

Innovations in Retail Choice for Large Commercial and Industrial Customers

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I. Introduction

THE ELECTRIC POWER INDUSTRY is the largest remaining major arena of utility regulatory reform in the U.S. With sales of over \$250 billion annually, the electric power industry dwarfs most other industries, and its importance to modern life and economic well-being is difficult to overstate. Recent blackouts provide a vivid demonstration of the importance of electric power to every aspect of American society.

The journey to reform the electric power industry regulatory structure, where market-based profit incentives rather than administrative decisions guide investment and service offerings, has not been particularly smooth.¹ One of the roughest spots in the road has been retail competition in which customers pick their own retail electric power supplier rather than relying on their franchised electric utility.² Much of the damage in the California energy crisis of 2000 and 2001 stemmed from problems with California's insistence that retail prices remain frozen despite wholesale prices that rose dramatically.³ One aspect of retail competition, namely continued state mandates for provider-of-last-resort (POLR) service at regulated prices, has been particularly problematic. POLR service applies primarily to customers who have not selected a retail electricity supplier, although customers whose retail supplier has exited the industry also receive electric power through POLR service until they select another supplier. Most states that permit retail electricity customers to choose their own supplier require that each local distribution utility provide POLR service at fixed, administratively determined prices.

The Federal Trade Commission (FTC) Retail Competition Staff Report found that prices for POLR service in many states prevented new suppliers from offering retail electricity services to customers and caused financial distress for POLR service providers.⁴ If POLR prices are fixed, as many states have done, increases in wholesale prices eliminate most incentives for entry of efficient and innovative retail suppliers. Moreover, fixed POLR prices can create financial distress for the distribution utilities providing POLR service because, as wholesale prices rise, the utilities are unable to pass on their higher costs to POLR customers. On the customer side, extended periods of below-market POLR prices remove incentives for cus-

tomers to be active market participants and may make entrants' subsequent marketing efforts more costly.

In this article, we discuss recent POLR service developments that seek to eliminate many of the market distortions caused by many initial POLR policies. The new POLR service pricing approach for large commercial and industrial (C&I)



customers in Maryland and New Jersey, for example, avoids some of the pitfalls of divergent retail and wholesale prices. POLR service prices that closely track wholesale prices can restore incentives for entry by efficient and innovative retail suppliers and can assure that supplying POLR service does not cause losses for distribution utilities. At the same time, the presence of diverse offers from entrants (and incumbents) creates incentives for customers to search for the best match between their preferences and available offers. The availability of diverse service offerings (including variations in prices, environmental characteristics of the supply purchased, reliability of the supply,

etc.) can benefit consumers as compared to the limited range of services offered by incumbent utilities. These pricing innovations also help eliminate any cross-subsidization between large C&I customers and other classes of customers, such as residential and small commercial customers. Because several states with existing retail customer choice programs are reaching the end of their respective phase-in “Atransition@” periods for customer choice, it may be a propitious time to reexamine POLR service pricing practices to avoid their detrimental effects on the development of competitive retail electricity markets.

II. POLR Pricing Analysis in the FTC Retail Competition Staff Report

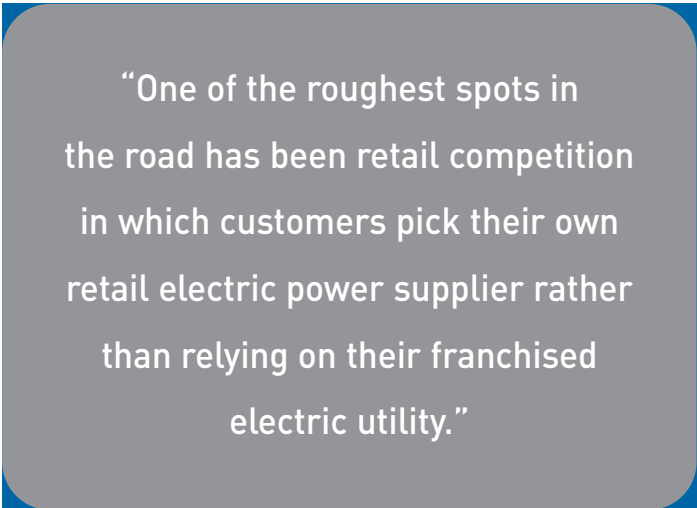
A PRINCIPAL CONCLUSION OF THE FTC Retail Competition Staff Report was that POLR pricing policies prevented new retail suppliers from offering services to eligible customers, thus dooming the initial prospects for a vibrant retail supplier market. States have adopted POLR service because the lack of electricity, even for a short period, may be life-threatening or impose severe hardship on customers. As implemented by several states, a customer may take POLR service when it has decided not to select a retail supplier or simply failed to make a decision (and there is no mechanism to assign an alternative supplier to the customer), when no alternative supplier has accepted the customer (usually because of the customer’s credit or payment difficulties), or when the alternative supplier selected by the customer has exited. State regulators have generally assigned POLR service obligations to the incumbent distribution utility whose franchise territory includes the customer’s location. POLR service assures that every customer always has an associated retail supplier and thus avoids any lapse in electrical service for retail consumers.⁵

The most harmful POLR service policy choice occurred when states established fixed retail prices that did not vary with changes in fuel prices used to generate electric power.⁶ When natural gas and some other fuel prices increased substantially and retail prices were fixed, utilities with POLR obligations in several states had costs that exceeded revenues for POLR service. This situation was most severe in California during 2000 and 2001, where natural gas is the predominant fuel for generation and where utilities purchased power to meet their POLR obligations primarily in the spot market.⁷ This condition also eliminated incentives for most types of retail entry. The only notable exception was retailers supplying green power. Green power entrants were sometimes able to attract sufficient customers at prices above the price for POLR service.

Experience since 2001 confirms the conclusion in the FTC Retail Competition Staff Report. In several states that ini-

tiated retail customer choice policies, few alternative suppliers entered or remained in the market and relatively few customers actively considered alternative suppliers. This fact, and the substantial market design flaws present at the retail and wholesale levels in California,⁸ eroded interest in electric retail customer choice programs in other states (and countries) during the early part of this decade, with the notable exception of Texas.⁹

Based on this experience, retail electric power markets with effective competition are more likely to develop if prices for POLR service closely follow wholesale prices.¹⁰ POLR service prices that do not closely track wholesale prices undermine incentives of new competitors to enter the market for two reasons: (1) they decrease the expected level of profitability if POLR prices are on average less than competitive market prices; and (2) they increase the expected risk of entry, (*i.e.*, the variability in profitability) to the extent that POLR prices are determined administratively and may not be linked to underlying



“One of the roughest spots in the road has been retail competition in which customers pick their own retail electric power supplier rather than relying on their franchised electric utility.”

market conditions. In other words, new entrants must compete against POLR services, offers that may not represent competitive conditions.¹¹ Fixed POLR prices also discourage customers from initially becoming, and thereafter acquiring the habits of, active market participants that keep informed about the range of offers available from different suppliers and act quickly and effectively to protect their own interests. These actions can undermine anticompetitive price increases when the transition to customer choice is completed. In addition, fixed POLR service prices may increase costs for existing and potential retail suppliers. Both types of retail suppliers may have to pay more to attract capital because their expected earnings are subject to greater variance than would be the case if POLR service prices closely tracked wholesale electricity prices.

POLR prices that track wholesale prices are also likely to

increase the efficiency of the electric system overall.¹² When retail prices track wholesale prices, peak loads are likely to be reduced (peak load shaving) and loads during off-peak periods are likely to increase as customers shift electricity use to less expensive off-peak periods. When customers have accurate and timely price information, they also have efficient pricing signals to invest in technologies that will facilitate future peak load shaving. In addition to lowering bills, shifting demand from peak to off-peak periods can provide two benefits: (1) system costs can be reduced because fewer higher-cost peaking generators are needed and more lower-cost, base-load generators can be substituted because the base load grows relative to total system load; and (2) reliability may increase because load peaks that strain the transmission system are less likely to occur. Both of these benefits accrue to all customers, not just to those who respond to the efficient price signals. Georgia Power's real-time pricing program for large industrial customers illustrates the beneficial effects of accurate price signals:

On a few days in summer 1999, Georgia Power's real-time prices reached levels as much as twice as high as those seen in previous years. . . . The very large industrial customers on hour-ahead rates reduced their purchases by about 30% from their normal rate on the moderately high-priced days and nearly 60% during the two high-cost, capacity-constrained episodes.¹³

Economists have explained the need to match prices to produce electricity with prices to consume electricity at the time in which it is consumed:

Any structural model of the industry should include a mechanism for charging customers for the cost of the production and delivery of electricity at the time of its consumption. Electricity at midnight in April is completely different from electricity at noon on a hot August day. In California, the former is cheaply produced from excess rainfall spilled over hydroelectric dams whose reservoirs are too full to contain it. By contrast, the latter demand must be met by high-cost power plants whose annual service may include just a few peak days. Yet, most California customers, including large industrial customers, are still charged for electricity as if its cost varies little throughout the year. Prices to most end users don't signal when electricity is cheap or dear for the industry to produce. Nor are consumers offered the true economic benefit of their conservation efforts at times of peak demand. Customers suffer further when unchecked peak demands grow too fast, pushing up costs for all.

Wholesale electricity markets also become more volatile and subject to manipulation when rising prices have no impact on [consumption]. Indeed, a functioning demand side to the electricity market in California would have greatly reduced the likely private benefits, and consequent social costs, of any strategic behavior engaged in during the crisis.¹⁴

III. Large C&I Customers are Likely to Benefit from Redesigned POLR Service Pricing Policies

LARGE C&I CUSTOMERS ARE AN ATTRACTIVE group of customers with which to initiate, or restart retail competition and implement POLR service prices that closely track wholesale prices. In general, large customers are likely to be relatively well informed about their energy costs and supply choices.¹⁵ Comparative shopping for electricity suppliers may be easier for large firms

“In general, large customers are likely to be relatively well informed about their energy costs and supply choices. Comparative shopping for electricity suppliers may be easier for large firms than it is for residential customers.”

than it is for residential customers. Furthermore, to the extent that retail customer choice in electric power markets requires fixed-cost investments for metering or telecommunications, these costs are spread over a greater volume, making cost increases proportionately smaller for larger customers. For similar reasons, retail marketers also generally find that average customer acquisition costs are lower for large C&I customers.¹⁶

In addition, some large C&I customers have renewed their calls for retail customer choice. These customers believe they can make better deals or obtain services that better match their needs than the rates and services provided by vertically integrated utilities.¹⁷ For example, Wal-Mart Stores, Inc. reported 20% savings on its electricity costs due to retail choice in California,¹⁸ 15% to 25% in Texas (including 15% savings relative to areas of Texas without retail choice), 5% expected in

Maryland, and 10% in Michigan.¹⁹ “In addition to pure cost savings, Wal-Mart has . . . [a] wide variety of new pricing options, term structures and risk products that are available in competitive markets that do not exist in regulated states. Retail competition also encourages voluntary demand response since customers have a financial incentive to participate.”²⁰

Under the retail choice system, one of the most important areas of innovation is the incentive for entrants to offer previously unavailable real-time pricing options to customers, providing important cost and reliability benefits. Analysis of market power and reliability issues in electricity markets focuses policy interest on increasing retail demand elasticity through



real-time pricing options.²¹ For example, a GAO report on demand response programs²² and the Federal Energy Regulatory Commission’s (FERC) *State of the Markets Report*²³ both highlight demand response as an investment alternative to generation and transmission. FERC observed that “[d]emand response, an effective tool for dampening price spikes and protecting reliability, was largely missing from electricity markets during the assessment period (January 2002 to June 2003). Lack of demand responsiveness to price harms competitive wholesale markets”²⁴ New retail customer choice and POLR service programs, described below, often include advanced metering that makes it feasible to charge efficient retail prices. These prices create incentives for customers to reduce consumption during peak demand periods when generation and transmission congestion costs are likely to be high.

Additionally, progress on open transmission access policies and introduction of efficiency principles to the problem

of pricing of transmission congestion, especially in regional transmission organizations (RTOs),²⁵ has increased the geographic size of electricity markets in many areas of the country, thereby increasing the number of generators that practically can supply electricity retailers in these areas.²⁶ These developments decrease concerns about the exercise of market power in retail and wholesale electricity markets because they make anticompetitive price increases by suppliers less profitable. For these reasons, the reformed POLR service pricing policies for large C&I customers described in the next section may provide substantial benefits.

IV. POLR Service for Large C&I Customers in Maryland and New Jersey

SEVERAL STATES, MOST NOTABLY MARYLAND and New Jersey, have developed innovative POLR service pricing plans for large C&I customers that eliminate the POLR price problems.²⁷ For example, the Maryland Public Service Commission recently revised its POLR service rate regulations to coincide with the end of the transitional rate freeze that accompanied the introduction of retail competition.²⁸ Maryland’s new POLR service rates for large C&I customers closely track wholesale prices. The rates include two charges: (1) wholesale electric power at real-time spot market prices, and (2) a charge reflecting the risks and administrative costs of the POLR service provider.²⁹

To have POLR service prices that closely track wholesale prices, Maryland regulators required installation of interval meters for all large C&I customers before the new POLR service price regulations took effect. Many of the large C&I customers already had interval meters, but some additional installations were required. Costs of metering improvements in Maryland are generally modest and are regulated. For example, in the Baltimore Gas & Electric service territory, the charges for interval meters are regulated under the Advanced Metering Services section of the firm’s Retail Electric Service Tariff. Installation of the interval meter costs \$180, and there is a \$30 per month charge for the meter if the customer provides the required telecommunications (or \$64 per month if the distribution utility provides the telecommunications as well as the meter).

Maryland’s large C&I customers have incentives to shop for an alternative supplier to the POLR service provider if they prefer to purchase insurance to protect themselves from wholesale price volatility or if they believe that they can secure more attractive prices for the same or additional desired electricity services. Furthermore, distribution utilities in Maryland that provide POLR service for large C&I customers are unlikely to have strong financial incentives to encourage or discourage cus-

tomers from taking POLR service because the prices so closely follow wholesale prices and because procurement of POLR supply is through competitive bidding conducted by the distribution utilities.³⁰ Instead, to the extent that their affiliates compete for large C&I customers, the distribution utilities have incentives to develop differentiated service offerings that appeal to these customers and for which these customers will be willing to pay a premium price for service enhancements. These incentives are akin to those of independent alternative retail suppliers.

Another important advantage of retail POLR service prices that track wholesale prices is that these prices reduce the risk of cross-subsidization of large C&I customers by other classes of customers that continue to receive bundled service. To prevent cross-subsidies from customers with bundled service to those with unbundled service, all customers that do not receive the spot price risk management services provided by their load-serving entity must bear the full costs of this change in service. Their hourly consumption of electricity must be measured and must have a load curtailment plan, or must arrange separately for another party to provide the risk management services formerly provided by their load serving entity.³¹

Naturally, not all of the Maryland reforms are popular with the states large C&I customers. Many express concern that the administrative charge is too high, and many regret the loss of low fixed prices that were available during the initial customer choice transition period.

Since the revised service regulations have been in place, large C&I customers have a greater variety of choices for their electricity supply. As of January 1, 2005, large C&I customers have 14 suppliers in the Baltimore area (up from 10 in May 2004) and 12 suppliers in the Washington, D.C. suburbs (up from two suppliers in May 2004). Distribution utilities are no longer at risk for losses in providing POLR service. Further, customers are actively considering alternative suppliers. The vast majority of large C&I customers and the load of this class have switched away from Maryland's POLR service.³² By the end of January 2005, in the Baltimore area, 87.5% of the peak load obligation of large C&I customers was served by alternative suppliers. In the Washington, D.C. suburbs, the comparable switching figure was 78.4%.³³ The widespread interest of large

C&I customers in customer choice has provided competitive opportunities for alternative suppliers, including the distribution companies' retail service affiliates.

New Jersey adopted a program for POLR service, called basic generation service, which includes aspects predating the Maryland program. The New Jersey Board of Public Utilities adopted proposals from the four major distribution utilities for the states POLR service in December 2002.³⁴ Under the New Jersey program, an auction is held to determine the supplier of POLR service for each class of customers for each distribution territory.³⁵ Service for the largest customers the Commercial and Industrial Energy Price (CIEP) class consists of *hourly-priced* electric power supplied by the winner of the auction for that customer class in the distribution area.³⁶ The class was orig-



inally limited to customers that take electric service from high-voltage primary circuits. As of December 31, 2003, 76% of the load in the CIEP class, state-wide, had switched to an alternative supplier.³⁷ As of September 2004, the number of active C&I retail suppliers from which customers in the CIEP class could choose varied from 5 to 16 among New Jersey's four major distribution territories.

In December 2003, the Board extended the CIEP class to all customers with a peak load share of 1500 kilowatts or more.³⁸ As a result, the number of customers in the class increased by 7.2%.³⁹ At the same time, the Board allowed other C&I customers to participate in the CIEP class.⁴⁰ The Board indicated that it may consider expanding the class further. The result of these actions has been to increase the number of customers that are subject to accurate price signals, as well as to provide an incentive for these customers to shop for a new sup-

plier if the customer preferred to reduce the price volatility inherent in hourly prices.

V. Other States Adopted Various POLR Policies that Enhance Retail Competition

SEVERAL OTHER STATES have adopted economically appealing POLR service policies that are also likely to benefit customers by making retail competition more effective. Texas, Maine, Ohio, and New York have adopted differing policies to enhance retail competition. States that have approached the end of their initial phase-in periods for retail competition may wish to study the effects of these approaches, as well as those of Maryland and New Jersey.

A. Texas 40% Requirement has Encouraged Entry

Retail competition in Texas has been enhanced by its incentives for distribution utilities to have at least 40% of the load in each customer class served by alternative suppliers. In Texas, POLR service for all customers is initially provided by the local distribution utility.⁴¹ However, only independent generators, including affiliates of distribution utilities from other areas, are allowed to offer non-POLR service to a class of customers in an area until switching to alternative retail suppliers exceeds 40% for that class of customers in the area. After the 40% threshold is met, the distribution utility may suspend POLR service and offer its own non-POLR service. The effect of the 40% requirement has been to encourage entry so the distribution utility can free itself of the POLR service requirement. Indeed, the 40% requirement was developed because of concerns that the distribution utilities would undermine retail customer choice programs if they could initially supply POLR and non-POLR service.

Texas avoided many of the problems brought on by fixed POLR prices in other states with a requirement that POLR prices be adjusted semi-annually for changes in fuel costs. Fuel adjustments are particularly important because wholesale prices in Texas are often set by generators fueled by natural gas,⁴² and natural gas prices have been relatively volatile during the years since customer choice was initiated in Texas.⁴³ Therefore, Texas POLR pricing is more consistent with the recommendation that POLR prices track wholesale prices than POLR pricing regulations that set fixed prices with no fuel adjustments or with seldom adjusted rates.

Reportedly, retail customer choice has been well received by Texas customers. Survey research indicates that at least 50% of Texas consumers have considered their retail electricity choices, 77% know that they have a choice among retail electricity suppliers, and 66% now believe switching electricity suppliers is easy.⁴⁴ As of September 2004, over 1.1 million customers (or

18% of residential and 25% of C&I customers, which represents 43% of energy demand) were taking service from suppliers not affiliated with the local distribution utility.⁴⁵ Numerous alternative suppliers are available to serve large C&I customers in many areas of Texas, including the affiliates of distribution utilities from other areas of the state. In fact, certain classes of customers in several areas within the state have met the 40% switching benchmark.⁴⁶

B. Maine's POLR Obligation Auction has the Effect of Customer Aggregation

Maine's Public Utilities Commission (PUC) was the first to adopt a competitive bidding approach for procurement of electric power POLR service.⁴⁷ Maine's POLR service could best be described as a customer aggregation approach with competitive procurement conducted by the state regulator with a

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customer opt-out provision.⁴⁸ Under Maine's program, the PUC invites generators to bid separately to supply standard offer service for each class of customers in each distribution area or portions thereof. Because Maine's PUC sought several competitors for each contract and never capped retail rates, Maine's approach avoids most of the concerns about below-market prices for POLR service in electricity markets.⁴⁹ The supply arrangements made by the state are generally short-term to medium-term contracts. Neither the Maine distribution utilities nor their affiliates have participated as bidders for standard offer service or as non-POLR retail suppliers within their respective distribution areas, even though they are allowed to do so to a limited extent.⁵⁰ The limits on bidding by Maine's distribution utilities and their affiliates were enacted because of

concern that the distribution utilities would undermine bidding processes for standard offer POLR service.⁵¹

Maine's large C&I customers have become more interested in picking alternative suppliers rather than taking standard offer service.⁵² This may reflect customer interest in other bundles of service or perceptions that better deals are available through individual bilateral negotiations with generators. Maine's PUC has proposed to the legislature that all large C&I customers be expected to select an alternative supplier by 2005 and that standard offer service for these customers would be restricted to unusual circumstances.⁵³

C. Ohio's Customer Aggregation Approach

Ohio's retail customer choice program developed primarily through contracting by aggregations of retail customers.⁵⁴ An aggregation may consist, for example, of all of the electric power customers in a city or town. Ohio views aggregation as a technique to overcome high transaction costs associated with bilateral contracting by individual small customers. Many of the most publicized aggregations in Ohio have been local jurisdictions or combinations of jurisdictions. Citizens in more than 200 local jurisdictions in Ohio have passed ballot issues favoring aggregation, and aggregations account for 88% of switching by commercial customers.⁵⁵ However, 93% of industrial customer switches have stemmed from individual switching.⁵⁶ Ohio's PUC has adopted rules for market-based POLR service, called the market-based standard service offer, which will take effect in most areas of the state following the end of the Market Development on December 31, 2005. The POLR competitively-procured supply contracts would last from one to three years.⁵⁷

D. New York's Preparations for Retail Competition

In August 2004, the New York Public Service Commission (NYPSC) adopted a Statement of Policy and an Order on Next Steps to Accelerate Evolution of Energy Competition in New York State. The Statement of Policy indicates that the NYPSC expects that all remaining utility-served commercial and industrial customers will be exposed to a pass-through of spot market prices in utility rates. ESCOs (independent suppliers) will likely provide fixed and other stable pricing options to those customers who desire them. As utility contracts expire and utilities reduce their hedging exposure, it should be easier for ESCOs to attract customers seeking to avoid market volatility. In fact, the NYPSC observes that this is already happening in some utility distribution territories.

Before issuance of the Statement of Policy, the NYPSC undertook several efforts to reduce impediments to effective retail competition. These included requirements for uniform electronic data interchange standards and procedures to affect

the exchange of retail access data between utilities and retail marketers, development and adoption of uniform business practices for retail competition, and consumer protection rules applicable to independent suppliers and utilities.⁵⁸ The NYPSC also actively supported divestiture of generation assets by distribution utilities, formation of the NYISO (New York Independent System Operator), the development and implementation of the NYISO's market power monitoring and mitigation policies at the wholesale level, and increased demand elasticity through real-time metering and rates. These are all efforts to address existing horizontal and vertical market power concerns that could impede effective retail competition. The NYPSC concluded that the earlier policy steps noted above have fostered enough new suppliers, customer awareness, and interest in switching to make acceleration of retail competition feasible, particularly for large C&I customers.⁵⁹

VI. Conclusion

SUBSTANTIAL ADVERSE CUSTOMER EFFECTS arose from several states' initial pricing regulations governing electric power POLR services. These regulations contributed to the slow development of retail competition in many states and discouraged additional states from initiating customer choice programs. Renewed interest in retail customer choice programs, especially for large C&I customers, has come from several sources. Additional states should consider retail customer choice programs at least for large C&I customers because they can increase market efficiency and reduce market power concerns for all customers, and better match the reliability and price volatility preferences of these customers. In addition, effective retail competition for large customers may reduce the costs and risk of extending retail competition to additional classes of customers at a later date. States may be particularly interested in the large customer POLR service price regulations developed as the consensus proposal of a wide array of distribution utilities, independent generators, and consumer groups in Maryland. The proposal was subsequently adopted by the Maryland Public Service Commission. Under the Maryland approach, POLR service prices for large C&I customers closely track changes in wholesale prices. In addition, attributes of other state retail competition programs may supplement the Maryland approach so that customers obtain the benefits of retail competition for electric power services.

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ENDNOTES: John C. Hilke and Michael Wroblewski

¹ See, e.g., Paul L. Joskow, *The Difficult Transition to Competitive Electricity Markets in the U.S.* (AEI-Brookings Joint Ctr. for Reg. Stud. Related Publication 0313, 2003), available at <http://www.aeibrookings.org/admin/authorpdfs/page.php?id=271> (last visited Sept. 9, 2005).

² Even with retail competition among electricity suppliers (generators and marketers), the franchised utility continues to distribute the electric power to the customer's premises. Some states have customer choice programs available to all retail customers, while others extend customer choice only to large commercial and industrial customers (which typically account for the largest share of a traditional utility's demand). The latter policy choice also implicitly recognizes that residential retail customers have less experience in "shopping" for electric power and their relatively higher marketing and metering costs may make entry so unattractive that remaining suppliers available to these customers will have market power. These considerations prompt us to focus this paper on large retail customers, usually named as large commercial and industrial customers.

³ See, e.g., Frank A. Wolak, *Lessons from the California Electricity Crisis* (Ctr. for the Study of Energy Markets (CSEM) Working Paper 110R, 2003), available at <http://www.ucei.berkeley.edu/ucei/PDF/csemwp110.pdf> (last visited Sept. 9, 2005); Carl Blumstein et al., *The History of Electricity Restructuring in California* (CSEM Working Paper 103, 2002), available at <http://www.ucei.berkeley.edu/PDF/csemwp103.pdf> (last visited Sept. 9, 2005); John C. Hilke & Michael Wise, *Who Turned Out the Lights? Competition and California's Power Crisis*, 15 *Antitrust* 76 (Summer 2001).

Regulatory problems may have been exacerbated by anticompetitive behavior both directly in the electric power industry and indirectly in the natural gas industry that supplies much of the generation servicing California customers. See, e.g., Fed. Energy Reg. Comm'n (FERC) Staff, *Final Report on Price Manipulation in Western Markets: Fact-Finding Investigation of Potential Manipulation of Electric and Natural Gas Prices* (2003) and the submissions and FERC decisions in FERC Doc. No. EL-01-118-000 (Investigation of Terms and Conditions of Public Utility Market-Bases Rate Authorizations).

⁴ FTC Staff, *Competition and Consumer Protection Perspectives on Electric Power Regulatory Reform: Focus on Retail Competition* [hereinafter *FTC Retail Competition Staff Report*] (2001), available at <http://www.ftc.gov/reports/elec/electricityreport.pdf> (last visited Sept. 9, 2005).

⁵ There are alternative mechanisms, however, that can prevent gaps in electricity supply and that have been employed in other contexts. For example, states may insist that all drivers have insurance, but individual insurers may refuse to serve customers who have had accidents (or violated traffic laws) or be reluctant to accept new, high-risk customers. To address this problem, some states have required insurers to participate in an insurance pool for high-risk drivers. Higher rates are charged to such drivers, but all legal drivers can obtain insurance from this pool and a driver served by the pool is welcome to obtain insurance from outside the pool. *High Risk Auto Insurance Rates*, at <http://www.highriskinsurances.com/autorates.html> (last visited Sept. 9, 2005). Another potential approach is to allocate difficult-to-place customers to suppliers in proportion to the supplier's share of easy-to-place customers. This approach is similar to the customer allocation approach adopted by Georgia for its natural gas retail customer choice program in the Atlanta Gas Light franchise area.

⁶ *FTC Retail Competition Staff Report*, *supra* note 5, ch. 5. Another source of problematic pricing policies stem from states' efforts to pay utilities for their stranded costs. For example, some stranded cost recovery systems gave incumbent utilities incentives and the ability to exclude alternative retail service providers. See *Id.* at ch. VII.

⁷ The market clearing price in California is set by generators fueled by natural gas more than 90% of the time. Office of Market Oversight & Investigations, Fed. Energy Reg. Comm'n (FERC), *The State of the Markets Report* 10 fig.4 (Jan. 2004), available at <http://www.ferc.gov/legal/fercregs/landdocs/som2003.pdf> (last visited Sept. 9, 2005). The increases in natural gas prices had a greater impact on electricity procurement costs for California's distribution utilities providing POLR service because, unlike distribution utilities in other states, they made nearly all POLR service electric power purchases on the spot market (including bidding for the output of their own generators). Hilke & Wise, *supra* note 4. In other states, POLR service supplies usually included a substantial portion of long-term supply contracts at predetermined prices (vesting contracts). These long-term supply contracts moderated the effects of substantial increases in spot market prices on average procurement costs for POLR service.

⁸ See *supra* note 3.

⁹ The Texas retail customer choice program has continued to lead the United States in terms of various market performance criteria. Ctr. for Advancement of Energy Markets, *Retail Energy Deregulation Index 2003* (2003). Under the Texas plan, all customers have a choice among suppliers and the distribution utility is required to offer POLR service and precluded from marketing its own retail customer choice program (other than offering POLR service) until 40% of load for a class of customers has shifted to alternative suppliers. See also, Energy Inst., Univ. of Houston, *Electricity Industry Restructuring in Texas: A White Paper* (2001); Lynne Kiesling, *Getting Electricity Deregulation Right: How Other States and Nations Have Avoided California's Mistakes* (Reason Pub. Pol'y Inst. Policy Study No. 281, 2001), available at <http://www.rppi.org/ps281.pdf> (last visited Sept. 9, 2005).

¹⁰ This conclusion assumes that POLR service is necessary to avoid gaps in supply for specific electric power customers. As discussed earlier, alternative mechanisms to avoid gaps in supply have been developed in other contexts and may warrant consideration in electric power markets. See *supra* note 6.

¹¹ POLR prices cap the prices that alternative retail suppliers can charge for comparable services. If POLR prices are below those that would prevail in a competitive market, customers of alternative retail suppliers with services comparable to POLR service are likely to switch back to POLR service. Alternative retail suppliers with differentiated products may be able to retain some customers, but some of their customers are likely to switch back to POLR service because the differential has increased between the POLR price and the price of the differentiated products.

¹² Some economists have argued that the competitiveness of wholesale markets can be enhanced if both retail suppliers and retail customers face real-time spot market prices. Of course, suppliers and customers are free to minimize the volatility in spot prices by contracting on the basis of expected long-term or hedged prices. If load and generation are treated symmetrically, then customers signing fixed-price, long-term supply agreements implies that retailers have long-term fixed price supply obligations that they would like to hedge through long-term contracts with generation unit owners. The entire sequence of incentives to sign hedging agreements begins with final consumers facing the real-time price as their default wholesale price. Symmetric treatment of producers and consumers is a characteristic of virtually all other markets besides electricity. See generally, Frank Wolak, Chairman, Market Surveillance Committee of the California ISO, *Designing a Retail Electricity Market that Enhances Wholesale Competition*, Statement to the California PUC (Apr. 20, 2004). Suppliers in organized wholesale markets already face real-time spot market prices unless they sign a contract to sell at a hedged price. The parallel treatment on the customer side is that each consumer faces real-time spot market prices and a curtailment plan unless he or she signs a contract with hedged prices. While most customers are not familiar with hedging in retail electricity markets, hedging activity is a common experience in other markets. A simple example is customer stocking up on soft drinks when grocers offer a special low price. A more directly related example is retail heating oil customers who routinely decide when and how often to buy heating oil (and what size storage tank to buy).

¹³ U.S. Gov't Accountability Office (GAO), *GAO04844, Electricity Markets: Consumers Could Benefit from Demand Programs, but Challenges Remain*, 22 (Report to the Chairman, Comm. on Governmental Affairs, U.S. Senate, 2004) (summarizing one of nine empirical studies of price-responsive demand in the U.S. released between 2001 and 2003), at <http://www.gao.gov/new.items/d04844.pdf> (last visited Sept. 9, 2005).

¹⁴ Harold Demsetz et al., *Manifesto on the California Electricity Crisis* (AEI-Brookings Joint Ctr. for Reg. Stud. Related Publication 0310, 2003), available at <http://www.aeibrookings.org/admin/authorpdfs/page.php?id=264> (last visited Sept. 9, 2005). From this perspective, retail competition is a complement to wholesale competition. Effective retail competition is not possible without wholesale competition and wholesale competition can be more effective when it is accompanied by well-designed retail competition. See Wolak, *supra* note 13.

¹⁵ The assumption that larger customers are better informed is also imbedded in securities law, for example. The private offering exemption (from the Securities and Exchange Commission securities registration and disclosure regulations) is based on sales of a security being limited to a small number of sophisticated investors who the issuer "has reasonable grounds to believe are of knowledge and experience which would enable them to evaluate the merits of the issue or who are financially able to bear the risk." *Pinter v. Dahl*, 486 U.S. 622 (1988). In the antitrust field, the government "has not sought civil penalties from companies that inadvertently fail to

file” a pre-merger notification as long as the error is corrected as soon as it is discovered and “absent gross negligence by a sophisticated buyer that exercises a reckless disregard for its obligations under the [Hart-Scott-Rodino] Act.” Howard Morse, *Mergers and Acquisitions: Antitrust Limitations on Conduct Before Closing*, 57 Bus. Lawyer 1463, 1466 (2002).

¹⁶ Staff of the Ariz. Corporations Comm’n, *Staff Report in the Generic Electric Restructuring*, Doc. No. E00000A020051, at 18 (Mar. 22, 2002); Peace Software, *Retail Customer Energy Valuation* (CIS World White Paper, Apr. 2003), at http://www.cisworld.com/articles/0304_peace3.htm (last visited Sept. 9, 2005). High average acquisition costs for small customers are one of the primary justifications for the aggregation programs in Ohio and other states. See *FTC Retail Competition Staff Report*, *supra* note 5.

¹⁷ For example, Wal-Mart Stores, Inc., with support from LaQuinta Corp., Lowe’s, J. C. Penney, Staples, Home Depot, and the Gulf Coast Retailers’ Association encouraged Arkansas to provide retail customer choice for large customers. Brett Perlman, *Reply Comments of Brett A. Perlman on Behalf of Wal-Mart Stores, Inc. in Support of a Large User Access Program*, In the Matter of a Report to the General Assembly on the Feasibility of a Large User Access Program for Electric Service Choice, Ark. Pub. Serv. Comm’n Doc. No. 04-061-U, filed June 25, 2004, available at http://170.94.29.3/pdfstorage/04-061-u_37_1.pdf (last visited Sept. 9, 2005).

¹⁸ Wal-Mart Stores is one of the customers that chose alternative retail suppliers during the period when California allowed customer choice. Customers that chose alternative retail suppliers during that period have retained the right to select their own retail supplier even though customer choice is not available to additional retail customers.

¹⁹ Brett Perlman, *Initial Comments of Brett A. Perlman on Behalf of Wal-Mart Stores, Inc. in Support of a Large User Access Program*, In the Matter of a Report to the General Assembly on the Feasibility of a Large User Access Program for Electric Service Choice, Ark. Pub. Serv. Comm’n Doc. No. 04-061-U, filed May 28, 2004, available at http://170.94.29.3/pdfstorage/04-061-u_17_1.pdf (last visited Sept. 9, 2005).

²⁰ *Perlman*, *supra* note 17, at 12.

²¹ Market power for a supplier is the ability of the supplier to profitably raise prices above the competitive level for an extended period of time. Preventing increased market power that may result from mergers or anticompetitive conduct is the principal objective of antitrust policy.

²² GAO, *supra* note 13.

²³ FERC observed that “[d]emand response, an effective tool for dampening price spikes and protecting reliability, was largely missing from electricity markets during the assessment period (January 2002 to June 2003). Lack of demand responsiveness to price harms competitive wholesale markets . . .” FERC, *supra* note 8, at 70-72. FERC estimated that customers in New York City and some other load pockets during the January 2002 to June 2003 period would have found demand response to be privately cost effective based solely on energy bill savings. If additional payments were made to customers to compensate for the resulting ability of the electric system to avoid some generation investments that would otherwise have been required to maintain reliability, demand response would privately be cost effective in several other areas as well. Another indication of increased interest in this topic is the formation of the Demand Response Coordinating Committee (DRCC) to “focus on developing information and tools needed to allow demand response to be another option employed to address national, regional, and state electricity issues and challenges. The DRCC’s efforts are part of a larger, global demand response effort announced recently by the International Energy Agency’s Demand Side Management Program.” Press Release, DRCC, Demand Response Is Focus of New Effort by Electricity Industry Leaders (July 1, 2004), at http://www.electricity.doe.gov/documents/drcc_press_release.pdf (last visited Sept. 9, 2005).

²⁴ FERC, *supra* note 3, at 70-72. FERC estimated that customers in New York City and some other load pockets during the January 2002 to June 2003 period would have found demand response to be privately cost effective based solely on energy bill savings. If additional payments were made to customers to compensate for the resulting ability of the electric system to avoid some generation investments that would otherwise have been required to maintain reliability, demand response would privately be cost effective in several other areas as well. Another indication of increased interest in this topic is the formation of the Demand Response Coordinating Committee (DRCC) to “focus on developing information and tools needed to allow demand response to be another option employed to address national, regional, and state electricity issues and challenges. The DRCC’s efforts are the U.S. part of a larger, global demand response effort announced recently by the Interna-

tional Energy Agency’s Demand Side Management Program.” Press Release, DRCC, Demand Response Is Focus of New Effort by Electricity Industry Leaders (July 1, 2004), at http://www.electricity.doe.gov/documents/drcc_press_release.pdf (last visited Sept. 9, 2005).

²⁵ Although RTOs are not mandatory under FERC Order No. 2000, RTOs are being formed in nearly all areas of the country. For example, in February 2003, FERC issued an order giving the Southwest Power Pool (SPP) conditional approval as an RTO and, in May 2004, the SPP made a compliance filing with FERC. At least some degree of transmission open access can take place without an RTO under FERC Order Nos. 888 and 889 and under state protocols that discourage transmission discrimination. Perlman, *supra* note 19, at 12-13.

²⁶ For example, the *Wall Street Journal* reported that expansion of PJM (the regional transmission organization serving the Mid-Atlantic states) to part of the Midwest, resulted in lower wholesale prices in the Mid-Atlantic states as generators in the Midwest became able to transmit power at lower cost to customers in the Mid-Atlantic states. Rebecca Smith, *Eastern Power Is Getting Cheaper as Midwest Utilities Join the Market*, WALL ST. J., Jan. 26, 2005. Similarly, the rapid increase in wholesale trading following FERC’s 1996 Order No. 888 (open access order), from less than 200 million MWh/yr (annualized) in all quarters of 1995 to an annualized rate of over 3 billion MWh/yr in the third quarter of 1998, reflects in part this expansion of the geographic scope of electricity markets. See, e.g., Frederick Pickel, Tabors Caramanis & Associates, *Power Marketing Transforms the U.S. Wholesale Electricity Business: The Growth of Electricity Marketing in the U.S.* (Prepublication Version, Nov. 1998), available at <http://www.tca-us.com/Publications/USmarketers%28prepubNov98%29.pdf> (last visited Sept. 9, 2005); Joskow, *supra* note 1. FER’s efforts to reduce transmission rate pancaking also increase the size of wholesale geographic markets for electric power by reducing the costs of transmission facilities owned by more than one transmission entity. Conversely, increased transmission congestion reduces the geographic scope of these markets. See, e.g., Rajat Deb et al., LCG Consulting, *Transmission Capacity and Market Contestability in the Midwest Interconnect* (2002), available at <http://www.energyonline.com/reports/EntergyTransmissionCapacity.pdf> (last visited Sept. 9, 2005).

²⁷ Customer size under the Maryland Public Utility Commission’s Order No. 78400 is based on the customer’s Peak Load Contribution (PLC). A customer’s PLC is established based on the five peak hours occurring on five different days during the June 1 to September 30 time period of the prior year. *BGE’s Role Provider of Last Resort (POLR)*, Baltimore Gas & Electric, at <http://www.bge.com/cmp/CDA/discussion/0%2C1666%2C22801%2C00.html> (last visited Sept. 9, 2005).

²⁸ Maryland’s POLR service is termed Standard Offer Service (SOS). Md. Pub. Serv. Comm’n (Md. PSC), Order No. 78400, In the Matter of the Commission’s Inquiry into the Competitive Selection of Electricity Supplier/Standard Offer Service (Apr. 29, 2003). See, Md. Pub. Serv. Comm’n Staff, Initial Brief (Jan. 3, 2003) (in the same matter). The rate freeze ended on June 30, 2004 for large C&I customers. One highlight of the settlement is that it received nearly unanimous support from the wide variety of parties in the negotiations, including the distribution utilities, independent power suppliers, and consumer representatives. Only one independent supplier (Washington Gas Energy Services) disagreed with the settlement, and this disagreement centered on the duration of POLR supply contracts to serve classes of residential and smaller C&I customers (not on the provisions affecting large C&I customers that are the subject of this paper). Md. PSC, Order No. 78400, at IV.J.

²⁹ Distribution utilities will recover the wholesale cost of supply, transmission and related charges, an administrative charge, and applicable taxes. Md. PSC, Order No. 78400, *supra* note 29, ‘V.D.

³⁰ The administrative charges are designed to recover a negotiated return component – the utility incremental cost of providing POLR service and uncollectible expenses. Non-residential incremental costs are subject to true-ups. The lone objection to the settlement’s administrative charges pertained to the pre-set level established for residential customers. The objection was that this charge might result in POLR customers being subsidized by customers with alternative suppliers. The Maryland PSC found that this rate was reasonable since it is the expected actual level of these costs. Md. PSC, Order No. 78400, *supra* note 29, V.D. A more common concern in other states has been that administrative charges will result in cross-subsidization from POLR customers to customers with alternative suppliers.

³¹ Wolak, *supra* note 12.

³² As of January 2004, 5.7% of non-residential customers had switched suppliers, state-wide. Large C&I customers that have remained with POLR service are reportedly customers with demand that is predominantly off peak when wholesale prices

are generally low. Dr. Calvin Timmerman, Md. PSC Staff, Remarks before CAEM Retail Competition Workshop, Washington, D.C. (Apr. 7, 2004).

³³ Md. PSC, *Electric Choice Enrollment Monthly Report, All Utilities Where Choice is Available in Maryland, Month Ending July 2004*. At the end of May 2004, the Baltimore figure was 80.9% and the Washington suburban figure was 27.2%. *Id.*

³⁴ In the Matter of the Provision of Basic Generation Service Pursuant to the Electric Discount & Energy Competition Act, N.J.S.A. 48:3-49 et seq, N.J. Bd. of Pub. Utilities, Doc. Nos. EX01110754 & EO02070384 (Dec. 18, 2002).

³⁵ The New Jersey Board engaged a consultant to evaluate the auction processes for New Jersey's POLR service. The consultant reported that the auction process has improved over time and now operates smoothly. Charles River Associates, *Project No. D0405400, Post-Auction Report on the New Jersey Utilities' Basic Generation Service Auction Processes: BGS Supply Period Beginning June 1, 2004* (Final Report, Redacted Version, May 4, 2004), available at <http://www.state.nj.us/bpu/www-root/energy/CRA%20Post%20BGS%20Auction%20Report%20May%202004%20%20REDACTED%20Version.pdf> (last visited Sept. 9, 2005).

³⁶ Frederick F. Butler, Commissioner, N.J. Bd. of Pub. Utilities, *Acquiring Electric Supply: An Overview of the New Jersey Basic Generation Service Auction Solicitation Process*, Presentation to the Illinois Commerce Commission (Apr. 29, 2004).

³⁷ *Id.*

³⁸ New Jersey defines the customer's capacity peak load share as that customer's portion of the total capacity assigned to the electric distribution company's transmission zone by the grid operator (PJM).

³⁹ N.J. Bd. of Pub. Utilities, Doc. No. EO03050394, *In the Matter of the Provision of Basic Generation Service for Year Two of the Post-Transition Period B CIEP Customer Class* (Dec. 23, 2003).

⁴⁰ Approximately 100 C&I customers volunteered statewide. Butler, *supra* note 40.

⁴¹ For a further discussion of the Texas retail choice program, see Pub. Util. Comm'n of Tex. (Texas PUC), Report to the 79th Texas Legislature, *Scope of Competition in Electric Markets in Texas* (Jan. 2005), available at http://www.puc.state.tx.us/electric/reports/scope/2005/2005scope_elec.pdf (last visited Sept. 9, 2005).

⁴² Natural gas was the marginal fuel that set the market-clearing price in the ERCOT interconnection during 86% of the hours in 2003. FERC, *supra* note 3, at 10 fig.4. The comparable figures for other areas of the country range from 10% in the MAPP-US region (north central states) to more than 90% in Florida and California.

⁴³ FERC, *supra* note 3, at 80 fig.44.

⁴⁴ Texas PUC, *Texas Want Competition In Football, Barbeque and Even Electricity* (Nov. 10, 2003) available at <http://www.powertochoose.org/media/press.asp?aid=149f&pageid=1> (last visited Sept. 9, 2005).

⁴⁵ *Id.* at 45.

⁴⁶ Brubaker & Assoc., *Customer Choice Update* (Spring 2004).

⁴⁷ Thomas Welch, Chairman, Me. Pub. Util. Comm'n (Maine PUC), Presentation before the FERC, In the Matter of Solicitation Processes for Public Utilities, Doc. No. PL04-6-000 (June 10, 2004) available at <http://www.ferc.gov/EventCalendar/Files/20040630083548-PL046%20June%2010Transcript.pdf> (last visited Sept. 9, 2005). Suppliers take all of the risk that the load will change over the contract period. The Maine PUC requests indicative bids and then negotiates before requesting final bids. The winning bid for a class of service is generally picked on the same day that the final bids are received. This allows the winning bidder to lock in its supply sources and avoids paying a price premium for the risk borne by bidders if the selection process is time-consuming. Price and security of supply reportedly are the two principal selection criteria used by the Maine PUC.

⁴⁸ In Maine's case, the opt-out alternative is a bilateral contract with an independent retail supplier.

⁴⁹ Because the Maine POLR service price does not include an administrative adder some alternative retail suppliers may be concerned that Maine's POLR service prices understate some POLR service costs. See Thomas Welch, Chairman, Maine PUC, *Retail Electricity Competition Progresses in Maine, 2003 Metering International 30* (2003), available at <http://www.state.me.us/mpuc/Commissioners/RetailElec-CompMEWelch.htm> (last visited Sept. 9, 2005).

⁵⁰ Welch, *supra* note 47. There were occasions in the early years, however, when the Maine PUC ordered the distribution utility to arrange POLR service for one or more classes of customers because the PUC found the bids it received from generators to be unacceptable. *FTC Retail Competition Staff Report, supra* note 4, at app. A.

⁵¹ Welch, *supra* note 47; *FTC Retail Competition Staff Report, supra* note 4, at app. A; Welch, *supra* note 47.

⁵² As of January 2004, approximately 60% of Central Maine and Bangor Hydro medium and large customers were served by competitive providers. Brubaker & Assoc., *supra* note 46.

⁵³ Maine PUC, *Standard Offer Study and Recommendations Regarding Service after March 1, 2005* (Dec. 1, 2002); Welch, *supra* note 47.

⁵⁴ Ohio's retail choice program facilitates forming aggregations of customers in part by allowing jurisdictions to operate with an individual customer "opt-out" provision rather than requiring that an individual retail customer opt in. With the opt-out provision, all of the customers in a jurisdiction switch to the retail supplier selected by the jurisdiction unless a customer explicitly decides to have a different retail supplier (including continuing with the POLR service). Ohio PUC, *Energy Governmental Aggregation: The PUCO's Guide to Community Buying Groups*, available at http://www.puc.state.oh.us/PUCO/consumer/information.cfm?doc_id=102 (last visited Sept. 12, 2005); Matthew Brown, *An Analysis of Opt-Out Aggregation in Massachusetts and Ohio* (Nat'l Energy Affordability & Accessibility Project, U.S. Dep't of Health & Hum. Serv., Aware No. 90XP0027/01, Sept. 2002), available at <http://neaap.ncat.org/experts/PartTwoPDF.pdf> (last visited Sept. 9, 2005); Nancy Rader & Scott Hempling, *Promoting Competitive Electricity Markets through Community Aggregation* (2000) (on file with the Am. Pub. Power Ass'n, <http://www.appanet.org>). To date, the opt-out provision has been exercised by only a very small proportion of customers in jurisdictions that have selected an alternative retail supplier.

⁵⁵ Ohio PUC, *Aggregation Activity in Ohio* (Mar. 2004 observations), available at <http://www.puco.state.oh.us/emplibrary/util/MktMonitoringElec-CustSwitchRates/Summary%20of%20Rates%20Aggregation%201Q2004.pdf> (last visited Sept. 9, 2005).

⁵⁶ *Id.* Switching by commercial and industrial customers varies greatly between distribution service territories in Ohio. The commercial customer switching rate ranges from 74% in Cleveland to nearly zero in the distribution territories of Ohio Power and Monongahela Power. The industrial customer switching rate ranges from 35% in Toledo to nearly zero in the distribution territories of Columbus Southern, Monogahela Power, and Ohio Power. Brubaker & Assoc., *supra* note 46.

⁵⁷ Before becoming effective, these rules must be approved by the state legislature's Joint Committee on Agency Rule Review. Ohio PUC, *2003 Annual Report* at 13, available at <http://www.puco.ohio.gov/emplibrary/files/medial/AnnualReport03.pdf> (last visited Sept. 9, 2005).

⁵⁸ N.Y. Pub. Serv. Comm'n (NYPSC), *Statement of Policy on Further Steps toward Competition in Retail Energy Markets* [hereinafter HYPSC Policy Statement], Case No. 00-0504 (Aug. 25, 2004), section entitled Current State of the Markets; NYPSC *Interim Revised Uniform Retail Access Business Practices*, Case 98-1343 (Nov. 16, 2001).

⁵⁹ The NYPSC reports that in each major distribution service territory there are at least three independent electricity suppliers and five independent gas suppliers. Most service territories have many more suppliers. Furthermore, nearly 100% of the largest gas customers and more than 60% of the state's large time-of-use commercial and industrial utility electricity load is now supplied by independent suppliers. *NYPSC Policy Statement, supra* note 58, section entitled The Current State of the Markets. Outside of C&I customers, the NYPSC reports one service territory in which 30% of residential customers have switched to an independent supplier. The NYPSC attributes this unusually high residential customer switching rate, in part, to a program adopted by the utility that offers a discount for two months to customers that try out being supplied by an independent electricity supplier. For an overview of the Orange & Rockland's Switch and Save program, see note 58, section entitled Near Term Strategies Residential Customers.