
Manipulated, Misled, Ignored, Abused

Residential Consumer Experience with Electric Deregulation in the United Kingdom

Kevin Jewell

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www.consumersunion.org

Consumers Union Southwest Regional Office, 1300 Guadalupe, Suite 100, Austin, Texas 78701

Tel: 1-512-477-4431

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www.psiru.org

PSIRU, School of Computing and Mathematical Sciences, University of Greenwich, Park Row, Greenwich London SE10 9LS

email: psiru@psiru.org

Tel: +44-(0)208-331-9933

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Executive Summary

The United Kingdom began deregulating its electric market years before the U.S. Thus, the UK provides the best example of what can be expected in the deregulated residential retail electric market in the United States. .

An extensive review of the evidence found:

Questionable price savings: Large drops in wholesale market prices were not fully passed on to residential consumers in the deregulated marketplace.

Increase in complaints: The volume of complaints about energy companies jumped after deregulation, and new types of complaints such as unauthorized switching of service ("slamming") arose.

Failure of Competition to Develop: Rather than compete for new customers, companies are relying on customer inertia to keep their existing customer base.

Higher prices for low-income consumers: Since deregulation began in 1990, there has been a marked increase in the use of prepayment meters, resulting in low-income customers paying more for their electricity.

These findings lead us to recommend against implementing plans to replace traditional regulation with "retail competition" for consumers. Where a state or country has already enacted such a plan, it should be prepared to address and remedy each of the problems identified above.

Background

The last few decades have seen a move towards the privatization of state owned network utilities such as telephone, electricity, and gas. Globally, markets for these goods have increasingly been restructured to replace rate regulation with market price mechanisms. This shift towards competitive market structure has been imported to the United States, where rate regulated utilities are increasingly "deregulated."

Ranking with water and natural gas high on a household's hierarchy of vital utilities, electricity provides light, climate control, and appliance power to families in modern society. The importance of electricity has made the deregulation of its production and sale a contentious topic. Before deregulation was

Segments of an Electricity Market:

There are four components of a consumer's electricity bill:

- **Generation:** The production of electricity from fuel or renewable sources.
- **Transmission:** The transport of electricity over long distances via high voltage wires.
- **Distribution:** The final delivery of electricity after it has been stepped down in substations to household voltage levels.
- **Retail:** Buying electricity from the wholesale market and reselling it to consumers. This includes the administrative overhead of customer care, billing, and advertising. In the UK, meter reading is considered part of the retail segment, but it is considered a distribution function in the US.

Together, these make up the electricity market. Under the UK's monopoly cost structure prior to 1999, each component contributed to a typical consumer bill roughly as follows: Generation (63%), transmission (4%), distribution (27%), and retail (5%).¹ Since restructuring, generation prices have fallen and retail prices have increased as a proportion of the bill.

Under most deregulation schemes, transmission and distribution are maintained as regulated monopolies. Generation is opened to competition. Retail supply has been opened to competition in fewer markets, some of which have introduced competition only to large industrial and commercial users.

Notes:

¹ OFFER 1997, as reported in Littlechild "Why we need electricity retailers" August 22 2000, Table 1. Numbers recalculated to exclude the Fossil Fuel Levy.

implemented, advocates of restructuring predicted increased efficiency and lower prices, while sceptics warned of new risks to consumers in a deregulated marketplace.

One of the first electricity markets to take the plunge into deregulation was that of England and Wales in the United Kingdom. England and Wales began the restructuring process in 1990 with the opening of their wholesale market to competition.¹ Retail markets were opened up in stages, immediately beginning with the largest industrial and commercial users and concluding with the opening of its residential market in early

Privatization of the British electricity industry

While outside the UK, the changes that have taken place in the British electricity industry are termed liberalization or deregulation, in Britain, they are generally described as privatization. This reflects the perception (perhaps mistaken) that the change from state to private ownership was more important than the concurrent opening of the market to competition. Some analyst also avoid the term “deregulation” as a misnomer – market price setting mechanisms can require more regulation than state ownership or rate regulation.

In the United Kingdom, prior to privatization, there were three main electricity transportation grids. The largest covered England and Wales (about 90% of demand), while there was a separate but interconnected system covering Scotland and a physically isolated system supplying Northern Ireland. All of the segments of the market were state owned.

At the time, there was one main generation and transmission company and twelve regional distribution and retail companies in England and Wales. The Central Electricity Generating Board (CEGB) had an effective monopoly of generation and owned and operated the national high voltage transmission system. In 1990, it was split into four companies. The fossil fuel plants were given to two newly privatized companies, National Power and Powergen, while the nuclear plants remained in public ownership in a new company, Nuclear Electric. The transmission network was separated and was transferred to the new National Grid Company (NGC).

The twelve regional distribution and retail companies (referred to as Regional Electricity Companies, or RECs) were each privatized intact in 1990. They were required to make an accounting separation between their monopoly distribution and their increasingly competitive retail activities, and were given joint ownership of NGC. (In 1995, the Regional Electricity Companies were required to sell their shares in the National Grid Company (NGC) and NGC remains entirely independent. In 2002, it merged with its equivalent in the gas industry, Transco, to form National Grid Transco.)

In Scotland, there were two publicly owned companies before privatization, the South of Scotland Electricity Board (SSEB) and the North of Scotland Hydro-Electricity Board (NSHEB). These were fully vertically integrated monopoly companies carrying out generation, transmission, distribution and retail in their regions. These companies were privatized largely intact in 1990 as Scottish Power and Scottish Hydro. The nuclear plants could not then be privatized and were placed in a new publicly owned company, Scottish Nuclear. The connection between England and Scotland was then relatively weak and although there were provisions for competition, Scotland remained, in practice, two vertically integrated monopolies. Since 1990, these connections have improved, allowing more interaction between the Scottish and England and Wales markets.

Steve Thomas contributed to this section

1999.² The pioneering nature of the changes in the U.K, along with the perceived success of the reforms meant that the “British model” was often used as a archetype for redesigns of other markets, including those in the U.S.

Today, several years into deregulated markets in England and Wales, we have the experience and data to evaluate the changes deregulation has brought to consumers. Recognizing that wholesale and retail deregulation are separate issues (See Box: *Segments of an Electricity Market*), this report focuses on evaluating the impact retail market deregulation has had on residential consumers.

Now is an important time to evaluate the fruits of restructuring. Although several states in the U.S. have transitioned their electricity markets, others

(such as New Mexico, Oklahoma, and Nevada) delayed or reversed course after the California crisis, opting to “wait and see” how things have developed in other markets.³ Member states of the European Union are also looking to learn from the experience of the early movers, as many have recently completed the transition to retail competition and the rest must do so by 2007.⁴

The evidence

The evidence we examine falls along four main themes: customer service, price, market function, and effect on low-income consumers. Using each of these metrics, we compare the outcome of residential retail competition versus the data from traditional regulatory structures.

Consumer Voices

"Electricity Direct lied to me, manipulated me, misled me, ignored me and generally abused me. This is the most appalling and underhand service I have ever experienced."

David Patterson, Hotel Owner in New Galloway, via Energywatch 'better billing webpage' (<http://www.energywatch.org.uk/betterbilling/index.asp>)

"It's a pain. It might only take 'three minutes' to complete the form, as was quoted by the regulator on the radio this morning, but it takes three years to sort out the mess afterwards. Having swapped my Electricity supply to British Gas they still haven't billed me 14 months later. Somehow I suspect a rather large bill will land on my doorstep one day."

Dave Gibson, England via BBC news website. (<http://news.bbc.co.uk/1/hi/business/3014187.stm>)

SERVICE

Be careful what you wish for: the market opens to 'competitors'

The idea of deregulation had been sold to policymakers with images of energy companies beating a path to the doors of consumers, offering savings and enhanced products. In the UK, this quite literally occurred: door-to-door selling was an early and popular marketing channel for retail companies looking to sign up customers.

Door-to-door selling brought with it the first signs that competition had a down side. It quickly became apparent that commission-driven salespeople were engaging in deceptive and fraudulent practices in order to make sales. Allegations of "slamming" (i.e. switching providers without the consent of the consumer) and other fraudulent tactics were reported by consumers and regulators. Some retailers were also accused of improperly blocking consumers from leaving their service. The UK governmental agency charged with regulating the new market (OFGEM), has taken action against multiple companies for illegal sales tactics since the market opened. Recently, for example, OFGEM fined London Electricity over \$3 million for acts of misrepresentation by its sales staff.⁵

Billing complaints have also emerged as a problem under deregulation. The government consumer protection agency Energywatch estimates that half a million consumers have

been put in debt because of poorly estimated bills in the last year alone.⁶ When companies underestimate meter readings, consumers can be surprised by large bills when the meter is physically checked. If a household is on a tight budget, this unexpected bill can snowball into a larger debt. Energywatch recently launched a "better billing campaign."

Overall complaints to Energywatch rose by nearly 400% over the first year of retail competition, from 6,000 complaints the 12 months before Feb 1999 to 22,000 complaints the following year.⁷ By the 2002-2003 financial year, Energywatch reported receiving 92,600 complaints from residential consumers – another 400% plus increase.⁸

PRICE

The bottom line

Proponents of deregulation promised that privatizing and opening the electricity markets to competition would squeeze out inefficiencies, resulting in lower prices to consumers. Using this yardstick, how have customers fared in the new marketplace?

From 1990 to 2002, U.K. standard credit residential prices have fallen about 30% in real terms.⁹ Since 1998 (the eve of opening the residential market), prices have fallen about 17% in real terms. These gains are used as a basis to declare competition a "success" – after all, the

average monthly bills are lower for U.K. consumers after retail competition than before.

However, a true analysis of costs to consumer requires looking at what residential prices would have done without retail competition. This requires a closer look at wholesale and distribution prices, as well as pricing trends for other classes of consumers.

Under the “deregulated” system in the UK, the transmission and distribution systems remained monopolies subject to rates set by the government. Mandated reductions in the rates of these systems (which represent about 30% of a consumer’s bill) reduced bills by about 9%. These price changes would have happened regardless of retail competition.

More significantly, OFGEM (the UK regulator) reports wholesale prices are down 40% since 1998. This drop has been attributed to a redesign of the wholesale market, over capacity, and lower fuel costs.¹⁰ Since wholesale prices represented about 50% of a consumer’s bill in 1998, this should have translated to large gains for consumers independent of changes to the retail market.

Significant price reductions have been seen by large commercial and industrial customers. Commercial and industrial uses have been able to use volume contracts and aggressive negotiating to capture the benefits of dropping wholesale prices. Data from the UK’s Department of Trade and Industry shows that from 1990 to 2002, prices fell 39% in real terms for industrial customers.¹¹ From 1998 to 2002, prices fell 20%. These customers already had retail competition, so this 20% drop is also independent of the introduction of residential retail competition. Residential consumers have seen less of the wholesale price reductions from 1998 to 2002 than industrial customers.

The retail electric markets opened for industrial and commercial customers first, from 1990 to 1998. During this time, it appears that retail companies allocated their higher cost contracts to the captive residential market and their lower cost contracts to favored commercial and

A Fair Wind for Liberalization

The true test of electricity market reforms is whether prices are lower than they *would have been* if the reforms had not taken. Thus, although prices have fallen since 1990, we need to take into account the very favourable circumstances that influenced prices over the last 13 years.

Costs fell prior to privatization. The first element to take into account is that the much maligned publicly owned companies were consistently increasing their efficiency before privatisation by about 1-2% per year and there is no reason to assume this would not have continued. So in the thirteen years since privatisation, costs under their control (e.g., excluding fuel purchase) might have fallen by up to 30%, perhaps reducing overall costs by 5% or more. Government also imposed real price increases prior to privatisation in 1987 and 1988 totalling 7% to ‘fatten’ the companies up for privatisation.

Fuel costs dropped since privatization. Prices for coal and gas, the two major generation fuels in Britain, have fallen in real (net of inflation) terms since 1990 by about 40% and that alone should have resulted in overall real price reductions of about 10%. Coal and gas prices are set in regional and global markets and liberalisation in Britain cannot claim any credit for these price reductions, they were simply ‘good luck’. Recently, this luck has ended, with British gas announcing a 6% bump on consumer prices for 2004, following increases by Powergen as well.¹

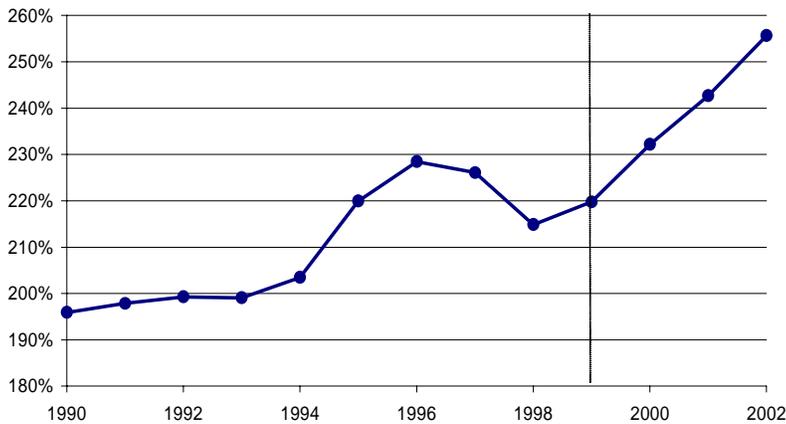
Capital subsidies. In addition, because the state owned infrastructure and generation plants were sold in privatization for only about a third of their asset value, the new companies received a large windfall that has reduced their costs. In the monopoly businesses, (transmission and distribution, about 30% of total costs), prices are set to give a ‘fair’ rate of return on the assets owned. Effectively writing off two thirds of the asset bases has allowed price reductions of nearly 50%. These price reductions had little to do with efficiency gains, rather they were paid for by taxpayers who saw the assets they owned sold off at fire-sale prices. These price reductions are also temporary – prices will have to rise to when the discounted assets age and are replaced by new assets purchased at full market value.

To put it simply, if fossil fuel prices had not fallen and the assets had not been sold off at a fraction of their value, it is far from clear whether prices would have fallen, and even more unlikely that prices would have been lower than if the reforms had not taken place.

¹ "British Gas puts up energy prices" 8 December, 2003. BBC News Online.

Steve Thomas contributed to this section

**Residential Retail Prices for Electricity
as a Percentage of Prices Paid by Industrial Users**
Source: DTI data



industrial accounts.¹² This resulted in a higher spread between the two customer types in 1998 than at the market opening in 1990. Retail competition was proposed to reduce this spread in costs, but the data shows that instead the spread between the prices paid per kilowatt hour by the different customer types has widened even further.

In 1998 residential consumers paid about 220% more per kilowatt hour than industrial consumers, but by 2002, the spread in prices had risen so that residential consumers paid over two and half times the prices paid by industrial consumers. (see chart: *Residential Retail Prices for Electricity as a Percentage of Prices Paid by Industrial Users*).

Thus, the gains to consumers since 1998 can largely be attributable to influences in the marketplace other than retail competition. In fact, the cost of the retail component of a consumer's bill has risen. A report from the UK's National Audit Office in 2003 indicated that retail costs have increased 20-40% due to the requirements of the competitive market structures. Residential consumers' bills are further impacted by retail company profits that are above historical levels.¹³

MARKET PERFORMANCE

Competition is "in danger of failing"

It is hard to judge the market a competitive success benefiting consumers, as complaints have increased and the prices paid by residential retail electricity customers have not fallen. Lately advocates of deregulation have focused on competition as an end in itself rather than a means to delivering services more efficiently. Those who support deregulation have often in the past pointed to the UK as a model because of its relatively high rates of "switching" – 43% of electricity customers have switched suppliers at least once.¹⁴

High rates of switching have been viewed as an indication that competitive forces are operating in the marketplace.

Recently, however, even this yardstick of success has been called into question in the UK. Switching rates jumped quickly after the market opened in 1999, but since 2001 the percentage of consumers to ever switch has inched up just 5%, revealing that the majority of consumers have no inclination to switch providers. These statistics led the government funded industry watchdog Energywatch to warn in June of 2003 that competition was "in danger of failing."¹⁵

Another metric of competition, the number of active market participants, has also declined since the initial opening of the market.. The

Retail Electricity Companies in Scotland and England and Wales	
<u>1990</u>	<u>2002</u>
1. London	1. EDF. Owns: London, SEEBOARD, SWEB
2. SEEBOARD	2. Powergen (E.ON). Owns: Eastern, East Midlands, Norweb
3. SWEB	3. Innogy (RWE). Owns: Yorkshire, Midlands, Northern
4. Eastern	4. Scottish Power. Owns: South Scotland, Manweb
5. East Midlands	5. Scottish & Southern. Owns: North Scotlans, Southern, SWALEC
6. Norweb	6. British Gas (Centrica)
7. Yorkshire	
8. Midlands	
9. Northern	
10. South Scotland	
11. Manweb	
12. North Scotland	
13. SWALEC	
14. Southern Electric	

Market consolidation since 1990

The market structure set up in 1990 remained unchanged until 1995, largely because of restrictions against takeovers implemented by the UK government during privatization.

Restrictions against takeovers of the Retail Electricity Companies (RECs) expired in 1995, and was immediately followed by a period of intense mergers and acquisitions activity – 11 out of the 12 RECs changed ownership in the following two years. Seven were bought by US utilities. However, attempts by the generating companies National Power and Powergen to integrate vertically by taking over RECs were blocked by the government on the grounds that it would hamper competition.

In 1998, as retail competition for residential consumers was being introduced, the UK governmental regulator began to require a much more complete separation of RECs' regulated distribution businesses and the soon-to-be competitive retail businesses. This separation was intended to prevent the monopoly activities from cross-subsidising the competitive activities. In 1998, the policy on vertical integration was reversed and National Power and Powergen were allowed to take over retail businesses. The separation of supply from distribution, the opening of the retail market and tougher regulation of monopoly prices gave incentive for the companies that had purchased RECs in the 1995-97 wave to sell them, and most of the US companies exited the market.

Today, 99% of the residential market is controlled by companies that own generation. The retail businesses were quickly taken over by generation companies and by 2002, all 12 England & Wales RECs and the two Scottish retail businesses had been taken over by just five companies. National Power, which was taken over by the German company RWE in 2002, owns incumbents in three regions; Powergen, (taken over by another German utility, E.ON in 2002), owns three incumbents; EDF, the French national electric utility, owns three incumbents, Scottish Hydro merged with a REC to form Scottish and Southern and owns the incumbents in three regions, Scottish Power took over a REC and owns two regions. Texas based TXU, which seemed to be in a strong position, owning generation and two large regional supply businesses, made errors in its wholesale power purchasing and was forced to sell its business to E.ON in 2002. Increasingly the distribution and retail supply businesses for a given region are now under separate ownership.

Vertical integration of generation and supply seems to be forcing independent generators out of business, and the five main generation companies without retail supply businesses are all bankrupt or near bankrupt. It now seems difficult for new generators to enter the market because the retail supply companies can all supply their needs from their own plants, while the integrated companies would have no incentive to sell wholesale power to potential new retail supply companies. The exception to this is Centrica, which trades in Britain as British Gas. Building on this powerful brand name, it has won more than 30% of the residential electricity market despite being one of the most expensive suppliers in the market. It too has bought generation and now owns over 2000MW of power plant.

Steve Thomas contributed to this section

retailers. Today, after a wave of mergers and

acquisitions, 6 major players account for over 99% of the market. (See table *Retail Electricity Companies in Scotland and England and Wales*, and *Box Market consolidation since 1990*)

This has resulted in a reduction of the number of competitive offers made to consumers. All major companies remaining are vertically integrated, owning both generation and retail capabilities. Market observers fear this acts as a barrier to the entry of new participants, since a new retail company would have to either build new generation or find a company willing to sell electricity to a competitor of its retail unit.

All of the major retail companies that remain appear to have turned their backs on aggressively competing for new residential customers in favor of consolidating their market base.¹⁶ In the summer of 2003, the French company EDF announced it was firing its UK sales force and giving up on gaining new customers in the market. EDF's action followed an announcement from British Gas that it was cutting its door-to-door retail force in half, and reports that both Scottish and Southern and Scottish Power were reducing their customer acquisition strategies.¹⁷ Reduction in sales staff is a signal that price competition for residential customers is over.

UK retailers spend on the order of \$80 to acquire a customer through marketing. The current rollback in marketing comes as they realize that it is very difficult to keep a customer who has demonstrated a willingness to switch long enough to recoup this marketing investment.¹⁸ In fact, an aggressive residential consumer in the Eastern region willing to spend the time and energy to continually monitoring prices would have had to switch at least twice in the last two years to maintain the best price.¹⁹ Levelling off of gross switching rates indicates that most consumers aren't willing to spend the time searching for marginal gains.

Customers who have never switched from their incumbent provider command a premium when they are acquired through company acquisitions – commanding \$290-\$490 (£180 to £300) an account.²⁰

Companies appear willing to pay a premium for incumbent customers because they believe non-switching customers will provide high enough profit margins to earn back the investment.

They are likely correct, as incumbents still benefit from significant market power in their home markets, charging rates \$23-40 higher in their home markets.²¹ This premium reflects both the inertia of consumers and consumers' view that the incumbent provider offers them a lower risk transaction than new entrants.

Incumbent market power has meant that the competitive market has not helped all consumers equally – a dual pricing structure has emerged, low prices for those with a propensity to switch, and higher prices for the rest of consumers. This has raised concerns – albeit different ones- from both government and industry. As EDF Chief executive Vincent de Rivas announced the recent reductions in his sales staff, he commented that the lower prices for switchers were unsustainable: 'If everybody switched and got a 20 per cent cut in bills there would be no suppliers because there would be no margin.'²² In contrast, Energy minister Brian Wilson recently lamented the high prices of incumbents, stating "The benefits of price falls must not be restricted to those who switch, not least because if everyone starts to switch, the costs of administering this will outstrip the savings." Such

commentary by a high level minister has fuelled speculation in the trade press that the government is considering re-regulating the retail market.²³

“Whatever you’re planning, npower has a personal loans service, provided by The Funding Corporation, where you can borrow from £500 up to £25,000 to spend on virtually anything.”

Npower website: http://www.npower.com/html/personalloans_5059.htm

**NEW
MARKET
PRACTICES**

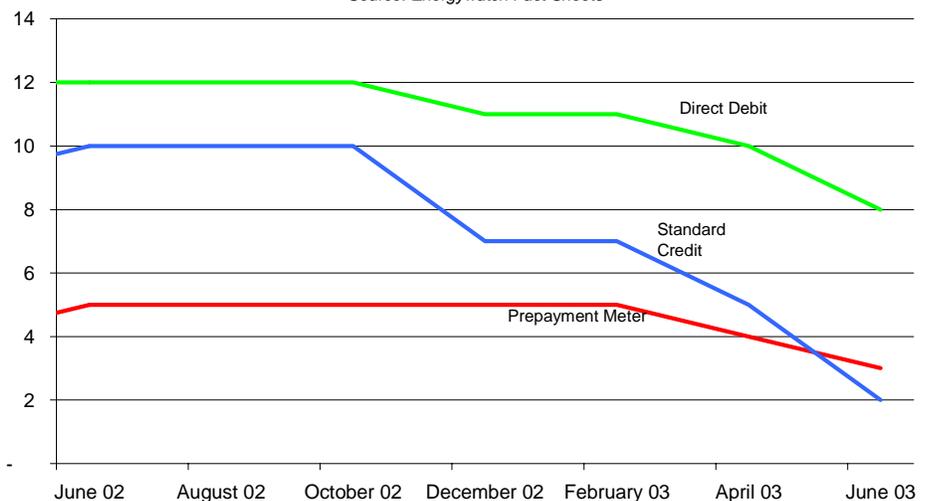
**Unwanted
Customers**

The dual pricing structure means that non-incumbents face high acquisition costs and low margins. Marketing costs for acquiring consumers are difficult to cover on electricity sales alone,²⁴ forcing retail electricity companies to re-fashion themselves as consumer goods and services suppliers in a vain attempt at larger margins. Retail companies now internally position residential electricity contracts as a marketing channel for the host of other products they wish to sell to their customers.

Other utilities, such as gas and telecommunication services have been a natural fit. All the major retail companies offer “dual fuel” deals- offering to supply consumers with both their gas and their electricity needs. Dual fuel

Competitive Offers for Consumers in the Eastern Region

Source: Energywatch Fact Sheets



consumers are likely to be stickier – i.e. less likely

to switch away for a better price, because they have both contracts with the same supplier.

burglar alarms, roadside assistance, and a credit card.

Many retail electricity companies offer non-utility products as well. Some examples:

- Southern Electric sells appliances ranging from dishwashers to DVD players.²⁵
- Npower pitches travel insurance and personal loans.
- Centrica (Under the British Gas brand name) markets home repair services,

Consumers should be wary of this cross-marketing, because although bundling goods may be convenient, they often are not the best deal. For example, for an average volume residential consumer paying by standard credit in the eastern region, the best dual fuel offer is \$55 per year more than choosing the best of each gas and electricity provider separately.

Fuel Poverty

Low-income consumers are at particular risk when energy prices rise. When energy prices are high, higher income consumers can afford investments in insulation and energy efficiency to reduce energy dependence, as well as reduce non-essential usage. Low-income consumers, on the other hand, are less likely to be able to come up with the upfront money required for investment in energy efficiency, even if the investment will quickly pay itself back in savings. Opportunities to reduce non-essential usage may also be reduced, as energy usage by low-income consumers is lower than by the population at large, reflecting the fact many have already cut non-essential usages to a minimum.¹

Vulnerable groups, such as the elderly, can face serious health risks from heat or cold related illnesses if they can not afford to maintain their house at comfortable temperatures. More than 400 Americans die from heat related illnesses every year, while the Center for Disease Control estimates over 700 die from extreme cold.²

Governmental and non-governmental poverty advocates in the United Kingdom have developed a systematic approach to identifying low-income households that are at particular need of energy assistance. They have developed the concept of “fuel poverty.” The most widely accepted definition of a fuel poor household is one which needs to spend more than 10 per cent of its income on all fuel use, including that needed to heat its home to an adequate standard of warmth. This is generally defined as 21°C (70° F) in the living room and 18°C (64° F) in the other occupied rooms.³ The climate in the UK does not lend itself to concern about cooling system to prevent heat related illnesses, and the definition includes all fuels (i.e. gas, oil and electricity.) The UK uses this definition to target its energy assistance funds to those in the greatest need. In 1998, about 16% of England’s households were classified as fuel poor.⁴

Recognizing the dangers of fuel poverty, the UK government has launched a campaign to eradicate fuel poverty among vulnerable groups by 2010. Fuel poverty is caused by a combination of fuel costs, household income, and household energy efficiency. The campaign aims to combat fuel poverty through a mixture of government programs –ranging from efficiency measures to direct benefits – targeted at the energy poor.

Notes:

¹ Oppenheim, Jerrold. “Assuring Electricity Service for all Residential Customers After Electricity Industry Restructuring. November 10, 2001. Pg 23

² Eric Klinenberg, “Dead Heat” Slate Magazine July 2002; Morbidity and Mortality Weekly Report, CDC December 20, 1996 / 45(50);1093-1095 Internet Source: <http://www.cdc.gov/mmwr/preview/mmwrhtml/00044869.htm>

³ http://www.dti.gov.uk/energy/consumers/fuel_poverty/index.shtml

⁴ DTI, “The UK Fuel Poverty Strategy” November 2001 Table 4.3 pg 33.

Low income consumers

Cross-selling may be annoying for middle and upper income consumers who have to deal with ads in their bills and sales pitches on their service calls, but the evolution of electricity as a marketing channel rather than a stand alone product has had a disturbing impact on the prices and service offered to low income consumers.

Low-income consumers are an important bellwether of the success or failure of market restructuring, and have been a high-profile part of the debate leading up to liberalization. Advocates for low-income consumers have been some of the most vocal participants in the deregulation debate. The stakes are very high for this segment of the population – even small increases in electricity costs can force low-income consumers to choose between power and other necessities such as food, rent, and healthcare (see sidebar – fuel poverty).

Both the United States and the United Kingdom have an important tradition of universal service and non-discriminatory pricing for utilities. This means that citizens expect all consumers to have access to electricity and to pay a fair price for that service. This policy goal was generally accomplished under the previous market structure through standard pricing and universal service obligations for regulated retailers.

Today, however, retailers segment the industry and offer the best deals to the customers they view offering the highest potential profits across

Prepayment Meters.

Prepayment meters are a type of utility meter that automatically shuts off service when the pre-paid value of service is exhausted. The use of this technology has increased significantly in the United Kingdom since deregulation began. (See chart: *Electricity Customers in Great Britain on Pre-payment Meters*)

Implementations of the technology generally involve a consumer buying a set value of electricity (ranging from a few days to a few months supply) from a retail distributor. The consumer is then either given a smart chip key to physically enter into the meter, or a numerical code to enter into a keypad. The meter then allows electricity to flow until the money runs out or it is recharged.

The technology was first introduced in the gas market. In the years following the 1986 privatisation of the gas market in the U.K, disconnection for non-payment of bills became a politically charged topic. In response to a trend of increasing disconnections, the privatized gas company (British Gas) increased the use of pre-payment meters to avoid the negative publicity associated with high disconnection rates.

Consumer advocates in the UK have pointed out, however, that use of prepayment meters does not block the health and safety hazards associated with disconnection, but rather hides the rate of disconnections because consumers who can not pay their bills now “self-disconnect.” Pre-payment meters effectively bypass the procedural protections against disconnection.

In 1991, 48,000 residential customers were disconnected for debt. By 1998 this had dropped to 400, as pre-payment meters replaced disconnection. However, a report published by the Energy Association (a trade group) in 2001 found that 24% of prepayment meter users self-disconnect in a given year, 11% of users for more than 7 hours.¹ With 3.8 million electricity pre-payment meters in place, that translates to 912,000 customers being disconnected. (410,000 for over 7 hours). The survey found that about 1% of consumers were chronically disconnected (over 20 times in a year). This translates to about 36,500 consumers. In sum, the use of pre-payment meters has dramatically increased the number of short term disconnections.

One of the most troubling aspects of prepayment meters, however, is that that companies in the UK invariably charge more for the service than they charge standard credit users. (See main text). Some utilities justify this on the basis of cost – consultants hired by the UK regulator estimated prepayment meters cost about \$21-23 per year more than conventional metering technology.² However, promotional literature for metering companies boasts that the meters can recoup their costs in reduced debt recovery costs.³

This technology has been slow to enter the U.S, but utilities have seen deregulation as an entry point for its use.⁴ Several pilot programs have been run in both the electricity and gas markets.⁵ Advocates and consumer need to be aware of this technology and its effects on consumer well-being.

Notes:

¹ Energy Association “Affording Gas and Electricity: Self Disconnection and Rationing by Prepayment and Low Income Credit Consumers and Company Attitudes to Social Action” March 2001 pg 22-23

² OFGEM “Prepayment Meters: A Consultation Document” October 1999 pg 35

³ http://www.metering.com/archive/992/30_1.htm

⁴ NY Gas “Feasibility Study of Pay-for-Use Metering.” NYGAS technology brief. Jan 1999 Internet Source: www.nygaz.org/publications/Zgas715.pdf

⁵ Howat, John G “Prepayment Meters: Wave of the Future for Low-Income Utility Ratepayers?” August 2001

all product lines. Low-income customers, who are viewed as less likely to buy other goods and therefore less desirable customers, find themselves subject to lower levels of competition in the marketplace – in some cases blatantly unwanted by companies.

on average a \$46 a year premium over direct debit users.²⁷

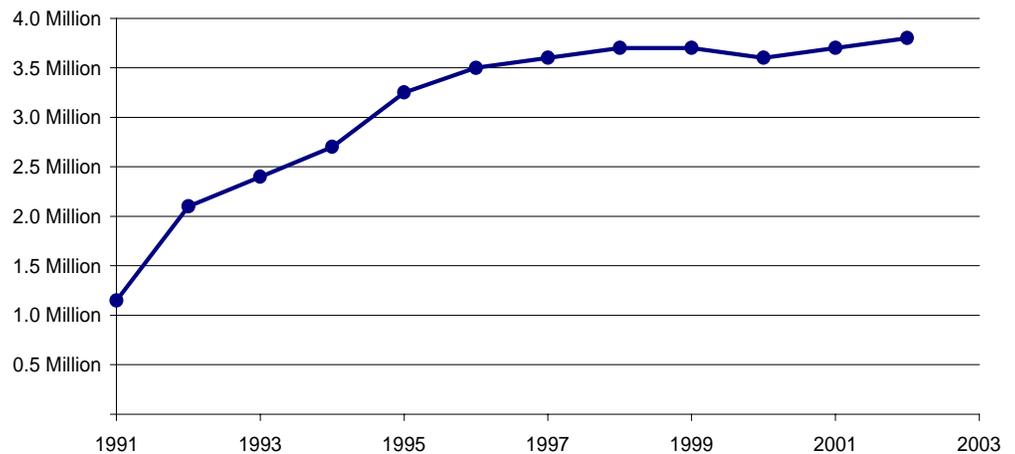
The data shows many UK energy companies have clearly made the decision not to compete for low-income customers. For example, in

Payment type has become an easy method for companies looking to segment the market. While monthly credit billing is the norm in the United States, in the U.K, consumers have traditionally paid quarterly “in arrears, ” which is similar to monthly credit billing in the U.S. With the privatization of the gas market, another payment type became increasingly pervasive: prepayment meters. (See sidebar: *Prepayment meters*). The use of pre-payment meters expanded in the electricity market after its privatization. Modern banking has also introduced “direct debit” as a third payment option. Under direct debit the utility makes a fixed monthly withdrawal from the consumer’s bank account based on estimated usage.

A household’s payment choice is roughly associated with its income.²⁶ Households with low incomes, no bank account, or a history of payment problems are more likely to use a pre-payment meter. Consumers who carry a predictable bank balance are more likely to choose direct debit. The most desirable consumers (i.e. those paying by direct debit) are therefore offered the best prices, while those that pay by pre-payment meter pay more. Prepayment meter users pay

Electricity Customers in Great Britain on Pre-payment Meters

Source: Boardman and Fawcett “Competition for the Poor” March 2002 and National Energy Action “Prepayment Meter” Position Papers July 2002



London, only three companies have chosen to offer competitive prices for pre-payment meter customers, as contrasted to eight companies offering lower rates than the incumbent for direct deposit and standard credit customers. (see the table, as well as chart above for comparable data for the Eastern region). One company, Npower,

The Options Facing a Typical Consumer in London (Annual Bills by Payment Type)

	Direct Debit	Standard Credit	Pre-Payment Meter
Not Moving (London Electricity)	\$400	\$413	\$421
Best Offer (Basic Power)	\$340	\$360	\$380
Worst Offer (Various)	\$400	\$413	\$472
Number of Better Offers	13	13	5
Max. saving upon switch to better offer	\$59	\$53	\$41
Average saving upon switch to better offer	\$36	\$23	\$21

Source: Energywatch June 2003. Table based on 3,300 kWh usage by a residential customer in London.

has offered pre-payment meter customers a rate of \$472, a full \$51 higher than the incumbent's pre-payment rate, and a clear signal that they do not want to gain pre-payment customers. This reduced competition, as well as lower savings available for switching, has in turn led to lower switching rates for low income consumers.

Furthermore, there are signs that basic standards of customer service for low income consumers may be at risk. Consultants swarm around the industry, selling the secret to "increasing revenue through varying customer services according to target potential"²⁸ and describing how to stratify customers according to value. Some consultants ask companies to seriously consider whether they should target and keep all customers.²⁹ This raises the very real spectre of companies offering reduced customer service levels to customers they don't predict will buy higher margin non-utility goods or services.

The reduced competition for and higher prices paid by low-income consumers should be of particular concern to consumers and policymakers. Retail competition appears to have given the benefits of declining wholesale and transmission prices to the players with the most market power – industrial, commercial, and upscale consumers. Although all classes of consumers are buying the exact same electrons, they pay strikingly different prices – and more so today than before restructuring.

Conclusion

The experience of residential consumers in the UK calls into question the benefits of deregulating retail electric service, especially for residential customers. By any yardstick – service, price, equity, even competition itself – the deregulation of residential retail service appears to have had no benefits for consumers. The head of OFGEM, (the UK electricity regulatory agency) has defended lags in benefits for residential consumers by claiming that the "market is not yet mature,"³⁰ but after over 4 years of retail competition, the trends don't look to be improving.

Even the industry finds itself questioning the value of deregulating the retail market. A 2002

global survey of executives at utility companies by a consulting firm found "significant levels of doubt as to whether the benefits of residential retail competition outweighs the cost."³¹ The same survey found that less than half of respondents thought the current or planned residential retail competition schemes in the United States were effective.

Whatever the "free-market" political appeal of retail electricity deregulation, the data indicates that consumers are better off without it. The small value of the retail component of the bill, combined with high marketing and consumer acquisition costs, works against the ability of competitive forces to best serve consumers in this market.

Recommendations

Based on the experience to date in the England and Wales market, we make the following recommendations for states and countries looking to follow in their footsteps.

Reject residential retail electricity market deregulation:

In the UK the promise of competition and resulting improvements in service and decreases in price has not been kept. Restructured markets have not resulted in price savings for consumers. Although the UK can claim large drops in wholesale market prices, those decreases have not been passed on to residential customers in terms of price savings. In addition, the marketing and infrastructure costs of competition outweigh efficiency gains on the thin retail component. Consumer complaints about fraud, abuse and billing errors have skyrocketed, along with prepayment meters that enable price discrimination against lower income consumers. Consumers are better served by keeping retail supply under rate regulation with distribution and transmission networks.

Do not partially open markets: Pressure from large industrial and commercial consumers to open their retail markets can lead to dangers for residential consumers, even if the residential market remains

regulated. . If a partial opening is adopted, retail companies should not be allowed to allocate high cost generation contracts to residential consumers and low cost contracts to commercial and industrial users, as happened in the UK.

Increase Consumer Protection in those markets already deregulated.

- Enact consumer safeguards on “door to door” and commission sales: After retail competition is implemented, expect problems at the point of sale. Experience in the UK (as well as a similar experience in the state of Texas) indicates this problem is inherent in an inadequately regulated system of commission sales. Rules regarding conduct, disclosure and consumer remedies must be established beforehand to head off problems of fraud and abuse before they occur. .

- Protect low-income consumers: If retail competition is implemented, protections need to be built into the market structure to ensure that low-income and other vulnerable consumers have access to the market at fair and non-discriminatory prices. Provisions have to be made to supply (at a fair price) the consumers that no-one else wants

- Beware prepayment meters: Experience in the UK indicates that pre-payment meter technology can be used to charge higher prices to lower income consumers and to hide high disconnection rates. Private companies wish to avoid the bad publicity of high direct disconnection rates and will push for the introduction of the technology. However, pre-payment meter technology merely distances the company from the problem and doesn't solve the policy problem of consumers without power. Data indicates that use of the technology significantly increase the percentage of consumers that have short term disconnections. UK customers on pre-payment meters have also paid higher prices than those paying by other means.

- The degree of price deregulation must be appropriate to the level of competition in the market. The experience in the UK shows that residential customers did not share in overall price decreases after deregulation.

Moreover, consolidation in the retail market has shrunk the number of competitive suppliers from 14 to 6, with several of those have announced cutbacks in marketing to new residential customers. Clearly, responsible regulators cannot rely on the so-called “market” to ensure reasonable prices to consumers under these circumstances.

Endnotes:

Currency Note: All prices converted to dollars using the 7/11/03 exchange rate (1£ = \$1.631) as published in the Financial Times on 7/14/03.

¹ Thomas, Steve “Theory and practice of governance of the British electricity industry” International Journal of Regulation and Governance June 2001.

² Thomas, Steve “Theory and practice of governance of the British electricity industry” International Journal of Regulation and Governance June 2001.

³ Davis, Kathleen. “Is Deregulation Dead?” Electric Light and Power, February 2003.

⁴ Commission of the European Communities “Second benchmarking report on the implementation of the internal electricity and gas market,” 7.4.2003 Table 5.
http://europa.eu.int/comm/energy/electricity/benchmarking/doc/2/sec_2003_448_en.pdf

⁵ “OFGEM CONFIRMS £2m PENALTY ON LONDON ELECTRICITY “ OFGEM, 11/18/2002.
http://www.ofgem.gov.uk/temp/ofgem/cache/cmsattach/997_r8002_18nov.pdf

⁶ Internet Source:
<http://www.energywatch.org.uk/betterbilling/index.asp>

⁷ Boardman, Brenda “Competition for the Poor: Liberalisation of electricity supply and fuel poverty: lessons from Great Britain for Northern Ireland” March 2002, pg 44

⁸ Internet Source:
http://www.energywatch.org.uk/uploads/Quarterly_Domestic_Supply_Complaint_Statistics.doc

⁹ Analysis of DTI “Quarterly Energy Prices “ Table 2.2.1 2
http://www.dti.gov.uk/energy/inform/energy_prices/tables.shtm

¹⁰ National Audit Office “The New Electricity Trading Arrangements in England and Wales” May 9 2003. pg 16

¹¹ Analysis of DTI “Quarterly Energy Prices “ table 3.3.2
http://www.dti.gov.uk/energy/inform/energy_prices/tables.shtm

¹² Thomas, Steve, “Has Privatisation Reduced the Price of Power in Britain?” November 1999

¹³ National Audit Office “The New Electricity Trading Arrangements in England and Wales” pg 20, 22

¹⁴ OFGEM “Domestic Gas and Electricity Supply Competition: Recent Developments” June 2003. pg 37

¹⁵ Energywatch press release: “Competition losing momentum” June 16 2003
http://www.energywatch.org.uk/news_room/release.asp?article_id=388&article_type_id=1.

- ¹⁶ Datamonitor “EDF Energy: shutting the door on direct sales” July 1, 2003
- ¹⁷ Power UK Issue 112 June 2003 pg 23
- ¹⁸ Taylor, Andrew Financial Times “French supplier scraps residential sales team” ; Jun 30, 2003
- ¹⁹ Analysis of Energywatch pricing sheets 10/01 – 06/03
- ²⁰ June 06, 2003 Utility Week The big clean-up;
- ²¹ DTI data
- ²² Utility Week June 27, 2003 pg 3
- ²³ Power UK June 2003 Issue 112 pg 29
- ²⁴ June 06, 2003 Utility Week The big clean-up;
- ²⁵ Internet Source: <http://www.southern-electric.co.uk/shopping/index.asp>
- ²⁶ OFGEM “Prepayment Meters: A Consultation Document” October 1999 pg 9. See also internet source: [source http://www.nea.org.uk/policy/ppmeters.htm](http://www.nea.org.uk/policy/ppmeters.htm)
- ²⁷ DTI table 2.21 internet source: http://www.dti.gov.uk/energy/inform/energy_prices/mar_03.shtml
- ²⁸ <http://www.newsletters.com/map/prod/782664.html>
- ²⁹ Internet Source: http://www.develin.co.uk/CASE_STUDIES/tp13/tp13.htm
- ³⁰ McCarthy, Callum. Speech to US Energy Association June 12th, 2003
- ³¹ “Delivering Value Through Competition,” Cap Gemni Ernst & Young, 2002 Survey Report Summary.