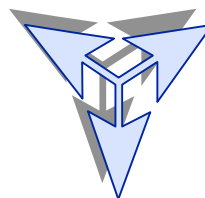

Massachusetts Electric Restructuring: Beyond the Standard Offer

MASS MARKET DEVELOPMENT POLICIES
CULLED FROM OTHER MARKETS' EXPERIENCES

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CONTENTS

	<u>Page</u>
EXECUTIVE SUMMARY	1
INTRODUCTION & BACKGROUND	1
OVERVIEW OF RETAIL ELECTRICITY MARKET	2
VISION FOR THE POST-STANDARD OFFER ERA	3
CHALLENGES INHERENT IN THE MASS MARKET SEGMENT	4
KEY FINDINGS OF THE MARKET BENCHMARKING PROCESS	5
THE CUSTOMER EXPERIENCE	6
LESSONS LEARNED FROM OTHER MARKETS	8
INDICATED POLICY DIRECTIONS FOR MASSACHUSETTS	10
I. INTRODUCTION & OVERVIEW.....	13
A. BACKGROUND TO THE POLICY REVIEW.....	13
B. MASSACHUSETTS POLICY GOALS & DOER PROJECT OBJECTIVES	14
C. COMPARATIVE BENCHMARKING METHODOLOGY.....	14
D. SCOPE OF THE REVIEW.....	15
E. TRANSFERABILITY & ADOPTABILITY OF MARKET DEVELOPMENT POLICIES.....	15
F. INFORMATION SOURCES USED IN THE POLICY REVIEW	16
II. MASSACHUSETTS RETAIL ELECTRICITY MARKET SETTING.....	18
A. BRIEF HISTORY	18
B. CURRENT SITUATION	19
C. HIGHLIGHTS & LESSONS LEARNED	20
D. BENCHMARKING PROFILE: HOW MASSACHUSETTS COMPARES	21
E. DEFINING CHARACTERISTICS OF THE MASSACHUSETTS MARKET SETTING	21
III. MARKET DEVELOPMENT POLICIES FROM OTHER MARKETS	24
A. ALTERNATIVE MARKET MODELS, POLICIES & PRACTICES.....	24
B. DESCRIPTIONS OF POLICY ALTERNATIVES	28
C. MEASURING PROGRESS TOWARD COMPETITIVENESS: ILLUSTRATIVE BENCHMARKING RESULTS.....	34
D. THE CUSTOMER EXPERIENCE	38
E. BARRIERS TO TRANSFER & ADOPTION OF MARKET POLICIES	40
IV. POLICY MENU: OPTIONS FOR MASSACHUSETTS.....	44
A. RESEARCH FINDINGS: KEY PRINCIPLES UNDERLYING EFFECTIVE POLICY	44
B. INTRODUCTION TO THE POLICY MENU	49
C. FIRST TIER POLICIES	50
D. SECOND TIER POLICIES	54
V. RECOMMENDATIONS FOR ONGOING REVIEW, BENCHMARKING & MEASUREMENT OF PROGRESS	57
A. RETAIL MARKET BENCHMARKING	57
B. ADAPTING TO THE EVOLVING MARKET: RESTRUCTURING GOVERNMENT’S ROLE	57
VI. CONCLUSION	59

APPENDICES	60
A. RETAIL ELECTRICITY MARKET PROFILES.....	61
B. RETAIL MASS MARKET DEVELOPMENT: RAW BENCHMARKING DATA	74
C. GLOSSARY OF TERMS USED IN THIS REPORT.....	76
D. ALBERTA'S <i>VISION 2012</i> STATEMENT.....	79
E. LIST OF INFORMATION SOURCES.....	83
F. RETAILER TELEPHONE INTERVIEWS CONDUCTED BY PLEXUS	90
G. ABOUT THE AUTHOR.....	91

LIST OF FIGURES

	<u>Page</u>
FIGURE 1: COMPETITIVE RETAIL ELECTRICITY MARKETS IN THE COMPARATIVE ASSESSMENT.....	1
FIGURE 2: RESIDENTIAL CUSTOMER SWITCHING RATES (%) IN 2003.....	5
FIGURE 3: DESCRIPTION OF RETAIL MARKET MODEL CLUSTERS.....	25
FIGURE 4: POLICIES APPLIED IN COMPARISON MARKETS THAT IMPACT RETAIL COMPETITIVENESS.....	27
FIGURE 5: BENCHMARKING FRAMEWORK FOR COMPARING RETAIL MARKET COMPETITIVENESS.....	35
FIGURE 6: MASS MARKET RETAIL DEVELOPMENT: PERFORMANCE AGAINST BENCHMARKS (ILLUSTRATIVE).....	37
FIGURE 7: FIRST TIER POLICIES FOR CONSIDERATION CULLED FROM OTHER MARKETS.....	51
FIGURE 8: SECOND TIER POLICIES FOR CONSIDERATION CULLED FROM OTHER MARKETS.....	55

Executive Summary

Introduction & Background

In September 2003, the Massachusetts Division of Energy Resources (DOER) engaged Plexus Research, Inc. (Plexus) to perform an assessment and analysis of the Massachusetts electric restructuring experience as compared to other jurisdictions that have introduced retail electricity competition, both national and international. This comparative assessment was seen by DOER as a potentially valuable resource that could be used in the development of policies for the post-Standard Offer¹ period.

The comparative review encompassed competitive retail electricity market experiences in Maine, Massachusetts, New Jersey, New York, Ohio, Oregon, Pennsylvania, and Texas, as well as foreign markets in Australia, the United Kingdom (UK) and Alberta (Figure 1). Experience in Georgia's retail gas market has also been considered for the unique retail assignment approach employed there.² Plexus systematically reviewed these markets to uncover policies implemented to create conditions conducive to competition in the mass market of residential and small business customers. Plexus has used a deliberate and objective process to determine whether these policies can be successfully transferred to Massachusetts.



Figure 1. Competitive Retail Electricity Markets in the Comparative Assessment

¹ For an explanation of Massachusetts Standard Offer Service, see Glossary of Terms

² The importance of Georgia's approach to retail gas competition was overshadowed by several years of pervasive problems with customer billing and service disconnections.

This report, which contains the results of the comparative market review, offers an objective foundation for DOER's continuing work to identify policies that will create a more workably competitive market for Massachusetts residential and small business customers. Conclusions reached here reflect *real*, bellwether experiences and results on a meaningful scale.

Massachusetts has limited time to act. The transitional Standard Offer Service (SOS) is scheduled to terminate in February 2005. Barring any legislative change or expanding competitive activity, the majority of the 1.6 million Massachusetts customers on Standard Offer today will be transferred to Default Service.

"Doing nothing" is one course of action available to the Commonwealth that cannot be immediately dismissed. Under this scenario, all customers remaining on Standard Offer Service as of February 28, 2005 would be transferred to Default Generation Service on March 1st, exposing them more directly to market price movements. While it is debatable whether this course would produce forward progress or retrogression of retail market competitiveness in the near term, it would nonetheless be a major event. Transfer of more than one million customers from an energy supply arrangement with an administratively determined price to another arrangement, whose price is determined by competitive bids, may be unprecedented in competitive energy markets that have been open for more than five years.

Several key market stakeholders are now circulating legislative and regulatory proposals for the post-Standard Offer period. This report can support consensus building around the underlying principles and policies that are embodied in the proposals in different ways. At a minimum, the information contained in this report will enable better understanding of experiences in other retail markets that will be referenced by some of the proposals. Failure to assimilate the lessons learned elsewhere and in Massachusetts, or to find the common ground among market stakeholders, will likely delay actions that are needed to improve the competitive situation for mass market customers. Doing nothing leaves Massachusetts vulnerable to unforeseen market risks.

Overview of Retail Electricity Market

The introduction of retail electricity competition through utility industry restructuring is a relatively recent phenomenon. England and Wales initiated a ten-year program to make electricity supply competitive in 1990, with participation initially limited to large commercial and industrial customers whose demand exceeded 1 megawatt. In 1994, customers with demand exceeding 100 kilowatts were allowed to participate, followed by domestic (residential) and small commercial customers in 1999. By May of 1999 all 26 million customers were able to select their retail supplier of electricity.

Within the U.S., the New Hampshire pilot Customer Choice program and Massachusetts Electric Company's two pilot Choice programs in 1996-97 led the electric industry. As many as 22 other states and a number of countries have introduced some form of competitive electricity retailing since 1996; however, each jurisdictional market³ model is essentially unique, as this report will describe. Profiles of the twelve, competitive retail electricity markets considered here are contained in the Appendix.

In most U.S. jurisdictions that introduced retail electricity competition policy makers expected that all types of customers would ultimately have the opportunity to exercise their choice and share in the economic benefits of competition. However, what has emerged in the first five years of U.S. experience is instead a series of discrete sub-markets with varying degrees of competitiveness. These include: the mass market of residential and small business customers, mid-market commercial and industrial segment, and major accounts, the largest commercial and industrial customers. While five years is too short a timeframe for judging the success or failure of a competitive market, mass market retail competition lags significantly behind the other segments in Massachusetts and most other markets. This report focuses on policies to create conditions that will lead to greater mass market competition.

Vision for the Post-Standard Offer Era

Massachusetts has not articulated a formal vision for the post-Standard Offer period. Nevertheless, it seems apparent from discussions in which DOER has participated that such a vision statement would contain the following key elements:

- **Consumer Choice:** All electricity consumers in the Commonwealth have the opportunity to exercise choice of electricity services from a range of competitively priced options and non-price offers that reflect the diversity of customer needs and preferences. Consumers view the competitive market as beneficial.
- **Efficient and Competitive Market:** The electricity market structure, through price discovery and transparency, gives all consumers access to electric prices that reflect the real underlying costs and change when the market costs change.

Each of these elements can be directly represented by one or more performance metrics (see section III.C and figure 5). These metrics capture some relatively simple questions. Are all classes of customers participating to

³ References in this report to 'jurisdictional markets' are appropriate in that the legislative and regulatory authority specific to each market area determine key features of the retail market model being implemented and often give rise to unintended barriers to competition.

a similar degree? How many retailers are present and actively extending offers to residential customers? How many price and non-price offers are available? How have retail prices moved under competition? And most importantly, how do customers who have been exposed to competition judge the experience?

For comparison, the Alberta Advisory Council on Electricity, in its 2002 *Report to the Alberta Minister of Energy* (see: Appendix D for Alberta's Vision 2012), provided the following long-term vision statement for the Alberta electricity market:

“Electrical industry restructuring will have enabled the development of efficient and competitive markets attracting investment and encouraging innovation that will lead to fair and equitable prices for consumers and other market participants.”⁴

Massachusetts must decide whether the primary long term goal is to provide reasonably priced electricity to consumers using wholesale competition alone, or to force prices down and provide innovative products by tapping the wider potential of retail competition. Our investigation into other markets' practices has emphasized the importance of this fundamental choice to the policy decisions facing Massachusetts.⁵

Challenges Inherent in the Mass Market Segment

Mass market competition has been slow to emerge in most restructured utility markets for specific reasons, among them:

- The cost of acquiring a mass market customer is high relative to the margin associated with supplying the customer.
- Complex and expensive information systems are required to handle the high volume account transactions associated with retailing in the mass market, even where the customer's bill continues to be produced by the utility.
- The minimum scale necessary to maintain profitable retail operations in the mass market is in the hundreds of thousands, if not millions, of accounts.
- Savings that can be offered by competitive retailers on the generation supply portion of the customer's bill are often less than the 10 to 15%

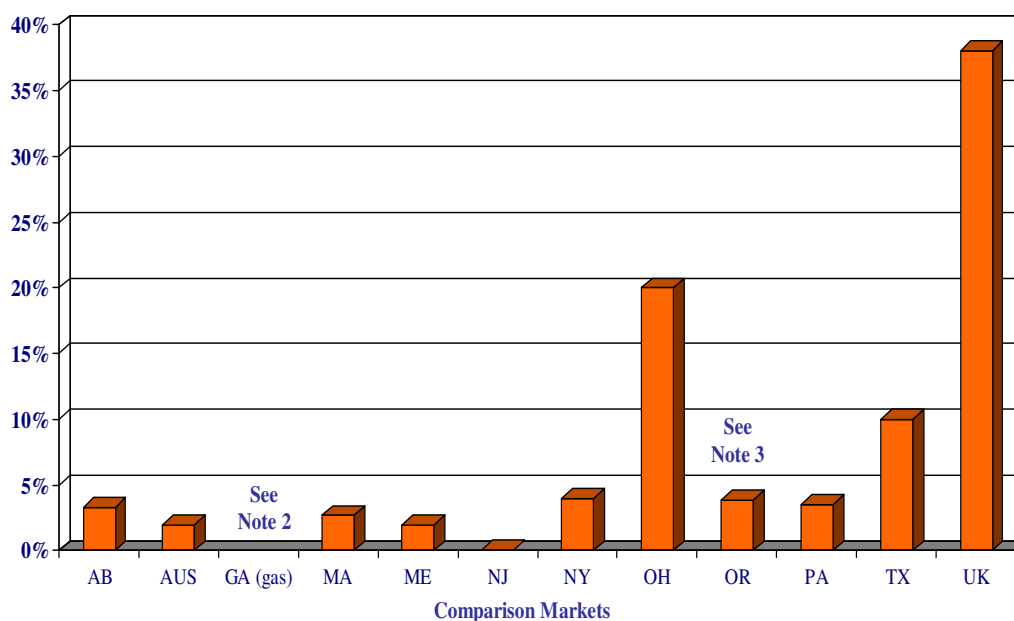
⁴ Alberta Advisory Council on Electricity, *Report to the Alberta Minister of Energy*, June 2002, p. 8.

⁵ Maine customers surveyed by the Maine Public Utilities Commission came down in favor of continuing to use wholesale bidding to obtain the best possible price for Standard Offer Service even if this would result in less retail competition. See: Critical Insights, *Public Utilities Commission Residential Survey*, November 2002 at: <http://www.state.me.us/mpuc/electric%20restructuring/appendixcresidential.pdf> .

total bill savings that experience suggests customers need to switch suppliers.

- The role of the incumbent utility in providing standard offer or default generation service is often structured in ways that make it difficult for new entrants to gain market share.
- The price of default generation service is often artificially low, or disconnected from actual wholesale market costs, with the result that customers either do not switch to a competitive supplier or return from competitive supply when market prices rise and default prices do not.

Due to this combination of factors, residential switching three to five years into retail competition has averaged less than 5% of all eligible customers, with some variation by jurisdiction. Policies to enhance mass market retail competition will clearly have to address these fundamental issues. Figure 2 provides the recent pattern of switching activity for the comparison markets.



Notes:

1. Data shown are for varying reporting periods between 6/03 and 10/03; data are for residential or small customers, depending upon market area.
2. GA gas market was forced to 100% level in 1999 via direct assignment of customers who had not made a choice.
3. Residential switching not permitted in OR – data represent % of customers selecting regulated portfolio options

Figure 2. Residential Customer Switching Rates (%) in 2003

Key Findings of the Market Benchmarking Process

Some of the factors that lead to greater competitiveness are readily applicable to Massachusetts in its current stage of retail market evolution, while others are not. Key findings of objective benchmarking of Mass Market

competitiveness in the twelve retail electricity markets of interest are as follows.

- Of the twelve jurisdictional markets considered, only the UK has reached a plateau at which the mass market can be considered reasonably competitive, although not yet mature. In the four years since residential customers in England and Wales were first enabled to choose a competitive supplier, nearly 40% have done so. This compares with less than 3% in Massachusetts in five years.
- The most competitive retail markets in the comparison all adopted the UK model of Full Retail Transfer or a hybrid of that model, such as Georgia's direct assignment scheme. All customers were transferred to an affiliate of the incumbent utility at the time of the market opening for the provision of retail service, creating instant operating scale for those retailers. Responsibility for billing the customer and providing customer care was also transferred. Full Retail Transfer satisfies a number of the important prerequisites for expanding competition, as described in the Challenges section above. However, it is not certain whether this particular model is the most effective route for achieving these ends.
- Several of the most competitive retail markets (UK, TX and Alberta) also share another common characteristic: unified regulatory authority. One regulatory agency has joint authority over wholesale and retail electricity in each of these markets, making it easier to align retail and wholesale policies.
- Level of competitiveness may correlate with market size. Alberta, which is substantially smaller in size than the UK, Texas, and Australia, scores significantly lower in competitiveness benchmarking, yet adopted a competitive retail model that is substantially similar.
- The amount of time that a market has been open appears to have little bearing on competitiveness measured against the benchmarks defined in this report. The UK, Texas, and Australian markets have all been open for mass market competition for a shorter time than Massachusetts, suggesting that sound market policies do indeed make a difference.

The Customer Experience

Customer experiences are an essential part of any assessment of policy effectiveness in a competitive market setting. In the UK, the most advanced market reviewed here, both switching and non-switching customers have expressed a high degree of satisfaction with their competitive experience. Roughly 90% of UK households rated their overall experience with electricity

competition favorably when surveyed in late 2001. Their views offer Massachusetts a window into the future.

U.S. households have responded less enthusiastically in similar opinion surveys, as discussed in section III.D, presumably because they do not yet have the ability to exercise their choice in a meaningful way.

Key characteristics of the UK's competitive retail energy experience include the following:⁶

- Price is the leading factor influencing customer switching. Numerous energy retailers offer customers substantial discounts, as high as 20%, to encourage switching.
- Price discounts offered vary by method of payment. Customers on direct debit are offered significantly greater savings than those on credit card or pre-payment plans.
- Dual fuel (electricity and gas) is central to retail marketing efforts, with more than 80% of those switching buying their gas and electricity from the same source.
- As the market has developed, customer awareness of retail suppliers has increased, with 80% of customers able to identify two or more suppliers at the time the survey was conducted.
- Selling methods also evolve. In the UK, 60% of customers mention direct experience with 'doorstep selling.'⁷ This practice is somewhat less prevalent in rural areas.
- Customers report that price comparison continues to be confusing and difficult however.
- Non-price offers include—
 - Affinity deals such as loyalty points, bundled offers and joint sales channeling
 - Green pricing options
 - Opportunities to differentiate service, e.g., accidental death insurance pays off bill

Taking all of these characteristics into consideration, it is clear that in advanced stage retail competition, as represented by the UK experience, competitive forces create real price savings and a diversity of offers that have

⁶ Source for the views contained in this summary: MORI, *Experience of the competitive domestic electricity and gas markets*, research study conducted for the Office of Gas and Electricity Markets, November 2001.

⁷ Door to door selling has also emerged in the Texas market.

not been seen anywhere in the U.S. to date. The interaction between method of payment and the attractiveness of a customer, as evidenced by level of discount offered, points to a high level of customer differentiation and targeting.

Lessons Learned from Other Markets

Lessons learned in other markets must be an essential part of the foundation for policy making in Massachusetts. The following list summarizes lessons that appear to have a high degree of relevance for Massachusetts. The research however identified no one factor that is singularly influential, e.g., a ‘magic bullet,’ in promoting mass market development.

- **Retail market size is fundamental to the entry decision.** The Massachusetts electricity market with 2.5 million customers eligible for choice is smaller in size than eight (8) other states currently offering some form of retail electric choice. As such it may be less attractive to retailers spread too thinly to enter all of these markets. Policies that would have the effect of subdividing this statewide market into smaller utility market areas are counterproductive, e.g., allowing individual utilities to pursue different courses of action in their handling of Standard Offer customers in 2005. Conversely, a seamless New England retail electricity market of more than 5 million eligible customers would be highly attractive to retailers.
- **Achievement of scale is critical for retailer operation.** Minimum scale for a competitive energy retailer appears to be in the range of 500,000 to 1 million customers, and it is unlikely that this can be achieved by acquiring customers one by one. In fact, all of the most competitive electricity markets reviewed here share a common element – rapid creation of meaningful operating scale. Massachusetts has a prime opportunity to create scale as it decides the future disposition of 1.6 million customers currently served under Standard Offer Service.
- **Artificially inflating default price to create headroom does not lead to sustainable competition.** Headroom (see Glossary of Terms) is a key factor in most retailers’ decisions to enter a jurisdictional market. However, experience in other markets suggests that artificially increasing the price customers compare against—default price, ‘shopping credit,’ price-to-beat, etc.—can cause large movements of customers to market, but similarly large returns of customers to the utility under certain conditions later.⁸

⁸ Increasing the customer’s default price to reflect the cost of retail services such as billing insures comparability with competitive offers and is appropriate, as discussed elsewhere in this report.

- **Default Service structure and Default Service pricing can be barriers to competition.** Default Service can interfere with retail competition in many ways. All must be avoided. Retailers do not want to compete with regulated delivery companies; super-efficient, large scale wholesale procurements work against market liquidity and undermine retail competition; and default service pricing vs. competitive pricing that is ‘apples to oranges’ in terms of its cost components deters customer switching.
- **Primary features of the Full Retail Transfer model cannot be easily transferred to the current Massachusetts setting.** Moving customers who have not made an affirmative choice to an unregulated retail marketing affiliate of a Massachusetts utility will be difficult today. However, alternatives are available to create the same end results of rapid scale achievement by retailers and lessening of the incumbent utility’s continuing role in energy supply.
- **Municipal aggregation with opt-out provision appears to work.** Ohio’s successful experiences with municipal opt-out aggregation in which 750,000 residential customers (92% of all residential switching) have been moved to market offers a promising bellwether. In fact, Ohio has achieved the highest residential switching rates of any jurisdiction in the U.S. to date. This policy is applicable in Massachusetts since the 1997 Restructuring Act allows for this form of aggregation. Moreover, the Cape Light Compact has demonstrated on a limited scale its effectiveness for providing benefits to Default Service customers.
- **Overly burdensome administrative requirements deter retailer entry.** Use of complicated procedural rules to obviate customer ‘slamming’ and environmental disclosure rules that are more extensive than those in other jurisdictional markets create real barriers to entry. Alternative approaches such as imposing penalties for slamming and posting environmental disclosures on the Internet may achieve the same results at lower cost.
- **The debate over who performs customer billing and customer care often overlooks the underlying need to create and maintain retailer brand awareness.** Brand awareness is essential to customer recruitment and retention, and therefore to retailer survival. Several policy alternatives recognize and support this fundamental need.
- **Binoculars are as necessary as magnifying glasses.** The long term direction of competitive market strategy, based on the most advanced retail energy market experience available today (UK) may be toward dual fuel marketing, e.g., selling bundled electricity and gas services. Policies under consideration to encourage mass

market electricity competition must not impede such dual product strategies.

Indicated Policy Directions for Massachusetts

Evaluation of policies that have been tested in other competitive retail energy markets, and assessment of whether the same policies will be feasible and effective in the Commonwealth produces a list of promising policies for consideration (the “Policy Menu,” figures 7 and 8 in Section IV). Key policy directions are listed below. Alternative policy devices to achieve them are shown in the Policy Menu.

First Tier Policies

First Tier policies are those that have the potential to directly influence the retailer’s willingness to enter the Massachusetts market. They are fundamental to the continuing development of Massachusetts retail electricity competition and improvement in the Commonwealth’s performance against objective benchmarks of competitiveness. As such, policies such as these are on the critical path for retail market development.

Seize the opportunity of Standard Offer expiration to create minimum operating scale for a limited number of retailers (similar to idea of ‘anchor stores in the mall’)—

- Avoid creating a new version of the Standard Offer that sets fixed prices unrelated to market influence.⁹
- Adopt policy devices that move the majority of Standard Offer customers to competitive supply arrangements, subject to appropriate consumer protection measures including customer opt-out.

Create level playing field for retailers—

- Continue to utilize competitive bidding for default service energy procurement.
- Continue to reflect market pricing signals in default service option.
- Make default service pricing consistent with retail pricing, including components that accurately reflect the cost of retail services such as billing and customer care.¹⁰

⁹ Since Standard Offer pricing has acted as a barrier to retail competition throughout most of the period since market start-up in early 1998, its extension would send a powerful, negative message to retailers considering entry into the Massachusetts market.

¹⁰ Plexus is not proposing that headroom be created by artificially inflating price however.

- Consider changes in the law that would enable competitive bidding to determine responsibility for provision of default service, subject to appropriate consumer protection measures.

Lower barriers to retail competition—

- Maintain a single statewide model of retail choice that preserves effective market size; avoid creation of utility-specific market models, e.g., distribution companies pursuing different paths in their handling of Standard Offer customers.
- Create and maintain greater customer awareness of retail sources and pricing options available through continuous education and promotion as the market develops.
- Simplify, standardize and regionalize business practices for customer enrollment and switching.
- Address perceived ‘exit barriers’ that make customers reluctant to leave distribution company supply service, e.g., fixed default price true-up.¹¹

Facilitate customer recruitment and lower customer acquisition costs—

- Offer licensed retail entrants real opportunities to build brand awareness, e.g., being prominently featured on utility bills and websites.
- Move customers to market via a transitional step, e.g., allowing customers to directly purchase competitive retail products through the utility without a formal retailer switch.
- Enable licensed retailers to better target customers by releasing additional, pertinent account information subject to strict limitations on use of the information.
- Encourage or require an affirmative choice of retail supplier when customers open new accounts with the distribution company.
- Evolve toward a market model that enables the retailer to maintain the retail customer relationship, e.g., unbundle billing and customer service and allow retail suppliers to provide as a service.

¹¹ Several alternative solutions are possible that would not involve subsidization of switching customers by non-switchers.

Second Tier Policies

Second Tier policies are ones that would contribute to sustainable business operations once retailers have entered the market. They are important to long term success but may not represent immediate priority actions for public policy decision making.

Facilitate continuing customer acquisition—

- Actively promote municipal aggregation with customer opt-out.
- Conduct an ongoing customer education program that emphasizes the benefits of competition and provide customer-friendly resources that facilitate price comparison.

Simplify customer retention and renewals—

- Avoid creating future barriers to customer retention, e.g., avoid automatic return of customers to utility default service after initial term of contract.

Mitigate customer non-payment (bad debt) risk—

- Reduce or eliminate the extent of customer non-payment risk not directly subject to retailer control.
- Adopt a disconnection policy that is fair to both customers and retailers and minimizes gaming by customers, e.g., not paying retailer portion of charges knowing that retailer cannot order service disconnection.

Enable advanced market strategies—

- Create a market environment conducive to bundled product marketing, e.g., dual fuel - electricity and gas.
- Remove administrative barriers to innovative billing and payment schemes, such as Internet bill presentment and pre-payment.
- Enable use of the Internet for comparison shopping and on-line enrollment

These policy directions can be used to assess the potential impact of particular stakeholder proposals aimed at encouraging market entry by retail suppliers, and leading to sustainable competition. Proposals reflecting these policy directions are likely to be more effective in generating a more competitive retail electricity market for mass market customers in Massachusetts.

I. Introduction & Overview

A. Background to the Policy Review

The Massachusetts Division of Energy Resources (DOER) is developing policy recommendations and strategies concerning provision of basic electric service to small commercial and residential customers (“mass market”) within an open retail competitive market. Currently, a large majority of mass market customers take service under the Standard Offer and Default services provided by the local distribution companies (LDCs) in Massachusetts. Under the state’s restructuring law Chapter 164, Sec. 1a through 1g, the Standard Offer services will be provided only until March 1, 2005. The current scheme was intended to result in significant customer migration from these services by that date. For a variety of reasons, a robust competitive market has not developed for these residential and small business customer segments, either in Massachusetts or in virtually any other U.S. jurisdiction. Absent legislative action, at the end of the Standard Offer period these customers will be placed on the Default Service, which offers a short-term market based price and exposes customers to a significant price movement as a result of market volatility.

DOER required an assessment and analysis of the Massachusetts experience as compared to other jurisdictions, national and international, which could provide guidance in the development of policies and recommendations to state decision makers. Specifically, DOER requested an assessment of:

- The level of mass market customer migration,
- The number of competitors,
- The stability of the migration,
- Number and extent of competitive offers, even if not chosen,
- The diversity of products provided, e.g. green pricing, bundling of other services, and billing innovation, and
- The interrelationship of structure and stimulation of new products.

DOER expressed particular interest in the retail electricity models adopted in the states of Texas, Oregon, Pennsylvania, New York, New Jersey and Maine, as well as those of Australia, UK and Alberta. Ohio's retail electricity market and Georgia's retail gas market were added to the scope of review early in the project with the expectation that their market models offer valuable policy lessons as well. The focus of the comparative policy review is on differing models not necessarily individual jurisdictions since several of the market models are fairly similar in their design, e.g., UK, Texas, Alberta and Australia, as we discuss in Section III.

B. Massachusetts Policy Goals & DOER Project Objectives

The following policy goals for Massachusetts serve as foundation this review:

- Near term — Manage the transition of Standard Offer customers in early 2005 to new Basic Service arrangements in a way that enables greater exercise of choice while mitigating customers' exposure to unwarranted price volatility.
- Long term — Enhance conditions for increased competitiveness and enable the mass market of residential and small business customers to realize their fair share of the economic and non-economic benefits produced by retail electricity competition.

Consistent with these strategic policy goals, DOER's project objectives were to develop a solid and objective foundation for upcoming discussions related to the disposition of Standard Offer customers in early 2005. Additionally, the project report must serve to educate and inform a wide range of stakeholders on a subject that is inherently complex and detailed.

C. Comparative Benchmarking Methodology

There have been successful (and unsuccessful) outcomes in retail electricity markets worldwide, Massachusetts included. One can capture other markets'

experiences, learn from them, and apply them in the Massachusetts setting by using an objective methodology. However, pre-existing conditions contributed to these market outcomes and must be taken into account. One must carefully control for these differences to apply the lessons learned. Policy devices and regulations applied in other markets also improved competitive prospects for the mass market (or in some cases erected barriers to competition). Together, these experiences, the pre-existing conditions, market setting, policies and outcomes describe a rich repository of cause-and-effect case studies that Massachusetts can learn from as it builds on its own early market successes. In fact, Massachusetts policies under consideration can essentially be viewed as hypotheses, some of which have already been tested elsewhere. These other markets' experimental outcomes and data are available for review.

D. Scope of the Review

The scope of the comparative policy review performed here is limited to retail electricity competition. While the existence of a liquid, stable and competitive wholesale market is a necessary prerequisite to retail competition, it is not the focus here. Investments in generation, transmission, and electric delivery infrastructure are similarly not within scope.

Geographic coverage of the review is limited to the jurisdictional markets that were identified as promising sources for mass market development policies.

Included were the competitive retail electric markets of:

- Alberta
- Australia
- Maine
- Massachusetts
- New Jersey
- New York
- Ohio
- Oregon
- Pennsylvania
- Texas
- United Kingdom
- Georgia (gas)

E. Transferability & Adoptability of Market Development Policies

Testing potential Massachusetts policies against other market experiences requires that two conditions be met—

- **Transferability:** The experience in another market must be transferable, e.g., the local conditions must not have been so unique that results could not be replicated in another jurisdictional market setting; and
- **Adoptability:** There must be no insurmountable barriers present that would preclude Massachusetts from adopting the policy, e.g., Massachusetts must not be so unique that the policy device(s) identified would be unlikely to produce a similar outcome, nor can there be legislative or other administrative barriers that would make adoption impossible.

F. Information Sources Used in the Policy Review

Plexus relied on a number of complementary sources of information to obtain its preliminary list of policy options and market descriptions, and to ensure that its understanding of the markets and policies was reasonably complete and representative. Extensive background research was conducted first, relying mainly on market updates published by the various regulatory authorities in each of the markets noted. Of particular interest were periodic market surveillance reports and reports to the respective legislatures on the development of retail competition (see List of Information Sources contained in Appendix E). For the Market Profiles contained in Appendix A, Plexus relied on both its own background research and summaries of state-by-state restructuring activity compiled at various points in time by the Electric Power Supply Association (EPSA) and the Energy Information Administration (EIA) of the U.S. Department of Energy. The Benchmarking Summaries contained in Appendix B were created largely from information available on state public utility commission web sites, with additional information available from state consumer advocates' offices.

Information reflecting direct, firsthand experience in the comparison markets was obtained in a series of telephone interviews conducted by Plexus principals in late October and early November. Seven retail companies were interviewed (see Appendix F for list). Together, they serve more than

12,000,000 retail electric customers worldwide. Each of the twelve markets was directly represented by at least one participating retailer, although in some cases the retailer's current participation is via modified retail arrangement, e.g., in Oregon where no retail switching has occurred to date.

II. Massachusetts Retail Electricity Market Setting

A. Brief History

Massachusetts historically had electricity prices that were among the nation's highest for a variety of reasons, including aging utility infrastructure, lack of indigenous energy resources, and relatively high labor costs. In 1997 the Commonwealth had the fifth highest electric prices in the country at just over ten cents per kilowatt-hour, 50% higher than the national average, placing a drag on economic development and discouraging some business location decisions. The Massachusetts legislature enacted The Electric Utility Restructuring Act on November 25, 1997, to introduce a competitive basis for electricity pricing. In doing so, Massachusetts became one of the first states to begin the complex and far reaching transition from cost-of-service pricing to market pricing.

The expectation at the time the Act was passed was that all customers would eventually have the opportunity to participate and share the benefits of retail electricity competition. Most major Massachusetts utilities divested their generation assets and disposed of long term supply contracts as unbundling proceeded. In effect, Massachusetts utilities became delivery companies, even though they remain obligated to provide backstop supply arrangements both for customers that either elected not to shop around and those who did but left their competitive supply arrangement.

Under the Act, all customers of investor owned utilities in the Commonwealth were allowed to choose an alternative electricity supplier on March 1, 1998. Customers with active accounts on that date were transferred to Standard Offer Service, a transitional generation supply arrangement with a pre-determined price per kilowatt-hour schedule extending until February 28,

2005, after which time Standard Offer would be unavailable. The utilities were required to provide this Standard Offer Service, and to reflect a 10% overall discount from historical rates (later increased to 15%).¹² The Standard Offer price for each year was administratively determined for each utility in proceedings before the Massachusetts DTE, with the exception of Western Massachusetts Electric Company, which sets its Standard Offer price by competitive procurement.

A separate default generation supply arrangement (Default Service) was set up for customers who activated accounts subsequent to March 1, 1998 and for customers who left Standard Offer Service for a competitive contract and later needed backup electricity supply for any reason. Default Service is also provided by the utility; however the electricity supply for Default Service is procured by the utilities through wholesale bidding.

Overall, the Massachusetts approach to retail electricity competition is typical of those states that have unbundled generation and made it subject to competition (without full transfer of retail functions away from the regulated delivery utility). Massachusetts, Maine, New Jersey, New York, Ohio and Pennsylvania all share a number of common elements, and essentially constitute a 'model cluster,' as is discussed in the next section.

B. Current Situation

Five years after the start of competitive retail choice, Massachusetts has made significant progress¹³ without a major mishap. The market has become increasingly competitive for large commercial and industrial (C&I) customers in Massachusetts. By July 2003, 35% of large C&I electric load was supplied competitively. More than 800,000 customers are now supplied under Default Service and are experiencing pricing that reflects wholesale market conditions but with some mitigation of their exposure to volatility. The Cape Light

¹² It is important to note that the 10% discount was not the result of competition but a rate reduction.

¹³ The market is not yet sufficiently competitive to see any downward pressure on prices however.

Compact pilot program has demonstrated the feasibility of opt-out municipal aggregation, offering approximately 50,000 default service customers a price significantly lower than the applicable Default Service price. And no serious problems have thus far arisen to challenge the fundamental integrity of the market. Massachusetts has avoided California-style problems.¹⁴ Several major electricity retailers are seriously considering entry into the Massachusetts electricity market. It is clear they will be keenly interested in the future disposition of the Standard Offer Service customers, currently numbering 1.6 million.

C. Highlights & Lessons Learned

Nevertheless, mass market competition has been slow to develop in Massachusetts, as in most other jurisdictional markets with retail access. As of July 2003, only about 3% of residential and small commercial customers were supplied their electricity by a competitive retailer. If the Cape Light Compact group is removed, the overall percentage is substantially lower. Only one competitive retailer (Dominion Retail) currently offers Massachusetts residential customers a competitive option; however, it is priced slightly higher than current standard offer and default prices.

Lessons learned to date over the five years in which Massachusetts has had retail access include the following:

- Standard Offer Service has acted as a significant barrier to retail competition, particularly in the early years of the transition period when the price was well below market. With Standard Offer pricing set administratively, wholesale costs and the retail price seen by the customer are disconnected. Quite simply, retailers have been unable to beat the Standard Offer price and customers have no reason to leave.

¹⁴ Serious problems were also experienced in the UK (1994 interval metering failures), Georgia gas market (1999-2001 customer billing failures), and Texas (2001 pilot program switching delays). Failures arising from poor execution of key transitional processes are not the subject of this report however.

- Default Service pricing has typically run higher than Standard Offer price during the transition period and has exhibited significant volatility, rising at one point to more than 9 cents per kilowatt-hour for the commodity only. However, this high price did not induce competitive retailers to enter the market as one might have expected. One can speculate about the reasons, but it appears that the periodic large volume bids by the utilities for wholesale energy supply for Default Service dominate the market and reinforce the utilities' central role.

D. Benchmarking Profile: How Massachusetts Compares

Not surprisingly, benchmarking Massachusetts' competitive progress places the state well behind current market leaders on several indicators, as discussed in Section III.C. Only one retailer is currently active in the mass market (Dominion Retail) and there is only one competitive offer available. Fully 97% of mass market customers remain on one of the two utility-supplied generation options. Because of the very limited extent of competitive switching in the mass market, most other benchmark measurements are not yet meaningful. This is not necessarily bad news, however. Development of a competitive market takes time and the most astute observers of electric restructuring have always emphasized that patience is required.¹⁵

E. Defining Characteristics of the Massachusetts Market Setting

A number of characteristics related to Massachusetts' restructuring approach define its electricity market — retail is defined by the Restructuring Act and DTE regulations, wholesale is defined by ISO-NE and FERC regulations. Beyond market structure and rules, customer demographics, types of generation assets, and other factors make the market unique. All of these characteristics taken together determine whether retailers will view

¹⁵ In the case of telephone deregulation, it took a full fifteen years (1984-1999) for 50% of AT&T's long distance customers to switch long distance providers.

Massachusetts as an attractive market opportunity. These characteristics also determine whether a policy that worked in another market will work here, as will be discussed later.

Key characteristics of the Massachusetts market setting important to consider for retail market development include the following:

- **Market size:** Massachusetts is a medium sized state with 2.9 million electric customers (2000 data). Approximately 2.5 million are served by investor owned utilities and therefore subject to retail competition. Among retail access states, Massachusetts ranks well behind eight other states (using 2000 data):
 - Illinois (5.3 million)
 - Michigan (4.6 million)
 - New Jersey (3.6 million)
 - New York (7.4 million)
 - Ohio (5.3 million)
 - Pennsylvania (5.1 million)
 - Texas (9.3 million)
 - Virginia (3.1 million)

Even if the five New England states with retail access were combined, the size of the market would still lag behind both Texas and New York. If five retailers were to share the market in Massachusetts, each would have to settle for an average volume of around 500,000 customers. In contrast, the same five would have average volumes of over 1.8 million accounts in Texas.

- **Regional power pool:** Massachusetts is fully covered by ISO-NE and subject to regional control of the wholesale electricity market and transmission operations. Regulation of wholesale and retail markets in New England is bifurcated between state utility commissions and the Federal Energy Regulatory Commission (FERC). In this respect, Massachusetts is quite similar to other New England and Middle Atlantic states (under PJM). However, markets in Texas (subject to Public Utility Commission of Texas regulation and oversight), Alberta (Alberta Energy & Utilities Board) and the United Kingdom (The Office of Gas and Electricity Markets-Ofgem) all enjoy a marked advantage in that they are subject to what amounts to unified regulatory oversight. This virtually ensures that there will be fewer

procedural barriers to retail competition, hence a market without ‘internal borders.’

- **Customer demographics:** Average electricity usage by residential customers in Massachusetts is approximately 7,000 kilowatt-hours per annum (using 2000 data¹⁶), reflecting a variety of factors such as housing type, household size, appliances, weather and income. This is not materially different from other high cost, northeastern states like New York and New Jersey, but significantly lower than Texas (14,600 kWh per annum) and Ohio (9,900 kWh p.a.). Given similar margins, Texas customers would be substantially more valuable to electricity retailers than Massachusetts customers.
- **Degree of regulation:** Massachusetts is perceived by market participants to be subject to extensive regulation, particularly in the areas of consumer protection and environmental disclosure. On the other hand, certain other markets, notably the UK, Alberta, and Australia are seen as having ‘light handed regulation.’ This distinction is important since the burden of complying with regulations and onerous licensing requirements constitutes an overhead that retailers cannot control. Retailers are less inclined to enter markets with onerous licensing requirements and a high degree of retail regulation.

Considered together, these characteristics suggest that Massachusetts is at a relative disadvantage in attracting retail entrants to its market. Policies that address these inherent starting point conditions are essential to achieving greater competitiveness.

¹⁶ Energy Information Administration, U.S. Department of Energy, *Electric Sales and Revenue 2000* (DOE/EA-0540(00)), January 2002.

III. Market Development

Policies from Other Markets

A. Alternative Market Models, Policies & Practices

Each of the twelve retail electricity markets selected for the comparative policy review is essentially unique in its design and specification. Because of this, they represent a rich repository of contexts and experiences. The differences are in some instances fundamental. For example, the Texas market model created instant operating scale for some retailers by transferring the entire customer bases of TXU and Reliant to their affiliated retail companies, along with full responsibility for the retail functions of billing and customer care. In contrast, Massachusetts utilities for the most part divested their generation assets and ultimately elected not to maintain retailing affiliates. Moreover, billing and customer service functions were kept within the regulated delivery company. In its fundamentals, the Texas approach was quite similar to that of the UK, Australia and Alberta, while Massachusetts was similar in many ways to Maine, New Jersey, New York and Pennsylvania. The Retail Electricity Market Profiles contained in Appendix A provide the basics of how each of these markets was structured.

Differences between markets can also be quite subtle. Within the UK-Australia-Alberta-Texas model “cluster” for example, metering services were to be provided on a competitive basis in the UK and Australia, but not in Alberta or Texas, although plans are now afoot in these jurisdictions to introduce competition in metering. Within the Massachusetts-Maine-New Jersey-New York-Pennsylvania model cluster, divestiture of generation assets was not universal and different competitive bidding mechanisms were to be employed to procure the energy needed to supply standard offer or default customers, as the case may be.

Figure 3 provides an overview of these model clusters, reflecting how the twelve jurisdictional markets tend to be similar at the most fundamental level.

Retail Market Model Description	Represented by	Model Characteristics
Full Retail Separation	AB,AUS, TX,UK	<ul style="list-style-type: none"> • Entire customer base was transferred to the affiliated retail company serving as Provider of First Resort. • The regulated wires company turned its focus exclusively to energy delivery. • Retail providers were allowed to issue a single consolidated bill containing all energy related retail charges. • Restrictions were placed on default prices that can be charged by the POFR until a certain % of customers have switched to competitive offers.
100% Retail Customer Assignment	GA (gas)	<ul style="list-style-type: none"> • All customers who had not chosen a competitive supplier by a certain date were randomly assigned to a supplier, with assignments proportionate to supplier market share. • Retail providers issued a single consolidated bill containing all energy related retail charges. • Utility exited the retail commodity business and focused exclusively on energy delivery.
Unbundled Generation Supply	MA,ME,NJ, NY,OH,PA	<ul style="list-style-type: none"> • Generation was unbundled and made competitive; divestiture required or restrictions placed on use of utility's generation assets. • Incumbent delivery companies assumed responsibility for Provider of First Resort (Standard Offer) and Provider of Last Resort (Default Service) obligations (ME is a variant). • Billing, Metering and Customer Care remained as bundled services provided by the regulated utility for the majority of customers.
Non-Residential Choice With Regulated Portfolio Options for Small Customers	OR	<ul style="list-style-type: none"> • Non-residential customers permitted to switch to an alternative retail provider of generation supply • Residential customers not allowed to switch retail supplier, but permitted to choose pricing and non-price options from a regulated portfolio • Small business customers allowed to choose portfolio options or switch retail suppliers

Figure 3. Description of Retail Market Model Clusters.

While it is important to understand the strikingly different contexts from which market development policies may be drawn, the market structure produced by utility restructuring in a particular jurisdiction does not in itself determine whether the retail market will become competitive, or even whether retailers will enter the market. Each jurisdictional market must also be reviewed to capture the policy devices that created the pre-conditions for competition, e.g., how default service is priced, whether aggregation is allowed, the degree to which business practices are standardized, and measures that are used to facilitate customer switching.

Figure 4 provides a picture of how wide a diversity of policies has been applied in the comparison markets. The sheer number of these policies makes assimilation of their effects difficult. It is equally difficult to isolate the effect on market competition of one policy vs. another where they have been employed together. A good example of this is offered in Ohio, where the law allows municipalities to aggregate customers for collective bidding of electricity supply, subject to any individual customer's decision to opt-out of the arrangement. However, First Energy companies in Ohio have in the same time period made available to retailers a certain amount of generation supply at prices that some consider below-market.¹⁷

While Massachusetts has implemented a relatively small number of these policies, the state has been an industry leader with those it has applied. Massachusetts is one of only a handful of jurisdictions whose restructuring law allows municipal aggregation, and this feature has already been exercised by the Cape Light Compact, which obtained competitive electricity supply for nearly 50,000 default service customers on Cape Cod, in NStar's service territory. Moreover, the Massachusetts Department of Telecommunications and Energy (DTE) has ordered the utilities it regulates to release certain

¹⁷ Referred to in First Energy's restructuring settlement agreement as 'Market Support Generation.'

customer account information to licensed retail providers to better enable them to target their marketing efforts and win customers.

Available Policies	AB	AUS	GA (gas)	ME	MA	NJ	NY	OH	OR	PA	TX	UK
Municipal Aggregation (opt-out)					●	○		●				
Retail Customer Assignment			●							○		
Default Supply Service Arrangements												
Full Transfer of Retail Functions to Affiliate with Billing Responsibility (Retail Separation)	●	●									●	●
Move to Market Pricing for Last Resort Supply Option	○		○		○						○	●
POLR Competitively Bid or Proportional Assignment			●								●	
Default Supply Procurement												
Wholesale Supply Auction						●						
Retail Supply Auction				●								
Market Support Generation								○		○	○	
Access to Customer Information					○					●		
Centralized Market Administrative Functions	○										●	○
Mitigation of Customer Non-Payment/Bad Debt Risk												
Utility Purchase of Retailer Receivables						●				●		
Sharing of Non-Payment Risk				●	●			●				
Unbundling of Retail Customer Services												
Retailer Consolidated Billing	●	●	●							○	●	●
Competitive Metering Services	○	●									○	●
Advanced Use of Internet												
Retail Offer Price Comparisons (by neutral third party)			●								●	●
On-line Enrollment											●	●
Regulated Portfolio Options									●			
Retail Strategy Support												
Scale Achievement	●	●	●							○	●	●
Uniform Business Practices	●						●				●	●
Utility Switching Incentives							●					
Legend												
● Policy has been thoroughly tested in the market area and results are available												
○ Policy has been tested on a limited statewide or pilot basis and results are available but may be insufficient to predict success on a larger scale												
○ Policy has been tested by an individual utility or on a selected class of customers; laws and regulations allow the policy to be implemented and plans to implement may be underway, but significant experience is not yet available.												
Blank Policy has not been implemented in the market area												
Disclaimer: This chart should be considered illustrative only as it reflects information available at the time of its preparation; no actual or implied warranties are made by Plexus Research, Inc. as to its completeness or accuracy.												

Figure 4. Policies Applied in Comparison Markets That Impact Retail Competitiveness

Are these policies successful in creating conditions more conducive to market growth, retailer entry, and expanded customer choices? The hard evidence is still being accumulated. However, subjective judgments can be made, and firsthand assessments can be obtained from retailers operating in these markets subject to the policies shown. Even if positive impacts can be attributed to certain of these policies, it remains to be seen whether the same policy design can be transferred to the Massachusetts setting and overlaid on the Commonwealth's current market structure and evolutionary stage.

B. Descriptions of Policy Alternatives

This section contains brief descriptions of the alternative policies highlighted in figure 4, with reference to jurisdictional markets in which they have been tested.

- **Municipal Opt-out Aggregation**

Ohio, Massachusetts, Rhode Island and New Jersey laws provide for cities and towns to use ballot questions to authorize local government to aggregate the electricity needs of their citizens for collective bidding of electricity supply. Individual citizens are given the opportunity to opt-out of these arrangements; however, only a small percentage of customers typically exercises the right to do so. Where this form of aggregation is allowed, such groups represent the vast majority of customers that have switched. In Ohio, municipal aggregation accounts for roughly 93% of the more than 700,000 residential customers who have switched statewide.¹⁸

- **Retail Customer Assignment**

Georgia's competitive retail gas market relied on direct assignment of customers to unaffiliated competitive retailers to move 100% of customers

¹⁸ The Public Utilities Commission of Ohio, *The Ohio Retail Electric Choice Programs, Report of Market Activity, 2001-2002*, May 2003,

off utility supply arrangements. In the fall of 1999, all 280,000 customers in the Atlanta Gas Light (AGL) service territory who had not chosen a competitive supplier (out of a total customer population of 1.6 million) were randomly assigned to competitive retail suppliers proportionate to existing market share.¹⁹ AGL exited the supply business and was not obligated to provide a default supply service.

- **Full Retail Transfer**

In the UK, Texas, Alberta and Australia, all residential and small business customers were transferred to utility-affiliated competitive retailers at the start of retail choice, creating instant operating scale for these companies. The retail functions of billing and customer care were transferred at the same time. As such, the regulated delivery companies in these jurisdictions focus entirely on energy delivery.

- **Move to Market Pricing for Last Resort Service**

As the UK market was judged to have become sufficiently competitive, Ofgem removed price controls on retail electricity supply in May 2002. Other markets, including Texas, Alberta, Ontario, New Jersey, and Australia have similar plans to remove price caps when their respective markets either reach a specific date or are determined to be adequately competitive.

- **Competitively Bid Provider of Last Resort (POLR) Service**

The Public Utility Commission of Texas (PUCT) conducted competitive bids to determine the POLR service in each utility franchise territory. Utilities were allowed to bid for the right to be the POLR in all areas except their own franchise territory.

¹⁹ *Final Report of the Governor's Blue Ribbon Natural Gas Task Force*, February 5, 2002, pp.10-11.

- **Energy Procurement by Wholesale Supply Auction**

In New Jersey, periodic wholesale auctions are performed to obtain the energy necessary to supply Basic Generation Service, a default service. The auction is conducted in a highly efficient manner using the Internet and can involve as much as 15,000 megawatts, representing a large percentage of New Jersey's total electric load.

- **Energy Procurement by Retail Supply Auction**

The Maine Public Utilities Commission solicits retail supply bids on behalf of investor owned utilities to provide the electricity supply needed for its standard offer service. The supply arrangement is considered a retail transaction even though customers do not officially switch to an alternative retailer because the supplier's name is shown on the customer's bill and supply-related calls are handled by the supplier, not the utility. Moreover, the utilities do not take title to the power.

- **Market Support Generation**

First Energy companies in Ohio provide wholesale generation supply at reasonable prices to competitive retailers during a transition period (lasting until January 1, 2006) as a condition of the company's restructuring settlement agreement. This arrangement was set up to facilitate retailer entry into Ohio and to maintain some control over wholesale prices during the market's start-up phase.

- **Access to Customer Account Information**

Massachusetts and Pennsylvania require that utilities provide licensed retailers with 'mass customer lists,' electronic files containing certain data fields from customer account records for the purpose of customer marketing and recruitment. The information content varies; however, telephone numbers and account ID numbers are generally not included, and tight restrictions are placed on how the information may be used.

- **Centralized Market Administrative Functions**

In the Texas market, ERCOT has been given responsibility for customer registration and switching as well as load profiling, functions generally performed by individual utilities in other U.S. markets. Centralization of these functions makes the associated business processes identical across utility franchise territories and creates a seamless market.

- **Utility Purchase of Retailer Receivables**

Utilities in Pennsylvania and New Jersey purchase the receivables of retailers whose charges are shown on consolidated bills produced by the utility. The utility transfers funds to the retailer's account without regard to the level and timing of actual customer payments. This reduces or eliminates the financial risk of customer non-payment. In the absence of rules to the contrary, utility purchasing of retailer receivables effectively makes non-payment of retailer charges grounds for disconnection by the utility.

- **Sharing of Non-Payment Risk**

In Massachusetts, Ohio and Maine, utilities share the risk of customer non-payment by allocating funds received from customer proportionately, based on the delivery and generation supply charges. In Massachusetts, if the retailer's charges represent 70% of the total monthly bill and the customer makes a partial payment, the retailer receives 70% of the payment. Somewhat different payment processing rules are used in other jurisdictions.

- **Retailer Consolidated Billing**

In Texas, the UK, Alberta, Australia and the Georgia gas market, retailers are the only ones to issue bills. These retailer-consolidated bills include all transmission and delivery related charges as well as charges for generation supply. The retailer under this model receives and processes customer payments and transfers funds owed to the regulated delivery company

according to a prescribed risk sharing rule. In certain markets, the delivery utility receives from the retailer 100% of the amount owed for use of the delivery system regardless of customer payment.

- **Competitive Metering Services**

In the UK and Australia, metering services are also competitive and the utility is no longer the monopoly provider of these services. A number of U.S. states are in various stages of regulatory process to unbundle customer metering and allow competitive metering services, usually starting in the large customer segment of the market.

- **Internet Price Comparisons**

Competitive retail electricity offer prices are assembled by neutral third parties and posted on Internet sites for shopping customers in Texas and the UK, enabling customers to make direct price comparisons. The concept is similar to Internet travel sites such as Travelocity, Orbitz and Expedia which allow on-line comparison shopping for airline travel and other travel related services.

- **Internet Enrollment**

Customers are enabled to enroll on-line in the jurisdictions noted above, as well as on some utility web sites. For example, Orange & Rockland Utilities (NY) allows customers to enroll with a competitive supplier via the utility's own Internet site.

- **Regulated Portfolio Options**

The two largest Oregon utilities are required to provide a portfolio of options that residential and small commercial customers can choose without switching to an alternative retail provider. Options include environmental products provided by Green Mountain Energy.

- **Scale Achievement**

A variety of policies has been used in competitive retail energy markets to help retailers rapidly achieve scale, by moving large blocks of customer accounts. Methods include:

- **Full retail transfer** (TX, UK, AUS, and AB)—All residential and small business customers are transferred to a retail affiliate of the incumbent utility when the market opens. Price is initially capped or subject to regulatory review.
- **Direct customer assignment** (GA gas)—All customers who have not selected a competitive retail supplier are randomly assigned to retailers *not* affiliated with the utility. Incumbent utility exits the retail function.
- **Customer auction** (PA-PECO's Competitive Default Service)—Utility randomly selects a large group of accounts and solicits competitive bids for the right to supply the group. Customers may opt-out of the arrangement prior to the group being transferred to the new retail supplier.

- **Uniform Business Practices**

New York has developed a standardized list of practices that must be used by utilities in their performance of customer enrollment and switching, load profiling, billing and payment processing, and other administrative functions. A nationwide effort to develop such uniform practices was launched by the Edison Electric Institute and three national supplier organizations in 1999. The effort is being continued by the North American Energy Standards Board-NAESB.

- **Utility Switching Incentives**

Certain jurisdictions (NY) have offered one-time cash incentives to customers who switch to an alternative energy supplier.

C. Measuring Progress toward Competitiveness: Illustrative Benchmarking Results

The first step in policy transfer is to describe the relative state of competitiveness in each of the comparison markets. Quite simply, if a market has failed to develop, then the policies implemented there have less credibility than policies that might be drawn from more successful market sources. Plexus has in the course of this work developed a preliminary series of benchmark criteria, and threshold conditions that can be used to determine level of competitiveness for each benchmark.²⁰ This benchmarking framework must be considered preliminary and illustrative at this stage, as substantial effort and cooperation will be required on the part of Massachusetts and the other jurisdictions to assemble and maintain accurate and reliable benchmarking results on an ongoing basis. Plexus believes that such collaboration would be well worth the investment, enabling direct sharing of policies and practices that have been shown to work (or have not worked).

Figure 5 provides the preliminary benchmarking framework and conditions that have been used in this comparative policy review to measure the relative maturity of the various competitive markets under review.

²⁰ The threshold conditions shown here were developed by Plexus solely to objectively differentiate markets and therefore do not necessarily represent optimal criteria for more substantive purposes.

Benchmarking Measure	Measurements	Threshold Conditions
Competitiveness	<ul style="list-style-type: none"> • Number of retailers present and active in the segment • Range of competitive price and non-price offers available • Market shares of customers/load: regulated rate options vs. competitive contracts • Customers switching from regulated rate options to competitive contracts • Actual and perceived barriers to entry 	<ul style="list-style-type: none"> • At least five • At least four non-regulated price or non-price offers, with at least one renewable product offering • At least 30% of customers on competitive contracts • At least 1% average monthly switching, until more than 30% competitively served • No material barriers to entry cited by multi-state retailers
Stability / Concentration	<ul style="list-style-type: none"> • Retailer entries and exits • Customer returns to regulated rate options • Market shares of customers/load: among competitive retailers (including utility and non-utility affiliated) 	<ul style="list-style-type: none"> • The number of competitive retailers has been stable or increasing over the prior 12 months • Not more than 10% of competitively served customers returning to regulated rate options in preceding twelve months • Market share of largest retailer does not exceed 30% and combined market share of top three retailers does not exceed 80%
Price	<ul style="list-style-type: none"> • Degree of retail price convergence among utility operating areas and divergence between restructured and un-restructured utilities • Price markups of competitive retail contracts with respect to wholesale prices (commodity margins) 	<ul style="list-style-type: none"> • Percentage difference between highest prevailing commodity price and lowest prevailing price within the jurisdictional market area declined over preceding twelve months • Not currently available
Customer Experience	<ul style="list-style-type: none"> • Customer awareness / satisfaction with retail market experience • Comparable access to market opportunities by low income customers vs. other demographic groups 	<ul style="list-style-type: none"> • 80% of customers satisfied or very satisfied with retail choice experience and at least 50% of customers aware of active retailers present • No measurable and significant differences in level of participation by social, demographic or income classification

Figure 5. Benchmarking Framework for Comparing Retail Market Competitiveness

Figure 6 provides a summary of how each of the comparison markets fares when available data are considered. Market data underlying the summary table are provided in Appendix B. While it is clear that further detailed information is needed to provide a complete picture, the following general conclusions can be drawn from this preliminary analysis:

- The UK retail electricity market alone can be considered reasonably competitive based on these objective benchmark measures.²¹ Since mass market competition was introduced roughly a year later in the UK than in Massachusetts (see Market Profiles in Appendix A), it is clear that market policies can indeed make a difference in the ramp-up to competitive conditions.
- Among U.S. jurisdictions considered here, Texas and the Georgia gas market appear to have the best prospects for long term competitive success based on policies they share with the UK. However, it is too early to declare either U.S. market fully competitive based on the adopted benchmarks.
- The ability to achieve significant scale in a short period of time appears to be a critical indicator of retailer success; however, the markets considered provide a number of alternative avenues to scale achievement.
- Massachusetts, while clearly in the mainstream insofar as competitive retail markets today, cannot be judged competitive at this time. As such, a sudden move to full market pricing would expose customers to significant volatility and price risk.

²¹ Upon making its own determination that the market was sufficiently competitive, Ofgem removed price caps on suppliers affiliated with regulated wires companies in May 2002; hence, all customers are now fully subject to competitive market prices in England and Wales.

Mass Market Retail Competitiveness Benchmark		Criteria	Alberta	Australia	Georgia (gas)	Maine	Massachusetts	New Jersey	New York	Ohio	Oregon	Pennsylvania	Texas	UK
Competitiveness Measures														
Number of competitive retailers present and active in the jurisdiction	≥5	●	●	●	○	○	○	○	●	○	○	●	●	●
Number of competing price and non-price offers available (not counting RROs)	≥4 + 1 renewable	○	●	●	○	○	○	○	●	○	○	●	●	●
Market share of customers/load receiving service under competitive contracts (vs. regulated rate options)	≥30%	●	●	●	○	○	○	○	○	○	○	○	○	●
Customers switching (net) from regulated rate options to competitive contracts	≥1% per mo. or >30% switched	○	●	●	○	○	○	○	○	○	○	○	○	●
Actual & perceived barriers to entry	None cited by retailers													
Stability/Concentration Measures														
Retailer entries and exits	# of retailers stable or increasing prior 12 mos.	○		●		○	○				○		●	○
Customer returns to regulated rate options	<10% of comp'ly served customers rtn to RROs in 12 mos.							○	●	○	○	○	●	
Market shares of customers/load: among competitive retailers (including utility and non-utility affiliated)	None >30% & no 3 >80%	●	●	●						○	○			●
Price Measures														
Degree of retail price convergence among utility operating areas and divergence between restructured and un-restructured utilities	Retail prices converged in 12 mos.					○	○							
Price markups of competitive retail contracts with respect to wholesale prices (commodity margins)	Data NA													
Customer Experience Measures														
Customer awareness / satisfaction with retail market experience	≥50% aware & ≥80% satisfied													●
Comparable access to market opportunities by low income customers vs. other demographic groups	≈ equal participation by all classes													●
Some judgement has been applied in the determination of benchmark performance levels.		Legend												
		●	Exceeds benchmark criteria											
		●	Meets or is approaching benchmark criteria											
		○	Does not yet meet benchmark criteria											
			Blank cells signify data unavailable or measure not applicable to jurisdictional market model.											

Figure 6. Mass market Retail Development: Performance Against Benchmarks (Illustrative Only)

D. The Customer Experience

The customer is unarguably the most important stakeholder in any competitive retail market and electricity is no exception. Accordingly, any compilation of lessons learned from other markets would be incomplete without reporting on the customer's experience. The challenge in representing the customer experience in the case of retail electricity competition is clear however. Only those customers who have experienced the market after it has become competitive can speak authoritatively about the experience. Customers in virtually all U.S. states that offer a form of electric choice must *imagine* what competition will 'feel' like down the road, when more retailers arrive, product and pricing options become available, and prices are fully comparable, e.g., apples to apples. If asked their opinion today, customers in Massachusetts might express their confusion about eligibility for Standard Offer vs. default service, or disappointment that they have not received any competitive offers in the first five years, much less offers that are below their current regulated price. Recent residential survey data on this subject are not readily available in Massachusetts.

Maine residential customers were surveyed by the Maine Public Service Commission in November 2002, however.²² The majority of residential customers in Maine receive their electricity through supply auctions and have not yet experienced active retail competition. In fact, 91% reported never having attempted to find a competitive retail supplier. Moreover, only about one quarter of the customers surveyed considered it important or very important "to have a broad selection of electricity suppliers from which to choose."²³

²² Maine Public Utilities Commission, *Public Utilities Commission Residential Survey*, November 2002 (series of presentation charts).

²³ *Ibid.*, p. 26.

Fortunately, the more deeply conditioned experiences of UK residential electric and gas customers were captured in a survey conducted by MORI during August and September of 2001 for Ofgem.²⁴ The results offer a valuable window into the future since the UK represents an electricity market that has become reasonably competitive for mass market customers, if not fully mature. Roughly 90% of UK electric customers rated their overall experience with competition favorably.

After several years of experience with retail competition, residential customers in the UK expressed several important attitudes and preferences:²⁵

- Price is the leading factor influencing customer switching, and numerous energy retailers offer customers substantial discounts, as high as 20%, to encourage them to switch.
- Price discounts vary by method of payment. Customers on direct debit are offered significantly greater savings than those on credit card or pre-payment plans.
- Dual fuel (electricity and gas) is central to retail marketing efforts, with more than 80% of those switching buying their gas and electricity from the same source.
- As the market has developed, customer awareness of retail suppliers has increased, with 80% of customers able to identify two or more suppliers at the time the survey was conducted.
- Selling methods change. In the UK, 60% of customers mention direct experience with ‘doorstep selling.’²⁶ This practice is somewhat less prevalent in rural areas.
- In spite of their high satisfaction with competition overall, customers reported that price comparison continues to be confusing and difficult.
- Non-price offers include—

²⁴ MORI, *Experience of the competitive domestic electricity and gas markets*, research study conducted for the Office of Gas and Electricity Markets, November 2001. Full report available at: http://www.ofgem.gov.uk/temp/ofgem/cache/cmsattach/14_26nov01.pdf

²⁵ Ibid.

²⁶ A characteristic also emerging in the Texas market.

- Affinity deals such as loyalty points, bundled offers and sales channeled through retail chain stores
- Green products
- Opportunities to differentiate service, e.g., accidental death insurance pays off bill

It is clear that in the advanced stage of retail competition, as represented by the UK experience, competitive forces create real price savings and a diversity of offers that have not been seen anywhere in the U.S. to date. The interaction between method of payment and the attractiveness of a customer, as evidenced by level of discount offered, points to a high level of customer differentiation and targeting. Households in the UK and Maine agree strongly in one area—price is overridingly important in their electricity purchasing decision. The difference is that in the UK choices have become real.

E. Barriers to Transfer & Adoption of Market Policies

Available benchmarking evidence suggests that some of the policies that have been tested in other markets have made a difference, and that there is an apparent cause-and-effect relationship between policies and measurable market outcomes. However, results that may have been produced by a particular policy in one jurisdictional market may not be capable of replication outside the original market. Moreover, even if the results are “exportable,” there may be unique conditions in Massachusetts that preclude application here.

Plexus’ analysis indicates that there are relatively few barriers to replicating policy features of other retail models in jurisdictions with *similar* pre-existing conditions. This section provides a sample discussion of issues that would need to be addressed to successfully transfer selected policies that have facilitated mass market retail development elsewhere. The discussion is meant

to illustrate some of the challenges that can arise when applying policies and is by no means intended to be comprehensive. Any policy being considered for implementation should be thoroughly investigated for both its feasibility and suitability in the Massachusetts setting.

Three of the policies that were identified during the comparative market benchmarking are discussed here:

- **Transfer of customers to utility-affiliated retailer**

Transfer of the utility's existing customer base²⁷ from the regulated wires company to a utility-affiliated retailer that is allowed to compete for market share addresses certain of the fundamental prerequisites for retail competition. Most notably, this approach creates immediate scale for the retailers receiving blocks of customers. While other policies that have the effect of rapidly creating scale are also presented in the Policy Menu in this report, benchmark results suggest that this feature is associated with rapid market development. The UK in particular serves as a positive demonstration of the power of full retail transfer, with nearly 40% competitive switching in four years, far higher than other markets.

Potential barriers to adoption of the policy in Massachusetts:

- Massachusetts electric utilities have for the most part divested generation assets, reassigned long term power supply contracts, and exited the energy retailing business. It is unclear whether the DTE or the FERC has the authority to order the fundamental restructuring that would result in asset repurchase or resurrection of retailing entities.

²⁷ Generally limited to residential and small business customers with large customers ineligible for the price caps being imposed.

- Creation of a second-generation Standard Offer Service, structured like Texas' Price-to-Beat service, five years after the opening of retail competition would likely send a negative signal to some retailers contemplating market entry.
- **Centralization of customer enrollment and switching**

In Texas, ERCOT has been given the responsibility as the retail market's central customer registration agent. Under this model, retailers who have enrolled customers submit switch requests to ERCOT rather than to the incumbent utility for processing, guaranteeing that there will be one and only one way of processing switch transactions. An additional advantage associated with this model is that the so-called 'seamless customer move' (see Glossary of Terms) can be easily accommodated. This feature makes Texas fundamentally different from other U.S. jurisdictions, where individual utilities accept, validate and process switches. Massachusetts operates under the more common model.

Potential barriers to policy transfer from Texas:

There is no counterpart to Texas among other U.S. states in that ERCOT is subject to *unified* jurisdictional authority. The Public Utilities Commission of Texas has authority over both wholesale and retail market rules because the Texas market lacks interconnection with other market areas. ISO-NE, on the other hand, is subject to FERC jurisdictional authority over its wholesale operations. Enrollment and switching are considered retail market processes and would fall under the five state commissions covering the retail access areas in New England. Accordingly, to adopt such a centralized model in New England would most likely necessitate voluntary moves by utilities and creation of a non-ISO registration agent.

- **Provision of Transitional Market Support Generation**

First Energy companies in Ohio have made generation supply available to retailers at reasonable prices for a seven year transition period as a condition in their restructuring settlement agreement with the Ohio Public Utilities Commission. It has been suggested that this policy (known as Market Support Generation, or MSG) helps to explain the significant level of residential switching that has been seen in northern Ohio, more so than the opt-out municipal aggregation approach that is also present. In fact, First Energy companies account for the overwhelming majority of statewide switching in Ohio.

Potential barriers to policy adoption by Massachusetts:

This policy cannot be directly adopted by Massachusetts since most Massachusetts utilities have divested their generation assets.

Undoubtedly, other issues may act as barriers to adoption of the policies described in this report. Due diligence into the feasibility of any policies that come under serious consideration by Massachusetts is therefore highly recommended.

IV. Policy Menu: Options for Massachusetts

A. Research Findings: Key Principles Underlying Effective Policy

Plexus' research into policies that have promoted mass market retail competition in other jurisdictions surfaced principles that underlie good market development policies. These principles were strongly reinforced in interviews with multi-jurisdictional electricity retailers (see list of retailers interviewed in Appendix F). In general, where these principles have been incorporated into policy devices, markets have performed better. Where they have been overlooked, markets have been slow to develop. And in jurisdictions where one principle has been applied, but another has not, progress that would otherwise have occurred can be stymied. In New Jersey, for example, more than 500 cities and towns were given the right to form aggregation groups in early 2003; however, flaws in default service pricing have thus far thwarted supply arrangements that would otherwise have taken advantage of this change in the law, according to several retailers.

Principles that must be embodied in policies for improved mass market retail competitiveness address challenges inherent in the mass market retail segment (see discussion in Executive Summary) and include the following:

- **Default service pricing must reflect underlying market cost**
Pricing of any last resort supply option, such as default service or standard offer service, *must* reflect underlying market conditions and the real cost of wholesale supply for direct access to be viable. Otherwise, customers will remain with the default provider or return

from competitive supply to default supply whenever market costs rise, as has been most dramatically witnessed in Pennsylvania.²⁸

- **Price adjustments for market changes**

Pricing of last resort supply options *must* also be adjusted periodically to reflect changing market conditions such as increasing fuel costs, and the designated providers of last resort service options must have an incentive to adjust pricing when necessary.

- **Recognizing the existence of distinct sub-markets**

Policies designed to encourage mass market retail competition will *necessarily* be different from those targeted at the mid market and major accounts market. Retail strategies are fundamentally different in the mass market and many retailers do not serve both mass market and other segments since the operational infrastructure requirements, capabilities and marketing approaches are entirely different.

- **Creating headroom should not be a policy objective**

Experience has shown that simply raising the price of the default service, price-to-beat, or ‘shopping credit,’ as it is alternatively called, to create headroom does not produce sustainable retail competition. If the structure of default service pricing reflects real costs to deliver, is correct and there is a level playing field, headroom will become solely a business consideration on the part of retailers.

- **Efficient wholesale bidding can be a barrier to retail competition**

The structure of wholesale bidding and supply auctions used to procure default supply can introduce a significant barrier to expanded retail competition. In markets where wholesale bidding is done, mass market retail competition has languished. It is unlikely that retailers can compete with a utility or state conducting wholesale bids for large

²⁸ A significant number of Massachusetts customers have also returned to Default Service after having
(footnote continued)

amounts of customer load. Massive scale and full commoditization combine to create price outcomes that cannot be beaten. Under this regime, customers all become ‘price takers’ and have no options for stabilizing or hedging price, while the market remains highly concentrated.

- **Effective market size is critical to retail entry decisions**

Markets with many millions of customers are the most attractive to retailers, given all other factors equal. Several of the most successful retail electricity markets today (see Benchmarking summary) are also the largest, with more than 26 million customers in the UK and 9 million in Texas. Massachusetts’ market of 2.5 million eligible customers is, based on indications received from retailers, sufficient to attract retailer entry; however, any policies or administrative requirements that would tend to subdivide a market into smaller utility franchise areas could have the effect of reducing the attractiveness of the market. Conversely, any steps that can be taken to create a regional market without seams will effectively enlarge the size of the available market. The five New England states with retail access represent a market of 5.7 million customers, 60% the size of the Texas market.

- **Volume is a key for mass market retailing**

Direct routes to achievement of estimated critical mass scale, e.g., 500,000 to 1 million customers, are essential to create sustainable competition. Volume and flawless process execution are the keys to the success of mass market retailers. With Standard Offer service in Massachusetts to be terminated in early 2005, the opportunity to compete for a share of the 1.6 million customers currently taking Standard Offer service would be viewed favorably by major energy retailers. Several alternative policies involving ‘bulk customer

been supplied competitively.

transfers' are available and have been tested in other markets, including retail auction, aggregation, direct assignment, and promotional campaigns.

- **The incumbent utility is viewed as retail competitor**

The role of the incumbent utility in the retail market is *always* considered by retailers deciding whether to enter a market. The CEO of one retailing firm interviewed considers this to be the paramount factor in his decision, avoiding situations where he will, in effect, be competing against 'embedded' utilities with physical assets and strong brand identity.

- **Mitigating customer non-payment risk**

Retailers must have an ability to manage volumetric (commodity) risk to survive; however, few if any have the ability to manage either customer payment risk or 'regulatory risk.' To the extent that non-payment risk alone can be mitigated, retailers are more likely to enter a market. Non-payment risk can be addressed by apportioning partial customer payments between utility and retailer. This has the effect of ultimately making non-payment of retail charges grounds for service disconnection.

- **Utility IT requirements can effectively reduce market size**

Policies that leave the details of how customer enrollment and switching, as well as other retail market processes, are performed in the hands of individual utilities tend to reduce the effective size of the market. In essence, each utility looks like a separate market when retailers must invest in IT back office systems to meet an individual utility's requirements.

- **Protecting customers against 'slamming'**

Use of enrollment and switching rules to protect customers against 'slamming' is inefficient, costly for retailers, and raises barriers to

mass market competition. Retailers are able to provide a wealth of examples of how ‘consumer over-protection’ flows through switching rules and increases overhead costs, especially in IT systems. Several retailers suggest that close monitoring to ensure that retailers are complying with expected behavior would be equally effective. Instances of intentional slamming, once proven, could be swiftly met with financial penalties and license revocation.

- **Opportunities for brand development**

Avenues must be available for retailers to build and maintain brand awareness. A number of alternatives are available to achieve this result, including customer billing arrangements, utility partnering with retailers, and promotional campaigns.

- **Burdensome administrative requirements create overheads**

Burdensome requirements associated with environmental disclosure, while motivated by progressive policies, can be antithetical to retail market development when specified in ways that dramatically raise overhead costs. Retailers advocate more efficient means to comply with the policy intent, including Internet disclosure as opposed to mandatory bill enclosures. The cost of complying with disclosure requirements must be considered against the backdrop of extremely thin margins in retail electricity supply.

- **Customer retention**

How new accounts are handled, e.g., whether they go onto a default arrangement or must choose from among a list of qualified suppliers, is seen by retailers as essential to maintaining their ‘book of customers.’ As such, implementing a ‘seamless move’ for customers currently enrolled with a competitive supplier (see Glossary of Terms) when they move within utility service areas, between service areas within the state, and between states that have retail choice is valuable.

- **Customer education**

Education must be effective, well timed and continuous. Surveys in some relatively active retail markets indicate that customers' awareness of their choices tends to wane over time. Moreover, policies in the area of customer education interact with certain scale building approaches more than others. Opt-out aggregation is viewed by some retailers as preferable to direct assignment schemes in that it offers a superior opportunity to improve the customer's understanding of competitive choice.

B. Introduction to the Policy Menu

Investigation into policies and practices that have been adopted by other jurisdictional markets and Plexus' retailer interviews produced a structured list of policy alternatives that embody the underlying principles described above. This 'Policy Menu' contains policy options worth considering for Massachusetts' retail market design in the post-Standard Offer Service phase. The Policy Menu does not represent a recommended course of action, however. Massachusetts policy makers must adopt a long term vision for the desired end state of electricity competition before evaluating the various proposals being circulated and deciding whether to make changes to the current approach. The decision must be made as to whether wholesale or retail competition ultimately provides the best answer for residential customers, given the Commonwealth's long term vision. Distinct policy choices flow from a decision to pursue either path.

The Policy Menu is structured in two tiers. First Tier policy options are fundamental to the continuing development of Massachusetts retail electricity competition and improvement in the Commonwealth's competitive energy market performance. Failure to address the underlying principles represented

by these policy alternatives would put mass market customers at risk, limiting their available choices and potentially exposing them to unwarranted market price volatility. As such, the First Tier policies are seen as being on the critical path for retail market development.

Second Tier policy options are important to long term success but may not represent immediate priority actions for public policy decision making. As some retailers point out, there can be diminishing returns in terms of customer confusion and overly complex processes when too many changes are attempted simultaneously. There is a substantial body of evidence in other markets supporting this view.

Both tiers can be used to judge the appropriateness and likely effectiveness of stakeholder proposals in Massachusetts to insure that experiences in other markets are brought into the debate. Experiences in other markets underlie the list of options making up this Policy Menu.

C. First Tier Policies

First Tier policies fundamentally influence the retailer's entry decision.²⁹ They address the following entry decision factors:

- Effective size of market
- Structure of default service and default pricing
- Retail market rules and requirements
- Viability of direct access—freedom of customers to choose
- Ability to rapidly develop scale
- Ability to build brand awareness
- Perceived regulatory risk / policy stability

The First Tier policies recommended for Massachusetts consideration are summarized in Figure 7.

²⁹ As noted previously, there are a number of wholesale prerequisites that must also be satisfied for retailers to enter; however, they are outside the scope of this review

Figure 7. First Tier Policies for Consideration Culled from Other Markets.

Strategic Market Objective	Policy Objective(s)	Alternative Policy Devices with Market Source
<p>Enable Rapid Scale Achievement</p>	<p>Upon expiration of Standard Offer, complete bulk customer transfers to licensed retail entities</p>	<ul style="list-style-type: none"> • Conduct retail customer auctions (opt-out basis) • Directly assign customer blocks to retailers based on competitive bids (opt-out basis)
	<p>Full retail transfer</p>	<ul style="list-style-type: none"> • Allow transfer of customers not on competitive contracts to utility-affiliated retail entities subject to full separation rules. • Allow transfer of customers not on competitive contracts to utility-designated retailer (unaffiliated)
<p>Create a Level Playing Field</p>	<p>Reflect market pricing signals in default service arrangements</p>	<ul style="list-style-type: none"> • Continue to utilize competitive bidding for default service energy procurement • Continue to reflect market pricing signals in default service option • Reflect market costs in any new default service arrangements
	<p>Make default service price consistent with retail pricing, e.g., including the same retail components</p>	<ul style="list-style-type: none"> • Reflect the cost of retail functions (billing, customer care) in default price without unbundling retail functions and credit the excess revenues back to customers via the delivery charge • Reflect the cost of retail functions (billing, customer care) in default price with unbundled cost of the retail functions (back-out credit)
	<p>Utilize competitive bidding to determine Provider of Last Resort (POLR) (would require a change in the law)</p>	<ul style="list-style-type: none"> • Conduct competitive bid to determine POLR(s) as a wholesale supply arrangement • Conduct competitive bid to determine POLR(s) as a retail supply option • Adopt a statewide approach to POLR energy procurement

Strategic Market Objective	Policy Objective(s)	Alternative Policy Devices with Market Source
Lower Perceived Barriers to Retail Competition	Maintain a single, statewide model of retail choice that preserves overall market size	<ul style="list-style-type: none"> • Avoid utility-specific market models or business requirements • Avoid different outcomes with respect to handling Standard Offer customers when Standard Offer expires
	Create and maintain greater customer awareness of retail sources and options available	<ul style="list-style-type: none"> • Provide enhanced customer education prior to Standard Offer expiration date encouraging affirmative choice • Provide Internet on-line resources and periodic utility bill stuffers with retailer provided information
	Simplify business practices for customer enrollment and switching	<ul style="list-style-type: none"> • Modify rules to allow electronic and telephone enrollments without third party verification • Modify rules to enable enrollment without customer account ID (practical alternatives have been demonstrated in OH, TX and PA)
	Standardize and regionalize business practices for customer enrollment and switching	<ul style="list-style-type: none"> • Standardize business practices³⁰ within the Massachusetts retail electricity market • Standardize business practices in all retail electricity markets within the New England region³¹ • Consider centralization of responsibility for customer enrollment and switching and/or load profiling for all retail access states in New England
	Address perceived 'exit barriers' that deter customers from leaving distribution company supply service	<ul style="list-style-type: none"> • Modify fixed rate option true-up under default service arrangement to eliminate perceived 'switching penalty' • Avoid creation of a Standard Offer Service successor program that disconnects price from wholesale market influences

³⁰ Business practices include: enrollment and switching, customer billing, payment processing, revenue metering, information exchange, load profiling and settlement, retailer licensing and others.

³¹ To the extent that the North American Energy Standards Board (NAESB) is successful in its mission, electric and gas retail practices will become more consistent over time.

Strategic Market Objective	Policy Objective(s)	Alternative Policy Devices with Market Source
Facilitate Customer Recruitment and Lower Customer Acquisition Costs	Offer retailer entrants opportunities to build brand awareness	<ul style="list-style-type: none"> • Employ utility partnering to ‘introduce’ retailers to customers • Modify utility bill format and content to include retailer branding materials such as logos • Use utility as sales channel to promote switching on behalf of retailers
	Move customers to market via a transitional step	<ul style="list-style-type: none"> • Provide a portfolio of retail options for customers that do not involve an immediate switch to a alternative retailer but whose products are sold as a brand directly by retailers
	Enable licensed retailers to better target customers	<ul style="list-style-type: none"> • Expand the existing mass customer information list to include additional information valuable to retailers for marketing purposes, subject to strict limitations on use and release of data
	Encourage or require customers opening new accounts to make an affirmative choice	<ul style="list-style-type: none"> • Modify rules for handling of new accounts to require an affirmative choice of retail suppliers once a minimum number of retailers have entered
	Evolve toward a market model that enables the retailer to maintain the primary customer relationship	<ul style="list-style-type: none"> • Consider an orderly transition to retailer-provided billing and customer care services, e.g., unbundle billing and customer care and allow retailers to provide as a competitive service offering

Figure 7. First Tier Policies for Consideration Culled from Other Markets.

D. Second Tier Policies

Second Tier policies fundamentally influence retailer operations and the ability of the retailer to manage the influences on bottom line performance once they have entered the market. There are numerous instances in which retailers have entered markets and become licensed but have not extended offers to customers. These policies recognize the importance of maintaining conditions under which well managed retail firms can succeed by exercising their ability to:

- Acquire customers
- Retain customers
- Mitigate non-payment risk
- Minimize overheads
- Enable dual market strategies

A number of the retailers Plexus interviewed emphasized the critical importance of brand development. Brand development is represented in the Policy Menu as a means to achieve the ends of customer acquisition and retention and, as such, does not appear as a strategic market objective. Enabling competitive entrants to build brand is however an important policy objective that must not be overlooked. Figure 8 contains Second Tier policy options for consideration.

Figure 8. Second Tier Policies for Consideration Culled from Other Markets.

Strategic Market Objective	Policy Objective(s)	Policy Device
Facilitate Continuing Customer Acquisition	Employ municipal aggregation with customer opt-out	<ul style="list-style-type: none"> • Promote the Cape Light Compact aggregation program as a model for replication elsewhere in Massachusetts • Investigate policies that encourage partnering of membership organizations with retailers for aggregation
	Create and maintain greater customer awareness of retail sources and options available	<ul style="list-style-type: none"> • Provide ongoing customer education that informs customers about the benefits of retail choice • Provide Internet on-line resources and periodic utility bill stuffers with retailer provided information
Simplify Customer Retention and Renewals	Remove current barriers to customer retention	<ul style="list-style-type: none"> • Implement ‘seamless move’ for all customer moves within utility service territories and between service territories within Massachusetts • Collaborate with other New England states to create a ‘seamless move’ process that works for all five of New England’s competitive retail electricity markets.
	Avoid creating future barriers to customer retention	<ul style="list-style-type: none"> • Under customer block transfer, assignment or auction schemes (see First Tier policies), adopt performance criteria that, if met, will result in customers remaining with the retailer they have been transferred to (avoid policies that make customer’s return to utility service automatic)

Strategic Market Objective	Policy Objective(s)	Policy Device
Mitigate Customer Non-Payment (Bad Debt) Risk	Reduce or eliminate the extent of customer non-payment risk not subject to retailer control	<ul style="list-style-type: none"> • Require or encourage utilities performing consolidated billing to purchase retailers' receivables (at 100% or discounted) • Require or encourage utilities performing consolidated billing to purchase retailers' receivables with subsequent recourse for uncollectibles • Further modify payment processing rules to provide preferential treatment to retailers' energy-related items • Introduce technologies that enable customer pre-payment options
	Maintain a disconnection policy that is fair and minimizes the potential for gaming	<ul style="list-style-type: none"> • Maintain a disconnection policy that discourages customers from paying only the delivery charges • Implement a disconnection policy for non-paying customers in the event that retailers are allowed to issue a consolidated bill in the future
Enable Advanced Market Strategies	Create a market environment conducive to dual product marketing, e.g., electricity and gas	<ul style="list-style-type: none"> • Rationalize and standardize competitive electric and gas market business procedures and practices within Massachusetts and, if possible, New England
	Remove administrative barriers to innovative billing and payment offerings	<ul style="list-style-type: none"> • Adopt rules that encourage Internet bill presentment and new methods of payment, including pre-payment
	Enable use of the Internet for comparison shopping and on-line enrollment	<ul style="list-style-type: none"> • Maintain an Internet site with up to date and accurate information that enables customers to make direct comparisons between competitive offers available and their regulated rate option (similar to Orbitz and Travelocity for travel offers). • Allow customers to enroll with the retailer of their choice on the same Internet site, and waive 'wet signature' and separate third party verification for these enrollments.

Figure 8. Second Tier Policies for Consideration Culled from Other Markets.

V. Recommendations for Ongoing Review, Benchmarking & Measurement of Progress

A. Retail Market Benchmarking

Benchmarking of the various retail markets included in this report was undertaken to provide an objective basis for determining whether the comparison markets are competitive. The data collected are known to be incomplete, may be inconsistent, and are drawn from somewhat different points in time. For the present purposes of illustrating likely policy effects however, they are adequate.

Learning lessons from other market experiences and measuring the impacts of policies that have been implemented elsewhere is not a one-time effort. Other states' experiences contain valuable lessons for Massachusetts and can save the Commonwealth valuable time and money. Plexus recommends that Massachusetts promote competitive benchmarking as a joint undertaking with its peer states and establish benchmarking measures and threshold criteria that can be supported by ongoing data gathering in participating jurisdictions. DOER appears to be well positioned to act as the Massachusetts lead agency in such an endeavor. DOER's periodic Market Monitoring Report should include highlights of other retail markets' experiences.

B. Adapting to the Evolving Market: Restructuring Government's Role

Utility industry restructuring requires diligent actions by the jurisdictional regulatory authority to insure that monopoly utility service is unbundled in ways that do not interfere with retail electricity competition. However, when markets are in the process of becoming competitive and ultimately mature, very different requirements emerge. Regulation of pricing gives way to

pricing that is kept in check by competitive forces, which must be constantly monitored. Regulations prescribing bill content and format give way to billing innovations and methods of payment that meet customers' needs and preferences. Marketing methods expand and become more creative as an increasing number of market entrants compete for market share. Consumer protection elements gradually seek a level consistent with other retail industries in which consumers make routine purchasing decisions. These emerging realities resulted in fundamental rethinking of the role of government and regulatory bodies in several other markets reviewed here.

The UK experience is particularly instructive. In May 2002 the role and mission of the UK regulator was transformed, consistent with a determination made at the time that the retail market had become sufficiently competitive to remove price caps. Ofgem's primary objective became "*to protect the interests of consumers, wherever appropriate by promoting effective competition.*"³² A similar transformation of government's purpose and key agencies' missions is likely to occur in Massachusetts as the retail market continues to develop.

³² Office of Gas and Electricity Markets, *Domestic Gas and Electricity Supply Competition: Recent Developments*, June 2003, p. 10.

VI. Conclusion

Massachusetts' transition to a competitive retail electricity market model, in lieu of continued price regulation over energy supply, has made substantial progress since opening in March 1998. Large commercial and industrial customers are taking advantage of retail competition with 35% of their total load supplied competitively as of July 2003. Moreover, no significant problems or economic disruptions have occurred in spite of the transition's inherent complexities. However, competitive opportunities have thus far not extended into the mass market of residential and small business customers, with only one competitive retail option currently available. The Commonwealth's upcoming decision regarding the future disposition of Standard Offer customers presents a significant opportunity to address issues that have stood in the way of more robust retail competition for the majority of customers. The review of other markets' experiences that underlies this report has surfaced a number of promising directions for policy to take, as it seeks to realize the Standard Offer opportunity. Paying careful attention to how the market really works, focusing especially on the pre-conditions for retailer entry into Massachusetts, will produce a series of policies with the potential to jump start mass market competition. Other markets have demonstrated policies that can accomplish this goal. The lessons are available for Massachusetts to advance its own cause.

Appendices

- A. Retail Electricity Market Profiles
- B. Competitiveness Benchmarking Profiles
- C. Glossary of Terms Used in the Report
- D. Alberta's Vision 2012 Statement
- E. List of Information Sources
- F. Retailer Telephone Interviews Conducted by Plexus
- G. About the Author

A. Retail Electricity Market Profiles

Retail Electricity Market Profile: Province of Alberta

Background / Legislation	Electric Utilities Act enacted in 1995. Historical electric prices among the lowest in North America; however, tight capacity in late 1990s led to high degree of price volatility.
Timeline	Wholesale competition implemented in 1996; pilot program for commercial and industrial customers from 1999. Retail choice began on January 1, 2001.
Size of Market	1.2 million customers (2001).
Type of Opening – Phased, “Big Bang”	Commercial and industrial became eligible for competition prior to retail.
Eligibility	All customers eligible for choice January 1, 2001.
Who’s In – IOU’S, MUNI’S, ETC.	IOUs, municipals, rural electric associations included.
Statewide Application or Utility by Utility	Province-wide rules.
Structure of POFR, POLR	Regulated rate option (RRO) available to residential and small commercial customers only on transitional basis. RRO provided by affiliated retailer of incumbent utility or designee.
Pricing – Administratively Set, Competitively Set	RRO pricing set by regulator.
What’s Competitive – Generation, Billing, Metering	Generation and billing are competitive.
Divestiture of Generation Assets	Divestiture not required; full functional separation of retail from regulated delivery.
ISO/Wholesale Market Model	Wholesale market administered by Alberta Power Pool (an ISO is to be established).

**Retail Electricity Market Profile:
Australia–New South Wales/Victoria States**

Background / Legislation	1990-91 Premiers’ conferences approved plans to develop a single wholesale electricity market in eastern and southern Australia; in 1995 state-owned utilities reorganized into distribution and competing retail companies. Harmonization of electricity markets of New South Wales and Victoria occurred in May 1997.
Timeline	National electricity market opened December 13, 1998. Retail competition phased in progressively with residential/small business customers eligible January 2002. (New South Wales began with largest customers in October 1996; Victoria in December 1994).
Size of Market	Victoria and New South Wales represent approximately 60% of the total Australian market in customers and demand.
Type of Opening – Phased, “Big Bang”	Phased opening. Large commercial and industrial eligible for retail competition in 1994 (Victoria), and 1996 (New South Wales); residential and small commercial January 1, 2002.
Eligibility	All customers eligible to participate as of January 1, 2002.
Who’s In – IOU’S, MUNI’S, ETC.	All state utilities in New South Wales and Victoria.
Statewide Application or Utility by Utility	Retail policies set by each state/territory.
Structure of POFR, POLR	The incumbent utility acts as default generation service provider subject to retail price cap until market becomes competitive. No Provider of Last Resort available for large commercial and industrial customers.
Pricing – Administratively Set, Competitively Set	Retail prices under default service (standard offer service) are capped during a transition period.
What’s Competitive – Generation, Billing, Metering	Generation, supply, billing/customer care, and metering are all competitive.
Divestiture of Generation Assets	Divestiture not required; full separation of retail functions and wires required.
ISO/Wholesale Market Model	National electricity market pool managed by the National Electricity Market Management Company Ltd. (NEMMCO).

Retail Market Profile: Georgia Gas Market

Background / Legislation	SB 215, The Natural gas Competition and Deregulation Act, was signed into law in April 1997. The legislation deregulated Georgia's natural gas market and opened consumers to competition. The network through which gas is provided, owned by Atlanta Gas Light Co (AGL), remained regulated by PSC. Repeated legislative and PSC intervention since 1997.
Timeline	It was expected that deregulation would take several years. Full deregulation occurred in 10 or 11 months. 100% of AGL's customers were supplied by competitive marketers as of October 1999, with the final 280,000 customers who had not chosen a supplier being assigned to marketers proportionate to their respective market shares.
Size of Market	1.6 million gas customers.
Type of Opening – Phased, “Big Bang”	All at once, statewide. Full competition occurred faster than expected and without gradual ramp-up, leading to a multitude of problems – poor communication, billing problems, increase in bad debt, disconnections for non-payment, and large customer movements among retailers due to bankruptcies.
Eligibility	All natural gas customers
Who's In – IOU'S, MUNI'S, ETC.	Atlanta Gas Light. AGL is the only U.S. gas company to exit completely from the merchant function and now focuses exclusively on delivery. The expectation was that at least 20 marketers would participate; in fact, four marketers controlled 94% of market three years after deregulation.
Statewide Application or Utility by Utility	AGL served the entire state.
Structure of POFR, POLR	No Provider of First Resort (POFR); all customers who did not choose were assigned to a marketer in late 1999. In late 2001, PSC designated Infinite Energy as temporary emergency provider of last resort (POLR) through June 2002.
Pricing – Administratively Set, Competitively Set	Under the Act, once five marketers were certified, AGL's price for commodity sales service became deregulated, encouraging customer migration to market.
What's Competitive – Generation, Billing, Metering	Billing was made competitive; marketers issue a consolidated bill including AGL's delivery charges. Distribution companies (AGL) and marketers still subject to various legislative rules and regulations.
Divestiture of Generation Assets	N/A
ISO/Wholesale Market Model	N/A

Retail Electricity Market Profile: Maine

Background / Legislation	Legislative Directive 1804 enacted May 29, 1997 and amended June 30, 1999 (Maine Electric Restructuring Act) enacted to restructure Maine’s electric utility industry.
Timeline	March 1, 2000 – start of retail competition.
Size of Market	749,000 electric customers (2001); total electric revenues of \$1.3 billion (2001)
Type of Opening – Phased, “Big Bang”	All customers eligible at time of market opening.
Eligibility	All customers eligible to participate.
Who’s In – IOU’S, MUNI’S, ETC.	All utilities, including consumer owned.
Statewide Application or Utility by Utility	Statewide application.
Structure of POFR, POLR	Only one type of default service is available in Maine— standard offer service (SOS) is available to all customers until March 1, 2005. SOS is a full requirements supply acquired through retail supply auctions conducted on behalf of each of the major utilities by the Maine Public Utilities Commission. T&D utilities not allowed to bid and utility affiliates limited to supplying 33% of native area SOS load.
Pricing – Administratively Set, Competitively Set	After March 2000, all generation prices, including prices for SOS, are set competitively.
What’s Competitive – Generation, Billing, Metering	Only generation is provided competitively.
Divestiture of Generation Assets	Divestiture of non-nuclear generation assets and auction of PURPA Qualifying Facility contracts required by 3/1/00.
ISO/Wholesale Market Model	Southern Maine included in ISO New England control area; northern Maine is not physically connected to the rest of New England and New Brunswick does not have an open market, a situation that creates unique conditions for competition using locally based generation assets.

Retail Electricity Market Profile: Massachusetts

Background / Legislation	Historically Massachusetts has had one of the highest retail rates in the country. In 1997 MA was the fifth highest average retail price 10.5 cents per kilowatt-hour, compared to the national average of 6.85 cents per kilowatt-hour. The Electric Utility Restructuring Act was signed into law November 25, 1997.
Timeline	Retail choice commenced March 1, 1998, with transitional Standard Offer Service extending though February 28, 2005.
Size of Market	Total number of consumers in 2001 was 2.87 million and total electric revenue from sales to consumers was \$6.1 billion.
Type of Opening – Phased, “Big Bang”	All customers eligible for Choice immediately. Transitional Standard Offer Service scheduled to last seven years.
Eligibility	All retail customers. New customers after March 1998, and customers who have taken competitive supply, are ineligible for Standard Offer Service.
Who’s In – IOU’S, MUNI’S, ETC.	All IOU’s are in. Municipal electric companies not included.
Statewide Application or Utility by Utility	Utility-by-utility implementation plans contain similar treatment for Customer and Supplier terms and conditions.
Structure of POFR, POLR	Standard Offer Service (the POFR), provided a 10% discount from August 1997 rates beginning March 1, 1998 and an additional 5% discount as of September 1, 1999. Since December 2000, Default Service (the POLR), has provided a market-based rate via distribution company wholesale energy procurements.
Pricing – Administratively Set, Competitively Set	Standard Offer Service rates administratively set. Default Service set by competitive bids (since December 2000). Western Mass Electric Company competitively sets both Standard Offer Service and Default Service pricing.
What’s Competitive – Generation, Billing, Metering	Generation supply is competitive. Billing, metering and customer service not currently competitive.
Divestiture of Generation Assets	Divestiture of generation assets by all utilities with Western Mass Electric Company selling its generation to an affiliate.
ISO/Wholesale Market Model	ISO New England provides a regional wholesale market with central generation dispatch covering MA, ME, CT, NH, VT, and RI.

**Retail Electricity Market Profile:
New Jersey**

Background / Legislation	Assembly Bill 10 (Senate Bill 5) of February 9, 1999 (the Electric Discount and Energy Competition Act) reduced rates by 10% and capped rates throughout a four year transition period.
Timeline	Market opened for all customers in November 1999 (delayed from August 1, 1999).
Size of Market	3.7 million customers (2001); total electric revenues \$6.8 billion (2001).
Type of Opening – Phased, “Big Bang”	All at once beginning November 14, 1999.
Eligibility	All customers eligible.
Who’s In – IOU’S, MUNI’S, ETC.	All public utilities.
Statewide Application or Utility by Utility	Individual utility restructuring implementation plans.
Structure of POFR, POLR	10% mandatory rate reductions over first three years; “shopping credit” determined by NJ Board of Public Utilities (1999 to 2003 levels pre-determined).
Pricing – Administratively Set, Competitively Set	Average revenues per KWH (2001) 9.42¢; national average 7.32¢ (2001).
What’s Competitive – Generation, Billing, Metering	Generation is competitive; customer service functions to be considered for competition later.
Divestiture of Generation Assets	Divestiture of generation encouraged but not required.
ISO/Wholesale Market Model	New Jersey is included in PJM.

Retail Electricity Market Profile: New York

Background / Legislation	No legislative directive; PSC initiated restructuring with its Order of May 20, 1996.
Timeline	Restructuring phased in by utility within timeframe of May 1998 to September 1998.
Size of Market	7.7 million customers (2001); total electric revenues (2001) \$16.4 billion
Type of Opening – Phased, “Big Bang”	Phased in by utility between May 1, 1998 and Fall 1998, with all customers eligible to choose by 2002.
Eligibility	All customers.
Who’s In – IOUs, MUNIs, ETC.	IOUs and Long Island Power Authority (implemented retail competition as of January 2002, seven years ahead of schedule).
Statewide Application or Utility by Utility	Implementation per utility restructuring plans that were approved on 1997 and 1998. New York pioneered statewide uniform business practices.
Structure of POFR, POLR	Last resort service available to all customers; last resort service for some utilities’ large customers reflects market pricing.
Pricing – Administratively Set, Competitively Set	Average revenues per kilowatthour 11.6¢ (2001); national average 7.32¢. Negotiated rate reduction for each utility, plus “back out” rates for each utility.
What’s Competitive – Generation, Billing, Metering	Generation and billing are competitive and metering has been deemed competitive.
Divestiture of Generation Assets	Partial or full divestiture of generation required, depending on utility.
ISO/Wholesale Market Model	Entire state subject to NYISO control.

Retail Electricity Market Profile: Ohio

Background / Legislation	Senate Bill 3 signed July 6, 1999
Timeline	Market opened January 1, 2001; market development period to end on December 31, 2005.
Size of Market	5.4 million customers (2001); total electric revenues \$10.3 billion (2001).
Type of Opening – Phased, “Big Bang”	All at once.
Eligibility	All customers eligible.
Who’s In – IOU’S, MUNI’S, ETC.	Investor-owned utilities.
Statewide Application or Utility by Utility	Individual utility restructuring plans.
Structure of POFR, POLR	Market-based Standard Service offer must be provided by each distribution utility.
Pricing – Administratively Set, Competitively Set	Average revenue per KWH 6.7¢ (2001); national average 7.32¢ (2001). Residential customers guaranteed a 5% rate cut in generation portion, followed by a rate freeze until market development period ends on December 31, 2005. After that date electric rates will be set by market.
What’s Competitive – Generation, Billing, Metering	Generation supply is competitive.
Divestiture of Generation Assets	Divestiture of generation assets not required; however, utilities were required to file structural separation plans.
ISO/Wholesale Market Model	Major utilities operate control areas; ISO under development

Retail Electricity Market Profile: Oregon

Background / Legislation	Senate Bill 1149 (July 23, 1999); PUC Order (August 29, 2000); House Bill 3633 (June 21, 2001).
Timeline	Commercial and industrial customers able to switch retail suppliers effective March 1, 2002 (delayed from original start date of October 1, 2001).
Size of Market	1.7 million customers (2001); \$2.5 billion total electric revenues (2001).
Type of Opening – Phased, “Big Bang”	Phased opening with only commercial and industrial customers eligible initially; PUC mandated to determine if full retail competition would benefit residential customers. (2002 report recommended against full retail competition at this time).
Eligibility	Non-residential customers eligible to switch electricity suppliers; residential customers offered regulated portfolio of options by their utility. (No customers were participating in direct access as of mid 2003)
Who’s In – IOU’S, MUNI’S, ETC.	Oregon’s two major IOUs—Portland General Electric and Pacific Power & Light. Municipal utilities, cooperatives and Public Utility Districts can decide whether to offer their customers direct access or portfolio options.
Statewide Application or Utility by Utility	Utility by utility application; utility-specific portfolio options.
Structure of POFR, POLR	Utilities must offer default service for non-residential customers.
Pricing – Administratively Set, Competitively Set	Average revenues per KWH 5.4¢ (2001); national average 7.32¢ (2001).
What’s Competitive – Generation, Billing, Metering	Generation supply for non-residential customers only.
Divestiture of Generation Assets	Not required.
ISO/Wholesale Market Model	N/A

Retail Electricity Market Profile: Pennsylvania

Background / Legislation	House Bill 1509 signed December 3, 1996.
Timeline	Market opened January 1, 1999; all customers eligible as of January 1, 2001.
Size of Market	5.9 million customers (2001); total electric revenues \$10.8 billion (2001)
Type of Opening – Phased, “Big Bang”	Phased market opening with 1/3 of customers on January 1, 1999, second 1/3 on January 1, 2000, and final 1/3 on January 1, 2001.
Eligibility	All customers.
Who’s In – IOU’S, MUNI’S, ETC.	All utilities.
Statewide Application or Utility by Utility	Individual utility implementation plans and generation “shopping credits.”
Structure of POFR, POLR	Utilities must provide standard offer service and act as provider of last resort for customers returning to utility service. Law requires utilities that have less than 10% of customers switched by a certain date to randomly assign 50% of the customers to alternative suppliers (competitive default service/market share threshold plan).
Pricing – Administratively Set, Competitively Set	Average revenues per kWh 7.9¢ (2001) – note average 7.3¢ shopping credits set to reflect retail market conditions.
What’s Competitive – Generation, Billing, Metering	Generation, billing, and metering are subject to competition.
Divestiture of Generation Assets	Divestiture not required.
ISO/Wholesale Market Model	Most of Pennsylvania is subject to PJM control.

Retail Electricity Market Profile: Texas

Background / Legislation	Senate Bill 7 signed June 18, 1999.
Timeline	Wholesale competition introduced in 1995. 5% pilot program commenced July 31, 2001; full choice implemented January 1, 2001 in ERCOT region of Texas. Retail access in Texas Panhandle (non-ERCOT) deferred until later date due to lack of ISO/RTO and lack of retailer interest.
Size of Market	9.7 million customers (2001); total electric revenues \$23.4 billion (2001).
Type of Opening – Phased, “Big Bang”	All classes eligible for retail choice on January 1, 2002, following commercial and industrial pilot in 2001.
Eligibility	All customers.
Who’s In – IOU’S, MUNI’S, ETC.	Utilities in areas of Texas not covered by ERCOT not presently included; electric cooperatives and municipals may elect to opt in.
Statewide Application or Utility by Utility	Structure of retail competition is highly centralized; ERCOT acts as the customer registration agent for all utility areas subject to competition (retailers submit switch requests to ERCOT for processing).
Structure of POFR, POLR	Affiliated retail providers must offer “price-to-beat” service until January 1, 2007 and are allowed to vary price as January 1, 2005 (earlier if 40% of eligible residential and small business customers switch to alternative retail suppliers). Provider of last resort service (POLR) must be available to all customers under 1 MW demand. Companies are designated as POLR by the PUC of Texas based on competitive bids.
Pricing – Administratively Set, Competitively Set	Average revenues per KWH 7.4¢ (2001); national average 7.3¢ (2001). Price-to-beat (PTB) rates discounted from previous cost of service rates; law required a 6% rate reduction at start of retail competition, adjusted for fuel costs. PTB rates may change up to twice annually if necessary due to changing fuel prices and with approval of Texas PUC.
What’s Competitive – Generation, Billing, Metering	Generation supply and billing are competitive; billing is not unbundled unless suppliers voluntarily offer it as a customer service. Unbundling of metering as a competitive service is planned.
Divestiture of Generation Assets	Not required; full retail separation was required however.
ISO/Wholesale Market Model	Texas (excluding Panhandle) covered by ERCOT; jurisdictional authority for wholesale resides with PUCT.

Retail Electricity Market Profile: United Kingdom*

Background / Legislation	UK Electricity Act of 1983 opened wholesale competition; Electricity Act of 1989 functionally unbundled and separated generation, transmission, distribution, and retail. The Utilities Act of 2000 altered the emphasis of The Office of Gas & Electric Markets (Ofgem) role to a central focus on customer interests as affected by electric competition.
Timeline	1990-1999 implementation of retail competition.
Size of Market	Approximately 26 million customers (England and Wales).
Type of Opening – Phased, “Big Bang”	Phased implementation: 1990 - large customers (greater than 1 MW) 1994 - commercial and industrial customers (100kW-1 MW) 1999 – domestic customers and small businesses under 100 kW
Eligibility	All customers as of May 1999.
Who’s In – IOU’S, MUNI’S, ETC.	All regional electric companies (initially 12 in number).
Statewide Application or Utility by Utility	National model for both wholesale and retail business operations.
Structure of POFR, POLR	Utility-affiliated retailers inherited all retail customers at time of market opening.
Pricing – Administratively Set, Competitively Set	Price controls initially maintained on all utility affiliated retailers. Price controls on default service lifted in May 2002, based on Ofgem determination that the market is competitive.
What’s Competitive – Generation, Billing, Metering	Generation, billing, and metering are competitive.
Divestiture of Generation Assets	Generation separate. Functional separation removed retail functions from wires company to affiliated retailer.
ISO/Wholesale Market Model	Subject to Electricity Pool of England and Wales and New Electricity Trading Arrangements.

*Mainly describing England and Wales; Scotland is in process of being integrated into the overall UK market.

B. Retail Mass Market Development: Raw Benchmarking Data

C. Glossary of Terms Used in this Report

Aggregation—Grouping of a large number of individual customer accounts for the purpose of collective bidding for electricity supply in the market.

Benchmarking—Use of objective measurements to compare the performance of different systems, approaches or organizations; used here to compare twelve competitive retail electricity markets with characteristically different conditions.

Competitive Billing—Further unbundling of utility service in which the retail supplier is allowed to issue a bill containing both regulated delivery and unregulated generation charges. Currently allowed in Texas, UK, Australia, Alberta, and Georgia gas market, among jurisdictional markets considered in this report.

Competitive Electricity Retailer—Unregulated entity licensed to sell electricity to customers in a jurisdictional market; becomes the customer's supplier of record after a customer switch has been processed.

Consolidated Bill—Single customer bill containing both regulated delivery and unregulated generation charges; may be issued by either a utility or retail supplier (in jurisdictions where billing is competitive)

Default Generation Service—Generation supply arrangement available to customers who have been served under a competitive supply contract that has been terminated or who choose not to continuing taking competitive service; generally provided by the incumbent utility but not always.

Direct Assignment—Customers are randomly transferred to a retail supplier by the incumbent utility, usually after a grace period in which the customer has the opportunity to make an affirmative choice of their own.

Enrollment—Process under which a competitive retailer signs up a customer; involves mandatory third party verification in some jurisdictions.

Electric Reliability Council of Texas, Inc. (ERCOT)—Organization responsible for wholesale market oversight and the intrastate transmission grid, as well as certain centralized retail market functions such as customer registration and load profiling.

Federal Energy Regulatory Commission (FERC)—Federal agency with authority over wholesale generation and transmission in most parts of the United States.

Full Retail Transfer—Model for electric competition which formally separates the retail functions from energy delivery by transferring all customer accounts and related customer service functions (billing, payment handling and customer care) to the utility's affiliated retail entity at time of market opening. The affiliated retailer is

permitted to compete for retail market share, subject to certain limitations designed to insure market competitiveness.

Headroom—Difference between the price the market will bear and cost of the commodity; an indicator of potential gross margin. If headroom is nonexistent because the default price is set below market, retailers will be unable to enter the market.

Independent System Operator of New England (ISO-NE)—Organization responsible for management and oversight of electric transmission and wholesale electricity market within the six New England states; subject to FERC jurisdictional authority.

Jurisdictional Market—Reference to a competitive electricity market that is defined by a utility industry restructuring process, e.g., the Texas electricity market.

Market Support Generation—Release of generation supply by a utility into the market on reasonable terms for resale by competitive retail suppliers; intended to stimulate retail competition.

Mass Market—Residential and small business customer segment of the market.

Massachusetts Department of Telecommunications and Energy (DTE)—Name of the state agency with regulatory authority over Massachusetts electric utilities establishes rules for the competitive retail electricity market and licenses competitive retail electric suppliers.

Office of Gas and Electricity Markets (Ofgem)—Name of the agency in the United Kingdom tasked with monitoring competitive gas and electricity markets and protecting customer interests; formerly operated as two separate regulatory agencies overseeing electric (OFFER) and gas (OFGAS) utilities.

Opt-out—Provision that allows a customer to elect not to participate in an arrangement, such as a municipal aggregation scheme.

Price to Beat Service—Texas generation supply arrangement under which customers who have not made an affirmative choice are served; price is capped until 40% of eligible customers have switched to an alternative retail provider or transition date is reached.

Provider of First Resort (POFR)—Initial supply arrangement for customers at time of market opening, similar to Standard Offer Service in Massachusetts and Price to Beat Service in Texas; generally provided by the utility or an affiliate.

Provider of Last Resort Service (POLR)—Another name for Default Generation Service.

Purchase of Receivables—Arrangement under which the party (usually the utility) producing a consolidated customer bill purchases the non-billing party's (usually the

retail supplier) receivables regardless of whether the customer pays the full amount owed.

Regulated Portfolio Options—Oregon’s approach for residential customers in lieu of retail choice of supplier; utilities required to offer customers a portfolio of pricing and product options.

Retail Choice—Alternative name for electricity supply competition, under which customers are able to make an affirmative choice of retail supplier

Seamless Customer Move—Business procedure that allows a customer being served under a competitive contract to continue receiving service when relocating to another area in which the same retail supplier operates, without taking any action.

Shopping Credit—Term used by Pennsylvania for the generation charge on the bill that will be credited back to the customer by their utility when they purchase their electricity from an alternative retail supplier.

Slamming—Practice of switching a customer to new retail supplier without customer authorization.

Standard Offer Service —Generation supply arrangement available to customers who have not made an affirmative choice of a competitive retail energy supplier; generally provided by the incumbent utility.

Switching—Process by which a customer account is transferred from one retail supplier to another; includes a validation step to confirm that the information supplied by the new supplier is correct and therefore reflective of customer authorization.

Uniform Business Practices (UBP)—Standardized practices for use by utilities and retail suppliers within a jurisdictional market, or across jurisdictional markets, to reduce the overhead costs associated with retail electricity competition.

D. Alberta's *Vision 2012* Statement

One of the very early items the Council worked on was a “vision” of what form the electricity industry would be in and how it would be operating at the end of the period the Council was to consider, based on the assumption of successful restructuring over that period. The Council reviewed the vision put forward in 1999 by the Department of Energy (*Vision 2005*). The Council decided that the *Vision 2005* document represented directionally a state that the Council thought should be achieved by the industry with successful restructuring.

On this basis the *Vision 2005* document forms a more comprehensive vision statement as the foundation for the more condensed **Vision 2012** used by the Council for its deliberations.

The full text of the *Vision 2005* document follows.

Source: Alberta Advisory Council on Electricity, *Report to the Alberta Minister of Energy* (Appendix A), June 2002.

Agencies involved in the transition to a competitive marketplace define their vision and expected benefits for Albertans.

Consumers Are Benefiting

- Strong competition among retailers for customers continues to put downward pressure on rates. Consumers are finding that they can get better rates from competing retailers than they would have received in a regulated system.
- Consumers understand how the marketplace works. They are well informed about the choices and opportunities available to them.
- Home, farm and small business consumers who initially chose to stay with their existing supplier on a regulated rate in order to become familiar with the new marketplace have now chosen a retailer. There is little or no interest by consumers in a regulated rate as lower, stable rates are now offered by the marketplace.
- Large industrial and commercial consumers are benefiting from new market opportunities: they can now make their own retail supply arrangements and they can build an energy supply portfolio from competitive offerings.
- There is a new era of choice and services for consumers. Electricity marketers are providing valuable services in ways not conceived of before restructuring. These advances have been made possible through new technologies. Technology is an “enabler” in the industry, as the market has been freed up to encourage innovation.
- Advances in telecommunications and other areas have positively affected the electricity market. For example, public data networks, smart technologies for controlling power, convergence of many utilities (e.g. one-bill service), and other advances have been developed.
- Consumers are effectively managing their own energy costs. They have a heightened awareness of conservation and many consumers are selecting “green power” suppliers.
- Investments in new generation are in sync with the needs of a growing population and thriving industry.

The Marketplace Is Competitive and Healthy

- By the year 2005, there are many market players, including retailers and generators. A level playing field exists for all market competitors. Systems are in place to handle the entrance of new players.

- There is a thriving market of direct sales between buyers and sellers, as well as a competitive Pool spot market for wholesale power.
- The long-term power supply arrangements applied to previously regulated generation fit well within the overall competitive system. The objectives of mitigating market power and ensuring that Albertans continue to benefit from the low-cost power built under regulation have been met through these arrangements. Utilities have not found themselves with unrecoverable costs. A secondary market for trading these arrangements may have developed.
- All markets are functioning well and new ones are developing in areas such as emissions trading. Buyers and sellers are confident enough to make financial commitments in day-ahead, week-ahead and year-ahead deals.
- The Pool price reflects the commodity' market and there is liquidity in the market.
- Correct market signals are being given for a competitive environment.
- Businesses in the industry are viable and shareholders are happy. Companies are increasing their earnings and businesses are growing and expanding into other regions.

Industry Support Systems Are Streamlined and Effective

- Roles, relationships and responsibilities of various agencies supporting the industry and the competitive marketplace are clear and common standards have been developed.
- The transmission system is well-managed for the benefit of consumers and industry. There is good, open access with British Columbia and Saskatchewan, including good interfaces. There is reliability and security of supply.
- System support services were well-provided during the transition and risk management factors were incorporated into transition systems. Unnecessary transmission investment was avoided.
- The Market Surveillance Administrator is effective and vigilant. As the market evolves, the necessity for the role has diminished as there are few, if any, concerns about anti-competitive behaviour.
- The streamlined regulatory system enables industry to be effective and innovative. Industry stakeholders are working together to resolve issues. There have been few, if any, hearings. Regulatory costs have been significantly reduced.

A Vision for Alberta's Electric Industry

Dramatic changes are occurring world-wide in the way power is generated and sold. To ensure that Alberta is ideally positioned to take full advantage of new technologies and innovations, the Government of Alberta is taking a leadership role in restructuring the province's electric industry.

Restructuring and deregulation began in Alberta in the mid-1990s. The transition to a competitive marketplace takes time and requires a clear vision of the end goals. This document looks ahead to the year 2005. It helps to define the Government's vision of a competitive marketplace and the benefits to Albertans.

In mid-1999, the Department of Resource Development, the Alberta Energy and Utilities Board and independent agencies (e.g., the Power Pool of Alberta and the Transmission Administrator) met to discuss their vision for the industry. They identified a number of goals that capture the effective and efficient operation of the competitive marketplace. This document captures the vision from the perspective of the Department and independent agencies, and defines the expected benefits for Albertans.

A snapshot of the year 2005	
	a competitive, efficient and innovative electricity marketplace
	new generators and many new service providers
	informed consumers choosing from competitive, attractive options
	continued downward pressure on rates
	incentives for conservation and the wise use of energy
	smart technologies and green power options that contribute to environmental goals

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F. Retailer Telephone Interviews Conducted by Plexus

Telephone interviews were conducted with the following major electricity retailers in late October and early November of 2003 to obtain first hand evidence on policies employed in other markets that influence mass market competitiveness:

- Constellation New Energy
- Direct Energy (Centrica)
- Dominion Retail
- Green Mountain Energy
- Reliant Energy Retail Services
- TXU Energy Services
- WPS Energy Services

Together, these companies sell (or have sold) electricity in, or are in the process of entering, the following competitive retail markets (* signifies that the market is included in this comparative review):

- Alberta *
- Australia *
- California
- Connecticut
- Delaware
- Dist. of Columbia
- Illinois
- Maine *
- Maryland
- Massachusetts *
- Michigan
- New Hampshire
- New Jersey *
- New York *
- Ohio *
- Ontario
- Oregon *
- Pennsylvania *
- Rhode Island
- Texas *
- UK *
- Virginia

One of the retailers interviewed has also sold gas in Georgia's competitive retail gas market, which is also included in the comparative market review.

Collectively, the retailers interviewed by Plexus directly serve the electricity needs of more than 12,000,000 customers worldwide.

G. About the Author

Eric P. Cody is Vice President and Senior Energy Advisor at Plexus Research, Inc., a consulting firm in Boxborough, Massachusetts that has served the energy industry for two decades. He leads Plexus' practice in competitive market infrastructure and participates in the firm's projects involving a wide range of customer technologies. In 1999 and 2000, Mr. Cody was lead consultant and facilitator for the nationwide consensus building effort to identify uniform business practices (UBP) for the retail electricity market. UBP was jointly sponsored by the Edison Electric Institute (EEI), the Coalition for Uniform Business Practices (CUBR), National Energy Marketers Association (NEMA), and the Electric Power Supply Association (EPSA). He co-authored the National Rural Electric Cooperative Association's (NRECA) *Operational Guide to Electricity Competition*, a primer developed for NRECA's 900 electric cooperative members in 2000. Since 1997, Mr. Cody has worked with utilities and retailers on the operational requirements of competitive markets across North America, including Alberta, California, Illinois, Maine, Massachusetts, Michigan, Minnesota, Montana, New York, New Jersey, New Mexico, North Carolina, Ohio, Oregon, Pennsylvania, Texas, Wisconsin, Virginia, and the District of Columbia. He has published a number of major articles in industry periodicals and contributed to several books on competitive retail electricity markets. He can be reached at ecody@plexusresearch.com.