The regulation of retail competition in US residential electricity markets

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14 US states presently have residential electricity markets that are open to competition. The best known such market, in Texas, is not dissimilar to the UK and other competitive retail markets around the world. The other 13 US markets have one significant difference: the incumbent network ("wires") utility in each area has an obligation to supply those customers who do not choose a retail supplier, and to do so at a rate that passes through the competitive wholesale market price. This report attempts to explain how these markets work, how these so-called default service rates are set, and what impact this has on retail competion. It also examines how regulation is evolving in New York, where the regulatory commission is attempting to require retail suppliers to guarantee that customers will be better off with their offers than with the default service rate provided by the network utility.

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Preface

Most US states retain the traditional vertically integrated monopoly framework for electricity generation and supply. But retail choice is now established for residential electricity customers in 14 US states, and these states account for a third of all power consumed in the country.

One of these 14 competitive states, Texas, has a market and regulatory regime not too dissimilar to that in the UK and in other competitive retail markets such as Norway, Sweden, Australia and New Zealand. The incumbent network ("wires only") utility in each area is not allowed to engage in retail supply, though it may have retail affiliates that do so.

Arrangements in the other 13 competitive US states are significantly different insofar as they require the incumbent network utility to offer retail supply to those customers who have not chosen a competitive supplier. The tariff rate for this so-called default service is required to pass-through or reflect the wholesale market price without profit to the utility. The precise basis for doing this is prescribed by the state regulatory commission and varies from one state to another. The incumbent network utility is also required to offer certain metering, billing and revenue collection services to competitive retail suppliers.

There are ongoing debates in these 13 states as to how best to promote retail competition, protect customers and secure acceptable service by the competing suppliers. In particular, there are questions about how to prescribe the network utility's purchase of generation for default service and how to set the utility's default service tariff rate. There is also discussion whether customers are generally better off on the default service tariff or with competitive retailers. But for the most part, retail competition seems to be accepted in these states. Indeed, there is recent evidence (cited herein) that the electricity sectors in these 13 competitive states plus Texas are more efficient than their traditional monopoly counterparts.

Nonethless, in one of the 13 states, New York, there has been growing criticism of retail suppliers. In the last two years, the New York state Public Service Commission (PSC) has variously sought to require competing electric power retailers to guarantee customer savings relative to the default service tariff rate, and to prohibit such retailers from supplying low income customers at all.

The purpose of this report is to explain – primarily for a non-US audience but hopefully it might be useful to a US audience too – what is going on in these 13 competitive markets. Specifically, the five parts of the report cover (1) the distinctive features of regulation in those 13 US jurisdictions other than Texas that presently allow retail electric competition at the residential level, (2) the different ways in which the default supply is procured and the default tariff rate is set, (3) the nature of the retail competition that has resulted, (4) the evolution of the debate associated with recent regulatory policy developments in New York, and finally (5) a brief summary and some thoughts on possible lessons learned that might have relevance elsewhere.

The report also attempts to answer, inter alia, such detailed and practical questions as:

- What are the tariff regulation arrangements in the competitive US states – i.e. what tariffs are regulated or specified, which companies need to comply with the regulations, whether these are established as a temporary measure or a time limited one, and what is the rationale for this regulation;

- What are the methodologies used to regulate or specify the default supply tariffs;

- What criteria would be used to assess whether to remove or adjust the default supply tariff regulation and who makes that decision;

- What impact do the default supply tariffs have on retail competition, including whether the competitive suppliers and the incumbent utility are able to price below the default supply tariff rate and/or attract new business via low prices in the competitive part of the market; and

- What other impacts does default supply tariff regulation have, such as on market entry and exit, wholesale purchasing behaviour etc.

The report is based on publications and other material on regulatory websites in these US competitive states, and cites various other published material. The report was informed by over twenty in-person initial interviews in late October and early November 2017 with individuals with considerable experience in these competitive markets, including in regulatory bodies, network utilities, competing retail suppliers and consultancies. The individuals gave me their own views, rather than spoke on behalf of their organisations. I am grateful to all of them for their accounts, explanations and fascinating insights, and for referring me to relevant publications, but they are not responsible for what I have written. Ofgem kindly provided financial support to carry out and write up the initial interviews, although again Ofgem bears no responsibility for any statements or views expressed herein.

Part I Retail regulation in the US competitive states

1. Historical background

Over the last few decades the US electric power sector has evolved very considerably, at least in certain states. Present policy may be put in historical context.

> "Traditionally, electric power was provided to U.S. consumers by vertically integrated utilities that owned generation, had exclusive retail franchises, and traded wholesale power through bilateral contracts."[1]

Prices to customers were set by a regulatory commission in each state, using a quasi-judicial process in which utility prices were set on a cost of service basis. This included an allowed rate of return on investments in transmission, distribution and generation that were deemed to be "used and useful".

During the late 1970s there came pressure for competition and reform in the regulated sector of the US economy generally. This impacted on the electricity sector two decades later.

> "The first wave of competitive electricity industry restructuring in the late 1990s was preceded by a tsunami of regulatory reform in telecommunications, transportation and energy network industries. … The central reality is that American public policy has been on a journey towards an increased reliance on market forces and customer choice…. The market demanded greater efficiency and more rapid innovation in providing services to customers in ways that regulation could not accommodate. … As regulatory reform in network industries matured in the two decades following the late 1970s, it was time to address the obvious question – What about electricity?"[2]

O'Connor credits Paul Joskow and Richard Schmalensee[3] and William Hogan with initiating discussion in the electricity sector. There were of course other factors, notably requests for significant rate increases and various disallowed investments. Initially, reform took place at the wholesale level.

> "Beginning in the late 1990s, a new "restructured" market model was introduced under which regional transmission organizations (RTOs) or independent system operators (ISOs) operate centralized competitive wholesale markets in certain regions of the U.S. While about a third of the U.S. population continues to obtain electric power service based on traditional institutional arrangements, about two-thirds of the population now obtains electricity through restructured wholesale markets."[4]

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[1] Mathew J Morey and Laurence D Kirsch for Christensen Associates Energy Consulting LLC, *Retail choice in electricity: What have we learned in 20 years?*, Report prepared for Electricity Markets Research Foundation, Feb 11, 2016, p 1.

[2] Philip R O'Connor, Restructuring Recharged: The Superior Performance of Competitive Electricity Markets 2008-2016, Retail Energy Supply Association, April 2017, pp 5-9.

[3] Paul L Joskow and Richard Schmalensee, *Markets for Power: An Analysis of Electrical Utility Deregulation*, Cambridge, MA, The MIT Press, 1983.

[4] Morey & Kirsch (2016) p 1.

In the states that restructured and enabled competition, the vertically integrated utilities were required or encouraged to sell their generation stations, or divest their generation assets into separate companies that would be independently owned, or at least transfer the assets to independently operated affiliates. As noted later, some large energy companies now include independently operated generators, network utilities ("wires-only businesses") and retail supply businesses.

The next step, in some jurisdictions, was to enable retail choice. This was phased in, beginning with larger industrial and commercial customers. There was generally a transition period to enable utilities to recover stranded generation costs, and to assist a smooth change from vertical monopoly service to customer choice. It was often not until about 2007 that this transition period was complete. Where retail choice was implemented, the utilities were again generally required or encouraged to divest their retail supply businesses. (Or in some cases their exclusive right to serve retail customers was phased out.) Regulatory commissions typically introduced obligations or codes of practice as to licensing and operation of new competitive retail suppliers.

The obligation to divest meant that the successor company to the previously vertically integrated utility was now limited to operating the local distribution network, and in some cases a transmission network too. It was regarded as providing a "delivery service" to the retail suppliers. Unless indicated otherwise, the incumbent utility in this report is a network utility, that is, a "wires-only" business, not to be confused with the traditional vertically integrated utility businesses that still operate in the non-competitive states.

Which states were leaders in reform and competition? "Initial interest in electricity sector reform started in the states with the highest retail electricity prices and where the apparent gaps between wholesale and retail prices were the largest. They included California, Massachusetts, Rhode Island, New York, New Jersey, Maine and Pennsylvania."[5]

In total, 14 jurisdictions implemented full retail choice for all customers, and have also maintained this policy to date. These jurisdictions are (in alphabetical order): Connecticut, Delaware, Illinois, Maine, Maryland, Massachusetts, New Hampshire, New Jersey, New York, Ohio, Pennsylvania, Rhode Island, Texas, Washington DC.

Half a dozen other states allowed an element of retail competition only for some customers or for a limited period of time, and are not considered further in this report.[6] Why the remaining states have not moved towards competitive markets is an interesting question that lies beyond the scope of this report, although it is possible to make a few conjectures.[7] Some monopoly states have implemented Time Of Use (TOU) and other pricing schemes that might have been more difficult

[5] P L Joskow, "The difficult transition to competitive electricity markets in the United States", in J Griffin and S Puller (eds), *Electricity Deregulation: Where to from here?* University of Chicago Press, Chicago, 2005.

[6] "Several other states – including California, Michigan, Arizona, Oregon, Nevada and Montana – allow limited portions of total load to be served competitively at retail, while denying the great majority of customers a choice of supplier. These hybrid states are regulated largely under the traditional monopoly model…." O'Connor (2017) p 12.

[7] In those states with initially lower electricity prices there was less pressure to consider reform, and to overcome the political and economic weight of the incumbent vertically integrated utilities. The California experience and the associated Enron experience did much to deter states, politicians and voters that might otherwise have been interested in reform and competition.

to implement, or less effective, as options in a competitive retail market. But I am not aware that this has been used as a reason for not implementing retail competition.

As noted in the Preface, the 14 competitive markets now account for one third of US power production and consumption.[8] As discussed further below, some 85% of their eligible large commercial and industrial load is presently supplied by competitive suppliers, and about half of their eligible residential load.[9] Note that eligibility is important: even in the full retail choice markets, some customers are served by municipal utilities and rural cooperatives, and typically these customers are not eligible for access to retail competition.[10]

The next two sections of Part I provide brief summaries of retail policies in California and Texas. California was the first state to introduce residential retail competition and the first to repeal it. Texas is widely regarded as the most successful retail electricity market in the US. However, Texas differs from the rest of the 14 competitive states (and is more like retail markets elsewhere in the world) insofar as there is no incumbent network utility in each area with an obligation to provide a default supply service.

This report focuses on policies and experience in the 13 competitive states other than Texas. The rest of Part I comprises a more extensive discussion of default supply service and the pricing thereof. It also indicates the various services that incumbent network utilities are required (except in Texas) to provide to retail suppliers in order to facilitate retail competition.

2. California: initial experience with utility pricing and retail competition

California was the state at the forefront of electricity market restructuring in the US, with its "Blue Book" template issued in April 1994. But what happens if retail competition is introduced but a customer does not choose a new retail supplier? Professor William Hogan proposed that charging such customers a time-of-use (TOU) tariff based on the wholesale market spot price would give them Efficient Direct Access to the competitive wholesale market. If they wished, customers could then enter contracts for differences with generators or retailers to provide whatever security, price stability or flexibility they preferred.[11] Hogan saw this an easy way to provide retail access.

Similar proposals for spot price pass-through were put forward earlier by Larry Ruff[12], and later by Paul Joskow[13] using the term Basic Electricity Service. All three argued that this approach

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8 O'Connor (2017) p 12.

9 O'Connor (2017) Fig 6.

10 "The market share of municipal utilities and rural cooperatives differs significantly across the 14 choice states. They play a smaller role in New York than in Texas, for example. In Texas, San Antonio and Austin are served by [local] government-owned electric utilities exempt from choice. Rural cooperatives serve large expanses of the state's territory." O'Connor (2017), fn 15 p 37.

11 W W Hogan, "Efficient Direct Access: Comments on the California Blue Book Proposal", *The Electricity Journal*, 7(7) Sept 1994:30-41.

12 Reportedly consultant Larry Ruff had earlier proposed a similar idea to the Regional Electricity Companies during the UK privatisation and restructuring process. He later presented his thoughts in Larry E Ruff, "Competitive electricity markets: One size *should* fit all", *The Electricity Journal* 12(9), November 1999: 20-35.

13 Paul Joskow "Why do we need electricity retailers? Or can you get it cheaper wholesale?", Center for Energy and Environmental Policy Research, MIT, revised discussion draft, 13 January 2000.

was more economic than extending retail competition to residential customers. Joskow was concerned that retailing would not add much value, and that smaller customers could be exploited over time because of information and transactions costs. If customers wanted a stable price or other value-added services, they could pay a retailer to provide this, but otherwise would automatically be provided with electricity at wholesale cost.

This was not a unanimous view. I argued that these analyses underestimated the importance of retail competition and failed to appreciate some of the costs and disadvantages of the proposed approach.[14]

These ideas nonetheless gained traction in California. The utilities there were required to purchase all their requirements from the California Power Exchange day-ahead market and the hour-ahead and real-time markets, They were precluded (or at least discouraged) from entering hedging contracts with generators (they were not guaranteed full recovery of such costs). The utility San Diego Gas & Electric (SDG&E) paid off its generation stranded assets by mid-1999, and during that summer it implemented a rate ceiling and smoothing plan. The next summer, 2000, it had no such plan in place. The average price on the California Power Exchange rose from $27/MWh in April 2000 to $50/MWh in May to $132/MWh in June. Some say there was not enough generation available, others that generators gamed the market. Either way, these high prices were passed straight through to 1.2m residential customers in San Diego. The average residential bill more than doubled from $50 in March 2000 to over $100 in June.

There were serious protests. A retail price cap was imposed, effectively ending wholesale spot price pass-through. Generation price caps were introduced and tightened. Two utilities became insolvent, with one declaring bankruptcy and the other teetering on the brink. The Power Exchange ceased operating. In January 2001 Governor Gray Davis declared a state of emergency and ordered the California Department of Water Resources (DWR) to buy power. It spent $8bn between January and May 2001, and committed a further $60bn over the next ten years. Shortly afterwards, spot prices fell back. In September 2001 retail competition was repealed in order to enable the DWR to recoup the stranded costs of its contracts. The electricity crisis was a factor in Governor Davis's removal from office in October 2003. Retail competition has still not yet been restored at residential level in California, although Community Choice Aggregation is atracting considerable interest, as discussed briefly in section 19 below.

The experience of California was in the minds of those considering how to secure and price default supply service in other states contemplating retail competition. Joskow later recommended that "the default service option for larger commercial and industrial consumers should be to purchase their electricity at real-time prices" but for other (residential and small commercial) customers "A good retail procurement framework … must assure that a large

[14] Stephen C Littlechild, "Why we need electricity retailers: a reply to Joskow on wholesale spot price pass-through", Judge Institute of Management Studies, University of Cambridge, WP21/2000, 22 August 2000. This was revised, extended and published as Stephen C Littlechild, "Wholesale spot price pass-through", *Journal of Regulatory Economics*, 23(1), 2003: 61-91.

fraction of retail demand is being met with longer-term fixed price contracts and only a small fraction fully exposed to the spot market."[15]

3. Texas: "the most active and advanced competitive retail market in the nation"

Texas generally has a laisser faire political philosophy towards markets. It was the last state in the US to establish a statewide system of electric utility regulation (in 1975). It is unique in not having to deal with the Federal Energy Regulatory Commission (FERC) and therefore in having sole jurisdiction over its electric power market. Some would suggest that this is perhaps the most important reason why it has the most advanced and effective electric power market in the US.

In 1995 Texas decided to introduce and encourage wholesale competition.[16] In 1999 it further decided that customer choice would begin on January 1, 2002 (rather than immediately, as in California). Texas was a fast-growing state: 47 new power plants were added by the opening of retail competition. Utility providers were permitted to remain involved in both regulated and competitive activities, but were required to unbundle their functions into separate legal entities by January 2002. Generation and retail activities were largely deregulated, with safeguards such as a code of conduct between a regulated company and its affiliates. Two of the largest three incumbent vertically integrated utilities (Centerpoint and American Electric Power) fully divested their competitive generation and retail activities from their regulated transmission and distribution services. To avoid the market flaws that characterised California, and to reduce consumer exposure to hourly fluctuations in energy prices, the wholesale market structure was designed to rely upon and foster bilateral contracts between Power Generation Companies (PGCs) and Retail Electricity Providers (REPs). Following the 2000-01 California energy crisis, caps were put on bids for balancing and ancillary services.

Careful thought was given to retail competition issues.

> "The introduction of retail competition involved creating attractive opportunities for new retailers to enter the retail market and compete with the retail affiliates of the incumbent utilities" as well as "the establishment of default pricing for smaller customers who decided not to exercise retail choice…" (p 395)
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> "Default retail prices were established for REPs affiliated with the incumbent utilities (AREPs). AREPs were required to reduce the electricity prices charged to residential and small commercial customers by 6%.... The resulting price provides a Price to Beat (PTB) for potential competitors and a default price for consumers who fail or decide not to exercise their rights to retail choice. This PTB remains in effect for 5 years (ie through January 1, 2007)." (p 395)

[15] P L Joskow, "California's electricity crisis", *Oxford Review of Economic Policy*, 17 (3) Autumn 2001: 365-388. For further discussion of California's experience, see (e.g.) Ahmad Faruqi and Kelly Eakin, "Summer in San Diego", *Public Utilities Fortnightly*, Sept 15, 2000: 60-62; Ahmad Faruqi et al, "Analyzing California's Power Crisis", *The Energy Journal*, 2001, 22(4): 29-52; Joskow (2005); and James L Sweeney, "California's Electricity Restructuring, The Crisis and Its Aftermath", ch 10 (pp 319-381) in Fereidoon P Sioshansi and Wolfgang Pfaffenberger (eds), *Electricity Market Reform: An International Perspective*, Elsevier 2006.

[16] The account and quotations in this section are primarily from Parviz Adib and Jay Zarnikau, "Texas: The Most Robust Competitive Market in North America", ch 11 (pp 383-417) in Sioshansi & Pfaffenberger (2006).

There was an interesting twist.

> "However, the AREP can begin charging rates other than the PTB after 36 months or when the AREP loses at least 40% of its residential or small commercial customer load to competitors. After either of these events occurs, the PTB establishes only a ceiling, and the AREP may also offer lower prices. Larger energy consumers in Texas received no price cap protection." (pp 395-6)

In other words, for an initial period of time, at most three years, incumbents were precluded from cutting their prices in response to competition. At the end of the five year period, the PTB expired and there were no further price caps. Nor, in contrast with other US competitive states, were default utility service providers or default service rates specified. There are designated Providers of Last Resort in each area, but this is emphasised to be a high-priced, rare and temporary service.[17]

Also in contrast with other competitive states, the regulated distribution (wires) companies in Texas do not provide billing and other services to retailers. On the contrary, the transmission and distribution companies are effectively required to sell their services to retailers who then resell those services to customers. "Transmission and distribution companies in the Texas competitive market have very limited interaction with customers (mostly limited to receiving outage calls). Consequently, the wire companies do not create competitive barriers in Texas, unlike other US markets."[18]

Even before the price controls had formally been terminated, Texas was claimed to be "the most robust restructured retail market in North America and one of the top three in the world". (p 384) In 2013 it was reaffirmed as "the most active and advanced competitive retail market in the nation".[19] Some policy makers in other states were envious, or saw the removal of default supply prices as a goal, but no other state ever established a comparable policy.

Later sections of this report give some further quantification of the extent of retail competition in Texas. Meanwhile, one qualitative example may be of interest here. On 1 July 2016, British Gas (BG) introduced an option of free electricity on Saturday or Sunday (9am-5pm) for its UK residential customers (albeit only available for those customers that were on smart (half-hourly) meters that BG was then promoting). This seemed to me an excellent example of a retail

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[17] "The Commission has designated Providers of Last Resort (POLR) as a back-up electric service provider in each area of Texas open to competition. POLR service is relatively high-priced, due to the costs associated with planning and the risk of serving an uncertain number of customers with uncertain electricity loads. POLR service is a safety net for customers whose chosen REP is unable to continue service. This service is intended to be temporary and used only under rare circumstances when a REP is unable to provide service, or when a customer requests POLR service." http://www.puc.texas.gov/consumer/electricity/polr.aspx. These POLR providers are retail suppliers themselves, not the wires utilities, and the POLR rate is an hourly index-based product. There can be up to 15 different suppliers designated as POLRs for each class of customer in each area, and the designations change frequently over time.

[18] Young Kim, "Unfinished business: The evolution of US competitive retail electricity markets", Ch 12 (pp 331-361) in Fereidoon P Sioshansi, *Evolution of Global Electricity Markets*, Elsevier: Academic Press, 2013.

[19] Kim (2013) p 335. For a recent analysis of Texas experience with references to earlier publications, see P R Hartley, K B Medlock and O Jankovska, Electricity reform and retail pricing in Texas, Working Paper, Center for Energy Studies, Baker Institute for Public Policy, Rice University, June 2017.

innovation enabled and stimulated by a fully competitive retail market as in the UK. But in the course of the present research project I discovered that the UK, and British Gas, had been beaten to it by Texas and TXU, by some four years.

> "TXU Energy sponsored a 'free nights' program in May of 2012, and added a 'free weekends' option in May of 2013. In only 15 months, the programs attracted almost 100,000 participants, or a 3% market share. Competitor Direct Energy [an affiliate of British Gas] responded with a similar program, offering free electricity on Saturdays. It has since introduced the offering in other states in which it operates. And Reliant Energy offers a plan with deeply discounted rates for electricity used on both evenings and weekends."[20]

TXU's parent company Vistra notes that it continues to innovate in its retail products.[21] Vistra also comments that "ERCOT has evolved into the most competitive of the US retail markets, requiring retailers to differentiate and excel at sales and service to compete effectively". A further extract from Vistra's comparison of Texas and the other competitive states is at the end of section 6 below.

4. The concept of default supply and default service rates

Under traditional US regulation, incumbent utilities had an obligation to serve all customers within their area. This obligation typically continued after the introduction of retail competition in the US (except in Texas, and in contrast to the situation in the UK and elsewhere). For example, in Maine, a customer initiating service or moving house (residences) is put onto default supply service until the utility receives formal notice that the customer has chosen a competing electric supplier.[22]

Thus, in the event that the customer did not choose an alternative competing supplier, regulatory commissions needed to authorise the basis on which utilities would incur generation and other costs in order to provide default supply service. They also needed to specify the "default service rate" that the utilities would charge for this service. Default service is variously also known as "provider of last resort" (POLR) service, standard offer service, basic service or (in New Jersey) as Basic Generation Service.

In setting the default service rate, the general aim is to ensure that incumbent utilities (as Default Service Providers) are indifferent as to whether or not to supply customers at the default service rate. They should cover their costs, but should not make a profit or a loss on providing default

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[20] Wilson Gonzalez, "Restructured States, Retail Competition, and Market-Based Generation Rates", in Jim Lazar and Wilson Gonzalez, Smart Rate Design for a Smart Future, Montpelier, VT: Regulatory Assistance Project (RAP), July 2015, Appendix C, p C-7.

[21] "TXU Energy Continued product innovation: Launched "Free Nights and Solar Days" in May combining its most popular Right Time Pricing Plan with solar energy for retail customers • Launched new residential "MyAccount" web experience optimized for all digital devices" Vistra Energy First Quarter 2017 Results, slide presentation May 18, 2017.

[22] Suppliers in Maine are presently encouraging the Commission to consider implementing a program that would allow customers to actually choose a competitive electricity provider at the time of service initiation or reinstatement. State of Maine, Public Utilities Commission, Docket No. 2017-00268 Inquiry into Transparency and Marketing Practices in the Electricity Supply Market, Comments of Retail Energy Supply Association (RESA), November 16, 2017, p. 23.

service. The utilities are to provide a default supply for those customers who do not wish to choose a competitive supplier. But the utilities are not meant to "compete" with these suppliers. As will be seen below, these concepts and their application can be contentious.

The allowance for the wholesale generation cost is a pass-through of costs that the utility incurs with no element of profit. Since these utilities no longer own generation, these generation costs – whether hedges bought ahead of time or spot prices for purchases on the day of consumption - reflect prices in the competitive wholesale market. Consequently, the utilities are procuring supply from the same wholesale market as the retail suppliers are, albeit via a more formalised process.

There may be additional costs associated with capacity charges, transmission charges, the purchase of ancillary services, and so on. These too are passed through to customers.

The allowance for the utility's non-generation costs is usually set on the basis of its costs in a specified test year. This is usually on a historic cost basis – generally the most recent year for which data are available – but could be forward-looking. However, there is relatively little benchmarking against the costs of other companies, as practiced in UK network regulation.[23]

In those states and areas where smart metering is installed, utilities may be required to offer an alternative service option, reflecting the hourly real time wholesale price. In a few cases (see New York in Part IV below), utilities have provided the option of a default tariff on a variable (hourly) price basis as well as on a standard fixed price basis. But generally, there is no provision for incumbent utilities to offer 'competitive' tariffs other than the default supply tariff.

Some commissioners and/or staff members in some states may have preferred the Texas model, with network utilities not required to provide a default service. Or they may have wished to transition to the Texas model over time. But from a political perspective, retail competition was novel and risky, and it was safer to provide for a continuing role for network utilities to provide a default supply service.

State legislation typically envisaged that default service would be permanent rather than time-limited (albeit the regulatory commission could modify the way the default service rate was calculated within the statutory specification). So, removing the utility's obligation to provide a default service via a default service tariff would generally require new legislation in each state. As explained below, New York is an exception here, since retail competition was introduced by the regulatory commission rather than by state legislation, and the commission is presently in process of limiting that competition.

Incumbent utilities had different economic positions and different views on the new role provided for them as default service providers. Some had generation contracts, others did not. Some would have preferred to remain the monopoly supplier and were reluctant to lose customers. Others were pleased to lose their supply business and evolve into a wires network-only company.

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[23] Reportedly, where more forward-looking approaches are used, there can be some benchmarking – for example, of the costs of a particular program such as smart meter installation.

Regardless of their initial views, network utilities in each competitive area have to work with the regulatory commission and deal with competitive suppliers, customers and the media on an ongoing basis. So they have an interest in ensuring that the regulator, suppliers and customers are generally satisfied rather than dissatisfied with the service they provide and the policies they adopt.[24]

In general, there is no policy to regulate the level or nature of offers made by competing suppliers (though two states provide exceptions).[25] These competing offers may be fixed or variable, and may be higher or lower than the default service rates offered by the utilities. Or a fixed price offer may start off one way and change as the default service rate changes during the course of a particular customer's contract.

Restructuring has led to considerable consolidation in the sector, along with new entry. There are now many independent generating and retail companies. At the same time, some large holding companies now comprise businesses at all stages of the vertical supply chain. For example, Exelon Corporation (one of the largest US energy companies) has about 35.5 GW of generation capacity in competitive markets across the US (which are not rate-based as in the monopoly states); over 10m electric and natural gas customers in its six mid-Atlantic utilities including BGE, ComEd, PECO and PEPCO; and over 2m residential customers in its competitive supplier Constellation. So in such companies there is an understanding of the role of utilities as well as the role of competitive generation and retail.

5. Differences of approach in procuring and pricing default supply service

When markets were first opened to retail competition, various transitional arrangements were put into place. These often included multi-year contracts with generating companies and fixed prices to utility customers. Over time, these various arrangements have now expired, leaving regulatory bodies with two major decisions. These determine the precise nature of the default service rates and potentially impact on the nature of retail competion. Subject to the general requirement that the utility should pass through costs incurred without a profit,

- on what basis should the utility purchase generation and related services?
- and on what basis should the utility price the default supply service?

As regards the first issue, purchasing generation, traditionally, utilities would buy such generation, or additional generation, as they needed from the wholesale market on a "block and spot" basis. That is, they would buy blocks of peak, off-peak or shoulder generation – or hedges against wholesale generation price – to meet the forecast level of demand. These blocks might be bought months or years ahead, perhaps adjusting and refining the purchases over time as demand

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[24] The Connecticut Public Utilities Reglatory Authority website has a FAQ: "Will Eversource or UI [the two utilities in that state] be upset if I choose an electricity supplier? No, Eversource and UI encourage customers to keep their usage as low as possible."

[25] In 2015 Connecticut prohibited retail electric providers from offering variable rate services to residential customers. In 2016 and 2017 New York state Public Service Commission issued several Orders required competing retail suppliers to prove that customers would save money by choosing their offer compared to the default supply rate and limiting the type of customers that such suppliers could serve. These New York provisions are further discussed in Section 4 below.

forecasts became clearer. Then the balance of requirements would be purchased (or sold) on the spot market. This would include the costs of load-following: that is, the costs of buying extra if load is higher than expected, and of selling surplus power if load is less than expected.

The state of New Jersey pioneered a new approach, sometimes called "load-slice auctions", involving Fixed Price Full Requirements (FPFR) contracts. A defined proportion of a utility's actual load during a specified future period of time was put up for auction. The bidder would take the demand risk, and the costs of this and all the utility's requirements, including the costs of load-following, would be priced into the bid. The detail of the New Jersey auction has evolved over time, as discussed in Part II below.

State regulatory bodies debated the merits of each approach. Some (like Pennsylvania) initially adopted a mixture of the two then moved entirely to load-slice auctions. Over time, the load-slice (FPFR) auction approach is now generally adopted, but not universally so. More precisely, for residential customers, the present arrangements are as follows:

- Most of the mid-Atlantic and New England states now follow New Jersey in using load-slice (FPFR) auctions, though the specifications of those auctions varies from state to state.
- Some of the New England states (like Massachussetts) still include a proportion of "block and spot" purchase.
- Illinois and New York rely entirely on the "block and spot" approach, although they do this differently. In New York the implementation is left to the utilities (within regulatory guidelines) whereas in Illinois, which originally used an auction approach, the purchasing is now carried out by a new independent state agency.

These various mentioned states are discussed further in Part II (or New York in Part III).

As regards the second issue, the criteria for setting the default service tariff/rate/price varies in detail from state to state. The approach is usually pragmatic, with each state seeking to balance on the one hand the promotion of competition and efficient cost-reflective pricing, and on the other hand the protection of customers who do not participate actively in the competitive market. In states and in periods where the competition/efficiency consideration is stronger, the default price tends to be closer to real-time prices, leaving competitive suppliers to add value by offering fixed prices for whatever future periods customers prefer. In states and in periods where the customer protection consideration is stronger, the default price might be set for a year ahead, or for two seasons ahead (winter and summer), and often based on hedged purchases and perhaps smoothed over up to three years.

There is also the related question how additional costs of spot purchases and load-following are passed on to customers. With the FPFR auction approach, those costs are already reflected in the bid price. In Illinois, there is a separate Purchased Energy Adjustment (PEA) that is added to or subtracted from the pre-specified seasonal (winter and summer) default prices. In New York, the default price is set monthly, but in arrears, and reflects the spot price costs actually incurred in that month (albeit not known and reported until the next month).

Part II contains more detail about arrangements for residential customers in four representative states: New Jersey, Pennsylvania, Massachusetts, and Illinois. Arrangements in New York are explained in Part IV.

These regulatory arrangements thus influence the precise way in which utilities incur generation and related costs and pass on these costs to default service customers in the form of default service rates. However, it is worth emphasising for an overseas audience that the regulatory commissions do not "regulate" these utility default service rates in the way that they once regulated the rates of the vertically integrated utlities. The default service rates directly reflect - albeit possibly with some lag and smoothing and addition of related costs - the costs that the utilities actually incur in purchasing in the competitive wholesale market (which is itself not subject to price regulation).

6. Other services provided by the utility

Retail suppliers are responsible for purchasing generation on behalf of their customers, as in all competitive retail markets. In order to facilitate retail competition in the 13 competitive states (excluding Texas), the incumbent network utility in each area is obliged to provide (or at least make available) various other services to the competing retail suppliers. (This is unlike the arrangements in other competitive markets outside the US.) These services include metering, billing, revenue collection and purchase of receivables. Competing suppliers often provide these services for their large customers, but typically rely on the utility with respect to residential customers.

The utility provides and reads residential meters, traditionally on a monthly basis. By 2010, about 50 million residential customers in the US had Automated Meter Reading (AMR) meters, which provided one-way communication. They gave the utility the ability to read residential meters via a van driving down a street.

Since the mid-2000s there has been a significant increase in the installation of Advanced Metering Infrastructure (AMI) meters, known as smart meters, which provide two-way communication. "By the end of 2016, U.S. electric utilities had installed about 71 million advanced metering infrastructure (AMI) smart meters, covering 47% of the 150 million electricity customers in the United States."[26] Ironically, the prior installation of AMR meters means that the saving from moving to smart meters is less than would otherwise be the case.

Utilities bill residential customers monthly. Metering information is obtained by incumbent utilities and available to competing retailers, but sometimes with a time lag.

[26] "Nearly half of all US electricity customers have smart meters", US Energy Information Administration (EIA), December 6 2017.

Figure 1 Typical residential bill for customer with competitive supplier in PECO utility territory

Where there is Consolidated Utility Billing (CUB), retail suppliers have a small box on the bill to display their logo. Some say that the supplier's name is often hardly noticeable, and many customers may not even notice it and therefore may not realise that they are with a competitive supplier. Reportedly, this reflects a tradeoff that retail suppliers made a few years ago in exchange for Purchase of Receivables (discussed below) and billing services, and some retail suppliers would like to rethink this trade-off.

The box on the bill also specifies the retail charge (which may be described as generation charge). This is typically in the form x kWh @ \$y/kWh = \$z. Figure 1 is an example of a bill from PECO, the utility in Philadelphia, in CUB form, showing the logo of the (hypothetical) supplier ABC and Electric Supplier ABC charges Generation 690 KWH @ \$0.0809 = \$55.82.

Utilities reportedly differ in the flexibility of their billing systems, but retailers often have to submit their data in one of two forms: so-called Rate-Ready, in which the retailer specifies the price per kWh and the utility then applies this in calculating the bill, or Bill-Ready, in which the retailer specifies in $ the total monthly amount to be charged.

Retailers, in particular, argue that such restrictions prevent or hinder them from offering certain kinds of products. For example, they cannot display discounts on the bill, or more generally explain to customers in more detail how the monthly total is calculated. Or again, to offer a product that involves charging customers a fixed price per month (as E.On's former Staywarm tariff did in the UK, and as some other retailers now offer), the retailer would need to get data on the utility's distribution charges for each month and adjust its own charges accordingly, then presumably explain to customers what all these calculations mean.

The major retail suppliers provide their own bills for business customers (where enabled by the local utility). In due course, some retailers aim to provide their own bills to residential customers, but there is customer resistance to receiving two bills, and retailers are not yet in a position to provide a single bill (including utility distribution charges) to most residential customers. Meanwhile, some utilities observe that, in the past, retailers have demanded certain facilities (such as access to customer details and account numbers), which the utilities have been required to provide at considerable cost in terms of IT system changes (a cost borne by all customers), but in the event these services have never been used.

Utilities not only bill customers on behalf of suppliers, and collect their revenues. They also take on their bad debts, in return for a specified fee (of the order of 1% of revenues), under a Purchase Of Receivables (POR) programme. Here is a typical explanation of the pro-competition rationale for such programmes.

> "Pursuant to Section 60 of the Green Communities Act, electric distribution companies ("EDCs") are required to purchase the accounts receivables of competitive suppliers that have chosen the complete billing method and that serve customers in the EDCs' service territories. The Purchase of Receivables ("POR") program is intended to mitigate the risk that competitive suppliers bear regarding nonpayment by their customers, thus avoiding the need for suppliers to undertake costly credit screening and selective enrollment processes, particularly for their small commercial and residential customers. A POR program mitigates such risk by establishing a discount rate at which the electric distribution companies purchase the receivables of competitive suppliers. The expectation is that implementation of a POR program will reduce the barriers that competitive suppliers face in seeking entry into the competitive market, thereby increasing the number of market participants and enhancing retail competition."[27]

If suppliers are not liable for the bad debts of their customers, one would expect less (if any) attention paid to creditworthiness in the design of competing tariff offers, in the focus of customer marketing, and in subsequent monitoring of customer payments and ability to pay.

[27] Commonwealth of Massachusetts, Executive Office of Environmental Affairs, Energy & Utilities, Purchase of receivables.

Contrast Texas, for example, where competing retail suppliers have the ability to authorise the network utilities to Turn-Off customers for non-payment (under specified circumstances) and to Turn-on again. Retail suppliers do not have the ability to do that in the other 13 competitive states. It is striking that PrePayment Meters (PPMs) and associated tariffs are largely unknown in the 13 competitive states (as well as in the non-competitive states). In contrast, PPMs have now been widely adopted in Texas, where suppliers rather than network utilities issue the bills and are responsible for revenue collection.

Given the possibly restrictive consequences of the various arrangements, even today there is continuing debate as to who originally asked for network utilities to provide these various services, and why.[28] More importantly, as indicated the sections below, there are continuing concerns in some states as to whether utility services are adequately unbundled and cost-reflectively priced as between the provision of distribution (and transmission) services, and the provision of default service.

Table 1 summarises the perspective of Vistra Energy (the major Texas retailer) on the difference between the markets in Texas and in the other competitive states.

Table 1 Comparison of US electricity markets[29]

	ERCOT	PJM/NE/NY
Regulatory environment	Stable / Established	Challenged / Potential for reregulation
Pricing mechanisms	Fully competitive	Default / Price-to-compare
Customer relationship	Retailer has full ownership, excl. outages	LDC owns billing/svcs, REP is a line item on invoice
Ability to offer innovative plans	High flexibility to innovate; e.g., TXUE free nights, cash rewards	Limited by LDC's ability to bill (little flexibility)
Market growth & outlook	~1-2% annual growth, leading US population growth	Limited
Dual fuel / competitive natural gas	Electric only	Electric & gas choice

[28] E.g. "In their comments, Infinite [Infinite Energy, a retail supplier or ESCO in New York and elsewhere] states that Consolidated Utility Billing (CUB) and Purchase of ESCO Receivables (POR) give ESCOs little incentive to charge competitive prices. Infinite states that CUB was created to help grow the market, and was intended to help ESCOs avoid overhead expense. CUB was created to minimize customer confusion by providing customers a single-bill instead of having to receive two bills and to provide customer options. ESCOs were not in a position to receive utility charges, bill customers, and remit payments to utilities in 2000. In light of customers' desire to have a single bill, the only workable alternative was to have the utility provide a consolidated bill. Additionally, it is the ESCOs, not the utilities, who pushed for POR. POR lowered barriers to market entry and allowed ESCOs to avoid receiving partial payments, setting up payment arrangements, and having to engage in collection activities." NY PSC, Case 15-M-0127 et al, Reply Comments of the Joint Utilities, April 4, 2016, pp 5-6.

[29] Vistra Energy First Quarter 2017 Results, slide presentation May 18, 2017.

Part II The process of setting utility default service rates

7. Mid-Atlantic and New England states: default service procurement plans

The 14 competitive states have default service arrangements that differ in detail, but there are also similarities between the states in a given Independent System Operator (ISO) region. Some of the main characteristics are as follows.

In five Mid-Atlantic states in PJM ISO region (Washington DC, Delaware, Maryland, New Jersey, Pennsylvania) the utilities use a tranch auction process to procure energy, laddered over time up to 3 years out, with migration and load-following risk on the wholesale supplier. (That is, the auctions are for Fixed Price Full Requirements FPFR specification.)

Five New England states in ISO NE region (Connecticut, Massachusetts, Maine, New Hampshire, Rhode Island) have slightly modified arrangements. Here, too, the utilities mainly use a tranch auction (FPFR) process to procure energy, with migration and load-following risk on the wholesale supplier. However, the auctions are shorter-term, laddered over time up to 1 year out, and in some cases the utilities make a proportion of spot market purchases too.

In other words, the Mid-Atlantic states have generally adopted the New Jersey auction approach. The New England states have done so too, but on a shorter-term basis, and have tempered this with an element of spot market purchasing. This modification leads to a more frequent change in the default service price. This may or may not induce customers more readily to choose a competitive retail supplier that is offering a longer-term fixed price.

For residential customers, default service tariffs may be set anything from annually to quarterly. In Massachusetts the Standard Offer price was set annually from 1998-2000, in two separate rate periods from 2001-2004 (three periods in 2003), and since then the Basic Service price has been reset every six months. There is also now the option of a monthly price. In Connecticut standard service rates are set for six months. New Jersey and Maryland have summer and winter rates. In Pennsylvania, PECO's rates are set quarterly.

Illinois and New York are the two main exceptions in terms of generation procurement. Both use the more traditional Block and Spot approach. Arrangements in Illinois are described in section 15 at the end of this Part II. Arrangements in the state of New York are described in Part IV.

8. New Jersey: basic generation service auctions

In the early days of retail competition, two competing paradigms evolved with respect to the procurement of default service generation. One paradigm was based on relatively traditional utility procurement processes: the utility would buy a proportion of its demand in advance, based on forecast demand, initially via blocks of power (e.g. base load or peak). Then, over time, it would gradually fill in the load curve, tailoring its purchases towards the loads of individual customer classes.

The other paradigm involved load-slice auctions, purchasing via auction a defined proportion of the utility's actual default service load – in effect, auctioning the right to serve default supply customers.

New Jersey was the pioneer of this latter approach, creating what it called Basic Generation Service (BGS) auctions. Its work reflected developing thinking about auctions.[30] It has been well documented by economists.[31] And its proponents have held it up as a model for the nation.[32]

> "The first auction was held in February 2002 to supply $3.8 billion of electricity from August 2002 through July 2003. The second BGS auction process took place beginning February 2, 2004. In this second auction, New Jersey's four Electric Distribution Companies (EDCs) have purchased New Jersey's BGS electricity supply.
>
> The auction process consisted of two concurrent auctions: one called the hourly energy price or HEP auction for larger customers (about 1700 statewide) for 2,600 MW and one, a general auction for smaller commercial and residential customers, for 15,500 MW. The New Jersey Board of Public Utilities (BPU) decided to split these two customer groups because the BPU felt that large customers are better able to adjust usage to hourly market price fluctuations. The group of 1700 larger customers will have an energy rate based on hourly PJM spot market prices while the smaller customer group will have prices that are fixed for different durations."[33]

The use of a single auction to procure so much load was subsequently criticised. "The Ratepayer Advocate expressed concern that a single auction for obtaining all 17,000 MWh of load at one time exposed the New Jersey ratepayers to significant risk of high prices, mainly due to the impact a single purchase of that amount at one time could have on the market."[34] (As discussed below, this is essentially what happened in Illinois.) Since then, policy has been to ladder the purchases over a three year period.

As in New England and other mid-Atlantic states, the default service price in New Jersey includes the cost of load-following and/or the risk of customers migrating into or out of the default load. These costs are 'baked into' the wholesale supplier's bid. The network utility thus bears no additional risk associated with either component (hence nor do customers). This also means that the price against which customers have to compare the offers of competing retailers is clearer. As will be seen, RESA has been advocating such a process in Massachusetts.

9. New Jersey: developments in the auction process

The New Jersey auction process has evolved over time in the light of experience, and now involves a descending clock auction. Supporters and the New Jersey regulatory body itself have praised this feature. Thus Next Era Power Marketing (NEPM), a generator and trader, described

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[30] E.g. Peter Cramton, Andrew Parece and Robert Wilson, "Auction design for standard offer service", Working paper, University of Maryland, July 1997.
[31] Colin Loxley and David Salant, "Default Service Auctions", *Journal of Regulatory Economics* 26(2), September 2004, pp 201-229.
[32] Jeanne M Fox, "New Jersey's BGS Auction: A model for the nation", *Fortnightly Magazine [Public Utilities Fortnightly]*, September 2005, pp 16-19.
[33] "Electricity Auctions: Regulatory and Efficiency Issues", Christiano Vieira da Silva, Institute of Brazilian Business and Public Management Issues, The George Washington University, Washington DC, Spring 2004, Draft, pp 21-2.
[34] Loxley and Salant (2004) p 224.

and recommended it to Massachusetts as follows, in preference to the utilities themselves putting out Requests For Proposals (RFPs).

> "For the last seven years in a row, the New Jersey BGS auction has reduced or stabilized power prices for many New Jersey residents, and, we believe, a modified Massachusetts process can do the same. NEPM attributes much of the success of the New Jersey BGS to the use of a descending clock auction that maximizes participation through increased transparency, which, in turn, results in the most competitive price. The New Jersey Board of Public Utilities (NJ Board) explains the descending clock auction process as follows:
>
>> "The BGS Auction Process solicits bids through a clock auction: a multiple round process with dynamic information feedback. Bidders submit bids each round as prices tick down, and each round bidders get information about how the market views the auction opportunity. On the basis of that information, bidders have an opportunity to revise their bids, and switch their bids from one EDC [electric distribution company] to another. The information that bidders receive during the BGS Auction reduces the uncertainty that bidders face and leads to more aggressive bidding. In this way, the BGS clock auction format encourages competitive bidding and efficient market prices consistent with EDECA [the Electric Discount and Energy Competition Act of 1999]. The fact that bidders can switch from one EDC to another means that any price differences among the EDCs reflect the market's view of differences in the cost to serve each EDC's BGS Load. Hence, the BGS Auction achieves efficient relative prices and an efficient allocation of supply responsibility among the EDCs. As explained later in greater detail, the BGS Auction also provides a large degree of transparency as all bidders understand how prices are determined and how winners emerge. This transparency encourages participation and further helps to obtain reliable supply at prices consistent with market conditions." [35]
>
> This overview of the descending clock auction process demonstrates a significant difference between a static RFP process and the dynamic, transparent process of an auction that approximates a competitive market by providing for revised bids, switching of bids, and more aggressive bidding."[36]

10. Pennsylvania: statutory framework and an illustrative settlement

The following account of arrangements in Pennsylvania illustrates more concretely the statutory and regulatory framework within which utilities there are required to purchase and price default supply service.

The stated statutory aim is as follows: to ensure "that retail customers who do not choose an alternative electricity generation supplier (EGS), or who contract for electric energy that is not

[35] NJ Board, In the Matter of the Provisions of Basic Generation Service for the Period Beginning June 1, 2016, Docket No. ER15040482 at 8, July 1, 2015. (The NJ Board was here ruling on the 2016 auction process, including the goals and advantages of the auction process.)

[36] Commonwealth of Massachusetts, DPU 15-40, Reply comments of Nextera Energy Power Marketing LLC, Sept 11, 2015 pp 2-3.

delivered, have access to generation supply procured by a Default Service Provider (DSP) pursuant to a Commission-approved competitive procurement plan. The Electric Distribution Company (EDC) [that is, the incumbent utility] or other approved entity shall fully recover all reasonable costs for acting as a default service provider of electric generation supply to all retail customers in its certificated distribution territory." [37]

The utility has to provide default supply by procuring generation on the following basis:

> "pursuant to a Commission-approved competitive procurement process that includes one or more of the following: (1) Auctions (2) Requests for proposals (3) Bilateral agreements entered into at the sole discretion of the default service provider which shall be at prices that are either of the following: (i) No greater than the cost of obtaining generation under comparable terms in the wholesale market, as determined by the Commission at the time of execution of the contract. (ii) Consistent with a Commission-approved competition procurement process … [under which] The cost of obtaining generation from any affiliated interest may not be greater than the cost of obtaining generation under comparable terms in the wholesale market at the time of execution of the contract."

The utility has to file the first default service program not later than 12 months prior to the conclusion of the previous program [or the initial/transitional Commission rate cap for that area]. The Commission will hold hearings on the proposed program, and it will be deemed approved unless the Commission issues a final order within 9 months of the filing date. The first default service plan is to be for 2 or 3 years, and subsequent durations will be as determined by the Commission.

There is more specific guidance on the manner of procuring generation for the default service programme, notably that it shall include "a prudent mix" of contract types.

> "A DSP shall acquire electric generation supply at the least cost to customers over time …" and "The procurement plan shall be designed so that the electric power procured … includes a prudent mix of the following: (i) Spot market purchases. (ii) Short-term contracts. (iii) Long-term purchase contracts, entered into as a result of auction, request for proposal or bilateral contract that is free of undue influence, duress or favoritism of greater than 4 years in length but not greater than 20 years. The default service provider shall have sole discretion to determine the source and fuel type. Long-term purchase contracts must be 25% or less of the DSP's projected default service load unless the Commission, after a hearing, determines for good cause that a greater portion of load is necessary to achieve least cost procurement."

There are then specifications as to how the default service shall be charged for.

[37] Subchapter G, Default Service, issued and amended under the Electricity Generation Customer Choice and Competition Act, 66 Pa.C.S. §2807.

"… a default service customer shall be offered a single rate option, which shall be identified as the PTC [Price to Compare] and displayed as a separate line item on a customer's monthly bill. …

(d) The rates charged for default service may not decline with the increase in kilowatt hours of electricity used by a default service customer in a billing period.

(h) Default service rates may not be adjusted more frequently than on a quarterly basis for all customer classes with a maximum registered peak load up to 25 kW, to ensure the recovery of costs reasonably incurred in acquiring electricity at the least cost to customers over time."

To implement this process in practice, the utility files a proposed default service plan with the Commission. Interested parties such as competing suppliers (EGSs) and customer groups intervene, seek information and engage in negotiations. If they reach an agreement, it is put to the Commission for approval (or possibly rejection). If not, the Commission has to determine these various parameters. In practice, settlements are not unusual in the US, though they cannot by any means be taken for granted.

11. Pennsylvania: PECO's default service procurement plan in Philadelphia

The default service plan specifies the basis on which the utility will procure generation to supply its default service customers. In the case of Pennsylvania utilities, as just described, the plan has to reflect "a prudent mix" of spot price, short term and long term contracts.

Table 2 overleaf shows the procurement policies for the four successive default service plans (DSPs) established by the Philadelphia utility PECO over the period since 2011, when the plans first came into operation. [DSP stands for Default Service Plan as well as Default Service Provider.]

In the first period 2011-2013, DSP I provided for 75% of PECO's residential demand to be purchased on Fixed-Price Full Requirements (FPFR) contracts, via the New Jersey auction approach. These work as follows.

"Suppliers will bid in a competitive, sealed-bid request for proposals ("RFP") process on "tranches" corresponding to a percentage of the actual Residential default service customer load. Winning suppliers will be obligated to supply full requirements load-following service, which includes energy, capacity, ancillary services, and all other services or products necessary to serve a specified percentage of PECO's default service load in all hours during the supply product's delivery period. In addition, the full requirements product requires the supplier to provide PECO all necessary alternative energy credits ("AECs") described in Paragraph 30, infra, for compliance with Pennsylvania's Alternative Energy Portfolio Standards ("AEPS") Act. 73 P.S. § 1648.1 et

Table 2 Successive default service procurement plans for PECO utility in Philadelphia

Default Service Plans

	DSPI January 1, 2011 - May 21, 2013	DSPII June 1, 2013 - May 31, 2015	DSPIII June 1, 2015 - May 31, 2017	DSPIV June 1, 2017 - May 31, 2021
Residential	75% FPFR, 25% Block & Spot 45% 2 year, 30% 1 year, 20% Block, 5% Spot	100% FPFR (as block contracts expire) Laddered 1 & 2 year	100% FPFR (as block contracts expire) 60% 2 year, 40% 1 year	100% FPFR 60% 2 year, 40% 1 year
Small Commercial (<100kW)	90% FPFR, 10% Spot	100% FPFR 12 Month	100% FPFR 50% 2 year, 50% 1 year	100% FPFR 50% 2 year, 50% 1 year
Medium Commercial (>=100kW to 500kW)	85% FPFR, 15% Spot	100% FPFR 6 Month, 12 month	100% Spot 12 Month	Combined with Large C&I
Large Commercial & Industrial (>=500kW)	2011 - Fixed-Price 2012 -100% Spot	100% FPFR 12 Month	100% Spot 12 Month	100% Spot 12 Month

seq. Each of the contracts will be procured approximately two months prior to the beginning of the applicable contract delivery period."[38]

The remaining 25% of PECO's residential electricity was procured on a Block & Spot basis. As explained earlier, the utility would purchase blocks of energy in advance – say baseload and peak – and then fill in by spot purchases the remaining electricity required to meet demand. All these purchases were "laddered" over time: 45% was bought 2 years ahead, 30% one year ahead (making a total 75% on FPFR), then a further 20% was bought in block and the remaining 5% spot.

In other words, PECO's approach in the initial period DSP I was a combination of the New Jersey FPFR auction approach and the traditional utility Block and Spot approach. Over time, however, the use of Block & Spot was phased out. In the current period DSP IV, almost all PECO's purchases are on the basis of an FPFR auction, with 60% being bought 2 years ahead and 40% bought 1 year ahead.[39]

PECO's procurement policy is similar for small commercial customers (under 100 kW maximum demand), albeit weighted 50% and 50% for purchases 2 years and 1 year ahead. This gives a slightly greater weighting to current wholesale prices. For medium and large users the procurement plan is 100% spot, via hourly-priced default service contracts for full requirements products. Table 3 overleaf shows the detailed and published schedule of when these various products are to be procured.

Although there has been some evolution over time in the nature of the PECO procurement plans, the extent of change has been rather limited. While the details of the plans are not necessarily what each party would prefer, there has been an acceptance of the main elements. However, the process of determining each procurement plan has been time-consuming. It would typically take 12-15 months to determine the plan for the subsequent 2 year period. In other words, it was almost a full-time activity. Recognising this, the other parties suggested to PECO that the latest plan be for 4 years rather than 2 years, and this was accepted by PECO and the Commission.

[38] Pennsylvania PUC, P-2016-2534980, Petition of PECO Energy Company for Approval of its Default Service Program for the Period from June 1, 2017 through May 31, 2019, Joint petition for partial settlement, July 28, 2016, p 7.

[39] More precisely, the settlement provides for approximately 96% of the residential load to be purchased via FPFR auctions, of which 60% is to be bought 2 years ahead and 40% bought 1 year ahead. The remaining 4% comprises approximately 3.2% of two year FPFR products and approximately 0.8% of spot purchases. Joint petition for partial settlement p 7. PECO's original proposal was that these 3% of two-year products should be five-year products.

Exhibit A

Procurement Schedule

Class	Product Term	Months	Full Requirements Fixed Price Products							
			March 2017	Sept 2017	March 2018	Sept 2018	March 2019	Sept 2019	March 2020	Sept 2020
			Number of tranches							
Residential	June 2017 - May 2018	12	12							
	June 2017 - May 2019	24	9							
	June 2017 - May 2019	24	2							
	December 2017 - November 2018	12		12						
	December 2017 - November 2019	24		9						
	June 2018 - May 2019	12			12					
	June 2018 - May 2020	24			9					
	December 2018 - November 2019	12				12				
	December 2018 - November 2020	24				9				
	June 2019 - May 2020	12					12			
	June 2019 - May 2021	24					9			
	June 2019 - May 2021	24					2			
	December 2019 - November 2020	12						12		
	December 2019 - November 2021	24						9		
	June 2020 - May 2021	12							12	
	June 2020 - May 2022	24							9	
	December 2020 - November 2021	12								12
	December 2020 - November 2022	24								9

Class	Product Term	Months	Full Requirements Fixed Price Products							
			March 2017	Sept 2017	March 2018	Sept 2018	March 2019	Sept 2019	March 2020	Sept 2020
			Number of tranches							
Small Commercial	June 2017 - May 2018	12	9							
	June 2017 - May 2019	24	3							
	December 2017 - November 2018	12		9						
	December 2017 - November 2019	24		3						
	June 2018 - May 2019	12			6					
	June 2018 - May 2020	24			3					
	December 2018 - November 2019	12				6				
	December 2018 - November 2020	24				3				
	June 2019 - May 2020	12					6			
	June 2019 - May 2021	24					3			
	December 2019 - November 2020	12						6		
	December 2019 - November 2021	24						3		
	June 2019 - May 2021	12							6	
	June 2019 - May 2022	24							3	
	December 2019 - November 2021	12								6
	December 2019 - November 2022	24								3

Class	Product Term	Months	Full Requirements Spot Price Products							
			March 2017	Sept 2017	March 2018	Sept 2018	March 2019	Sept 2019	March 2020	Sept 2020
			Number of tranches							
Consolidated Large Commercial and Industrial	June 2017 - May 2018	12	8							
	June 2018 - May 2019	12			8					
	June 2019 - May 2020	12					8			
	June 2020 - May 2021	12							8	

Table 3 Procurement schedule for PECO utility

The extension to four years was reflected in a negotiated settlement. On March 17, 2016, PECO had filed its proposed default service plan for the two year period June 2017 to May 2019. Intervenors in the process included Noble Americas Energy Solutions LLC (a supplier subsequently acquired by Calpine), the Retail Energy Supply Association (RESA), the Philadelphia Area Industrial Energy Users Group (PAIEUG), the Office of Consumer Advocate (OCA), the Coalition for Affordable Utility Services and Energy Efficiency in Pennsylvania (CAUSE-PA), and the Tenant Union Representative Network and the Action Alliance of Senior Citizens of Greater Philadelphia (TURN et al.).

After discussions, all parties except Noble reached a settlement agreement on all but one of the issues. On July 28, 2016 they filed their partial settlement for PECO's default service plan for the four year period June 2017 to May 2021. The unsettled issue concerned PECO's Customer Assistance Program (CAP) Shopping Plan, as it related to moderate and low-income residential customers who are tenants and/or senior citizens.[40] The Commission approved the settlement agreement concerning the default service program and deferred for later consideration the issue of the CAP shopping plan. [41]

The settlement also spelled out, in more detail that the original proposal, how the utility's costs would be recovered via the rate design. For residential customers, "default service rates … will continue to change quarterly and over/undercollections of default service costs will continue to be reconciled on a semi-annual basis".[42]

Finally, the settlement confirmed PECO's proposal to continue the Standard Offer program that had been used to encourage customers to move to a competitive supplier. And it spelled out precisely how PECO representatives should explain this to customers.

> 40. The currently-effective Standard Offer Program ("SOP"), including the cost recovery mechanisms last approved by the Commission in PECO's DSP III proceeding, will continue until May 31, 2021.
>
> 41. Within ninety days of Commission approval of this settlement, SOP procedures, scripts and training documents shall be revised in the following manner:
>
> (a) PECO customer service representatives will be required to complete the transaction that was the subject of the customer's call to the PECO Care Center and provide all information relevant to the call (e.g., account numbers) prior to initiating any transfer to Allconnect.
>
> (b) PECO's SOP script initiating the transfer to Allconnect will provide the following language: "Your new account number is [12345-67899]. In Pennsylvania, you can choose the supplier that provides your electricity without impacting the quality of service provided by PECO. PECO is sponsoring a program called the Smart Energy Choice Program which may be able to offer you a potential savings opportunity by enrolling with an electric generation supplier. Would you like to hear more? If response is no: Close the call. If response is yes: Please hold while I transfer you to a specialist that can help you."

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[40] The customer groups argued for continuing or extending various protections for CAP customers if they were allowed to choose a competing retailer (including, for example, a guarantee that the competing retailer's price would be below the utility's default price). RESA argued that this was not necessary or desirable. The utility PECO argued (successfully as it turned out) for deferring the issue to a separate proceeding.

[41] Pennsylvania PUC, P-2016-2534980, Petition of PECO Energy Company for Approval of its Default Service Program for the Period from June 1, 2017 through May 31, 2021, Opinion and Order, December 8, 2016.

[42] "Such rates will continue to recover: (1) generation costs, certain transmission costs and ancillary service costs established through PECO's competitive procurements; (2) supply management, administrative costs (including costs incurred by PECO to implement Commission-approved retail market enhancement programs) and working capital, as provided in 52 Pa. Code § 69.1808; and (3) applicable taxes. The projected GSA [Generation Supply Adjustment] for each quarter, which forms the basis of the Price-toCompare ("PTC"), will be filed by PECO 45 days before the start of each quarter." (p 11).

(c) The Allconnect script will be revised to include the following language, which replaces the language required in the DSP III Settlement: “Hi, My name is [Allconnect NAME]. I understand you would like to learn more about the PECO Smart Energy Choice Program. Is that correct? PECO is responsible for delivering your electricity. The actual generation of the electricity you receive can be provided by PECO or a participating supplier of your choice. The PECO Program offers a fixed price of [SOP rate] cents/kWh for one year provided by an Electric Generation Supplier. The fixed Program price provides a 7% discount off of today’s Price to Compare which is [PTC Rate] cents/kWh. PECO’s Price to Compare changes quarterly in March, June, September and December. The PECO Smart Energy Choice Program price will not change during the 12 monthly bills, but the Price to Compare could be higher or lower than the PECO Program price during this period.”

12. Massachusetts: restructuring and standard offer electric service 1997-2005

The next example is from Massachusetts in New England. This section explains the evolution of policy over the period up to 2005. In order to illustrate further the kinds of arguments at play in this context, the following section describes a settlement that sought to establish a slightly different approach for one particular utility. The third section summarises more recent deliberations whether to move purchasing further in the direction of the New Jersey auction process.

In November 1997, the Restructuring Act introduced competition into the generation component of electric service in Massachusetts. It stated that “long term rate reductions can be achieved most effectively by increasing competition and enabling broad customer choice in generation service, thereby allowing market forces to play the principal role in determining the suppliers of generation for all customers.” Customers could choose entities other than their electric companies to provide the generation component of their electric service. Conversely, the other components of electric service (transmission, distribution and customer service), continued to be monopoly services provided by the Massachusetts electric companies and fully regulated by the Department of Telecommunications and Energy (DTE) (or by the Federal Energy Regulatory Commission (FERC) for transmission).[43]

The 1997 Restructuring Act established three generation service options open to customers: (1) standard offer service, a “rate-protected” transitional service that electric distribution companies were required to continue to provide to their existing (1998) customers through February 2005; (2) competitive generation service, provided by competitive suppliers; and (3) default service, a temporary “last-resort” service for new customers not eligible for standard offer service until they chose a competitive supplier, also provided by electric distribution companies.

Standard offer rates for each electric company were set at levels that ensured that existing customers received a 15 percent reduction in their electric bills, adjusted for inflation, relative to a summer 1997 reference level. As a result, standard offer rates from distribution companies were often below the prices that competitive suppliers were able to offer (i.e. were below-market). Most residential customers therefore had little financial incentive to switch to a competing supplier. “Below-market standard offers present an impediment to the development of

[43] Massachusetts Department of Telecommunications and Energy, *2004 Annual Report*, p 5.

a robust competitive market for smaller customers, which may remain the case through February 2005." (p 6)

As regards the pricing of default service, the 1997 Restructuring Act required "(1) that each distribution company provide basic service [originally called default service]; (2) that basic service be competitively procured; (3) that the basic service rate "shall not exceed the average monthly market price of electricity;" and (4) that bids to supply basic service "shall include payment options with rates that remain uniform for periods of up to six months."[44] This was implemented as follows.

> "The Department initially required each distribution company to procure 100 percent of its default service power supply requirements for smaller customers in a single solicitation. The Department revised this policy in [2002], stating that, because prices in the wholesale market can change quickly, procuring 100 percent of supply in a single solicitation could result in prices that represent an "anomalous market condition" and could lead to unwanted levels of price volatility.
>
> In terms of contract length, the Department stated that shorter-term procurements would ensure that default service rates "more accurately reflect market prices" but at a cost of increasing the "volatility of default service prices." Conversely, lengthening the procurement term would provide for more price stability but would weaken the connection to market prices.
>
> In 2002, the Department revised our policy to require distribution companies to procure 50 percent of their residential and small C&I supply requirements semi-annually for twelve-month terms, stating that such an approach is a better balance "between price certainty and price efficiency." As a result, each distribution company's default service supply for a particular six-month term is provided by a portfolio of resources from the company's two most recent supply solicitations, with default service prices calculated based on the winning bids of those solicitations." (April 2015 Order, p 3, references omitted)

In December 2004 the DTE noted that the 1997 Restructuring Act transition period would come to an end in February 2005. Remaining standard offer customers would become default service customers. "Despite the DTE's best efforts to remove barriers to the development of an active retail competitive market for all customers, most of the electricity consumed by residential and small commercial and industrial customers currently is provided through standard offer service and default service."[45] In fact, such supply was approximately 95% of residential consumption.

The DTE therefore requested comments on how default service power supply should be procured in future. It invited comments on whether there would be advantage in more frequent solicitations to procure default supply, perhaps following a more "laddered" approach as in some other jurisdictions.

> "Some jurisdictions (e.g., Connecticut, Maine, New Jersey) employ a more segmented portfolio approach to procure default service supply. Sometimes referred to as a

[44] Commonwealth of Massachusetts, DPU 15-40, Order opening investigation, April 9, 2015, p 2.

[45] Commonwealth of Massachusetts, DTE 04-115, Request for comments on the procurement of default service power supply for residential and small commercial and industrial customers, Dec 6, 2004, p 1.

> "laddered approach," a portfolio of several shorter and longer term contracts is procured for overlapping terms. An example of such a laddered approach would be one in which supply is procured annually, with one-third of the supply requirement procured for a one-year term, one-third of the requirement procured for a two-year term, and one-third of the requirement procured for a three-year term. An even more segmented portfolio approach was offered for Department consideration in DTE 02-40. In this proposed approach, each distribution company would use eight quarterly solicitations to procure its default service supply requirement. Each company's default service rates would change quarterly and would be based on the winning bids of the eight solicitations from which supply was procured for that quarter." (p 4)

The DTE also noted that in Massachusetts the distribution companies issued requests for proposals to supply, whereas in Maine and New Jersey this was done statewide. The DTE invited comments on the advantages and disadvantages of the two approaches.

In February 2005 the DTE decided that "default service" would be renamed "basic service".[46] But it seems not to have decided on any change in the basis of procurement. It reaffirmed that "the linchpin of a restructured electricity industry is the creation of a competitive market for generation services", provided by competitive suppliers.[47] There was also provision for municipal aggregation, and the Department approved a municipal aggregation plan for the Cape Light Compact, encompassing the cities and towns located on Cape Cod. More on this in section 19 below.

13. Massachusetts: laddered procurement in an exceptional 2005 settlement

As just explained, policy in Massachusetts was for distribution utility companies to procure half the predicted basic service requirement semi-annually. The DTE considered a more laddered approach, which would have smoothed basic service prices more, but did not implement this. However, this did not preclude an exception in one particular case, where the utility proposed to implement a laddered approach over three years. Although the resulting practice was not typical (and in the event was not actually implemented), the case illustrates the different views about procurement and pricing policy taken by the interested parties.

In 2005 four utility companies filed a rate settlement agreement entered into with the Attorney General of the Commonwealth of Massachusetts, the Low-Income Energy Affordability Network (LEAN) and the Associated Industries of Massachusetts. [48] This settlement, to cover the next seven years, was mainly directed at numerous other matters, including an increase in certain distribution charges and a reduction in certain transition charges. It also specified a laddered approach for electricity default service.

> "The Settlement requires NSTAR Electric to design a laddered approach for the procurement of basic/default service supply for residential customers to take effect July

[46] Commonwealth of Massachusetts, DTE 04-115A, Procurement of Default Service Power supply for residential and small commercial and industrial customers, Feb 7, 2005.

[47] Massachusetts Department of Telecommunications and Energy, *2005 Annual Report*, p 5.

[48] Commonwealth of Massachusetts, DTE 05-85, December 30, 2005. Petition of Boston Edison Company, Cambridge Electric Light Company, Commonwealth Electric Company and NSTAR Gas Company … for approval of a rate settlement effective January 1, 2006.

> 1, 2006, such that: 1) 50 percent of supply will be procured under one-year contracts; (2) 25 percent of supply will be procured under two-year contracts; and (3) 25 percent of supply will be procured under three-year contracts (Settlement at §2.21). NSTAR Electric will work with the Attorney General and LEAN to develop a staggered schedule to implement this provision, including a method for further review and modification to potentially include longer-term contracts (id.). The Settlement states that the laddered approach aims to reduce price volatility for small customers (id.). (p 9)

For gas, the settlement provided for a fixed price option, as well as various programs to assist low-income customers.[49]

As is generally the case, the negotiated settlement was proposed on an "all-or-nothing" basis. The case for it was "to provide ratepayers with some immediate relief from rising energy prices and with long-term price stability". It would "avoid a time-consuming and costly rate proceeding". And it would include "new initiatives for procuring basic/default service". (p 16)

As regards default service issues, retailers were the main critics.

> "National Energy Marketers Association (NEM) … recommends rejection of the proposed electric procurement proposal at section 2.21 of the Settlement on the grounds that, by staggering procurements over three years, ratepayers will not become educated consumers responding to meaningful price signals. NEM maintains that mandating a three-year commitment for a quarter of the supply is also likely to artificially inflate prices due to the lack of liquidity to hedge supply in the last half of the contract. NEM asserts that it also will exacerbate the ongoing credit crisis, significantly increasing energy costs and reducing competition simultaneously. NEM further argues that this market structure and three-year contract terms will insulate the retail price from market movements inasmuch as three-quarters of supply will always be locked in. NEM maintains that, as a result, a retail boom will be created when the forward market drops below the "locked in" NSTAR Electric rate, and a retail bust will be created when the forward market increases above the "locked in" STAR Electric rate. NEM contends that this could severely inhibit consumer migration to competitive supply in the NSTAR electric service territory.

The NEM also argued against the fixed price gas default rate, on the basis that "fixed price commodity offerings are products that should be offered by the competitive market place, and that such an offering by a regulated utility undermines any semblance of objective competitive neutrality." (pp 22-23) (This argument was made by marketers in other states too. Ironically, an alternative to a fixed price default rate is an indexed default rate, but that has proved difficult for retailers with fixed products to compete against.)

[49] The settlement also provided for "the creation of a new arrearage forgiveness program (AFP) designed to assist low-income customers through energy efficiency services, budget counseling, and negotiated payment plans". Reasonable costs in excess of the benefits would be "recovered annually through the Residential Assistance Adjustment Factor (RAAF) recently approved by the Department". (The utilities would file these and other costs for Departmental approval.)

The utility companies replied that "none of those comments refutes the fact that the Settlement is reasonable, will result in just and reasonable rates, and is in the public interest."

> "…the laddering of procurements for basic/default [electricity] service decreases price volatility because it blends the market price offered over several supply solicitations. …
>
> … a fixed-price option for residential and small commercial gas customers provides similar benefits. The Companies assert that this provision of the Settlement is necessitated by the competitive market's failure to succeed in offering such an option for these customer classes). On NEM's complaint that NSTAR Gas not offer this service as a regulated utility, the Companies argue that NSTAR Gas makes no money in providing default service, and that the fixed-price option is nothing more than a rate design option that will be offered to eligible default service customers." (p 25)

The Department approved the Settlement.

> "Although the Settlement has encountered some opposition, it is nevertheless supported by several parties representing a broad range of interests including residential, low-income, and business customers. The Department finds that the evidence supports a finding that the Settlement, taken as a whole, balances the competing goals of allocating costs while maintaining rate structure principles of efficiency, simplicity, continuity, fairness, and earnings stability. The Department further finds that the resulting rates are just and reasonable and that the Settlement is consistent with the public interest." (p 31)

It seems that this ladddered basis for calculating NSTAR's default electricity service was not actually implemented in practice. The case is thus of interest here in highlighting how consumer groups favoured greater smoothing of rates over time while retailers adduced a variety of reasons why this would not be a good idea.

14. Massachusetts: further consideration of basic service 2015

In April 2015 the Department of Public Utilities (DPU, which had succeeded the DTE) opened an investigation into significant increases in basic service electricity prices, and into declining participation by wholesale suppliers to basic service solicitations.[50] It started by summarising policy since 2002.

> "Pursuant to the Department's directives, the electric distribution companies procure basic service by conducting competitive solicitations (1) every six months to procure 50 percent of the supply requirement for one year for their residential and small C&I [Commercial and Industrial] customers, and (2) every three months to procure 100 percent of the supply requirement for three months for their medium and large C&I basic service customers.
>
> In these procurements, wholesale electricity suppliers submit bids to provide "all requirements service" for the applicable basic service term, with bid prices identified separately for each month of the term. As providers of all requirements service, suppliers

[50] Commonwealth of Massachusetts, DPU 15-40, Investigation into the provision of basic service, April 9, 2015.

> are responsible for providing the energy, capacity, ancillary services, and any other services or products necessary to serve 100 percent of the load, delivered to a specified point on the electric distribution company's system. Thus, each supplier's bid price is based on its projected costs to supply the products described above, taking into account its responsibility to provide supply for all basic service load, regardless of increases or decreases in load over the term. The distribution companies take a weighted average of the monthly bid prices to establish a fixed price basic service option, in addition to an option where prices change each month. Residential and small C&I customers are placed on a six-month fixed price option and medium and large C&I customers are placed on the variable monthly rate option; all customers have the opportunity to change their pricing option.
>
> The basic service rate is set as a "pass through" of the market costs of electricity supply to customers; electric distribution companies do not earn a return on or derive a profit from providing basic service. The Department reviews an electric distribution company's basic service solicitation to ensure that it is competitive and that the resulting rates are appropriately market based." (pp 3-5, references omitted)

The Department had also taken other measures to enhance and promote retail competition.

> "The Department has recently taken a number of steps to enhance the value that residential and small C&I customers receive from the competitive electric supply market, including a proceeding aimed at (1) removing barriers to participation in the competitive market; (2) providing customers with information regarding competitive supply products that is accurate, transparent, and understandable; and (3) improving customer protections related to the marketing and delivery of competitive suppliers' product offerings. See *Initiatives to Improve the Retail Electric Competitive Supply Market*. (DPU 14-40) [51] In addition, last year the Department established a program for electric distribution companies to purchase the receivables of competitive suppliers for the amounts owed to the suppliers by their retail electric customers who are billed under the complete billing method. (See *Investigation Regarding Purchase of Receivables.*) Purchase of receivables programs are intended to reduce the barriers that competitive suppliers face in entering the competitive retail market, thereby increasing the number of market participants and enhancing retail competition to achieve benefits for customers.
>
> While the Department anticipates an increase in participation in the competitive supply market as a result of its recent actions, we expect that, at least in the near future, a significant portion of residential and small C&I customers will continue to receive their generation service through basic service supply." (pp 5-6, references omitted)

The Department now put some further options on the table for discussion.

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[51] "In its Order opening this proceeding [DPU 14-40], the Department outlined five initiatives: (1) developing a "shopping for competitive supply" website; (2) revising the existing information disclosure label; (3) eliminating the basic service bill recalculation provision for residential and small C&I customers; (4) establishing reporting requirements for door to door marketing; and (5) establishing reporting requirements and rules for the assignment of customers to another competitive supplier." (DPU 15-40 p 6)

> "To address the challenges of high basic service prices and limited supplier response to solicitations, the Department puts forth for consideration three potential changes to basic service pricing and procurement: (1) adopting a more "layered" approach to the procurement of basic service supply; (2) providing the distribution companies with greater discretion and flexibility in their basic service supply procurement practices; and (3) changing the "all requirements" obligation currently placed on basic service suppliers." (p 10)

Later, in August 2015, the Department invited further comments on the possibility of an auction process as in New Jersey instead of utilities putting out requests for proposals. Interested parties responded. There seems (to me) no great pressure for such changes, although RESA argued for the New Jersey approach using auctions[52], as did the retailer Nextera. And an additional issue did attract attention in 2016, viz the possibility of zonal pricing of basic service. The DPU investigation is ongoing.

15. Illinois: default service procurement plans

The network utilities in Illinois are located in PJM and MISO (Midcontinent Independent System Operator) wholesale markets. They have a unique governance arrangement, whose origins lie in an exceptional episode around 2007. Briefly, after the end of the rate freeze in 2006, the utility Commonwealth Edison (ComEd) carried out an auction to determine future supply. This led to a rate increase of about 25%. Some attributed this to a hurricane that disrupted gas supplies and caused a gas price spike (despite which the auction was not postponed). Others alleged that the process had unduly favoured the utility's affiliated generation companies, though no misbehaviour was ever established.

The utility Ameren in the south of the state had other problems. In December 2005 its pumped storage dam in neighbouring Missouri had failed and destroyed a local park. In December 2006 its lights went out during an ice storm. It secured a rate increase of about 40% but its rate design was perceived as problematic and some customers reportedly saw a 300% rate increase. (Electric heat customers had been heavily subsidised in both utility's areas and this was part of the process of reducing that subsidy.)

As part of a settlement package to avoid the threat of bankruptcy, the utilities entered into five year swap contracts to provide price stability. (Since the prices in these contracts turned out to be higher than market prices, this turned out to be to the utilities' advantage, and also had further consequences as explained below). The utilities also agreed customer refunds of around $1 bn and agreed to give up the generation procurement process. Henceforth, energy procurement was the role of the Illinois Power Agency (IPA), established in 2007.

> "Its goals and objectives are to accomplish each of the following:

[52] "… the descending clock auction model currently in use in the State of New Jersey results in a dynamic bidding process that yields greater transparency and competitive market prices versus the opaque and static FRS RFP process in use in the Commonwealth". Commonwealth of Massachusetts, DPU 15-40, Reply Comments of Retail Energy Supply Association, Sept 11, 2015, p 5.

- Develop electricity procurement plans to ensure adequate, reliable, affordable, efficient, and environmentally sustainable electric service at the lowest total cost over time, taking into account any benefits of price stability, for residential and small commercial customers of Ameren, ComEd, and MidAmerican. The procurement plan is updated on an annual basis.
- Conduct competitive procurement processes to procure the supply resources identified in the procurement plan. …
  [The IPA must also]
- Ensure that the process of power procurement is conducted in an ethical and transparent fashion, immune from improper influence.
- Operate in a structurally insulated, independent and transparent fashion so that nothing impedes its mission to secure power at the best prices the market will bear, provided that it meets all applicable legal requirements."[53]

Some argued for using an all-requirements (FPFR) type of auction as in New Jersey, the mid-Atlantic states and New England. In contrast, the IPA took the view that Block and Spot with a laddered approach was likely to result in lower cost, and the IPA has continued to maintain this view today.

> "The 2018 Plan proposes to continue using the risk management and procurement strategy that the IPA has historically utilized: hedging load by procuring on and off- peak blocks of forward energy in a three- year laddered approach. The IPA believes the continuation of its tested and proven risk management strategy is the most prudent and reasonable approach, and the approach most likely to meet its statutorily mandated objective to "[d]evelop electricity procurement plans to ensure adequate, reliable, affordable, efficient, and environmentally sustainable electric service at the lowest total cost over time, taking into account any benefits of price stability." The IPA's energy hedging strategy for the 2018 Procurement Plan is consistent with the strategy used for the 2017 Plan. That strategy involves the procurement of hedges in 2018 to meet a portion of anticipated eligible retail customer energy supply requirements for a three- year period and includes two block energy procurement events, one in the Spring and the second in the Fall." [54]

Thus, the IPA approach in Illinois has rejected the New Jersey auction approach and has decided instead on a utility-based block and spot approach. Utilities in Illinois track the additional costs or credits incurred by load-following and customer switching. They then charge these costs back to default supply customers through a monthly Purchased Electricity Adjustment (PEA), which is added to or subtracted from the default supply price each month. (The PEA is capped at a maximum of 0.5¢/kWh each month, with amounts outside the cap deferred to the next month.)

The consequence is that, to this extent, migration and load-following risk is not absorbed and priced in by the wholesale providers but falls on the default service customers themselves via

[53] https://www.illinois.gov/sites/ipa/Pages/default.aspx.
[54] Illinois Power Agency 2018 Electricity Procurement Plan, filed for Illinois Commerce Commission approval, September 25, 2017.

this additional charge. Suppliers regard this as an important distinction. Because the purchased blocks do not cover the load-following costs, nor do they capture the risk of customer migration, they are priced lower than a comparable product purchased at the same time that would have included such costs. Although the Illinois default supply price may be presented as the "price to compare", and may give the appearance of being a fully fixed load-following price, in fact it is not. Suppliers argue that this makes it more difficult for customers to compare the default price against those offered by competing retailers.

Default prices in Illinois are specified for two periods per year (summer and non-summer). There is also the option of real-time (hourly) pricing for those customers with smart meters. A program to install such meters for every customer in the ComEd area is largely complete.

Part III Nature and consequences of retail competition in the competitive US states

16. Retail competition for industrial and commercial consumers

Although this report focuses on retail competition for residential consumers, it is worth briefly noting the experience of industrial and commercial consumers. They too have default service available, which might be a fixed price variable annually, quarterly or monthly, or an hourly spot price.

The percentage of eligible commercial and industrial electricity load served by competitive suppliers in the 14 jurisdictions increased steadily from 28.4% in 2003 to about 85% by 2013, since when it has remained at about that level.[55]

There is considerable variation across the 14 competitive states. In 2014, for industrial customers, the range was from just over 35% of customers in Massachusetts to 100% in Washington DC, with a median of about 85%. For commercial customers the range was from under 10% in Rhode Island to about 85% in Ohio, with a median of about 65%.[56]

In general, large customers have expertise in purchasing energy. They value hedging to reduce risk and they have individual load profiles that may differ from the average load profile underlying the default supply price. They are willing and able to negotiate their own electricity deals on more advantageous terms than the utility can offer. Reportedly, where default service is priced on a quarterly basis, some large customers purchase on that basis too, hence potentially changing retail supplier every three months.

Moreover, as more customers supply their own load, the smaller remaining default service load becomes more sensitive to individual customers leaving or rejoining default service. This greater uncertainty about the quantity to be supplied (load-following risk) is reflected in higher risk premia built into bids to supply default load. This in turn makes default service supply more costly and hence less attractive, and competing suppliers more attractive.

Regardless of the precise basis of default service pricing, there seems to be widespread satisfaction with retail competition for industrial and commercial customers. Yet there seems to be no particular desire to remove the provision of default service, used by about 15% of such customers.

17. Retail competition for residential customers

One would expect – and indeed we observe internationally – a higher proportion of commercial and industrial customers than residential customers opting for competing suppliers. This has been attributed to economies of scale.

> "Customer size is the main reason that residential customers have adopted retail choice at much lower rates than commercial and industrial customers. The gross benefits of switching suppliers are roughly proportional to a customer's size. For a business, these

[55] O'Connor (2017) Fig 6 p 16.
[56] Morey & Kirsch (2016), Fig 2 p 5.

> benefits can be large enough to warrant spending staff time investigating electricity supplier options, and even large enough to justify having some staff dedicated to managing energy consumption decisions. For a residential consumer, by contrast, the gross benefits warrant only minimal consideration of options. Furthermore, businesses have abilities to manage information and financial risks in ways that are generally unavailable to residential consumers; so risk aversion will quite rationally induce residential consumers to stick with their low-risk incumbent supplier to a greater extent than it will so affect businesses."[57]

What are the figures for residential switching in the US competitive states? As noted above, not all residential customers in these states are eligible to switch to a competitive supplier. (In Texas, for example, customers of municipal electricity companies and rural cooperatives are not eligible to choose another supplier.) Restricting the calculation to customers eligible to switch, for the 14 competitive US states, the percentage of total residential load (kWh) served by competitive suppliers increased steadily from about 6% in 2003 to over 20% in 2007 to about 50% in 2013, since when it has remained about constant.[58]

Table 4 shows the extent of switching by state in three illustrative years. The average proportion of eligible customers that took service from competitive suppliers, which was about 6% in 2003, increased steadily from about 18% in 2007 to nearly 44% in 2014, and still remains at about that level.

However, the overall average is not fully representative because the range is very considerable: from zero to 100% in 2007. Texas is exceptional because the incumbent utility is not allowed to provide supply (except minimally POLR), so essentially 100% of eligible Texas customers are with a competitive supplier.

A customer in Texas that did not choose a supplier would have been transferred to a supplier affiliated with the incumbent utility. The proportion of residential customers in Texas that has made an active choice to be served by a non-affiliated retail electricity provider shows a clear pattern, increasing from 10% in 2003 to 40% in 2007 to 59% in 2012 to 67% in 2016 and to 68% in 2017. [59] Thus, the proportion of customers actively selecting a non-affiliated supplier in Texas has systematically increased over time, albeit at a declining rate. It is almost always higher than the proportion of customers actively choosing a competitive supplier in any other state.

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[57] Morey & Kirsch (2016) pp 6-7. The paper goes on to note that government or regulatory restrictions can discourage competition. "To some extent, competition has been discouraged by the ways in which some states have required utilities to offer provider-of-last resort (POLR) service. This requirement has been intended to protect consumers by assuring that they can obtain electricity from incumbent utilities at reasonable prices. In addition to protecting consumers, however, state-mandated ceilings on POLR service prices also interfere with the establishment of retail prices that accurately reflect power system costs and reduce the profitability of offering competing retail electricity services." However, as explained herein, such transitional restrictions as state-mandated ceilings on POLR service prices have now largely been reduced or removed in the 14 competitive states.

[58] O'Connor (2017) Fig 6.

[59] Public Utility Commission of Texas, Report Cards on Retail Competition and Summary of Market Share Data. Text percentages are from July each year.

Table 4 Switched residential accounts in the competitive jurisdictions[60]

State/Jurisdiction	**2007**	**2014**	**2016**
CT Connecticut	4.0%	38.0%	31.4%
DC Washington DC	1.1%	14.1%	14.7%
DE Delaware	1.5%	10.3%	10.3%
IL Illinois	0.0%	64.5%	45/41% •
MA Massachusetts	10.6%	18.6%	38.9%
MD Maryland	2.5%	23.6%	19.8%
ME Maine	0.5%	24.5%	19.0% ••
NH New Hampshire	0.0%	18.8%	19.1%
NJ New Jersey	0.0%	14.7%	15.0%
NY New York	10.0%	20.6%	18.2% •••
OH Ohio	6.1%	54.0%	51.3%
PA Pennsylvania	2.2%	36.6%	34.5%
RI Rhode Island	0.0%	5.2%	12.0%
TX Texas	100.0% (40%)	99.8% (59%)	100.0% (67%)
Total	**18.3%**	**43.9%**	**42.8%**

In 2007 the other two leading states with respect to retail competition at residential level were Massachusetss and New York, with switching rates around 10%. But by 2014 they had been well overtaken by Illinois (64.5%) and Ohio (54%). As discussed in the next section, these are states where municipal aggregation has been allowed and particularly enthusiastically pursued, thereby allowing whole communities to be switched without an active choice by individual customers. There has also been a recent increase in aggregation in Massachusetts.

A better measure of active participation in the competitive states overall is perhaps the median switching rate. This increased from under 2% in 2007 to about 22% in 2014 and fell back slightly to about 19.5% in 2016. The minimum switching rate increased from zero in 2007 to 5% in 2014 to over 10% in 2016. The inter-quartile range was 0% to 8% in 2007 and increased to roughly 15% to 45% in 2014 and 2016.

The broad picture seems to be that, from 2007 to the present, residential customer switching has become established throughout the 14 states, with participation increasing in the originally inactive states. The main feature in recent years is perhaps the stability in switching rates, with a median of about 20% and a range of about 15% to 45%. Retail competition is no longer expanding at the residential level. However, the next section looks in more detail at the impact of municipal and community choice aggregation, which may change the picture.

[60] Source: This table is a composite of data from the US Energy Information Administration (EIA), based on Form 861 submitted by electric utilities, as well as data from DNV GL adapted from O'Connor (2017). Except as follows, figures are averages over the specified year. • Illinois 2016 figure is for May 2016/2017 based on ICC ORMD 2017 Report, see sections 21-23 below. •• Maine 2016 figure is for 2015, the 2016 value may be slightly lower. ••• New York 2016 figure reflects my calculation using EIA published data.

Figures for the UK are not directly comparable, because there is no equivalent utility default service there. However, about two-thirds of UK residential electricity customers are presently with suppliers other than their former incumbent supplier. (There is no municipal aggregation in the UK, although the possibility is being discussed.) This suggests that the proportion of residential customers with competing non-incumbent retailers is very much lower – less than one third the level - in most of the competitive US states than in the UK.

I am not aware of any systematic attempt to explain the differences in customer participation levels from one state to another. During and immediately after the transitional phases following market opening, the participation level was influenced by the transitional pricing arrangements in each state. States also differed in the extent to which they reduced the costs of switching, and encouraged transition of customers to competitive suppliers and away from default service (discussed in various sections here including in Part IV on New York). The extent of municipal aggregation and Community Choice Aggregation (as discussed further in the next two sections is also a factor.

Presumably the participation levels would also be influenced by the nature and level of the competitive market prices relative to the default service charge, and the extent and predictability of cost savings available.[61] There seems to be no extensive published analysis of this basic economic hypothesis in the US, although Tsai and Tsai (2018) provide recent evidence of it in the state of Connecticut.[62] That paper also makes an interesting further finding about competitive pricing: "Furthermore, we found that competitive suppliers on average were aligning their rates with the changes in regulated Standard Service rates rather than the movement of wholesale electricity prices."

Note that the term "switching" in the competitive US states refers to a *level*: the proportion of customers with competing suppliers (rather than the incumbent utility) at a point in time. There seem to be no statistics available on switching rates in the sense of the proportion of residential customers *changing* supplier each year, also known in the UK as churn. Informal but undocumented conjectures to me are that churn in some US states is very low, maybe of the order of 2 - 3% per year in some cases (although it can be much higher where municipal aggregation contracts are started or terminated). This is nearly an order of magnitude lower than the range of 10-20% per year observed in the UK since 2003 (and presently nearly 20% again there) and characteristic of many other retail markets internationally. At such low level in the US markets, churn as a competitive phenomenon is perhaps not easily distinguishable from changes in supplier as a result of customers moving house/residence.

[61] In the UK, "the strongest driver of consumer activity is the anticipated gains from switching". M Flores and C Waddams Price, "Consumer behaviour in the British retail electricity market", CCP Research Paper 13-10, Centre for Competition Policy, University of East Anglia, October 2013.

[62] "We found that between January 2015 and December 2016, as the rates for Standard Service decreased, residential consumers were responding and returning to Standard Service. However for customers who continued acquiring electricity from competitive suppliers, many of them were able to find plans with prices lower than the rates of Standard Service." Chen-Hao Tsai and Yi-Lin Tsai, "Competitive retail electricity market under continuous price regulation", forthcoming in *Energy Policy*, 114, March 2018 (Working paper, p 3).

18. Municipal aggregation

In states where municipal aggregation is allowed, this typically enables representatives in a municipality to put a question on a local election ballot paper inviting residents to vote for municipal aggregation.[63] If the motion is sufficiently supported, municipal representatives will negotiate with competitive suppliers for a better price than the utility default service rate. If they obtain and accept a sufficiently better offer they will switch all residential and small commercial customers in the municipality. Individual customers have the ability to opt-out (which is typically not exercised by more than a small fraction of the residents). In some states, it is now possible for the municipal council to initiate the process, rather than requiring residents themselves to vote in an election.

Note that this "opt-out" process is distinct from "opt-in" aggregation, whereby local or other organisations invite potential customers to join together to invite an offer from potential suppliers. Opt-in schemes have been offered in many electricity markets but in general have not attracted a high enough response to have a significant impact on the total number of customers with competitive suppliers.

Municipal aggregation of residential customers is presently allowed in seven US states. In date order of adopting the approach, these are Rhode Island 1996, Massachusetts 1997, Ohio 2001, California and Illinois 2002, New Jersey 2003, and New York 2016. In 2011 Pennsylvania clarified that municipal aggregation was not allowed without its explicit approval, because of its possible adverse effect on competition[64], though in 2015 there was a proposal to allow it. Delaware is presently considering the possibility of allowing such aggregation.

Until the last few years, not much municipal aggregation actually happened in five of these seven states. In Rhode Island schemes are not yet available to residential customers. (Reportedly, one of the problems is that the law requires the terms of the deal to be put on the ballot box, but any tentative deal may be off the table by the time the results are known.) In Massachusetts the Cape Light Compact was active from the beginning, but its cities accounted for under 7% of residential customers in the state. (Recent dramatic developments are discussed further in the

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[63] For an early introduction to this topic, see Rader, N. and S. Hempling (2000), *Promoting competitive electricity markets through community purchasing: The role of municipal aggregation*, report for the American Public Power Association, Washington D.C., available at:
http://www.scotthemplinglaw.com/files/pdf/ppr_appa_municipal_aggregation0100.pdf .
For a more recent survey of aggregation schemes and suggestions for application to the present UK context, see David Deller et al, *Collective switching and possible uses of a disengaged consumer database*, Centre for Competition Policy and University of East Anglia, August 2017.

[64] The Public Utility Commission chairman expressed his concern that municipal aggregation "may actually hinder competition by allowing a single supplier to lock in large groups of customers at a single point in time" which may prevent other "suppliers from making offers, thereby stifling innovation and competition and deterring the development of a robust retail market". "… the Commission ruled that "absent a legislative change to the anti-slamming provision, opt-out aggregation programs must be explicitly approved by the Commission, and the Commission will approve such programs only in unique circumstances where it is clearly in the public interest to do so. Under the facts that exist at this time, Commission approval of an opt-out municipal aggregation program would be an improper and unnecessary abrogation of individual consumers' rights concerning electricity choice." Pennsylvania Public Utility Commission, Press release "PUC clarifies municipal aggregation rules", March 17, 2011.

next section below.) In New Jersey municipal aggregation was originally introduced on an opt-in basis and nothing happened. In California there is now considerable interest in Community Choice Aggregation to increase renewable energy, as briefly summarised at the end of the next section. In New York CCA has only recently been allowed, in April 2016, “as part of both Governor Cuomo’s Reforming the Energy Vision (REV) initiative and its [the Commission’s] continued review and revision of retail energy markets”.[65] A couple of CCA schemes, involving a handful of towns, have since been approved. The Commission may see CCA as an alternative, rather than complement, to retail competition.

Municipal aggregation with a view to reducing the cost of electricity supply has been most extensively practiced in Ohio and Illinois. Ohio pioneered the concept.[66] In 1999 the Northeast Ohio Public Energy Council (NOPEC) was formed, which has since grown to negotiate municipal aggregation rates on behalf of over 200 Ohio communities and some half a million residential customers. In 2003 the Public Utilities Commission of Ohio declared that “aggregation is the success story in Ohio”. But it was a roller coaster ride. In December 2004 residential switching reached 69% in Cleveland, 95% of which was accounted for by municipal aggregation programmes. Ohio’s program was declared “a model for other states”. But by 2006 residential switching in Cleveland had fallen to 8%.

In Ohio as a whole, the residential switching rate was around 20% in the early 2000s. Table 4 above shows that it fell to 6.1% in 2007 but then rose to a peak of 54% in 2014, and was slightly lower at 51.3% in 2016. In December 2016 the extent of residential switching to competitive suppliers ranged from 34% to 69% across the six utility areas in Ohio, with an average of 50%.[67] Municipal aggregation is still important but gradually less significant. Of the residential customers that switched to a competitive supplier, the proportion that did so via municipal aggregation steadily reduced from 96% in 2011, 92% in 2012, 70% in 2013, 59% in 2014, 57% in 2015, and 53% in 2016. (It was actually down to 42% in December quarter 2016, based on preliminary information on the regulatory website.) Given the total proportion of residential customers switching in each year, it follows that the proportion of residential customers negotiating their own agreement with a competitive supplier has steadily increased: 1% in 2011, 3% in 2012, 15% in 2013, 22% in 2014, 22.5% in 2015 and 24% in 2016 (potentially reaching nearly 30% in the last quarter of 2016).

The other state where municipal aggregation is very active is Illinois, discussed in more detail in section 23 below. The residential market opened to retail competition in 2011. The average residential switching rate reached 64.5% in 2014 (actually 68% in May 2014) but fell to 61% in

[65] NY PSC, Case 14-M-0224 Order authorizing framework for community choice aggregation opt-out program, April 21, 2016. The Order concludes, “Community Choice Aggregation, as a part of the REV proceeding, aligns with the Commission’s vision for an energy system that is cleaner and more dynamic. It will increase the options available to mass-market customers and allow them to access benefits that were previously limited to large customers. It also enables communities to determine their own paths and goals and collaborate with individuals, ESCOs, utilities, and DER providers to meet those goals and enhance a rapidly changing energy system.” (p 49)

[66] Stephen Littlechild, “Municipal aggregation and retail competition in the Ohio energy sector”, *Journal of Regulatory Economics*, 34(2). October 2008: 164-194. Statements in this paragraph are taken from this paper.

[67] https://www.puco.ohio.gov/industry-information/statistical-reports/electric-customer-choice-switch-rates-and-aggregation-activity/. The calculations based on this data may differ slightly from those in Table 4.

May 2015, 45% in May 2016 and 41% in May 2017. Municipal aggregation has had a significant impact. Of all residential customers with competitive suppliers, the share of those on municipal aggregation schemes reached 78% in May 2013. However, as in Ohio, it has since declined, to 74% in May 2014, 70% in May 2015, 64% in May 2016 and 56% in May 2017.

This means that the proportion of Illinois residential customers with competitive suppliers but not on municipal aggregation schemes was 0.26 x 68% = 18% in May 2014, 0.30 x 61% = 18% in May 2015, 0.36 x 45% = 16% in May 2016 and 0.44 x 41% = 18% in May 2017. In other words, it has remained rather constant over the last five years, at about 18%. In broad terms, over the last five years the proportion of residential customers in Illinois that belong to a municipal aggregation scheme has fallen from about a half to a quarter, the proportion taking competitive supply on an individual basis has remained constant at about 18%, and the proportion not taking competitive supply on either basis has increased from about a third to nearly 60%.

19. Community Choice Aggregation (CCA) in Massachusetts and California

A more recent variant of municipal aggregation is Community Choice Aggregation (CCA). The aim here, rather than to obtain a lower price offer, is typically to supply the community with greener electricity than the state requires in its Renewable Portfolio Standard (RPS), which is the basis on which the utility provides the default supply service. In some cases the aim is also to support renewable energy sources provided locally.

In Massachusetts, 1997 legislation enabled the formation of the Cape Light Compact, involving 21 towns. The Compact points out that

> "The 1997 Massachusetts Restructuring Act enabled towns and cities to become municipal aggregators like the Compact that could, among other things: • Purchase power on behalf of all customers in the municipality and provide the power to all customers on an opt-out basis; and • Implement energy efficiency programs instead of the local electric utility, ensuring that funds collected from Cape and Vineyard residents and businesses are spent to reduce the energy costs of Cape and Vineyard residents and businesses."[68]

"The Compact's mission is to serve its 200,000 customers through the delivery of proven energy efficiency programs, effective consumer advocacy and renewable competitive electricity supply."[69] On this basis, the Compact is perhaps better seen as a forerunner of later community choice aggregation schemes than a means of simply reducing electricity cost.

In 2013, only two organisations filed reports on their municipal aggregations schemes.[70] The Cape Light Compact with its 21 towns had some 127,000 residential customers signed up, amd Colonial Power representing 4 towns had 12,000 residential customers, so the total was nearly 140,000 customers. In 2014 the situation was similar, albeit with nearly 160,000 customers. But by 2015 Colonial Power had expanded to 18 towns, and another two towns adopted schemes, so that over 300,000 residential customers were involved. By 2016 Colonial Power had expanded to

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[68] https://www.mass.gov/files/let_marini_12-1-17_compact_municipal_aggregation_2017_annual_report_final_complete_filing_clc.pdf
[69] http://www.capelightcompact.org/about/
[70] https://www.mass.gov/service-details/municipal-aggregation-annual-reports

29 towns, and over 30 other towns had aggregation schemes. By 2017 Colonial Power was representing 34 towns and another 35 towns had their own schemes. Together with the 21 towns in the Cape Light Compact this meant a total of about 90 aggregation schemes, with nearly 450,000 residential customers. As of January 11, 2018, some 136 towns had approved aggregation programs, though not all are presently active.

The 90 active aggregation schemes represent about 19% of the 2.4m residential customers in Massachusetts. They also represent nearly half of the just over 900,000 Massachusetts residential customers that are presently with competitive suppliers.

The interest here is primarily in the nature of the terms offered to the residential customers in the latest (September 2017) reports.

- 4 towns offered only a price for standard supply, that is, with green content equal to that specified in the Massachusetts Renewable Portfolio Standard.
- This is also what Colonial Power's 34 towns usually offered, but its towns typically also stated that "The Municipality has procured Renewable Energy Credit's (REC's) for 100% of its Municipal Aggregation."
- 23 towns offered this standard supply but also an option of 5% extra green energy (or in one case 20% extra green energy).
- 6 towns offered three options: standard supply + 5% (or in one case +25%), 100% green, or what they (rather disparagingly) called "basic supply", with green content equal to the RPS.
- 4 towns offered these three options plus an additional choice, such as 50% extra green.
- The town of Salem made 100% green its standard supply, with an option to take more than 100%; the town of Swapscott offered three choices: 100% green, more than 100% green, or basic (RPS).

In general, the greener options came at a higher price. But in one case (Brookline) there was no price discount for basic supply.

The Cape Light Compact had offered Cape Light Compact Green as an option until January 2017.[71] In November 2016 the Compact decided to become a green aggregation, "meaning that all customers' electricity supply would exceed the Massachusetts RPS renewable content requirements by default". Effective January 2017, the Compact offered only terms with its chosen supplier NextEra that exceeded the Massachusetts RPS requirements. The specification is quite extensive.[72]

[71] "When a consumer chose Cape Light Compact Green, the Compact matched 50% or 100% of the electricity a consumer used each month with renewable energy certificates (RECs) produced by solar, wind, and small hydro generation resources – all of which can dramatically reduce air pollution and environmental damage. Specifically, of the RECs included (whether matching 100% or 50% of a consumer's usage), at least 25% were Class I Massachusetts Renewable Portfolio Standard (RPS) RECs, and the remainder were RECs from Low Impact Hydropower Institute (LIHI)- certified hydro resources. All resources were located within New England, and the vast majority of the Class I RECs were from resources on Cape Cod. The Compact had a total of 816 electricity accounts that participated in the program during calendar year 2016." https://www.mass.gov/files/let_marini_12-1-17_compact_municipal_aggregation_2017_annual_report_final_complete_filing_clc.pdf

[72] "As a result of contract negotiations, NextEra also agreed to direct its standard supplier and retail fees to new renewable energy projects through the EarthEraTM Renewable Energy Trust (Trust). The Trust is a fund established

The other state to note in the CCA context is California. Retail competition itself is not yet re-established there for residential customers, but there is now considerable interest in aggregation to increase renewable energy, coupled with developments in renewable energy technology and economics. Community Choice Aggregation was made possible by Assembly Bill 117, enacted in 2002, and strengthened by Senate Bill 790 in 2011, which created a code of conduct that incumbent utilities must adhere to.

> "Among the many new trends reshaping the California electricity landscape is the continued growth of net energy metering, largely driven by technology innovation and cost reduction in solar PV manufacturing and financing. Since 2007, over 4,500 MWs and 550,000 customers have 'gone solar'….
>
> One more recent trend is the growth of the CCA. Marin Clean Energy formed California's first CCA in 2010 and now serves 255,000 customers … Other active CCAs … serve a cumulative 660,000 customers. Between all these communities, 915,000 customers currently take retail service from a CCA. This number is set to grow significantly in the coming years as cities and counties with populations in excess of 15,000,000 people consider launching CCAs.(pp 4-5)
>
> Between rooftop solar, Community Choice Aggregators (CCAs) and Direct Access providers (ESPs), as much as 25% of Investor Owned Utility (IOU) retail electric load will be effectively unbundled and served by a non-IOU source or provider sometime later this year. This share is set to grow quickly over the coming decade with some estimates that over 85% of retail load [will be] served by sources other than the IOUs by the middle of the 2020s. (p 3)"[73]

20. Default service pricing and the impact on retail competition

In all the competitive states, regulatory bodies have repeatedly considered what kinds of arrangements, and in particular what basis for the pricing of default service, would best balance the encouragement of retail competition and the protection of customers. Retail suppliers, too, have been considering, from their own perspective, what basis for pricing of default service best enables them to attract customers away from default service by the utilities.

Initially, suppliers argued that default service rates should reflect wholesale spot prices as closely as possible, as opposed to default service rates being fixed for, say, a year at a time. Varying and

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by EarthEra, LLC, an affiliate of NextEra Energy Services, for the purpose of developing renewable energy projects in the United States. Funds from the Trust, which is administered by an independent third party, can only be used to build new renewable energy projects. NextEra has made a commitment to the Compact to direct those funds to projects in New England to the extent possible. The extended and amended NextEra supply contract includes green aggregation provisions which 1) require NextEra to procure and reserve an additional 1% of RPS-qualified MA Class 1 RECs on an annual basis, beyond the RPS requirements; 2) require NextEra to reserve EarthEraTM RECs to meet 100% of Compact customers' load, in addition to the RPS-qualified RECs; and 3) require NextEra to deposit the premium paid by Compact customers for the EarthEraTM RECs, in addition to its supplier and retail fees, in to the Trust."

[73] *Consumer and Retail Choice, the Role of the Utility, and an Evolving Regulatory Framework*, Staff White Paper, California Public Utilities Commission, May 2017.

uncertain default service rates would give retailers the maximum chance to offer value-added fixed price products that customers would want to buy.

However, suppliers have since discovered that it is difficult to compare a fixed price product against a default service rate that is variable, particularly (as in New York) a rate that is not known until after the month is over. It is also more difficult to compete against a default service rate where the nature and extent of hedging is unknown (again as in New York), than against a default service rate where the nature and extent of hedging are more explicitly set out publicly (as in Pennsylvania). And it is more difficut to compete against a default service rate where migration and load-following risks are added later (as in Illinois), than against a default service rate that includes that element (as in Massachusetts and Pennsylvania), or is based on full requirements auctions (as in New Jersey).

There is also debate whether the basis on which default service rates are set affects the nature and quality of retail competition. For example, some suggest that the uncertainty engendered by the New York approach also provides the opportunity for less scrupulous suppliers to mislead customers and to sell them fixed products priced significantly in excess of the default service rate. This might explain the greater concern about such practices in New York than in other competitive states. Another factor, of course, might be the extent to which marketing malpractices are restricted and monitored in some states compared to others.

The precise nature and extent of retail competition naturally vary from one state to another. It seems that retailers (and municipal aggregators) are increasingly limited to exploiting opportunities offered by market prices falling below the level at which utilities have contracted for their default service supply. The size and timing of these opportunities are necessarily uncertain. But there do not seem to be systematic studies documenting the nature and extent of retail competition in each state, let alone relating such competition to the detail of the arrangements for default service pricing. The next four sections therefore summarise a very helpful recent picture of retail competition in one state, Illinois.

21. Retail competition in Illinois I: suppliers and offers

Illinois is a relatively active state with respect to retail competition. In 1984, its regulatory body, the Illinois Commerce Commission (ICC), issued a Ten Point Plan for electricity competition. In 1997 the state established retail competition for commercial and industrial customers. In 2006 the ICC was given the duty to promote retail electricity competition.[74] It was also to report annually on progress, and to set up an Office of Retail Market Development (ORMD). Unless otherwise indicated, the material in the next four sections is taken from the ORMD's latest

[74] The Retail Electric Competition Act 2006 says that "a competitive wholesale electricity market alone will not deliver the full benefits of competition to Illinois consumers. For Illinois consumers to receive products, prices and terms tailored to meet their needs, a competitive wholesale electricity market must be closely linked to a competitive retail electric market. …the Illinois Commerce Commission should promote the development of an effectively competitive retail electricity market that operates efficiently and benefits all Illinois consumers." Office of Retail Market Development, Illinois Commerce Commission, *2017 Annual Report*, June 2017.

(2017) annual report. The Commission has also monitored developments in the retail market and over time has imposed various new obligations.[75]

There are four incumbent utilities in Illinois, the largest of which are Commonwealth Edison (ComEd) which has about 3.54 million residential customers and Ameren which has about 1.06 million. (The two other utilities have about another 100,000 customers between them.) The number of certified residential suppliers in the ComEd area increased from 40 in 2012 to 72 in May 2017. The number of active residential suppliers increased from 27 to 55. In the smaller Ameren area (which has three rate zones, but fewer than one third the number of residential customers that ComEd has), the corresponding figures were an increase from 26 to 43 certified residential suppliers, and an increase from 10 to 27 active residential suppliers.

The ComEd competitive residential market (i.e. excluding default supply customers) is unconcentrated (HHI about 600). As of May 2017, 1 supplier has over 15% market share, 3 have shares between 5% and 15%, 19 suppliers between 1% and 5%, and 33 suppliers with less than 1%. As explained shortly, in May 2017 some 1,244,899 residential customers were taking competitive supply in the ComEd area. So a 1% share of that area corresponds to nearly 12,500 customers. It would seem that many suppliers are very small. However, many of these suppliers operate and have customers in other areas in Illinois and in other US competitive markets.

Over the period 2012 to 2017, the number of residential suppliers posting offers on the PlugInIllinois.org website increased from 20 to 34 in ComEd area, from 6 to 15 in Ameren area. The number of posted residential offers increased from 61 to 106 in ComEd area, from 11 to 36 in Ameren area.

Of the 106 posted offers in ComEd area in April 2017, 90 (85%) were fixed and 14 (13%) were variable. The majority (60%) had an early termination fee, though this proportion has been declining over time. There is a spread of durations: 36% under 12 months, 35% 12 months, 6% 13-23 months, 20% 24 months, 3% over 24 months. So in round terms, one third were under one year, one third exactly one year, and nearly one third about two years duration.

The proportion of offers with a higher Green or renewable content than required by the state's Renewable Portfolio Standard (RPS) (which is reflected in the default offer) is 26%. This has been about the level over the last three years, albeit a reduction on the particularly high level (39%) in 2014.

22. Retail competition in Illinois II: prices and customers on competitive supply

Section 15 above explained that the default service price in Illinois is calculated on the basis of purchases on a "block and spot" basis. Basically, the block prices purchased in advance by the

[75] In December 2012 the ICC "specified a number of RES disclosure requirements and similar consumer protections. … In September 2014 the Commission initiated a notice of Inquiry as a vehicle for gathering information and opinions on retail marketing issues that had been experienced since the beginning of retail marketing to residential customers in 2011 … the Commission entered a final Order in October 2017…. Among the changes are a broader definition of in-person marketing, new advance notice requirements for upcoming variable rate changes as well as more detailed disclosure requirements for the marketing of renewable or "green" offers." ICC, *Annual Report on Electricity, Gas, Water and Sewer Utilities*, 2017, p 12.

IPA determine the default service rate, which the ICC Report refers to as the Price to Compare, then a Purchased Electricity Adjustment (PEA) is added or subtracted to reflect the subsequent purchases and sales by utilities at spot prices.[76]

Table 5 shows the ORMD report's calculated average fixed and variable prices of the retail suppliers along with ComEd's default service Price to Compare including the PEA correction factor. (These are simple averages of the offers posted on PlugInIllinois.org.) Broadly speaking, the default service price including PEA was above the posted retail market prices in the first couple of years (for reasons discussed shortly), but below them in subsequent years.

Table 5 Average prices of offers posted on PlugInIllinois

Type of residential offer	May 2012 ¢/kWh	April 2013 ¢/kWh	April 2014 ¢/kWh	April 2015 ¢/kWh	April 2016 ¢/kWh	April 2017 ¢/kWh
Fixed	6.37	6.21	7.76	7.78	7.23	7.67
Variable	7.00	7.07	8.49	8.48	7.86	7.49
ComEd Price to Compare (incl PEA)	8.23	8.80	5.97	8.07	6.55	5.82

In ComEd territory, the number and proportion of residential customers on competitive supply increased dramatically from 406,144 (11.9%) in May 2012 to 2,356,669 (68.5%) in May 2014 then gradually decreased to 1,244,899 (35.2%) in May 2017. This seems consistent with the price differentials in the table, which favoured the competitive market in the first couple of years then favoured the default service rate. Over the same period, for Ameren Zone III, there was a corresponding increase in customers on competitive supply from 8.7% to 63.9% then a slight decline to 60.1%.

For Illinois as a whole, after the residential market opened in 2011, it seems that the proportion of residential customers taking competitive supply increased rapidly from 11% in May 2012 to a peak of 68% in May 2014. Since then the proportion has gradually declined to 61% in May 2015, 45% in May 2016 and 41% in May 2017. However, municipal aggregation has been a very significant factor in this competitive market, as now explained.

23. Retail competition in Illinois III: municipal aggregation

In the Ameren areas, no less than 90% of the residential customers on competitive supply in May 2017 were in municipal aggregation programs. In the ComEd area, by contrast, the proportion on municipal aggregation programs was 39%, a significant decline from 66% in May 2015. In particular, there was a significant reduction when the City of Chicago ended its aggregation

[76] "The PEA is a monthly fluctuating true-up mechanism for the utility, matching incurred supply costs to actual received supply revenues. The PEA is therefore a credit in some months and a charge in others." ORMD, *2017 Annual Report*, fn 15 p 30. There is a regulatory check on the costs claimed for.

program in September 2015. Offsetting this was a smaller increase in customers on competitive supply but not on aggregation programs.

In 9 sets of Illinois elections from April 2011 to November 2016, 746 communities passed referendums approving aggregation programs and 702 of them (94%) announced or implemented such programs.[77]

The high initial rate of municipal aggregation in Illinois, and of individual switching too, was a consequence of temporarily exceptional conditions. As explained in section 15 above, as part of the settlement in 2007 the Illinois utilities entered into five year swap contracts intended to create price stability. But in 2008 wholesale market prices began to collapse and the swap contracts were out of the money.[78] It was relatively easy to save 10-15% on residential bills by buying in the competitive market, and the focus was almost entirely on price. Proponents of municipal aggregation saw an opportunity. (Reportedly, the prices associated with municipal aggregation were 30-40% below the default rate at one point, and some were even as low as 50% of the default rate.)

Municipal aggregation in Illinois reached a peak some five years ago. There were 20 referendums in April 2011, then 257 referendums passed in three elections between March 2012 and April 2013, and 623 aggregation programs were announced or implemented. During 2014 only 64 referendums passed and 56 aggregation programs were announced or implemented. In the three years since then, the corresponding figures total 8 and 4.

A number of the municipal aggregation communities have seen their initial contracts come to an end. Some of the communities renewed with the previous supplier, some continued with a different supplier. But as of June 2017, some 19% of the communities had not continued with an aggregation program at all. Reportedly, this was usually where and when the municipalities were not able to get a significantly better offer from the market than was available as the default price. This is in fact a more general phenomenon in the 12 US competitive markets (excluding Texas and New York) where purchases are made at a point in time and used to fix a default price for a period of time. If the market price subsequently goes down, the retailers and aggregators can offer savings; if the market price doesn't go down, they can't.

What is the overall picture in Illinois in recent years? The proportion of residential customers with competitive suppliers that are also on municipal aggregation schemes has declined in recent years, from 70% in 2015 to 64% in 2016 to 56% in 2017. However, the proportion of customers that have chosen competitive suppliers on their own initiative has remained rather constant, at 17.4% in May 2015, 15.8% in May 2016 and 17.6% in May 2017.

[77] Where municipal aggregation was put to the vote it generally passed. The reasons for failure were reportedly very local issues, such as problems with municipal garbage collection.
[78] Reportedly, Illinois wholesale power prices in 2007 were of the order of $50/MWh and forecast to increase to $90/MWh, whereas they are now in the low $30s/MWh.

24. Retail competition in Illinois IV: savings and costs

The ORMD report estimates the annual savings realised by residential customers who take competitive supply in the ComEd area. Over the five years June 2011 to May 2016, the highest saving in any year was 2.148 ¢/kWh in 2012-13 compared to ComEd's Price to Compare, or 2.315¢/kWh including the PEA correction factor. This represented a total saving (including PEA) of $257.5m. The lowest saving in any year was actually negative: a higher cost (including PEA) of 0.948 ¢/kWh, a total increased cost of $115.2m. Over those five years, the total net saving was $135.8m compared to ComEd's Price to Compare, or $131.8m including PEA. (These calculations are based on weighted average actual prices as reported by the suppliers.)

For the latest year June 2016 to May 2017, the saving is again negative, averaging 1.449 ¢/kWh including PEA, giving a total increased cost of $152.1m. Over the six years including the latest year, the total saving is $4.4m compared to ComEd's Price to Compare, but negative at (minus) $20.3m after including PEA.

Overall, residential customers on competitive supply saved money during the first three years, compared to taking ComEd utility's default service rate, and paid more during the last three years. On average, a 500kWh/month customer on competitive supply saved about $139 during 2012-13, about $11 during 2013-14, and paid $87 more during 2016-17. In those same three particular years, an average 1200kWh/month customer saved $333 and $27 then paid $209 more.

The ComEd area was not peculiar here. In a separate calculation, customers in the Ameren area also paid more during the last two years.

The ORMD report notes several caveats: these are aggregate figures, and the savings for individuals will differ; they do not consider how the default rates would have been different if more or fewer customers stayed on the default rate; most of the residential suppliers have at least one offer with higher renewable content than required; and rewards and incentives (e.g. gift cards and airline miles) are not included. Nor do the calculations take into account any benefit from having a fixed rate for, say, 2 years (or for that matter a variable rate), compared to the default rates that vary from summer to non-summer months.

25. Ban on variable rates in Connecticut

One competitive state other than New York has recently established a significant restriction on the product offerings of competitive suppliers. In June 2015 the Connecticut legislature passed An Act Concerning Variable Electric Rates. Section 1 of the Act provided that "On and after October 1, 2015, no electric supplier shall (A) enter into a contract to charge a residential customer a variable rate for electric generation services; or (B) automatically renew or cause to be automatically renewed a contract with a residential customer and, pursuant to such contract, charge such customer a variable rate for electric generation services."

This section seeks first to understand why Connecticut took this action, second to understand the possible implications of it, and third to suggest that the situation is quite different from that of New York, and indeed the regulatory authority has invited a rethinking of this restriction.

The Connecticut Public Utilities Regulatory Authority (PURA) has explained the background.[79] In the early years of deregulation, the two electric distribution companies (EDCs, namely Eversource and United Illuminating) entered into multi-year contracts such that competing suppliers had difficulty offering more attractive terms than the standard offer service. Later, as the standard offer service more closely reflected wholesale market conditions, the situation changed. The proportion of residential customers with competitive suppliers increased from 6.2% in December 2007 to 56% in December 2012.

These percentages are higher than those in Table 4, partly because they reflect the position in December of each year rather than the average for each year, over a period when the proportion of customers with competitive suppliers was steadily increasing. Remarkably, Connecticut seems to have had the highest proportion of residential customers with competitive suppliers of all states other than Texas from 2010 to 2012. As Table 4 suggests, this continued during 2013 to 2015 with the additional exception of the two states (Ohio and Illinois) using municipal aggregation (which of course also used competitive suppliers). So, a significant proportion of Connecticut customers were on rates set by competitive suppliers.

As the retail market evolved, additional supplier-related consumer protection-oriented laws were passed in 2014, and PURA "issued several substantive supplier-related decisions addressing almost every aspect of competitive electricity supply, including rates, marketing, rate structures, customer service, dispute resolution and required notices". (PURA Report p 6) Now "the number of supplier-related complaints increased significantly in 2013-2014. Many of those complaints alleged unfair trade practices, deceptive marketing, non-compliance with PURA directives, slamming and other charges". (PURA Report p 7) But there was one key factor in winter 2013-2014 to which the PURA Report draws particular attention: the "polar vortex".

> "It is noteworthy that in 2014, New England sourced about 50% of its power from natural gas, up from only 15% in 2000.12 Prolonged frigid temperatures during the winter of 2013-2014 combined with natural gas pipeline constraints limited the availability of natural gas for power production. In turn, this caused the market price of natural gas to skyrocket. One report stated that an average price of $4/MMBtu (million British Thermal Units) of energy rose to over $24/MMBtu, with some spot markets seeing prices almost as high as $100/MMBtu.13 Some suppliers absorbed the price jumps, while others increased their short-term (i.e., variable) rates to pass through the higher costs to end users. This event has been called the "Polar Vortex." It exacerbated an emerging problem in the retail choice market: many customers were caught off guard by variable rate product fluctuations and complained to PURA." (PURA Report p 7)

It thus seems that the "polar vortex" in winter 2013-2014 was the reason for the unexpected price increases, and for the doubling of complaints from concerned customers in 2014. But the blame was put on energy suppliers and their variable rate products. (Of course, customers on

[79] PURA, *Report on Electric Supplier Residential Rate Structure pursuant to Connecticut General Statutes § 16-245o(o)*, December 31, 2015. (Henceforth PURA Report)

competitive fixed price products were protected.) This was also associated with a concern about the practice of offering "teaser" rates.

> "Oftentimes, cheaper, unpredictable "teaser" electric rates have lured customers into short-term contract rates that balloon shortly thereafter. According to Rep. Adams, these teasers are often attractive to citizens living on a fixed income who buy into contracts and find the rates increase over time.
>
> This is a pro-consumer and pro-business bill," said Rep. Adams. "By banning the marketing practices of offering low introductory rates, we are not only protecting customers, we are also protecting the industry's reputation and ability to conduct business credibly."[80]

While Section 1 of the Act imposed a ban on variable rates, Section 2 of the Act asked PURA "to develop recommendations and guidance regarding (1) what type of generation services rate structure is best suited for residential customers who allow a fixed contract with an electric supplier to expire and begin paying a month-to-month rate for generation services from such supplier; and (2) what change to the generation services rate and to the terms and conditions of such service that customers may experience after the expiration of a fixed contract when such customers beging paying a month-to-month rate".

PURA then had to interpret what was meant by a "variable rate". In particular, was a "month-to-month rate" an example of a "variable rate"? For example, suppose a supplier offered a product for one year that had a set of specified prices that varied by month to reflect expected wholesale market prices - was that now banned?

Suppliers argued that the Act's Section 2 request for guidance on "month-to-month" as distinct from "variable" rates meant that the Act allowed month-to-month rates to continue. PURA decided not, since "to fully embrace the Supplier Working Group's logic would render the Act's Section 1 ban entirely meaningless".[81]

Consequently, PURA interpreted the ban on variable rates as allowing "tiered" rate offerings, whereby the customer pays one rate for an initial term of at least four months and then the rate changes to another fixed price for the remaining term of the contract, but as precluding products with prices that, after the first four months, varied from month to month, even though the were fixed in advance. On this basis, the legislative directive was more restricting than it might have been, and (some would argue) more restricted than the legislature intended. Retail organisations pointed out that this interpretation restricted innovation in tariff structures.

In its consideration of what guidance to offer the legislature, PURA considered the argument that price increases reflected wholesale cost increases, and invited views on the extent to which subsequent wholesale price reductions had been reflected in retail prices. It made no assertions or

[80] "Ban on variable rate electricity contracts", State Representative Terry B Adams, June 2, 2015 at http://www.housedems.ct.gov/node/853
[81] Connecticut PURA, docket 15-06-15, PURA Variable Electric Rate Study, Interim Decision, Sept 30, 2015.

allegations about this, and retailers declined to provide analyses, arguing that the period was too short for useful analysis.

By the time that PURA came to make its recommendations in December 2015, it seems to have appreciated some of the disadvantages of its interpretation of the Act, or perhaps of the prohibition in Section 1 of the Act. And perhaps the concerns that motivated the Act were reducing. At any rate, PURA suggested that the legislature might wish to reconsider its position, and therefore proposed a choice.

> “The Authority's recommendations herein are guided by the traditional regulatory role of striking a balance between fostering a competitive retail choice market while ensuring an adequate level of consumer protection. While the legislature banned variable rate contracts for residential customers effective October 1, 2015, its request for guidance and recommendations on month-to-month rates signals a legislative willingness to revisit additional types of rate structures. At this stage in the evolution of the Connecticut retail choice market, there are distinct advantages and disadvantages to various rate structures. Pricing plans that change more often, such as monthly variable rates, tend to be more dynamic than fixed rate plans, which offer a set rate for at least four consecutive billing cycles. While participation in the supplier market is optional, it should not be overly burdensome or potentially dangerous.
>
> The Authority recommends a choice to the Legislature:
>
> • <u>If the legislature seeks a competitive market with only flat, long-term rates, then continuing the ban on variable rates is the best path forward</u>. Fixed rates offer the lowest possible risk for end-users and, like fixed rate mortgages, offer comfort in price stability. While a market with long-term, flat-rate structures will likely yield narrower price fluctuations, it is unlikely to yield the lowest possible price for electricity. Fixed rate contracts also can occasionally work against other state energy policy goals, such as conservation and time-of-use rates. Nevertheless, they represent the safest, most predictable choice.
>
> • <u>If the legislature seeks a competitive market with dynamic pricing options, continued innovation, and the maximum possible savings to customers, then some form of month-to-month rates should be considered</u>. A more dynamic pricing structure will likely yield wider price swings but also greater product and rate innovation. Like an adjustable rate mortgage, this pricing structure would include increased risk for market participants, especially those who do not monitor their contracts, market conditions, and notifications. More information and more timely notification of rate and term changes are now available to consumers, some of whom might be comfortable with a month-to-month product after an initial fixed rate term expires. Customers may now receive required notifications by email, U.S. Mail, or other options as suppliers offer them, and key rate information is now succinctly depicted on the front page of consumer electric bills. Taken together with other notifications and PURA oversight, these improvements minimize but

cannot eliminate the possibility that a customer may miss an important decision signal, such as a forthcoming rate or term change." (PURA Report pp 1-2)

There was one additional issue. Some customer groups argued for transitional price caps on monthly rates after the expiry of the initially fixed rate. Retailers argued against this. PURA was quite clear in opposing such caps.

> "Additional options related to renewal contracts include "caps" or banded rate requirements on month-to-month products. The Authority does not endorse caps or bands in this market at this time: they may present additional problems, including accounting for the overlap of billing periods related to EDC Standard Service, as well as monitoring and enforcement of such policies. These options would also limit supplier product offerings, constrain the competitive market, and might lead some electric suppliers to abandon the Connecticut market entirely." (PURA Report p 2)

What has been the effect of the ban on variable rate contracts? By 2016 the residential switching rate in Connecticut seems to have fallen by over a quarter since its peak. Initially, this may have reflected the concerns associated with the polar vortex price increases, but that was back in 2013/4. Tsai and Tsai (2018) find that residential consumers were returning to Standard Service as the rates for that service decreased during 2015 and 2016. They also find that "competitive suppliers on average were aligning their rates with the changes in regulated Standard Service rates rather than the movement of wholesale electricity prices". Is that a possible consequence of the ban on variable rate contracts? Some comparative analysis of price movements in other states would be useful.

The situation in Connecticut stands in contrast to that in New York. The ban on variable tariff rates in Connecticut was introduced by the legislature not by the Regulatory Authority. Nor is the Authority pressing for further restrictions because of a dissatisfaction with retail suppliers. On the contrry, the Authority recognised the particular pressure that led the legislature to act and subsequently suggested it consider a relaxation of the ban. Suppliers concluded a submission on the topic as follows.

> "The aberrant wholesale market conditions observed during the 2014 polar vortex, were just that – atypical, highly unusual and unforeseeable by retail marketers. The entire structure and functioning of the Connecticut retail market should not be undermined based on this uncharacteristic event."[82]

26. Competitive versus non-competitive states

The focus of this report is on how retail competition was and is implemented in the competitive US states, rather than on a comparison with the non-competitive states. Nonetheless, to put the findings into perspective, it may be helpful to conclude this Part III with some indication of the research that has been done on the comparison between competitive and non-competitive US states.

[82] PURA Docket 15-06-15, Written comments of the National Energy Marketers Association, November 13, 2015, p 9.

Morey and Kirsch (2016) summarise and survey a large literature, in the US and elsewhere. They come to a generally pessimistic conclusion: "there is little evidence that retail choice has yielded any significant benefits". They find that retail choice extends dynamic pricing programs, promotes renewable resources, has a mixed record in promoting demand response, and has not generally promoted smart metering. Retail choice states have had higher retail prices than other states, though the gap has been narrowing. Retail electricity prices vary more with current fuel prices, and vary more by location. Retail choice has created or increased some costs, by increasing financial uncertainties faced by investors in generation and increasing the risk of retail supplier bankruptcies, and adding costs of adapting billing procedures and making metering compatible with new retail service offerings, plus retail marketing costs.[83] They comment finally that retail choice leads to cherry picking of customers, a mixed impact on customer satisfaction, and "less educated or low-income consumers are more likely than other consumers to make poor retail supply choices".

In contrast, an econometric study by Ros (2017) finds that "retail electricity competition is associated with lower deflated electricity prices with the mean total impact being – 4.3%, - 8.2% and – 11.1% for residential, commercial and industrial customers, respectively and with the impact diminishing over the sample period for residential customers, remaining relatively constant for commercial customers and increasing for industrial customers".[84]

The research by O'Connor (2017) mentioned earlier refers to a "transitional decade" from 1998 to 2007. He then finds "compelling evidence of the superior economic performance since 2008 of the 14 competitive retail jurisdictions when compared to the 35 monopoly states". He instances prices in competitive states trending downwards while rising in monopoly states; comparable investment in generation; increased production well above changes in load while in monopoly states production has declined relative to load growth; and higher capacity factors in competitive states and better advantages of low natural gas prices.

An interesting but unanswered question is whether the benefits found by Ros and O'Connor would still obtain if the competitive states had required incumbent utilities to offer default service rates on the same basis as present default service tariffs, but had not opened these markets to retail competition, or had done so only for large industrial customers. Do the benefits derive from the retail competition or from the default service tariffs? My conjecture is that the same benefits would not obtain, because the impact of retail competition extends beyond retail customers, and into the wholesale market too. The nexus of contracts and competition between generators, retailers, customers, marketers, aggregators, switching sites etc would be weakened, with adverse effects on efficiency.[85] But further research on this would be useful.

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[83] They also refer to costs of creating competition in generation, via unbundling and divestment of generation facilities, in order to facilitate retail competition. This seems somewhat strained since competition in generation is a policy demonstrated to be economic in its own right.

[84] Agustin J Ros, "An econometric assessment of electricity demand in the United States using utility-specific panel data and the impact of retail competition on prices", *The Energy Journal* 38(4), 2017: 73-99

[85] As argued by Jeff Makholm in present New York proceedings, see section 45 below.

Part IV The evolution of retail energy regulation in New York state

27. Introduction and outline

New York is of particular interest in the context of retail energy regulation for at least three reasons. First, the state was one of the earliest and strongest proponents of competition in the US electricity sector, including retail competition.

Second, the default service rate for the mass-market customers of New York network utilities has generally been set on a different basis than in other US states that allow retail choice. Specifically, it is set on a monthly ex post basis – that is, the level is announced in the month after consumption has occurred – rather than set on a fixed basis for several months in advance.

Third, the New York Public Service Commission (NY PSC or the Commission) has expressed increasingly severe reservations about the nature and outcome of retail competition there. It has taken repeated steps to strengthen standards of conduct by suppliers. In 2014 the PSC ordered that competitive suppliers not be allowed to serve low income customers unless the suppliers could guarantee prices that are better than the incumbent utility's default service rate. After much challenge, this order is in course of implementation. The PSC has also proposed to extent this requirement to all mass-market (residential) customers. Retail energy regulation for residential customers in New York state is currently the subject of strong debate, both before the PSC and in the courts.

This final part of the present report has 21 sub-sections, all of which refer only to New York state. They cover five main areas, in roughly chronological order:

- The establishing of retail competition in 1999 and the specification of regulatory policy in 2004 concerning the nature of that competition and the basis of pricing utility default service;
- Further details on the pricing of default service, including an exceptional and temporary fixed price option offered by certain utilities, the debate about utility hedging strategies, and an illustration of default prices available today;
- PSC discussion and actions over 2005-8 to improve retail suppplier standards and its 2012 review of the market in response to PSC Staff concerns;
- PSC proposals in 2014 to reform the market, including an Order that competing retailers guarantee that low income customers pay less than they would on the utility default service rate, or alternatively offer value-added services, and subsequent challenges and debates about whether or how to implement these proposals;
- The PSC Reset Order in 2016 extending the guaranteed savings obligation to all residential customers, and the further challenges and debates, up to the present, on whether or how to implement these evolving proposals.

28. Establishing retail competition 1999

The establishment of retail competition policy in New York State was heavily influenced by developments in the generation sector, especially nuclear. The incident in 1979 at the Three Mile Island nuclear plant in Pennsylvania was the most significant accident in US nuclear history, and crystalised anti-nuclear safety concerns. In 1986 there was the Chernobyl nuclear disaster. The Long Island Lighting Company nuclear plant in Shoreham, NY, which had been completed in 1984 at a cost of some $6 bn, was run for only about three hours of tests before being closed down because of local opposition. It never operated commercially and was permanently closed in 1989 via a multi-party agreement imposed by a Federal Court Judge. During the 1990s there was increasing concern about the ability of utilities to construct generation plants (particularly nuclear) at reasonable cost.

Large industrial consumers were particularly concerned about energy costs, and the cost of delivery. They were threatening to move to other states where electric costs were lower, or even to relocate outside the US. Utilities were also concerned, because of the risk of being left with stranded assets.

In the early 1990s the NY PSC made provision for large consumers to be given "flex-rate" contracts, at prices down to marginal cost, provided there was some contribution to other costs. ("Margin plus a penny" was a term used.) At the same time, utility shareholders had to share some of the losses (relative to the previous regulated prices) to discourage them from proposing reduced prices too widely.

A similar scheme was put into effect in New Jersey in 1995, when the state found itself with electric rates 50 per cent higher than the national average and among the highest in the nation. Similar pressures were operating elsewhere. For example, utilities in Illinois had huge cost overruns and electricity rates there were among the highest in the nation, which was a particular concern in Illinois because the state had a large industrial sector.

By the late 1990s competitive wholesale markets were being established in some states. The NY utilities were each required to file rate plans in 1997 that included proposals for retail choice and generation divestiture. (They were strongly encouraged to divest their generation plant, including nuclear, by 1999.) The NY Independent System Operator (ISO) was formed (out of the previous NY Power Pool) in 1999. It was envisaged that large consumers would be able to choose a competing supplier, which in NY was called an Energy Service Company (ESCO). After discussion, it was decided that retail competition should be extended to all customers. In 1999 the PSC specified a set of Uniform Business Practices (UBPs) for retail access, to provide for consistent and acceptable business procedures for both ESCOs and incumbent gas and electric utilities.[86]

Large business customers received separate bills from utilities and ESCOs. This was not problematic. However, ESCOs requested the possibility of a single combined bill for residential customers (which some but not all utilities had offered). In 2000, the PSC required utilities to give customers the option of receiving a single combined bill from their utility or from their

[86] NY PSC, Case 98-M-1343, Order adopting uniform business practices and requiring tariff amendments, January 22, 1999, and Order granting portions of petitions for rehearing, April 15, 1999. Topics covered included ESCO creditworthiness, switching requirements, utility invoicing and collection practices, partial requirements customers (ie customers with more than one supplier), billing agency arrangements, discontinuance of service, slamming prevention and customer information.

chosen ESCO.[87] It prescribed the amount of space on the bill allowed to the non-billing entity (minimum 400 characters). Customer payments were allocated first to the utility component of the bill. The PSC Order discussed the possibility of performance standards. It prescribed the allocation of billing costs and credits, requiring that the content of the utility element of ESCO bills be the same as for utility bills, although the format was discretionary.

Over the first few years, as retail competition evolved and in the light of experience, the PSC took further steps. It required that promotional material be submitted to it, prescribed marketing practices, established rules to prevent utilities unduly favouring ESCOs that were their own affiliates, and dealt with ESCO credit issues (some were very small 'mom and pop' businesses with only a few hundred customers).[88]

Significantly, and exceptionally, retail competition in NY was introduced by the PSC, rather than by the state legislature. This meant that the PSC had greater flexibility in NY than in other states. The PSC's decisions about introducing retail competition processes, procedures and customer protections reflected largely collaborative discussions with industry participants. This meant that implementation of retail competition was utility-specific rather than uniform across the state. More recently, it has also meant that the NY PSC has greater flexibility than commissions in other states to narrow down or withdraw the scope for retail competition. The PSC's policy in doing this has proved controversial, as discussed below.

29. 2004 Competition Policy Statement and utility default service rates

In August 2004 the PSC strongly endorsed the concept of retail competition. In what became known as its Competition Policy Statement, it set out its evolving policies on the development of that competition and on the setting of utility default service prices.[89] In many ways market development had been successful, but "migration rates for small customers have lagged those of larger users", and "suppliers have not yet begun to offer the variety of price and service packages that we anticipate will occur in a more mature market". (p 2) The PSC's vision for the future reflected its duty "to ensure the provision of … energy at just and reasonable rates", but also its "conclusion that one of the most efficient and powerful tools we can use … is competitive markets". There was a "need to adjust the degree and focus of our regulatory oversight efforts as market dynamics replace the need for government controls". If competitive markets "continue to develop robustly, there may be no need for the utilities to remain in any competitive fields in the

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[87] NY PSC, Case 99-M-0631, Order providing for customer choice of billing entity, March 22, 2000.

[88] Other developments included the System Benefits Charge to fund low income and energy efficiency programs as well as support research, Competitive Metering, Single Bill – either ESCO or utility provided, and (ESCO) HEFPA (Home Energy Fair Practices Act/consumer protection requirements for ESCOs). The PSC also established an extensive "Unbundling" proceeding designed to determine utilities' costs for billing, metering and related services for the purposes of charging ESCOs for those services which the utility performed on their behalf and vice versa. These were followed by the Future Role of the Utility/Provider of Last Resort proceeding which recommended that the utility continue to serve as provider of last resort.

[89] NY PSC Case 00-M-0504, Statement of Policy on Further Steps toward Competition in Retail Energy Markets, Aug 25, 2004. This document describes the companion Statement of Policy on Unbundling and Order directing Tariff Filing as "one of the first efforts to accurately quantify a fair utility competitive rate against which the ESCOs can compete".

future". (pp 2-3) According to the press release, "the bottom line is that robust competition, wherever feasible, should continue to be this Commission's long-range vision."

All utilities would be required to prepare "methods for accelerating the migration of customers to non-utility suppliers". (p 23) The PSC considered options to increase participation in the competitive markets. "Orange and Rockland [Utilities]'s Switch and Save Program has proven to be the most successful model yet tried in New York State for moving mass market customers to non-utility entities." (Appendix D) Participating ESCOs agreed to offer customers a 7% discount on the regulated utility rate for a two-month period, after which period the terms would be set by agreement between the ESCO and the customer. Orange and Rockland continued to bill the customers and purchased the ESCOs' accounts receivable. About 30% of mass-market customers switched to ESCOs.

"In addition, gradually increasing the exposure of a customer class to spot market pricing has produced signficant migration results by providing increased opportunities for a variety of ESCO offerings." (p 3) Ohio's use of municipal aggregration could be successful in New York. (p 24) Proposals to auction blocks of utility customers to ESCOs were potentially effective, provided they were consistent with the rules about transfer of customers without their consent.

A number of commenters had recommended New Jersey's auction process whereby suppliers bid on a fixed percentage of utility load for a fixed time period. The PSC was not convinced.

> "We are not endorsing the New Jersey model because it unnecessarily prolongs the utilities' commitment to multi-year contracts and their role as a commodity supplier. Althought the commodity auction proposal would create a visible price to beat, it does not directly facilitate the movement of customers to competitive retail suppliers and it does not encourage an ESCO/customer relationship." (pp 26-7)

The PSC held that pricing of utility services should include some hedging and smoothing, but should move over time to reflect movements in market prices. "In the near term, we believe that utilities should continue to maintain a balanced contract portfolio for residential customer commodity. As the residential energy market matures, we will consider proposals by utilities for alternative commodity pricing approaches." (pp 28-9)

More specifically, in the gas market the hedging should be via a portfolio of contracts of a few months or so rather than via ongoing long-term full-service contracts, which might be inconsistent with the movement toward a fully competitive market place. In the electricity market the utilities continued to have multi-year hedges from independent power producer contracts and generating plant sales, so no additional hedges were needed.

> "In the longer term and depending on the state of market development, it may be reasonable for utilities to expose residential customers to seasonal pricing (for example, winter, summer, and shoulder rates). The sooner customers experience pricing variations, the sooner competitive markets will provide alternatives, including fixed-price options and peak and off-peak pricing, possibly accompanied by interval-metering. ESCOs, not utilities, are expected to provide those options in the longer-term." (pp 30-1)

The PSC endorsed the principle that "utility rates be based solely on utility costs and that no profit margin on commodity sales be allowed". (p 40)[90] It agreed with ESCOs that allowing utilities to provide fixed rate offerings with a profit margin could create a strong incentive for the utility to remain the monopoly provider and undercut ESCO efforts. (Recall that the utilities no longer owned generation assets, so that their retail price for default service would be based on the same wholesale market prices that the retail suppliers were using.)

> "Generally, rates should increasingly reflect market prices over time. As markets develop and utility multi-year contracts expire, utility commodity rates should move toward a short-term market price flow-through. … in the final stage of a utility's offering of a competitive service, the rates for that service should closely track the unadjusted spot price. … however, customers should not be exposed solely to the spot market until other hedged services are generally available." (pp 40-1)

30. 2006 Staff progress report

In March 2006 Staff reported on progress.[91] Referencing the 2004 Policy Statement, Staff noted the magnitude of the achievements to date.

> "The restructuring of the energy industry from regulated vertically-integrated monopolies to competitive markets has been described as "one of the largest single industrial reorganizations in the history of the world." With 9.4 million residential and 1.2 million business electric and natural gas accounts able to choose among a number of energy providers, New York State is recognized as a leader in this area. New York has adopted a flexible approach which has allowed policies to be guided and shaped by the successes and challenges experienced in this and other states, and by continuously evolving market conditions." (p 1)

The Report found that "New York's wholesale markets are among the most advanced in the nation and that wholesale competition has led to significant efficiencies". (p 2) There had also been good progress in retail competition.

> "On the retail side, there has also been significant progress toward effective competition in New York's gas and electricity markets. Progress has also been made in educating customers about retail competition and retail access programs are in place for each of the major utilities. ESCO participation has increased significantly within New York State, with nearly a third more ESCOs providing service to New York consumers by the end of 2005, compared to 2003. There are currently at least seven ESCOs providing residential customers with electric and natural gas service and at least 12 ESCOs providing non-residential customers with electric and natural gas service within each utility's service territory. More ESCOs are offering a variety of services. Some of the value-added services include various pricing structures (e.g.: fixed, capped, and indexed), green power, load control, energy efficiency assistance, and appliance maintenance contracts.

[90] "Only in that way … could the market operate efficiently and avoid the anomalies that would be caused by the utility as a competitor charging prices set by regulation rather than by maket forces. Eliminating this utility profit incentive would … also better align the utiliities' interests with our goal of fostering competitive markets." (p 40)

[91] NY PSC, State of Competitive Energy Markets: Progress to Date and Future Opportunities, March 2, 2006.

Large numbers of retail customers have switched to competitive providers for their energy commodity."

There was more to be done with respect to both wholesale and retail markets. As regards the latter:

> "In relation to retail markets, more must be done to increase customer education and awareness, which will allow customers to make more informed choices. Utility bills should continue to fully and separately identify energy supply costs and energy delivery costs, to provide the level of price transparency customers need to compare offers when selecting an energy supplier. Identified best practices such as time-differentiated pricing, ESCO referral programs and purchase of receivables programs, should continue to be implemented statewide to create greater administrative efficiencies and thereby lower overall costs. Alternative energy sources, such as green power, need ongoing promotion to ensure continued fuel diversity, reduce environmental impacts, and promote energy independence. Uniform Business Practices and Electronic Data Interchange documents need to be updated to reflect current Commission policies favoring the use of ESCO consolidated billing practices. Finally, additional work needs to be done to further promote cost and price comparability in a transparent manner between utility and ESCO commodity services and encourage ESCOs to provide more value-added services primarily to residential customers."

31. 2003-9 An exceptional fixed price offering

In the light of the PSC's statement of policy, most of the six utilities in New York state set default service rates that varied hourly for large industrial customers. For residential customers the costs were averaged to form variable monthly or bimonthly rates. The utilities hedged such proportion of the load as they each deemed appropriate.

In 2003 one utility, New York State Gas and Electric Corporation (NYSEG), and its affiliate Rochester Gas & Electric (RGE), set a fixed rate as the default rate, with a variable rate as an option. A fixed rate is exceptional in New York (and in the event this one was discontinued after a few years) but a fixed rate is the norm in other restructured states that allowed retail choice. So the discussion of whether or not this fixed rate should be continued provides a useful insight into the thinking of the various parties and the PSC.

In September 2005 NYSEG filed to extend its rate plan for six years beginning January 1, 2007.[92] It proposed a Fixed Price Option and a Variable Price Option, with the Variable option being the default for large (industrial and large commercial) customers and the Fixed option the default for small (residential and small commercial) customers.

The PSC observed that "The question of whether it is appropriate for the utility to offer such [fixed price] service was hotly contested in this proceeding."[93] The Recommended Decision (RD) of the Administrative Law Judges (ALJs) noted that "utility provision of fixed price service

[92] NY PSC, Case 05-E-1222, Petition of NYSEG, Sept 30, 2005.
[93] NY PSC, Case 05-E-1222, Order adopting recommended decision with modifications, Aug 23, 2006, p 3.

is expressly discouraged under the Commission's Retail Markets Competition Policy Statement". However, the ALJs considered that it was justified in NYSEG's service territory because "(1) customers there had become accustomed to fixed-price service and had come to believe such service was necessary as a protection from the volatility of the wholesale electricity market, and (2) the market for retail residential service in NYSEG's territory was not sufficiently competitive to ensure that fixed-price service would be available to customers at just and reasonable rates". (pp 4-5) The ALJs' Recommended Decision was that the utility could continue to offer a fixed price option, but "the fixed price option would no longer serve as the default option, and customers would have to affirmatively elect it". (p 3)

Retailers and PSC Staff opposed the concept of a fixed price option, on various grounds.[94] The PSC nonetheless accepted the recommendation of an optional fixed price service as a transitional measure. It noted that 88% of NYSEG customers presently received a fixed price service, "consequently consumers' demand for and dependence upon a fixed price offering is uniquely highly developed in NYSEG's service territory". (p 8) The competitive market in NYSEG territory was not fully developed. And prohibiting the fixed price service would be too abrupt a change. The PSC declined to accept any particular "trigger" for phasing out the fixed price option, but gave NYSEG the option of not continuing it in 2008, and required NYSEG to seek further permission if it wished to continue the option after that date.

As regards what the default service price should actually be, the ALJs proposed a flow-through of the variable (hourly) wholesale spot market price. This would be a just and reasonable rate (or price), would send appropriate price signals to the market and to customers, and would be consistent with the Competition Policy Statement. However, the PSC instead supported Staff's alternative proposal of a hedged portfolio default rate. It decided to "not require any set level of hedging or other portfolio standard with which NYSEG must comply at this time. Rather, we will instruct the company to use its judgement, based upon its considerable experience, to manage its supply portfolio to balance the objectives of low prices, secure supply, and rate stability". (p 18)

On appeal, the Public Utility Law Project (PULP), representing residential low income and rural consumers, argued against making the default rate variable. The Small Customer Marketer Coalition (SCMC) and the Retail Energy Supply Association (RESA) supported that proposition. The ESCO supplier Direct Energy referred to "the inconsistency between the continuation of a utility fixed price option and the establishment of a vibrant competitive market". It argued that "the option of an opt-in fixed price service is only an interim step toward the proper end state, in which such service is provided exclusively by ESCOs". [95]

The utility itself, NYSEG, "reluctantly declines" to support PULP's position, even though it "fully appreciates" PULP's concerns, because "NYSEG cannot afford to make the fixed price

[94] "SCMC/RESA, on reply, points out the extensive discussion in the many briefs in this case of the details of a fixed price product, including its price, mark-up, term, and profit sharing, and asserts, 'This cacophony of contrasting views creates the bizarre spectacle of the displacement of the free interplay of competitive market forces with the views of monopolists, attorneys, engineers, judges and bureaucrats.' This centralized planning, according to SCMC/RESA, is 'the very anthithesis of a competitive marketplace.' " (p 7)
[95] NY PSC, Case 05-E-1222, Order on Rehearing, December 15, 2006 p 33.

option the default. Given the structure of the fixed price option and what it characterizes as the unreasonably low retail conversion factor, NYSEG asserts that it could not withstand the increased risk that it would assume if large numbers of its residential customers were to default to the fixed price option."[96]

The PSC essentially reaffirmed its position on these various issues: that is, the default service rate for NYSEG customers should reflect the actual costs of wholesale spot price as modified by a hedged portfolio, but NYSEG could also offer a fixed rate option for the next two years. In the event, NYSEG discontinued its fixed rate option for default service at the end of 2009 (as did its affiliate RGE).

32. 2007 Further consideration of utility hedging policy

In 2007, the PSC reviewed the situation with respect to hedging by utilities. It considered that gas hedging practices generally worked well, but noted that electric utility hedging practices – reflecting the obligation to "maintain balanced commodity supply portfolios" – "varied in their impacts on customers and on the development of wholesale and retail competitive markets". [97]

As to the arguments about utility hedging: retailers contended that it did not benefit consumers because it was overly expensive, and was inconsistent with competitive retail markets.[98] (Reportedly, some felt that the utilities were just not very good at it, and therefore wasted ratepayers' money.) Others argued that it was an essential consumer protection measure. The PSC concluded that utility hedging was not anti-competitive. "Instead, the utility offering challenges competitors to devise products that consumers will find more beneficial than the utility hedged product". (p 13) The utilities should continue to hedge, subject to appropriate guidelines.

How restraining should these guidelines be? The PSC rejected restrictions proposed by ESCOs, generators and consumer advocates. No single proposed procurement approach was optimal for all New York electric utilities. Each utility was therefore directed to develop standards and goals for measuring and constraining volatility. How to balance customer protection against volatility and sending accurate price signals? This was best considered after those standards and goals were established. Over what period was hedging appropriate – as short as one month or up to five years? The PSC opined that artificial restrictions on electric utilities "could be a disadvantageous constraint that would reduce the flexibility utilities need to act in the best

[96] The retail conversion factor is used to convert the wholesale price into the fixed retail rate. Part of this factor reflects costs incurred to represents costs the utilities incur to procure capacity reserves, load shape, line losses and gross receipts tax. The remaining amount is intended to recognize the opportunity costs associated with bearing the risks for a fixed retail price service, regardless of the volatility of the marketplace.

[97] NY PSC, Case 06-M-1017, Order requiring development of utility-specific guidelines for electric commodity supply portfolios and instituting a phase II to address longer-term issues, April 19, 2007.

[98] Marketers and retailers argued that it was incorrect to assume that hedging would shield customers from the impact of rising energy prices in a more economic fashion than variable rates would. They instanced the existing rate plan under which NYSEG had offered residential customers both a variable price option and a fixed-price option (the latter being the default) since 2003. "The incontrovertible data associated with this fixed price program – the ultimate hedge - revealed that the utility's variable rate was lower than the fixed rate". NY PSC, Case 06-M-1017, Initial comments of the Small Customer Marketer Coalition and Retail Energy Supply Association, Nov 16 2006, p 6.

interest of their mass market customers". (p 24) But for gas utilities, existing arrangements that limited hedging to about one year were to remain in place.

How much information about utility hedging should be publicly revealed? Some utilities argued that non-utility parties would use such information to drive up the price of hedging. In contrast, ESCOs asked for utility hedging strategies to be revealed in advance, and for detailed reporting after execution (as is the case in other states that allow retail choice). Customer advocates suggested that utilities could furnish current and forecasted price information that could be posted in a format comparable to ESCO price information.

The PSC decided that "electric utilities will collaborate with other parties on the development of guidelines consisting of hedging measurement standards and volatility limitation goals …. Once the standards and goals are in place, utilities will report annually on their proposed implemementation of their portfolio management strategies to Staff." (p 27) But making this information publicly available could impede utility efforts to execute their hedging strategies at least cost. And "obtaining knowledge of a competitor's plan before the competitor executes them is not a characteristic of a competitive market". (p 27) (This may perhaps imply that default service was seen as a 'competitive product' competing against the ESCOs.) Methods of after-the-fact reporting of hedge prices would be developed.

Utilities and others then participated in collaborative discussions for the purpose of developing electric price volatility metrics, establishing goals for reducing volatility and recommending requirements for reporting utility supply price information.[99] Thus, Consolidated Edison (ConEd) and Orange and Rockland Utilities (O&R) used a co-efficient of variation to measure the volatility of their prices and to assess the success of their efforts over the last three years to dampen that volatility. ConEd suggested that constraining volatility (measured by co-efficient of variation) to a 10% range would be an appropriate goal; O&R experienced greater volatility over the same period and suggested a 15% range. Other utilities made different proposals. For example, NYSEG proposed to continue its current practice of hedging about 60% of the value of its variable price default service for residential customers, and (as just explained) also offered a fixed price service at that time.

The PSC decided that the volatility goals should be considered an objective rather than a mandatory target, and ordered that the utilities should implement the methods they had described. It also decided that utilities need only disclose historic prices and their performance in managing volatility, and need not forecast the potential effect of existing hedges on future utility prices. New York utilities regularly report such hedging performance today.[100] However, the detail of publication in New York stands in contrast to other jurisdictions, as illustrated by

[99] NY PSC, Case 06-M-1017, Order establishing electric supply portfolio standards, goals, and reporting requirements, Feb 26, 2008.

[100] E.g. NY PSC, Case 06-M-1017, National Grid, Niagara Mohawk Electric Commodity Portfolio Hedging Performance Report, Quarterly Report 39 for period October 1 2016 through September 30 2017. The report gives the NYISO index price and the electric commodity supply price for each month for each of three Niagara Mohawk regions, and the average value, standard deviation and coefficient of variation of each measure in each region over the year. The coefficient of variationfor the three regions ranged from 13.6% to 19.2% for the NYISO index price and from 15.6% to 16.7% for the electric commodity supply price.

the procurement schedule of the utility PECO in Pensylvania, in Table 3 above, where the extent and timing of utility purchasing is more explicit and public in advance.

33. 2011 Concerns about uncertainty and reporting of the default service price

As explained, the default supply service price in New York state is set by each utility on a monthly basis, but ex post rather than ex ante. It is announced a week or two into the next month, after the actual purchase and hedging costs have been incurred.

Because the default price is established after the fact, there is no 'price to compare' benchmark that is directly comparable with ESCO offers. This makes it difficult for competitive suppliers and customers to assess whether ESCO prices will be less than the utility's 'price to compare', since the latter does not actually exist at the time when ESCO offers are made and accepted.

In March 2011 the Retail Energy Supply Association (RESA) requested the PSC to modify the manner in which electricity utilities reported the charges for supplying electricity on the Power to Choose website.[101] RESA argued that "The current monthly reporting of utility prices is confusing, inaccurate and misleading." The reporting varied by utility. It was irrelevant insofar as ConEd's price was for a previous month. And, because of the methodology adopted, the utility was unable to say what the applicable ConEd rate would be. Where the utility did forecast the energy rate, there were problems about accuracy because of subsequent adjustments. RESA proposed that the website reflect only ESCO prices, and not utility prices. The utility Niagara Mohawk Power Corporation (d/b/a National Grid) opposed this proposition. The PSC does not seem to have taken further steps to address this issue.

34. An illustration with recent prices

The arrangements approved a decade or so do not seem to have changed. Consider the prices shown on the New York State Power to Choose website on 4 October 2017. Residential customers in New York city (zip code 10007, where City Hall is located) had available to them 176 offers from 64 competing suppliers (ESCOs), some fixed and others variable, in the range 5.3¢ to 19.9¢/kWh. The incumbent utility ConEd headed the list of offers available, at a (default service) price of 7.74¢/kWh. Only by clicking on the offer details is it explained that this was the price that obtained in August 2017. The default price for October 2017 was not yet available at that time. Nor was the price for the previous month September 2017. Clicking on Prior Offers and doing some searching revealed that prices for the previous year had ranged from 6.09¢ to 10.16¢/kWh.

Almost all the offers on 4 October were above the latest (August) default price. In total, there were only 11 offers lower than 7.7¢, mostly reflecting initial discounts off a higher ongoing price. The extent of the savings (compared to the August price) was small: one supplier offered a price apparently yielding a saving of $200 per year (the reason for this outlier being unclear), and two suppliers offered prices embodying a saving of about $20 per year. Of course, the most relevant comparison is with the default price over a future period of time – for example, the duration of a fixed price offer.

[101] NY PSC Case 06-M-0647, Case 98-M-1343 Letter from RESA, March 25, 2011.

The competing retailers must have offered some value to customers, at least at some time(s), since in December 2016 they supplied 22% of residential customers in ConEd territory.[102]

In the event, the default price for September 2017 was 8.24¢/kWh and the default price for October 2017, announced on 10 November, was 8.71¢/kWh. So the available savings on 4 October were higher than appeared at the time. But this cannot be guaranteed: the default supply price for November 2017 was down to 6.27¢/kWh.

35. 2005-2008 Commission actions to improve ESCO standards

In parallel with its work on defining the default service price and hedging policy, the PSC took steps to facilitate retail competion and improve marketing standards. In October 2005 it introduced a Power to Choose facility on its website, to enable customers to make more meaningful price comparisons among ESCOs and utilities. But not all ESCOs were willing to furnish timely and accurate price information.

In 2006 the PSC decided that a mandatory price reporting requirement was necessary "to enhance price transparency and price discovery", but that "compelling overly extensive or intrusive reporting could unnecessarily constrain the flexibility that is characterisic of competiive markets".[103] The solution was to require ESCOs to report, by the 5th day of each month, the price they would have charged for each generally available service on the 1st day of that month (plus basic information on terms and conditions). The Power to Choose website would note that these prices were illustrative and "alert customers that the Website is only the starting point for price discovery". ESCOs could make other offers than those reported, thereby "retaining the flexibility to nimbly respond to evolving market conditions and opportunities". (In 2010 the Power to Choose website was modified to enable ESCOs to input their own prices as frequently as they liked.)

In December 2007 New York state and city governments requested the PSC to adopt a voluntary Statement of Principles related to training of ESCO representatives, door-to-door and telephone marketing practices, and ESCO conduct. The PSC reviewed complaints from residential customers and media reports about misrepresentations concerning ESCO afllilation with the distribution utility and the (unrealized) savings provided by the ESCO. In 2008 the PSC set new marketing standards.[104] In 2010 the Legislature created an ESCO consumers Bill of Rights.

[102] New York retail access migration data for December 2016, NY State Department of Public Service. For New York state as a whole the proportion of residential customers supplied by ESCOs was 20.5%.

[103] NY PSC, Case 06-M-0647, Case 98-M-1343, Order adopting ESCO price reporting requirements and enforcement mechanisms, Nov 8, 2006, p 3.

[104] "The new marketing standards require, among other things: a "Consumer Disclosure Statement" on the first page of every sales agreement, which will include the most important terms of the ESCO agreement, such as the contract's term and termination fee provisions; training of ESCO marketing representatives; protocols for ESCO in-person and telephone contacts with customers; added measures for protecting non-English speaking customers; and processes for handling customer complaints and resolving disputes arising from ESCO marketing activities." NY PSC Case 98-M-1343, Order adopting amendments to Uniform Business Practices, October 27, 2008.

Also in 2007 the PSC opened a review of retail access policies.[105] It noted various strategies that had been implemented to further stimulate competitive market development.[106] These included advertising and other steps taken by utilities.[107] The PSC raised the question whether such practices, paid for by ratepayers, were effective and still necessary and appropriate.

The PSC decided in 2008 that some retail access programs should continue (e.g. Purchase of Receivables POR and consolidated billing programs, and ESCO referral programs) while other programs should not (e.g. promoting customer migration from utilities to ESCOs).[108]

36. 2012 Review of the retail market in response to Staff concerns

During 2011/12, PSC staff met several times with ESCOs and utilities, and also analysed data on prices charged by ESCOs and utilities and reviewed ESCO-related consumer complaints. In October 2012 the PSC commenced another review of the retail market in response to Staff concerns.[109]

> "These include the practical difficulty of comparing prices of electricity and natural gas that are available from the utility and Energy Service Companies (ESCOs), and the fact that a large sample of data indicate that many residential and small nonresidential ESCO customers paid a higher price than they would otherwise have paid as full-service utility customers."

Other issues for exploration included the failure of ESCOs to develop a broad range of value-added services; the possibility of publishing historical ESCO price data; possible modifications to the ESCO referral programs; the evidence that customers participating in utility low-income assistance programs were more likely to obtain their energy from an ESCO which, coupled with the finding that many residential ESCO customers paid more than utility rates, raised a question whether this was consistent with the PSC's efforts to assist low-income customers in maintaining service; complaints about door-to-door marketing and possible measures to address these; the possibility of requiring ESCOs to provide more information about their contracts offered; and possible distortions associated with the POR programs.

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[105] NY PSC, Case 07-M-0458 Order on review of retail access policies and notice soliciting comments, April 24, 2007.

[106] "Among the strategies were: the auctioning of blocks of load to energy services companies (ESCO);using utility customer service call centers to facilitate the transfer of customers to ESCOs;the purchase of ESCO accounts receivable by utilities in combination with the continuation of utility consolidated billing; the unbundling of utility bill formats; and, procedures for making customers' utility account numbers more readily available to ESCOs." p 2, footnote references omitted.

[107] "Included among these practices were outreach and education plans, market match programs, market expos, energy fairs, and utility designation of an ombudsman to respond to ESCO concerns. Utilities were also required to detail the progress of efforts to promote retail access, by surveying customers' awareness of competitive alternatives and ESCOs' satisfaction with utility performance, and by filing retail access reports. Some utilities were awarded a migration incentive, allowing them to earn monetary rewards based on their success in promoting retail competition, often measured by the number of their customers that selected ESCOs. Finally, utilities were allowed to recover from ratepayers the lost revenues "that they fail to realize because of retail migration," pp 2-3.

[108] NY PSC Case 07-M-0458, Order determining future of retail access programs, Oct 27, 2008.

[109] NY PSC Case 12-M-0476 et al, Order instituting proceeding and seeking comments regarding the operation of the retail energy markets in New York State, October 18, 2012.

As might be expected, views differed considerably but reaffirmation of concerns and requests for substantial remedial action were particularly noticeable. For example:

- The Utility Intervention Unit of the New York Department of State cited figures showing that, over two years, some 200,000 consumers paid over $100m more for ESCO electricity supply than they would have done with utility National Grid, although the majority of ConEd's ESCO customers paid less. The Unit noted also that "Consumer complaints alleging questionable ESCO marketing practices are rising rapidly in many geographical areas of New York State."[110]
- The Attorney General referred to "widespread improper practices by ESCOs", citing more than a dozen types of such practices. It had taken court action to prevent such practices, "Yet over the same time period and despite the growing evidence of improper practices by ESCOs, the PSC has not sanctioned any New York ESCO for marketing misconduct."[111] The Attorney General called for 11 steps to be taken, including that "ESCOs that market to low income consumers should be required to guarantee that their prices never exceed those of the utility for such consumers", and door-to-door marketing by ESCOs should be banned.
- Eighteen commenters proposed that door-to-door and telemarketing of electricity and natural gas should either be prohibited or subjected to stricter requirements; twelve recommended that ESCOs be required to post historic and current pricing data on their websites; eleven commented that the savings promised by ESCOs have not materialized and ESCO representatives provide misleading information; eleven stated that ESCOs should disclose additional information on contracts regarding rate changes and other issues; and eight consumers stated that they would benefit from additional information regarding their energy choices including comparison of current and historical pricing.[112]

37. February 2014 Order to reform the retail market

In February 2014 the PSC concluded that "the competitive retail energy markets are functioning well for large commercial and industrial customers" but not for other customers.

> "In light of the apparent scarcity of energy-related value-added products and services available in the residential and small non-residential markets; the high complaint rates; and what appears to be a large number of active ESCOs generating revenues by offering consumers little more than higher prices, it is apparent that these markets are not providing sufficient competition or innovation to properly serve consumers."[113]

The PSC reaffirmed that retail markets are "an integral part of the regulatory framework. In the future, these markets should foster the innovation and economic investment required to continue to modernize New York's power system design and operation".[114] It said that "the ultimate goal

[110] NY PSC Case 12-M-0476, et al, Utility Intervention Unit initial comments, February 1, 2013.
[111] NY PSC Case 12-M-0476 et al, Comments of Attorney General of New York State, January 25, 2013, p 5.
[112] NY PSC, Case 12-M-0476 et al, Order taking actions to improve the residential and small non-residential retail access markets, Feb 25, 2014, p 8.
[113] NY PSC Case 12-M-0476 et al, Order, Feb 25, 2014, p 3.
[114] There is reference here to the PSC's Order on energy efficiency standards. Case 07-M-0548, Order approving EEPS [Energy Efficiency Portfolio Standard] Program Changes, December 23, 2013.

… is the development of a competitive market structure which leads to innovation and other consumer and societal benefits". But the PSC also had to ensure that the function of these markets was properly aligned with other aspects, including "ratepayer supported clean energy programs".

The proposed remedies were in two groups: to increase and improve the information available to customers, and to strengthen rules and procedures applicable to ESCO marketing and customer enrollment. In addition, a further investigation into retail energy mass markets was ordered, to identify how to facilitate the development of energy-related valued-added products.

As regards information, utilities were required to provide a historic bill calculator on their websites, so that customers could compare bills under ESCO charges with those under utility rates. ESCOs were required to file certain historic pricing information that the PSC would publish. ESCO customers in debt could avoid termination by paying the lesser of what they owed and what they would have owed if they had taken utility service instead. ESCO referral programs (e.g. 7% discount off the utility price for the first two months with an ESCO) were deemed to have outlived their usefulness, and "the vast majority of mass market ESCO customers experience higher bills than they would have as full service utility customers and the programs have provided little or no competitive pressure". (p 21)

There was particular concern about low income customers, and the possibility or likelihood that retail competition was undermining state assistance programs.[115] This led the PSC to a striking decision. "ESCOs serving customers participating in utility low income assistance programs must do so with products that guarantee savings over what the customer would otherwise pay to the utility." (p 24) To comply with this guarantee, the ESCO would have to compare actual bills with what the bills would have been at the utility rate, and make any required refund at least annually. Alternatively, the ESCOs could provide value-added services designed to reduce energy bills.

As regards information and customer enrollment, ESCOs were required to establish independent Third Party Verification of door-to-door sales and telephone sales, plus prescribed questions to be asked and answered appropriately before customers could be enrolled. An introductory marketer identification statement and a business card were specified. Renewal notices had to explain that price comparison tools were available. The process for investigating complaints was streamlined. Rules governing ESCO conduct were extended to their agents such as energy brokers.

[115] "… we authorize more than $100 million annually for ratepayer-funded utility low income assistance programs. These ratepayer funds augment taxpayer funds that provide financial assistance to utility customers through the Home Energy Assistance Program (HEAP). … By charging more for energy supply without providing energy-related value-added benefits, ESCOs serving customers who participate in utility low income assistance programs or receive HEAP benefits diminish the value of those programs. Diminishing the value of public assistance in relation to customers' bills will make it harder for those consumers to pay their utility bills in full, which may lead to increased arrears and utility shut-offs, to the detriment of utilities and their customers. Further, the use of limited utility low income assistance program and HEAP funds to pay ESCOs higher-than-necessary energy prices reduces the availability of the funds for other consumers." (pp 22-4)

To take forward the further investigation, the PSC invited answers to 19 specific questions.[116] These covered (inter alia) how to reduce the costs of ESCOs acquiring customers, and possible changes to utility billing processes, and customer enrollment processes and data availability to reduce barriers to ESCOs, particularly in providing value-added services.

38. February 2015 Order re follow-up action

Utilities, retailers and others raised various concerns about this so-called February 2014 Order. In April 2014, the PSC accepted to rehear some issues and to stay the implementation of others.[117] In December 2014 the PSC modified the UBP to streamline the process for changing energy supplier, to enable switching electricity provider in as little as 5 days. [118]

In February 2015 the PSC pronounced on three of the outstanding issues.[119] It confirmed the provision in the February 2014 Order that "for an ESCO to sell energy commodity to Assistance Program Participants (APPs), the ESCO must guarantee such customers savings in comparison with what the customer would have paid the utility, or must include energy-related value-added services that may reduce a customer's overall energy bill". It reaffirmed that door-to-door and telephone sales required independent third-party verification, and clarified the details. And it asserted the legitimacy of the process used to modify the Uniform Business Practices requirements.

39. 2015 Collaborative on implementing guaranteed savings

The February 2015 Order also directed the Department of Public Service Staff to lead a collaborative to address implementation issues concerning the first requirement. These included how to identify whether a customer is an APP and how to define energy-related value-added products that satisfy the criteria. In November 2015 the collaborative reported.[120] All parties seem to have participated. Agreement was reached on a number of issues, but there was a clear difference on a new proposition put forward by consumer advocates. They argued that "the complex processes under consideration, the difficulties in identifying all APPs, and the costs and risks attendant to providing ESCOs with customer data regarding APP status could be avoided if the Commission extended the rate protection of low-income customers to all residential ESCO customers". (p 28) Retailers disagreed.

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[116] NY PSC Case 12-M-0476 et al, Notice seeking comments, Feb 25, 2014.

[117] NY PSC Case 12-M-0476 et al, Order granting requests for rehearing and issuing a stay, April 25, 2014 (known as the April Order or Stay Order).

[118] NY PSC Case 12-M-0476 et al, Order authorising accelerated switching of commodity suppliers, Dec 15, 2014. The PSC commented "A tighter temporal connection between customer choice and execution will encourage customers to be more engaged in the marketplace, and will lessen confusion, as customers will see the fruit of their energy provider decision in a more timely fashion. Greater customer engagement will help to ensure that the retail energy market responds to customer demands." (pp 1-2)

[119] NY PSC Case 12-M-0476 et al, Order granting and denying petitions for reharing in part, Feb 6 2015.

[120] NY PSC Case 12-M-0476 et al, Report of the collaborative regarding protections for low income customers of ESCOs, Nov 5 2015.

There was consensus within the collaborative that "few, if any, ESCOs intend to offer a product which guarantees that the customer will pay no more than would have been paid had energy been purchased from the utility." (p 32)[121] One suggestion was to establish a reference price "based on forward prices for energy and capacity and other related costs" (p 36) plus a risk premium. This reference price would be reset on the first day of each month. "All ESCOs would be able to sell one-year fixed price products to APPs at or below this reference price." (p 36) There was not agreement on defining acceptable value-added products.

A sub-group of ESCOs proposed an alternative "competitive solution to achieve the policy directives of the February 2015 Commission Order". APP customers would be aggregated by utility territory and ISO zone, then ESCOs would bid to serve them for a minimum of two years. "Qualified bids would be judged on pricing plans and value-added energy-related criteria based on Commission-established guidelines defined in the RFP [Request for Proposals]. Such guidelines should not be so prescriptive as to limit innovative products and services. Components of bids would be weighted, such as savings guaranteed by a pricing plan, the forecasted overall reduction to customers' energy bill related to value-added energy-related products, and the experience and capabilities of the bidder." (p 45)

Both opt-in and opt-out models were considered. A successful opt-in model was not considered realistic.[122] However, customer advocates argued against the opt-out model: it would be costly and "akin to slamming, or forcibly migrating APP customers to taking service from an ESCO and potentially paying higher energy rates than they currently pay while receiving no value in return". (p 55)

In December 2015 the PSC sought comments on the Collaborative's report.[123] The deadline for comments was subsequently extended to February 11, 2016. It was then overtaken by the Reset Order (see below).

40. 2015 New York State Energy Plan

Meanwhile, over the period since 2011, Governor Cuomo was developing his new initiative Reforming the Energy Vision (REV) to "create a stronger and healthier economy by stimulating a vibrant private sector market to provide clean energy solutions to communities and individual customers throughout New York." This was to be delivered by the 2015 New York State Energy

[121] "ESCOs cited several reasons for this result, including the practical difficulties of providing a price guarantee while commodity prices offered by the utility are unknown in advance and are subject to out-ofperiod adjustments, the desire for ESCOs to recover marketing and other costs that utilities do not incur, and the utilities' ability to purchase energy in volumes that many ESCOs cannot." (p 32)

[122] "It is a generally-accepted principle amongst suppliers that if a municipality chooses an Opt-Out mechanism for their aggregation, the winning supplier can expect to sign-up somewhere in the neighborhood of 80-90 percent of the residential customers in that community. Conversely, when communities instead choose Opt-In, participation is likely to range from as little as one percent to an upper-limit of 10-15 percent of the customers. Additionally those jurisdictions which choose Opt-In for their aggregations see lesser rather than greater supplier participation. … Further, the uncertainty associated with an opt-in model and low take rates for an opt-in program reduce the likelihood of investment in products that could help APP customers save on their overall energy bills. … opportunities for the types of intense, deep, sustained and local engagement that characterize the very few historically successful Opt-In aggregations will be limited." (pp 49-50)

[123] NY PSC Case 12-M-0476, Notice seeking comments, Dec 1, 2015.

Plan and three pillars. The first of these pillars was the PSC's Reforming the Energy Vision Docket.[124]

While REV's focus was on integrating distributed energy resources in utility planning and resource acquisition activities, it expected that ESCOs would be an integral part of any long-term solution for all types of customers. ESCOs would have an important role in sculpting combinations of purchases in the market, energy efficiency, demand response, storage, and behind-the-meter generation (including combined heat and power) – and this was indeed an expectation originally shared by the PSC itself.[125]

41. 2015 Staff proposals re ESCO Code of Conduct

In July 2015, after widespread consultation and examining requirements in other competitive states, PSC Staff proposed steps to tighten marketing standards and improve ESCO performance in other respects. "Staff proposes that the industry, with assistance from Staff, develop a Code of Conduct that include specific standards and requirements for ESCOs to participate in retail energy markets, for Commission approval. Until such standards are approved, Staff proposes amendments to the UBP."[126] The UBP was the Uniform Business Practices document that had determined ESCO eligibility to practice since 1999.

> "The retail energy supply industry should develop clear and common standards for core issues of importance to consumers, including the ESCO's ability to: provide high quality and responsive customer service; manage risk associated with offering fixed price products; use common, easy-to-understand contracts and/or contract language; use appropriate marketing practices; and demonstrate that the ESCO is performing well as part of a review to be conducted every two years."

In the interim, changes to the UBP would cover additional application requirements (including disclosure), required expertise (financial risk management and customer service experience), an application fee (to cover utility services to ESCOs), process for denying or conditioning an application, standardised definitions of 'fixed price' and 'green energy', standard contracts or contract terms, consequences for ESCOs with a material pattern of high complaints, foregoing the 'notice and cure period' where the ESCO has multiple UBP violations, rescinding eligibility of inactive ESCOs, modifying the dispute resolution process to increase efficiency, and provision of further information on energy brokers.

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[124] NY PSC, Case 14-M-0101, Proceeding on Motion of the Commission in regard to Reforming the Energy Vision, Order instituting proceeding, April 25, 2014. "With this Order we initiate a proceeding to consider a substantial transformation of electric utility practices to improve system efficiency, empower customer choice, and encourage greater penetration of clean generation and efficiency technologies." (p 5)

[125] "In the 1996 'Vision Order' deregulating the wholesale energy market in New York, and in the 2014 Reforming the Energy Vision (REV) proceeding, DPS Staff and the Public Service Commission (PSC or Commission) have clarified that ESCOs will take over billing processes for Investor Owned Utilities (IOUs), enter into the DER [Distributed Energy Resources] marketplace, sell "value added" services, and generally benefit from the continuing deregulation of the retail market." NY PSC, Case 15-M-0127 et al, Comments of the Public Utility Law Project of New York (PULP), September 29, 2015.

[126] NY PSC, Case 15-M-0127, Case 98-M-1343, Staff proposal, July 28, 2015, p 3.

42. February 2016 Reset Order

Larger ESCOs generally considered Staff's proposed approach to be reasonable.[127] But the customer group PULP did not, as illustrated by its summary of its response.

> "ESCOs are plainly against the public interest. 1. The role of ESCOs should not be expanded; rather, remedies should be created and made available for residential ESCO customers. 2. The Commission should seek and apply remedies for overcharging. 3. Evidence that ESCOs are not in the public interest: I Systematic patterns and practices of charging unjust and unreasonable rates. II Discovery of the failure of the competitive retail market and systematic failure to provide energy at just and reasonable rates. III Discovery of widespread abuses perpetrated upon consumers."[128]

Other customer and government entities supported this less tolerant approach.[129] On February 2 2016 the *Village Voice* newspaper published an extremely critical investigatory piece on some ESCO sales techniques.[130]

On February 23 2016 the PSC published its Reset Order.[131] It explained its thinking as follows.

> "While competitive retail energy markets continue to function well for large commercial and industrial customers, mass market customers have not seen comparable benefits. The vast majority of ESCOs serving these customers offer only commodity-related services. However, experience shows that, with regard to mass market customers, ESCOs cannot effectively compete with commodity prices offered by utilities. This may be for a number of reasons, including customer acquisition costs, the greater economies of scale of utilities, and the fact that utilities do not profit from the sale of energy commodity. In addition, the Department of Public Service (Department) continues to receive a large number of complaints from ESCO customers about unexpectedly high bills. The Commission has repeatedly taken strong action in an effort to improve and strengthen these markets. However, based on performance of these markets, an immediate transition away from a retail market focused on commodity only without price protection, to a market in which competitive ESCOs provide services of demonstrated value to consumers, is warranted."

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[127] E.g. NY PSC, Case 15-M-0127 et al, Final comments of Retail Energy Supply Association (RESA), September 25, 2015. "Founded in 1990, RESA is a broad and diverse group of more than twenty retail energy suppliers dedicated to promoting efficient, sustainable and customer - oriented competitive retail energy markets."

[128] NY PSC, Case 15-M-0127 et al, Comments of the Public Utility Law Project of New York (PULP), September 29, 2015.

[129] The Reset Order (p 5) cites the City of New York, the AARP (originally the American Association of Retired Persons), the Utility Intervention Unit of the Department of State, the New York State Attorney General and the NYC Public Advocate.

[130] "Why is Albany letting energy companies scam thousands of New Yorkers?", Jon Campbell, *Village Voice*, Feb 2, 2016.

[131] NY PSC, Case 15-M-0127 et al. Order resetting retail energy markets and establishing further process, Feb 23, 2016.

The PSC's action was dramatic: it extended rate protection from low income customers to all massmarket customers. The PSC had thus sided with the consumer advocates rather than with the energy retailers.

> "Effective ten calendar days from the date of issuance of this order, energy service companies (ESCOs) may only enroll mass market customers and renew expiring agreements with existing mass market customers based on contracts that guarantee savings in comparison to what the customer would have paid as a full service utility customer or provide at least 30% renewable electricity. …
>
> Further, this order sets forth the issues to be evaluated within 60 days of the date of this order to refine the retail energy markets for residential and small non-residential customers in New York State [including] …new requirements applicable to entities providing energy to mass market customers."

This action was welcomed by the state Governor, and by the *Village Voice* newspaper.[132] But suppliers immediately challenged the Reset Order in the courts, questioning its legality and propriety.[133] More on this below.

43. May 2016 Staff White Paper on benchmark reference prices

The Reset Order required ESCOs to guarantee that their prices would be lower than the default price. But future default prices in New York are unknown at the time of offering a fixed price contract. The Reset Order envisaged that an ESCO could meet the proposed guarantee by refunding any excess charge at the end of each year. However, the 2015 Collaborative had found that few if any ESCOs planned to offer such a contract. One suggestion had been a reference price. Developing this idea, in May 2016 Staff advanced some exploratory thinking as to how ESCOs could be given ex ante guidance as to what level of price would be acceptable. Staff proposed to calculate and publish a 12 month reference price each month, such that ESCO prices below this level would be deemed reasonable, and prices above it could be investigated.[134]

> "In light of the Commission's interest in 'an immediate transition away from a retail market focused on commodity only without price protection, to a market in which competitive ESCOs provide services of demonstrated value to consumers...' Staff is proposing a formula for determining an appropriate not-to-exceed benchmark "reference price" for a 12-month fixed price offering. A fixed price product could provide value to

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[132] "After Voice investigation, major reforms announced in retail energy industry", Jon Campbell, *Village Voice*, Feb 23, 2016.

[133] E.g. "The Order's terms came as a complete shock to IGS [an ESCO with over 1 m customers]. In fact, I have never seen an Order of this nature issued without notice and an opportunity to comment in any of the 12 competitive retail energy states where IGS serves customers. … this Order far exceeds the scope and nature of any proceedings and notices of rulemaking the Commission has issued. The substance of the Order's requirements — and the arbitrary deadline for compliance — will almost certainly destroy a valuable industry from operating in this State, all as a result of the alleged conduct of a small number of energy service companies ("ESCOs"). It is not within the statutory authority or the public interest for the Commission to eliminate a segment of the energy industry in New York State, particularly without the opportunity to be adequately heard." State of New York Supreme Court, RESA et al v NY PSC, Affidavit of Matthew Scott White for IGS, Index No 870-16, March 2, 2016.

[134] NY PSC, Case 15-M-0127 et al. Staff White Paper on benchmark reference prices, May 4, 2016.

customers who are looking to lock in a budget and/or insulate themselves from price spikes.

The fixed price offering could be a standalone product or could be coupled with an energy related value added product, the price of which would be bundled with the per unit commodity costs but separately disclosed in the customer disclosure statement, including the price of that product. In either case the reference price must consider the additional risks ESCOs incur when offering a fixed price product. …

The purpose of this reference price formula is to establish a just and reasonable per kilowatt-hour price for a 12-month fixed price supply product. A 12-month fixed price product offered by an ESCO at a price at or below the reference price will be deemed to be just and reasonable. Prices above the reference price would be subject to staff review and possible compliance action."[135]

This reference price is not exactly a price cap, because it does not prohibit pricing above it. However, it is in effect an advisory or warning price cap.

Joint Utilities took no position on the proposal. PULP argued against this approach because it would contravene the Commission's guaranteed savings principle. The New York State Energy Marketers' Coalition (NYSEMC) argued against it for a different reason.[136] Using the utility default price as the sole Price To Compare was flawed for several reasons.[137] A benchmark needed to be "easily understandable and easily verifiable by consumers themselves, not to mention the Commission Staff. The complicated methodology and formulas proposed in Staff's whitepaper on benchmark reference prices will simply not accomplish that goal." There would be other disadvantages too.[138] What was needed was "an actual listing of the pricing, terms and

[135] The proposed reference price would be set equal to the 12 month forward energy price for the relevant NY ISO zone times a multiplier to cover costs of load shaping and ancillary services, plus the 12 month forward capacity price, plus a risk premium to cover ESCO customer acquisition, financing, labor, POR costs and taxes.

[136] NY PSC, Case 15-M-0127 et al. Comments of the New York State Energy Marketers Coalition on Staff White Papers related to performance bonds, reference prices and express consent, June 6, 2016.

[137] "… chief among them – the fact that utilities have possessed the ability to pass along all risk to the consumer and obtain recovery on decisions or conditions which change at a later date, often over extended periods of time such as a year or more. In addition, utilities are able to socialize their costs over their entire ratepayer base at incrementally smaller numbers over longer periods, all while guaranteeing a specific return on their investment." NY PSC, Case 15 -M-0127 et al, NYSEMC Comments, p 5.

[138] "Any attempt at a formula which includes components which will be "decided periodically by the SC," or "cover costs of load shaping," "cover ESCO customer acquisition, financing, labor..." or determine an appropriate level of acceptable "supplier margin" is fraught with complication, unfairness, arbitrariness; and, completely undermines the ability of an ESCO to respond timely to consumer preferences in a real-time market with innovation, as well as subverts the ability of the consumer to choose based upon comparative knowledge of the marketplace. Any use of a formula approach would need to have consistent and highly skilled oversight by Staff, with equal representation by ESCOs. The formulas outlined are neither workable nor practical, and suggest that a constraint on the market place which will disallow all manner of true competition. NYSEMC understands the importance of prices. However, the current approach to regulate pricing –in addition to being clearly outside of the authority of current Public Service Law –may very likely limit innovation and drive more narrowly defined product offerings, which will erode the level of competition in New York, limit new investment into the acquisition of new customers, and perhaps result in the exit of some well qualified ESCOs." NY PSC, Case 15-M-0127 et al, NYSEMC Comments, p 6.

conditions by category (variable, fixed, flat, and value-add) of the offers which all competitors provide (including the utility)".

Other ESCOs suggested a benchmark based on some kind of average ESCO price in the market. One ESCO, Constellation, argued the importance of fixed price products for durations longer than 12 months, which would necessitate either multiple benchmarks or exempting such longer term products from the obligation to guarantee savings.

These issues do not seem to have been resolved, and the PSC did not take up the notion of a reference price. The discussion illustrates the problems involved in setting a market-based price index (or indeed a price cap in other jurisdictions).

44. July 2016 Low Income Moratorium and appeals to the Supreme Court

Retailers appealed the February 2016 Reset Order on numerous grounds. On March 8 2016 the New York Supreme Court issued a temporary restraining order. On May 10 2016 the PSC sought comments on the proposed standards in the Reset Order, in the light of collaborative discussions and further Staff whitepapers on ESCO performance bonds, reference prices for ESCO products, and express consent from ESCO customers.[139]

On 15 July 2016, the PSC reaffirmed its concern for low income customers, and its concern that ratepayer-funded low-income assistance programs were being subverted by ESCO service to low-income customers. It noted the lack of consensus in the Collaborative. It was therefore led to issue a further Order, known as the Low Income Moratorium, instituting a Moratorium on ESCO new enrollment and renewals of low income customers, effective after 60 days.[140] Again ESCOs appealed to the Courts.

On July 22 2016 the New York Supreme Court considered the Reset Order.[141] It rejected arguments that the PSC had no authority over ESCO rates. However, it determined that "the Reset Order must be vacated for two reasons. First and foremost, the petitioners were simply denied their procedural due process rights." (p 15) They did not have a meaningful opportunity to present their case on this issue. Previous consultation opportunities did not extend to the obligation to provide a price guarantee to *all* ESCO customers, as opposed to low income assistance customers.

Second, the Court held that the Reset Order "bears little rational relationship" to the February 2014 rehearing proceedings, the July 2015 comments on the Staff report and the November 2015 Report of the Collaborative. "Given the very sweeping and comprehensive changes to the UBP, meant to improve the retail energy market, and the recommendation by the majority of commentators that further study be given to energy-related value added services, the Reset Order

[139] NY PSC Case 98-M-1343, Notice seeking comments, May 10, 2016.
[140] NY PSC Case 12-M-0476 et al, Order regarding the provision of service to low-income customers by energy service companies [known as the Low Income Moratorium], July 15, 2016.
[141] State of New York Supreme Court, National Energy Marketers Association et al v NY PSC, Index No. 868-16, Retail Energy Supply Association et al v NY PSC et al, Index No. 870-16, Family Energy Inc et al v NY PSC, Index No. 874-16, Decision/Order, Zwack J. July 22, 2016.

appears to be irrational, arbitrary and capricious. Also arbitrary and capricious is the "immediate transition" - the ten day period by which the Reset Order was to be implemented." (p 20)[142]

Accordingly, the Court vacated the first three provisions of the Reset Order and remitted the matter to the PSC.

45. December 2016 Third Moratorium Order

On 26 July 2016 the PSC Chair responded robustly to the Court decision, defending its policy and saying that the PSC would "easily address" the procedural problems.[143] On September 19 the PSC responded to objections to its Low Income Moratorium.[144] On September 28 the Court issued a temporary restraining order with respect to both PSC Orders.

In December 2016 the PSC converted the July temporary moratorium on ESCOs enrolling new low-income customers into an explicit prohibition on ESCOs serving any low-income customers..[145] This became known as the Third Moratorium Order. The PSC explained that "Staff recently compiled data that indicates that for the 30 months ended June 30, 2016, New York State low-income customers who chose to take service from an ESCO paid almost $96 million more than residential customers that elected to take commodity supply from their utility for the same period". For all residential and small commercial customers the comparable figure was $817m. The Order also provided that ESCOs could apply for a waiver of the prohibition if they could demonstrate to the PSC that they offered a guaranteed savings program to APP customers.

This Third Moratorium Order was again challenged. In June 2017 the court held that the PSC had power to act on all these various issues.[146] On September 1 2017 the Court denied an ESCO petition for a stay of the December Third Moratorium Order. The PSC directed ESCOs to de-enroll their low-income customers and transfer them to utilities. Later the same month the PSC denied the requests of two ESCOs for waivers to serve low-income (APP) customers, because

[142] "The Court also agrees with petitioners that the Reset Order is arbitrary and irrational in that it imposes the unexplained and harsh ten day implementation period for the Order, which amounts to a major restructuring of the retail energy market — or even its collapse. The Court is perplexed that implementation would be so immediate, when by the PSC's own admission so many questions remain." (p 22)

[143] "When ESCOs were charging multiple times the prices that utilities charge for energy, and consumer complaints of deceptive marketing practices poured in by the hundreds, the Commission took bold action in February to protect consumers. We are disappointed that a Judge delayed these protections for what were deemed to be procedural problems with our order. Unfortunately, as a result of the litigation, ESCO customers are still paying millions of dollars more every month than they should be paying for electric and gas services. But this injustice will be short-lived. The Court's decision recognizes the Commission's authority and firmly sided with the Commission that it is both our right and obligation to protect consumers against price gouging and other abuses. We will and we must use this authority. That is why we acted last month to ban ESCOs from serving low-income consumers. More actions are necessary to protect other residential customers. The Commission will easily address the procedural concerns raised by the Court and will continue our work to ensure that all electric and gas consumers in New York have the protections they need and deserve." NY PSC 16051/12-M-0476 Statement from PSC Chair, July 26, 2016.

[144] NY PSC Case 12-M-0476 et al, Order on Rehearing and providing clarification, Sept 19, 2016.

[145] NY PSC Case 12-M-0476 et al, Order adopting a prohibition on service to low-income customers by ESCOs, Dec 16, 2016, and Press Release, ESCOs banned from selling to low-income customers in New York, 16085/12-M-0476.

[146] National Energy Marketers Assn v New York State Pub. Serv. Commn. 2017 NY Slip Op 27223, decided on June 30, 2017, Supreme Court, Albany County, 5860-16.

they had failed to prove that they could save these customers money. A third ESCO, Ambit, was given a waiver for two years because it was able to satisfy the PSC. [147] It offered a 1% saving over the utility rate, over a 12 month period, with a refund check if no savings occur. A month later the PSC denied four further requests for waivers by ESCOs but approved three others.

46. December 2016 and 2017 Track I and II proceedings

Meanwhile, in December 2016 the PSC had opened Track I and II proceedings to reconsider and decide these and related issues.[148] This brought together a number of separate ongoing Commission investigations.[149]

In February 2017 PULP made extensive information requests, including for ESCO prices for the last five years. ESCOs resisted. In March PULP filed a motion to compel the ESCOs to provide that information. In May the PSC ruled in favour of PULP and issued 153 subpoenas to ESCOs (to include also those not participating in the formal proceedings, another 33 of whom were added later).[150] In June 2017 the *Village Voice* referred to "a state of open war".[151]

In April 2017 the Retail Energy Supply Association (RESA) requested the suspension of Tracks I and II on the grounds that they had not been properly authorised by the Commission. Alternatively, the proceedings should be limited to exclude issues related to large commercial and industrial customers (because the focus of concern had always been mass-market customers) and ESCO profitability (because it would be inappropriate to treat ESCOs as regulated utilities).[152] In August the Commission rejected both these requests, and said that it would now "explore whether and how ESCOs can truly provide energy services and value to New Yorkers in support of Governor Cuomo's Reforming the Energy Vision".[153]

Direct testimony was submitted on September 15. Commission Staff, PULP, the City of New York and other parties continued to argue for requiring ESCOs to guarantee savings relative to

[147] NY PSC Press release 17066/12-M-0476, September 14, 2017. Case 12-M-0476 et al Order approving Ambit petition for waiver, Sept 15, 2017.

[148] Specifically, Track I would decide "(a) whether ESCOs should be completely prohibited from serving their current products to mass-market customers, and (b) whether the regulatory regime, rules and Uniform Business Practices Act (UBP) applicable to ESCOs need to be modified to implement such a prohibition, to provide sufficient additional guidance as to acceptable rates and practices of ESCOs, or to create enforcement mechanisms to deter customer abuses and overcharging, including whether the Commission decision not to subject ESCOs to Article 4 of the Public Service Law should be revisited." Track II would decide "(c) whether new ESCO rules and products can be developed that would provide sufficient real value to mass-market customers such that new products could be provided to them by ESCOs in the future in a manner that would ensure just and reasonable rates". NY PSC Case 15-M-0127, 12-M-0476, 98-M-1343, Notice of evidentiary and collaborative tracks and deadline for initial testimony and exhibits, Dec 2, 2016 pp 3-4. Direct Testimony of Jeff Makholm on behalf of RESA (see below) p 11

[149] "The three matters under which the Notice was filed each have relatively distinct beginnings but have merged in recent years. Case 98-M-01343 began as an investigation of the retail access business rules. Case 12-M-0476, started as an overall review and assessment of the retail electricity and natural gas market. The final matter, Case 15-M-0127, began in order to discuss the eligibility criteria for energy service companies." (footnotes omitted)

[150] NY PSC Case 15-M-0127 et al, Ruling on motion to compel discovery responses, and Letter to ALJs re subpoenas, both May 25, 2017.

[151] "NY's parasitic energy scammers are digging in their heels", Jon Campbell, *Village Voice*, June 6, 2017.

[152] NY PSC Case 15-M-0127 et al, Motion of RESA to suspend or, in the alternative, to limit scope of proceedings, April 12, 2017.

[153] NY PSC Commission moves ahead with ESCO investigation, press release, 17057/15-M-0127, August 2, 2017.

the utility default service rates. Retailers and their industry organisations continued to argue that such price comparisons were inappropriate (because ESCOs provide a different and more valuable basket of products) and that savings could indeed be made by using ESCOs.

Some relatively new additional points were made, or at least made from a novel perspective. John Haff, from the New York Office of General Services, explained that the Office was a Direct Customer of the NY ISO and acted as an ESCO in purchasing electricity for State agencies.[154] He wanted "to inform the Commission of the positive attributes that Direct Customers and ESCOs can bring to the market". These included checking that utility rates are structured appropriately (the Office had found errors in utility allocations). He observed that "the electric market is dominated by the utilities. The utilities control customer data and have historically had a monopoly on the entire customer experience within their service territory." ESCO participation in the market was expensive and involved competing "against a utility which is not allowed to make a profit on its commodity sales. This makes true competition impossible." (p 4) There were problems with utility cost allocation.[155] Steps should be taken to eliminate ESCO malfeasance, but it was premature to prohibit ESCOs from serving mass market customers. The Commission should "assume[ ] a direct oversight role … to help ensure that costs are allocated properly" (p 6) and a more streamlined approach was needed.[156] He recommended reestablishing the Office of Retail Market Development.

Consultant Jeff Makholm, testifying for RESA, argued that the materials in the proceeding did not "appear to recognize the true and complete role of competitive energy retailers in New York."[157] "The role of competitive retailers is not only to promote different kinds of choice for energy services, but also to provide a substantially widened source of useful and economic bilateral relationships between energy suppliers (particularly power suppliers) and buyers." Reducing ESCO service "removes these intermediaries and forces producers to pass too much energy through to New York consumers at the NY ISO spot price, with a far smaller ability to find buyers to hedge their production". (p 54) The utilities would not replace ESCOs: "The utilities do not have the inherent business competition incentive that ESCOs do to minimize costs" and "there exist far fewer utilities to provide choices in the market by which to structure bilateral transactions". (p 55) This is a particular problem for capital intensive energy production businesses needing to hedge their credit risks. Removing ESCOs as intermediaries or limiting them to the utility default service price would ultimately lead to more volatile wholesale markets and potentially increased costs for all customers.

[154] NY PSC Case 15-M-0127, Direct Testimony of John T Haff on behalf of NY State Office of General Services, Sept 15, 2017.

[155] Utilities were incentivised "to allocate all possible commodity and employee/technology costs to a customer's delivery bill, since that is where the utility receives an ROI [Return On Investment]. As a result, no accurate comparison is possible between utility and ESCO commodity costs." (p 4)

[156] "The Commission can continue to assist in the development of reasonable policies for the retail market, instead of eliminating that market altogether. Over the years, OGS has had significant issues with various utilities concerning market rules and cost allocation methodologies. It has been OGS's experience that getting these issues addressed is a slow and difficult process, which usually takes years and requires testimony, significant legal expenses, and a utility rate case. A more streamlined and accessible approach is needed to address market inequities and allow true competition between utilities and other providers." (p 7)

[157] NY PSC Case 15-M-0127 et al, Direct Testimony of Jeff Makholm on behalf of RESA, Sept 15, 2017, p 53.

On 26 October 2017 the ESCOs proposed a settlement process on Track I issues. They suggested that "all of the parties believe that there is room for improvement in each of the following areas: Raising standards for market participation; Increasing market transparency and accountability, including with respect to variable pricing offers; Enhancing consumer protection, including with respect to the door-to-door sales channels; and Providing further opportunities for product innovation." [158] Others opposed this. "UIU/NYAG note that the parties have attempted to resolve problems in the retail energy market in New York for several years and have been unable to arrive at consensus on the required action necessary to address market concerns, including an inability to come to consensus on whether a market problem even exists."[159]

There appeared to be little meeting of minds. Suppliers and their witnesses remained very critical of the Staff and PULP position.[160] Statements about the worrying propensities of regulation, as noted by a former Chair of the Commission, were prayed in aid.[161] Staff's response to the settlement proposal left no doubt about the heightened tensions now obtaining.[162] On November 9 the Commission observed that it could not direct parties to engage in settlement talks against their will and declined to impose a settlement process.

[158] NY PSC Case 15-M-0127 et al, Motion to commence settlement negotiations in the ESCO proceedings, October 26, 2017, p 5.

[159] NY PSC Case 15-M-0127 et al, Response to the motion by Utility Intervention Unit, Division of Consumer Protection, Department of State, November 6, 2017.

[160] E.g. "Staff and/or PULP witnesses (1) overlook the highly-incomplete nature of unbundling that makes reasonable comparisons of default and ESCO service impossible, (2) claim wrongly that what ESCOs sell to consumers are generic and indistinguishable commodities instead of highly varied services of which electricity and gas are only part, (3) struggle in vain to document the profitability of competitive ESCOs with unsuitable regulatory tools, (4) misuse a troubled default service price as the sole standard to compare ESCO service, and (5) garble the economic analysis of the retail energy market in New York by lumping utilities—with their regulatory compact assurances—with ESCOs that must compete to survive." Case 15-M-0127 et al, Rebuttal testimony of Jeff D Makholm on behalf of RESA, Oct 27, 2017, p 5.

[161] The statement just cited continued as follows. "In other words, Staff and/or PULP witnesses have sought to micromanage, prescribe the results of a perfect world, and require that ESCOs, as a whole, beat a regulated service with no profit margin, as the sole criterion by which to continue to serve mass market consumers in New York. Such positions are unreasonable to take in assessing "unregulated" markets. As a whole, those positions of Staff and/or PULP witnesses demonstrate 'the very propensities of regulation that are the principal reason for its abandonment'. The last phrase is a quotation from the veteran US regulator Professor Alfred Kahn, who referred to "the very propensities of regulation that are the principal reasons for its abandonment—propensities to micromanage the process; to prescribe the results that, it is anticipated the Almighty would have produced if He or She were in full possession of the facts; to handicap the competitive process to produce visible competitors; and, opportunistically, to produce visible price reductions." Alfred E Kahn, *Whom the Gods Would Destroy, or How Not to Deregulate,* AEI-Brookings Joint Center for Regulatory Studies (2001), pp. 3-4.

[162] "The testimony pre-filed by Staff clearly demonstrates that ESCOs have for years been significantly overcharging nearly all mass market customers - to the tune of hundreds of millions of dollars – without providing any added value to justify the overcharges. ESCOs have been abusing customers through high-pressure and deceptive sales tactics, tricky teaser contracts, and exploiting vulnerable elderly, immigrant, and low-income populations. ESCOs have failed or refused to police themselves. ESCOs were given several years of collaborative processes by the Commission to work constructively with Staff and other consumer advocates to clean up ESCO practices. The results were denials and delaying tactics. Meanwhile, customers continue to suffer at the hands of the ESCOs." Case 15-M-0127 et al, Staff response to motion for settlement, Nov 6, 2017.

Suddenly, on the evening of November 29, the Office of General Services withdrew the testimony of John Haff and said he would not be appearing as a witness in the proceedings. The National Energy Marketers Association attempted to compel his testimony, but without success.

Hearings were completed in December 2017. As of February 2018, the Commission's decision is awaitd.

47. Unanswered questions in New York

At one time, New York saw itself as a leader in wholesale and retail energy competition, and indeed was. In 2007, along with Massachusetts, it had the highest level of switching by residential customers outside of Texas. The PSC was then very positive about the situation and prospects. But since then, regulatory attitudes and policy have changed. There has been a noticeable and continuing hardening of Commission policy towards competing residential retail suppliers. The recent Order, that such suppliers may not serve low income customers unless they can prove they would save these customers money compared to the utility default service price, is unprecedented. It is not clear why policy has changed in this way.

A few possible factors can be conjectured, but without much conviction. Exceptionally, in New York it is the primary role of the Commission rather than the state Government to initiate and define policy on retail competition. This gave the New York Commision more latitude to limit such competition. But other commissions have generally not wished to do so.

Is it possible that the residential retail market is more problematic in NY because the PSC's rules on ESCO participation may not have matched those of other competitive states?[163] But in other US states there are still some concerns (for example, about some suppliers' marketing tactics), yet there appears to be a broad consensus to continue present policies on retail competition and regulation.

Does the ex post and untransparent monthly setting of the default service rate hinder retail competition, as suppliers allege? Yet this was a policy adopted and maintained when the Commission was keen to promote retail competition.

It remains to be seen whether a significant number of retail suppliers are given permission to supply low income customers in New York; whether such customers respond to their offers; whether the Commission renews its previous attempt to extend this restriction to all customers; and how this all impacts on retail competition. Not least intriguing and important is whether or how the Commission will decide that such restrictions on retail suppliers are consistent with its own envisaged role of competing retail suppliers in taking forward the New York Governor's initiative on Reforming the Energy Vision.

[163] "Staff examined ESCO eligibility requirements of other states with restructured energy markets, including Texas, Illinois, Pennsylvania, New Jersey, Maryland, and Massachusetts. Staff determined that other states had additional requirements for ESCOs to satisfy in order to enter the market beyond those applicable in New York." NY PSC, Case 15M-0127, Case 98-M-1343, Staff proposal, July 28, 2015, p 2.

Part IV Summary and conclusions

48. Regulatory arrangements in the 13 competitive states

Fourteen US states have embraced retail competition for residential electricity customers. In one of those states, Texas, regulatory arrangements are similar (for present purposes) to those in the UK and many other competitive markets around the world. This report has focused on the other 13 US states, where arrangements are significantly different insofar as the incumbent "wires-only" network utility in each area is obliged to make available default supply service to those customers that have not chosen a competitive supplier. The default service rate is defined (in ways that differ from state to state) so as to pass through to default customers the price in the competitive wholesale generation market, without a profit margin for the utility.

The market in Texas has often been studied, but there is little published research about the residential markets in the other 13 states. Their rules differ as to how the utilities should purchase generation for default supply. New Jersey pioneered the use of Fixed Price Full Requirement (FPFR) (or "load slice") auctions. There seems to be some learning and evolution insofar as this approach is becoming more widely used. But the frequency and durations of the purchases vary between states, as does the extent of "laddering" over time. Yet other states require their utilities to use a more traditional "Block and Spot" approach. In one case (Illinois) the purchasing of "blocks" is carried out by an independent state agency.

Rules differ on the basis of pricing the default supply service. Typically the price is set in advance, and may be for the whole year, or per quarter, or may vary from summer to winter. Adjustment factors to reflect additional costs such as spot purchases or sales may be added later. In one state (New York) the price is set not in advance but monthly in arrears, to reflect the actual cost incurred in each month.

States also vary as to how much information is published about the purchasing and hedging policies of the utilities, and whether this is published in advance or after the event.

In general, rules on marketing by competing suppliers have been tightened over time. But again this has been done without any conscious attempt to create a common set of conditions across the 13 competitive states.

In order to promote retail competition, the network utilities are generally required to make available a variety of services to the competing suppliers. These services include metering, billing, revenue collection and purchase of receivables. In consequence, there is less scope for competing utilities to differentiate themselves and their products, than there is in markets where retailers provide such services for themselves. There is also less interest in ability to pay (e.g. as instanced in the very limited use of prepayment meters). These arrangements surely preclude some kinds of adaptation and innovation that characterise the competitive retail market in Texas, the UK and elsewhere.

49. The nature of residential competition and the extent of customer switching

In all 14 US states there were various different transitional arrangements over the period 1998 to 2007, such as bilateral contracts and price caps, to facilitate the change from vertically integrated monopolies to competitive wholesale and retail markets. Whether suppliers could compete often depended upon whether the wholesale market prices fell or rose relative to the transistional contract prices. But once these transitional arrangements were phased out, by about 2007, the proportion of eligible customers with competitive suppliers – known in the US as the switching rate - increased quite rapidly.

For non-residential (large commercial and industrial) customers in the 14 states, the proportion of the load provided by competing retail suppliers steadily increased from about 55% in 2007 to about 85% in the last few years. There appears to be widespread satisfaction with the competitive retail market for such customers. And there seems no pressure to remove the obligation on utilities to provide default service for the remaining 15% of load, typically at wholesale spot prices.

The proportion of residential customers with competitive suppliers has also grown, albeit more slowly. In terms of load (MWh), the proportion in the 14 competitive states has grown from about 6% in 2003 to over 20% in 2007 to about 50% in 2013. In terms of customer numbers, the proportions are slightly less, reaching about 40% in 2013. There seem to be many competing suppliers and available offers. But whether by customer load or customer numbers, the proportions of customers switching have remained about constant over the last few years.

These average figures for the 14 states overstate the extent of engagement by individual residential customers in the 13 states, for three main reasons. First, the proportions in Texas are all about100% because there is no default service supply as in the 13 other states. Essentially all eligible customers in Texas are deemed to be with a competitive supplier.

Second, in two states, Ohio and Illinois, there has been a very significant impact of municipal aggregation. Municipalities that vote for this seek to negotiate a lower price with a competing supplier than the default service price. The negotiated price is then the basis on which all residents of those municipalities are supplied, unless they opt out. The extent of such aggregation has varied considerably over time, but at present nearly 25% of residential customers in each of those two states takes competitive supply as part of a municipal aggregation program.

Third, a form of municipal aggregation called Community Choice Aggregation (CCA) is beginning to attract support in some states. The main aim here is not to reduce price compared to the default service price, but to negotiate the best price for a higher proportion of renewable energy than the level specified in the state's Renewable Portfolio Standard (which is reflected in the default service price). This approach has been particular popular in Massachusetts, where active CCA schemes presently represent about 19% of Massachusetts residential customers.

A more accurate measure of individual residential participation in the competitive retail market is perhaps the median switching rate in these states. This increased from under 2% in 2007 to about 20% in 2014, since when it has remained relatively stable. The interquartile range has similarly remained rather stable since 2014, at roughly 15% to 45%. (By the same token, in the competitive states the median proportion of residential customers *not* choosing a competitive supplier, and taking default supply from the local wires-only utility, is about 80%, ranging from about 55% to 85%.)

All 14 competitive states have now achieved a significant and stable customer switching rate, which reflects and is sustaining a competitive market. But for an overseas audience, in particular, it is worth putting this into perspective. The comparable switching rate in other competitive markets is much higher than the median 20% in a range of 15% to 45% reported here. In the UK over 70% of customers are no longer with the incumbent supplier. In the four main Australian states between 74% and 91% are on competitive market offers. In Texas the proportion of customers no longer with the retailer affiliated with the local utility is about 68%.

One suspects there is a similar difference with respect to what is elsewhere called the switching rate, viz the proportion of customers *changing* suppliers over a period of time, also known as "churn". In the competitive US states it is apparently not sufficiently significant or of interest to be measured, but is conjectured to be very low in some states, maybe only a percentage point or two. But in the Nordic markets (Norway, Sweden and Finland) this churn is in the range 10-15% per year. In the UK and three Australian states it is in the range 15-20% per year, with Victoria now reaching 30%.

50. Customer concerns and regulatory restrictions on competitive suppliers

Some customer bodies have questioned whether prices offered by competing suppliers are generally lower or higher than the default supply service rate. Calculations by regulatory authorities in Illinois and New York suggest that on average the prices of competing suppliers have been higher in very recent years (but lower in Illinois a few years ago). Another calculation in New York showed that, for a customer whose only interest was in price, it was possible to achieve a lower average price by using competing suppliers rather than the default service rate. But note that these calculations take no account of additional value that may be associated with competitive products, such as fixed prices, higher green content, free gifts, etc. A systematic analysis of prices and switching rates across all 13 states would be of considerable interest.

The New York calculations are for a short period of time, whereas the value of a fixed price product will often depend on whether the wholesale price is moving up or down, and therefore could vary over time. In the 13 markets generally, the scope for retailers to compete by offering lower prices than the default rate does seem to be remarkably dependent on the particular price generated by the default service purchasing and pricing regulations, and on subsequent movements in the wholesale market: at some times retailers can compete, at other times it is difficult. In that sense competing retailers in the 13 states seem to live a rather hand-to-mouth existence.

In response to public concerns, two states have intervened to restrict the prices that competing suppliers can charge residential customers. Connecticut has prohibited tariffs with variable rates over time, insisting instead on fixed price products. This measure was imposed by the legislature in response to unexpected price increases associated with the "polar vortex". The Connecticut regulatory authority has since invited the legislature to consider relaxing this restriction.

New York now requires competing suppliers wishing to serve low income customers to guarantee that their prices will save money for these customers compared to the default service rate. This has proved highly controversial, and regulatory dockets on related issues are still in process. How the policy will develop and what effects it might have remain to be seen. Many have pointed out its inconsistency with the State's policy, known as Reforming the Energy Vision. That policy, actively supported by the regulatory authority itself, envisages a major role for competing retailers in driving change.

These two states are exceptional as regards intervention in the residential retail market. So far, no other state has indicated an intention, or even a wish, to restrict retail competition in such ways.

51. Lessons for other markets?

In the light of the experience of residential electricity markets in the 13 competitive states, would there be merit in changing the nature of retail competition or its regulation in any present jurisdictions? Consider three possibilities.

First, US states and other countries that have not yet opened their electricity sectors to generation and retail competition might wish to consider the approach adopted in the 13 competitive US states as well as the approach adopted in Texas (and elsewhere). Both approaches provide customer choice, and are more conducive to innovation than are vertically integrated monopolies. There is also now evidence, cited in this report, that the electricity sectors in the 14 US competitive markets as a whole are more efficient than in the US regulated monopoly states.

Second, the 13 competitive states and their regulatory bodies and legislatures have no doubt considered the possibility of changing to a Texas-style residential market with no obligation on wires-only utilities to provide default supply service for those customers that do not choose a residential supplier. Originally, some seem to have envisaged utility default supply service as a transitional stage en route to a Texas-style competitive market. The greater role of competitive suppliers in Texas and in competitive markets overseas seems more conducive to innovation and meeting customer preferencs. But I sense no appetite in the 13 states for such a transition at the moment. Some further comparative studies would be helpful.

Third, would there be merit in Texas, or other similar competitive retail markets overseas, adopting a default supply obligation on the network utilities as in the other 13 US competitive markets? Alternatively, should Texas and the overseas markets require existing competitive suppliers, rather than the network utility, to offer a basic default product related to wholesale market price? Would such an obligation be better than the recent and proposed UK price caps on tariffs to vulnerable and less engaged customers?

A full analysis of such questions goes beyond the present report. But there is no feeling in Texas that adopting the 13 state model would be an improvement. Introducing a default supply obligation in other overseas competitive markets might reduce prices to those customers that are less engaged in the market, but could remove some of the low prices to those customers that are more engaged. It would influence the timing and levels of competitive offerings in ways that are not yet well understood. Comparison of the markets in the 13 states with those in Texas and overseas suggests that such a provision would significantly reduce the role of competitive suppliers, the extent of customer switching between them, and the rate of innovation and adaptation to change. This would be a high price to pay for an uncertain benefit.