efficiency from the distribution utility, direct bidding of demand side into ISO and regional transmission operators, integration of demand side into regional planning, real time pricing for large customers, strong appliance standards and building codes to help with the residential sector.
- Rebates for energy efficient equipment are most important for smaller customers (residential and commercial).
- Need a really effective marketing program, based on good market research on who participates and why and how to reach them. Then a targeted marketing campaign to reach customers, with targeted incentives, based on the strategy derived from the market research.
- Money, technical assistance, public education, and motivation.

DISCUSSION

This research project conducted direct data collection from four key groups involved in the energy efficiency marketplace (energy efficiency service companies, retail electricity commodity providers, distribution utilities, and industry expert observers). As a supplement to that activity, secondary research was conducted to identify and review other examples of research that address the issues under examination. This section of the report incorporates those additional perspectives.

The mechanism to facilitate that incorporation will be as follows. A number of the key substantive observations from the direct data collection in this study will be noted in a series of subheadings. For each key observation, relevant information from the secondary data sources will be summarized and discussed.

Key Observations

1. There are major market segments (e.g., residential and small commercial) that are not targeted and thus largely missed by the energy efficiency service company industry.

Through interviews with ESCO industry firms and expert observers, this study found that energy efficiency service companies generally do not target services to the residential and small commercial market sectors. This conclusion was confirmed through research conducted elsewhere. For example, a study of energy service companies conducted for the Energy Center of Wisconsin and the New York State Energy Research and Development Authority (ECW 1999) concluded:

> In Wisconsin and New York, as elsewhere, ESCO activity has focused on public and institutional clients at the expense of other segments. Outside of DSM sponsored activity, there appears to be virtually no ESCO involvement in the residential or small commercial segments, while among the industrial and larger commercial customers the picture is more mixed. (p. 5)

Similarly, a survey of nearly 50 ESCOs active in the California energy efficiency services market found that only 2% of their company revenues came from the residential market (CEC 1999).

Most recently, a study conducted for the Massachusetts Division of Energy Resources (MDOER 2001) found that large ESCO firms derived virtually none of their revenues from the residential market. Paralleling the results of the current study, the MDOER research also found that among all energy efficiency service providers, the residential and small commercial markets were commonly cited as sectors for which it was not profitable for them to provide services. Small energy bills, high transaction costs, and split incentives (i.e., between property owners and renters) were cited as major deterrents.

Although not as excluded as the residential and small commercial markets, the research has generally found that the industrial customer market also tends to be relatively under-served by

the ESCO industry. For example, this was observed in a study of the New York ESCO industry where it was found that the value of ESCO performance contracts in the "MUSH" market (i.e., Municipal and government facilities, Universities, Schools, and Hospitals) was about 15 times greater than contracts in the industrial sector (ECW 1999). Similarly, the recent Massachusetts research (MDOER 2001) reported that among 25 energy efficiency service providers surveyed, only 7% of their total Massachusetts revenues came from the industrial sector versus 36% from institutional, 31% from government/municipal, and 27% from commercial customers.

Two other factors are also mentioned as contributing toward constraining the scope of impact of the ESCO industry. First, researchers have pointed to the tendency of the ESCO industry to focus on relatively simple efficiency measures involving lighting, HVAC, and motors, thus resulting in a relative neglect of more comprehensive projects, including such things as industrial process opportunities (Edgar, Kushler, and Schultz 1998). Second, a new issue receiving increasing attention is the trend toward consolidation in the ESCO industry through mergers and acquisitions. There is some concern that this trend may be leading to an increased emphasis on larger and larger projects and a relative neglect of smaller market opportunities.

2. Government policies of supplemental support are extremely important to the energy efficiency services industry.

Even for the sectors that ESCOs most commonly serve (i.e., institutional and commercial buildings), government policies to provide supplemental support are very important to facilitating energy efficiency services. This was strongly affirmed in this study, both through the ESCO surveys and the interviews with industry expert observers.

The previously cited Wisconsin study (ECW 1999) also found strong support for the importance of government policies. It cited such policies (including both system benefit charge [SBC] funding for energy efficiency and state and federal rules and requirements regarding procurement of energy efficiency services by government facilities) as among the most critical factors affecting the future growth of the ESCO industry. Consistent with the current study, it also pointed to such policies as key factors affecting business location decisions by ESCOs.

Similarly, the previously cited Massachusetts research (MDOER 2001) contains a strong endorsement of the importance of supplemental support policies. That research effort asked energy efficiency service providers a series of questions about the system benefit charge energy efficiency funding in that state. Here is their conclusion from that study:

> Respondents were overwhelmingly favorable as to the impact of funding on prospect conversion and project enlargement. Nineteen of the twenty-three respondents said that funding has a direct impact on moving customers to accept or expand projects. Common beneficial impacts of energy efficiency funding were cited as:
>
> - Makes a direct, important impact on their growth;
> - Builds success of customer acceptance of projects, by both creating positive economic paybacks and by overcoming credibility barriers;

- Provides the opportunity to work with utilities on identifying and motivating customers to do projects;
- Allows studies to be done that otherwise would not be performed; and
- Allows companies to be creative in project design and utilize more comprehensive measures. (p. 8)

Their study also asked what percentage of the ESCOs' projects in Massachusetts have used SBC energy efficiency funding, and received a median response of 80%. When asked if projects, or parts of projects, would not have been implemented without the SBC funding, 95% said yes. In terms of overall effect, the median estimate was that two-thirds of their total projects would have not gone forward, or would have been reduced in scope, without the presence of the SBC supplemental support.

3. The concept of bundling energy efficiency with the electricity commodity has had limited impact and may be of questionable viability.

This study found that despite some conceptual support among at least a portion of the electricity commodity supplier industry, the actual provision of energy efficiency services by electricity commodity suppliers has been quite limited. The surveys with industry expert observers also found much skepticism about this "bundling" approach.

Other research, with representatives of a market segment not addressed in this study (i.e., customers of electricity commodity suppliers) provides additional basis for skepticism. For example, in national research targeting large non-residential customers of retail electricity commodity suppliers, Golove et. al. (1999) found that "value-added" services bundled with the electricity commodity were ranked very low in importance (second to the last out of seven factors) by customers and that only one-fourth of those customers had purchased any type of energy efficiency-related service from their commodity suppliers (including energy audits). In particular, their research identified several important barriers to customers using energy efficiency services from commodity suppliers:

- Some customers had contracts or established relationships with existing energy efficiency providers that pre-dated restructuring, and therefore had no interest in having the commodity supplier provide these services.
- One commonly held view among those procuring energy services was that purchasing energy efficiency services from the firm selling them electricity was a clear conflict of interest.
- Some customers questioned the ability of an electricity commodity supplier to provide high-quality energy efficiency services. (One commented: "I believe strongly in dealing with specialists rather than generalists.")

Golove et. al. also noted the conflicting time horizons involved in a commodity purchase versus the acquisition of energy efficiency infrastructure:

> Some companies were reluctant to enter into long term contracts with their RESP [retail electricity service provider] and this limited the scope of value-added services that they would purchase from them. "Commodity contracts are

> necessarily short term, while the optimal contract length for other value-added services, such as efficiency, are necessarily longer. Thus, I would much prefer to enter into longer contracts with an ESCO and shorter contracts with an RESP." Indeed some large customers did not want to enter into any contract that might require a longer-term commitment to their commodity supplier. "I want to maintain the ability to switch quickly, to avoid entanglements." (p. 287)

This lack of interest in obtaining energy efficiency from commodity suppliers was also documented in an E Source report (Burnett 2000) that summarized their research with corporate energy managers from over 40 large corporations and institutions. They found only a tiny proportion of respondents (3%) who felt they were most likely to obtain energy efficiency measures from their retail commodity supplier (versus 44% who said "in-house" and 53% who said from some other third party).

Another very interesting source of information on this issue is provided by the Retail Energy Markets research conducted by XENERGY (XENERGY 2000). In surveys with 362 non-residential customers of competitive retail electricity commodity suppliers, XENERGY also found energy efficiency to be a very low rated factor for selecting an electricity commodity provider. In fact, the bundled services of energy efficiency, metering, and power quality together were rated as the second to last factor out of eight decision factors. (Price, customer service, and "good reputation" were overwhelmingly rated as the three most important factors.)

Moreover, that research effort also gathered data on whether energy efficiency was even offered to customers. In in-depth interviews with 27 large commercial and industrial (C&I) customers in Illinois, only one reported being offered energy efficiency services by their commodity supplier. In a survey with 172 Pennsylvania C&I customers, approximately one-fourth (26%) reported being offered energy audits by their commodity supplier, with less than 5% of the total sample actually purchasing that service. On the residential side, 17% of the 236 households interviewed reported being offered some type of "conservation" service by their commodity supplier, but only one in ten of those customers purchased the service (less than 2% of the total sample).

4. A crucial question is whether energy audits and other "information only" services (which represent the type of service offered by many private market actors) really result in significant energy efficiency actions.

This study documented that "information" based energy efficiency services (e.g., energy tips and advice, energy audits, etc.) represent a significant proportion of the energy efficiency offered by retail electricity commodity suppliers, and account for almost all of the energy efficiency programs provided on a voluntary basis by electric utilities in the restructured states examined. This raises a significant concern, because "information only" programs have long been regarded by the energy evaluation community as a rather weak intervention. While it was beyond the scope of this study to attempt to directly gather data on this subject, we identified a very interesting recent research report that did directly address this issue, in the context of energy efficiency offerings by competitive retail electricity providers in a restructured state.

The state of Massachusetts, in a recent annual report to the legislature on energy efficiency activities in the state (MOCABR 2001) included a section entitled: "Competitive Retail Suppliers Bundling Energy Efficiency with Commodity." The following is an excerpt from that section.

> In the Division's 1998 Energy Efficiency Report to the Legislature, the Division reported several new energy efficiency offerings in the market in 1998. Competitive retail suppliers began to offer energy services, including energy efficiency, bundled together with electricity commodity. These services were offered primarily to medium and large C&I customers, although there was some activity in the residential market as well…. In 1998, these new competitive retail suppliers included Exelon Energy Services, PG&E Energy Services, and Select Energy.
>
> The Division informally surveyed these three competitive retail suppliers during 2000 to determine whether and how their energy efficiency activities progressed in 1999. The Division found that in the case of Exelon Energy Services, which served as an aggregator to the Massachusetts Health and Education Facilities Authority's (HEFA) *Power Options* program, **no energy efficiency services were offered in 1999. While over 20 HEFA customers had signed up for energy audits in 1998 through combined energy efficiency/electricity commodity services, HEFA is not aware that any of the customers followed up on these audits.** Similarly, PG&E Energy Services, which offered both electricity commodity and other energy services to the Massachusetts High Tech Council (MHTC), signed up a large percentage of its customers to participate in energy audits in 1998. However, in 1999, PG&E Energy Services (then New Energy) was sold to ENRON, and energy services focused on electricity commodity only. **According to MHTC, greater emphasis is being placed on providing energy information (e.g., web based real-time price information) to customers, and there is little focus, if any, on energy efficiency services.** Finally, in the case of Select Energy, which contracted with National Energy Choice and the Massachusetts Municipal Association to supply electricity and other energy services, 18 customers had energy audits performed on over 35 facilities during 1999. Of these audits, ten proposals were prepared and delivered to customers by Select Energy for their review and evaluation, but **no customer acted on the proposed recommendations during 1999.** The reasons for this were attributed to customers' decisions to either not pay for the cost of the audits or not make the recommended investments, as well as problems related to executing the energy efficiency contracts.
>
> These examples clearly indicate that energy efficiency activities provided to medium and large C&I customers by competitive retail suppliers were minimal during 1999, and less active than in 1998. While this decline in activity may be partly due to the limited activity in the competitive electricity market in general, it also points to the fact that competitive retail suppliers are focusing on developing bundled packages that provide the greatest overall cost savings to customers,

primarily through competitive commodity prices and energy information services (e.g., load management, real-time pricing information). **The provision of energy efficiency services does not appear to be a priority.** (pp. 46, 47) [Emphasis added.]

CONCLUSION

The issue underlying the origin of this study was the assertion, put forth by many advocates of electric restructuring, that energy efficiency would be better served by relying on private market actors and retail electricity competition and that regulatory policies and requirements for energy efficiency could be phased out or eliminated. Unfortunately, the arguments about that premise have tended to be based on philosophy and theory, rather than actual data. The fundamental purpose of this study was to provide research information to help inform that debate. This project conducted direct data collection from the three most prominently identified private market actors expected to provide energy efficiency in a restructured electricity industry: energy efficiency service companies; retail electricity commodity suppliers; and distribution utilities. In addition, we surveyed a number of energy efficiency industry "expert observers" and reviewed other available research pertaining to these issues. Overall, this research effort has led to several key conclusions.

First, while the energy efficiency service company industry performs a very valuable role in delivering energy efficiency in the United States, there are at least two important reasons why this industry could not be expected to step in and replace the role of government/regulatory policies and programs in providing energy efficiency.

- There are major gaps in the market segments reached by this industry. In particular, the industry generally has demonstrated little or no ability, or interest, in serving the residential or small commercial customer markets. To a lesser extent, the industry has also had some difficulty reaching the industrial customer market.

- Even in the market sectors where the ESCO industry performs the best (institutional and larger commercial markets), it is in fact intricately involved with, and supported by, existing government/regulatory policies and funding programs for energy efficiency. Indeed, these policies and programs in large part helped create the ESCO industry, and continue to play a major role in sustaining its work today.

Second, for a variety of reasons, the retail electricity commodity supplier industry has not demonstrated itself to be an effective vehicle for achieving energy efficiency improvements. Significant challenges include a high failure rate among supplier firms, a mixed interest in energy efficiency among suppliers, a lack of commodity suppliers actually marketing tangible energy efficiency measures, and a lack of customer interest in obtaining energy efficiency from commodity suppliers (due to perceived conflict of interest and other reasons).

Regardless of the specific causes, the vision of a robust supplier industry bundling electricity commodity sales with energy efficiency to provide customers with lowest-cost energy solutions has simply not materialized.[13]

[13] There are a few prominent examples of major firms providing "energy outsourcing" to very large customers. However, the success of that strategy in accomplishing actual energy efficiency improvements has not yet been publicly documented.

Third, absent legislative or regulatory requirements (e.g., system benefit charge-funded programs), there is strong evidence that in a restructured electric industry, utility companies will not choose to provide substantive energy efficiency programs. Rather, if they provide anything at all, they are much more likely to provide minimal information type programs, largely as a customer service and customer relations mechanism.[14]

In summary, this study has found little evidence to support the premise that relying on private market actors to provide energy efficiency would be a superior approach and that government/regulatory policies and funding for energy efficiency can be phased out or eliminated.[15] Indeed, after focusing on nine states that were early adopters of electric restructuring and gathering data from the three private market actors most prominently mentioned as entities that would "pick up the ball" and deliver energy efficiency in a restructured marketplace (i.e., energy efficiency service companies, retail electricity commodity suppliers, and distribution utilities), this study supports conclusions contrary to that premise. Those private market actors each face significant limitations in their interest and ability to deliver energy efficiency, and have thus far demonstrated no realistic capability to replace government/regulatory policies and programs to provide energy efficiency.

Ironically, continued government/regulatory policies and programs to support energy efficiency would actually play an important role in enhancing the ability of those entities to provide energy efficiency in the marketplace. Therefore, it appears that the proper question is not: Can private market actors replace government/regulatory policies and programs? but rather: How can government/regulatory policies and programs help maximize the energy efficiency provided by these market actors?

[14] This is in contrast to peak load shifting and curtailment programs, for which there appears to be widespread utility involvement, including substantive, incentive-based programs for customers (especially large commercial and industrial customers).

[15] Interestingly, the essence of this conclusion may be gaining increased recognition among policymakers. Three of the states that initially had among the shortest of funding periods for public benefit energy efficiency programs in their original restructuring policies (i.e., New York—3 years; California—4 years; and Rhode Island—5 years) have recently acted to significantly extend the time period for public benefit funding for energy efficiency (by 5 years, 10 years, and 5 years, respectively). Similarly, the state of New Hampshire (whose Public Utility Commission initially took a strong stand against regulatory requirements for energy efficiency after restructuring) in 2000 passed legislation creating a system benefit charge for energy efficiency and low-income programs (SB472).

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