Report prepared for the Electricity Authority

Tariff information in consumer search decisions

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The statutory objective for the Authority (the Authority) is "to *promote competition* in, reliable supply by, and the efficient operation of, the electricity industry *for the long-term benefit of consumers*" (emphasis added).[1] Competition generally improves market performance - measured in terms of efficiency, total welfare and consumer welfare - for the long-term benefit of consumers.

At its core, competition is a process of rivalry between sellers (or between buyers) to win and retain sales (or supplies), analogous to a sporting competition. It implies independence of action and the absence of collusion or coordination, where the conduct of each rival affects and constrains the conduct of others. In workably competitive markets there is sufficient rivalry to compel firms to produce efficiently, price relative to their costs, meet consumer demand for variety, and strive for product and process improvement.

For many years competition analysis tended to focus on the supply side of markets. This approach has been augmented in recent decades by efforts to improve how demand is expressed in the market. The way in which consumers search for and switch between competing goods and services is now seen as fundamental to a healthy, workably competitive, market.

Difficulty in accessing tariff information can lead to consumers being less engaged and fewer transactions that provide the best value for consumers. In some circumstances, retailers have incentives to make searching and switching difficult for consumers. Markets that exhibit these characteristics are not operating as effectively as they could.

Our review of the availability of tariff information in the New Zealand electricity retail market identified some positive developments from a competition perspective:

- use of new technologies by retailers to communicate with consumers about their electricity usage and costs is reasonable in New Zealand
- many consumers use the What's My Number or Powerswitch comparison tools; there is a high rate of satisfaction by consumers who use Powerswitch
- a range of retailers are using their websites to provide consumers with detailed consumption data as well as tariff information
- retailers have become more proactive in directly contacting consumers with price offers and in countering offers by competitors
- the Authority has been proactive in partnering and training agencies who support vulnerable groups on how to compare retailer offers and switch retailers.

However, the overall impression is that improvements are possible to the availability of tariff information:

[1] Electricity Industry Act 2010, section 15.

- around 27 per cent of consumers do not find it easy to compare retailer offers, according to the UMR *Charge Transparency* survey (and a further 22 per cent were neutral)
- not all retailers publish tariff information on their web sites, and it is not easy to find tariff information given some retailers require customers to call their call centres
- New Zealand has relatively few comparator web sites
- the primary source of comparative information currently is Powerswitch, which exists because of regulatory initiatives.

It is not clear whether the New Zealand retail market has reached the stage of development where retailers face strong incentives to compete through being transparent about their tariffs:

- in electricity retail markets, strategic behaviour by firms to raise search costs is likely to take the form of making comparative price information more difficult for consumers to access (methods such as drip pricing do not appear to be used)
- only a third of retail customers could be described as active leaving the potential for retailers to price discriminate.[2]

In general, accurate information allows consumers to compare prices and terms of goods and services, shop around and seek the best deal, enhancing rivalry between suppliers. Hence access by consumers to comparative information is typically pro-competitive.

However, there are also circumstances in which increased tariff information can be anti-competitive. This can occur when the form of information made available, or the market structure, enables suppliers to tacitly or overtly collude, deters suppliers from innovating or otherwise reduces the pressure to compete. An intervention which required retailers to publish information which retailers would typically keep commercially confidential may cause more competitive harm than good. For example, with only headline offers visible, a retailer seeking to acquire customers must "beat" the offers of other retailers by a margin to ensure that their acquisition offer is well clear of any 'below the line' pricing in the market that is invisible to it; complete transparency could erode this consumer benefit.

We report strong findings from the economic literature, and the empirical experience in the United Kingdom, that any regulatory intervention to ensure greater availability of tariff information should be designed carefully so as not to impede or curtail price or offer differentiation by retailers. An intervention which limits or encourages retailers to reduce experimentation, or narrow the dimensions of product service over which they compete, would have a high risk of doing more harm than good.

In the context of the New Zealand electricity retail market – with falling concentration ratios and dominance of retailers in regions - increased availability of tariff information is likely to be pro-competitive where that information:

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[2] Where active is defined as customers that search for alternative offers without prompting by an approach from a retailer.

- concerns historic or current prices and does not include information about future intentions
- would likely be made public in any event; that is, the price information is already available on the supplier's website or available to the public upon request (but may be difficult or time consuming to access)
- changes relatively infrequently (if prices change frequently, current prices can signal future intentions).

Economic and marketing literature, and the Authority's surveys, shows the importance of individual characteristics of consumers in explaining how they search and switch. Behavioural economics literature illustrates that consumers have limited ability and in-built biases when applying themselves to searching and analysis. Consumer heterogeneity and the comparatively high proportion of inactive consumers, means that uniform policies are unlikely to be effective in encouraging participation by all customer segments. More vulnerable customers, such as lower income and older people, are more inclined to have problems with understanding and analysing tariff data. This underlines the importance of understanding individual and segment level consumer characteristics in policy development, and efforts by the Authority in educating groups supporting vulnerable consumers.

Overall, the New Zealand electricity market appears to be faring much better than a number of other markets. However, this paper points to possible regulatory initiatives to make it easier for customers to access, understand and use retail electricity tariff data which could benefit consumers. Foremost among these is formally codifying the continued supply of retailer tariff data to comparator sites such as Powerswitch, and working with the industry to standardise the format in which this data is provided. Currently tariff data is provided without the Code specifying it. Standardising the requirement and the data format should benefit consumers from lower search costs and the improved competition especially as smart grids materialise.

In our view the characteristics of retail competition in New Zealand mean an intervention to attempt to create a single, comprehensive, centralised comparator site, would be unlikely to improve results for consumers relative to a more commercial approach. Competition in comparator websites is likely to better meet consumer needs over the long run as these websites innovate to draw in customers. However, this approach could need regulatory guidance to bolster the trust and integrity of these sites. An accreditation scheme which promotes transparency about which retailers are covered by a comparator site and their form of funding could assist in building consumer trust and confidence.

1. Introduction

Competition generally improves market performance, whether market performance is measured in terms of economic efficiency, total welfare or consumer welfare. With the objective of enhancing competition in the retail electricity market, the Electricity Authority (the Authority) is examining options for improving access for consumers to retail data. Retail data is defined by the Authority to include electricity consumption data, tariff data and connection data.

This paper considers the availability and influence of comparative information about retailer tariffs on consumers search decisions and competition. It seeks to answer whether there is a case for the Authority to act to make it easier for customers to access, understand and use retail electricity tariff data.

1.1 Background

The 2009 Ministerial Review of electricity market performance identified a number of problems with the retail electricity market including high retail prices and insufficient competition.[3] While the review found that a substantial part of the increase in retail prices appeared justified by changes in underlying costs, it noted that the rate at which retail prices had increased, especially for residential consumers, appeared excessive. It also commented on a 'marked difference between incumbent margins and the "best competitor" margin for each network area' and that 'customers with the incumbent supplier could often make savings by switching to a competitor'. It concluded that consumer switching puts real pressure on retailers to improve their offerings. A number of initiatives were therefore advanced to improve retail competition and monitor the retail electricity market.

Subsequent analysis by the Authority (2013) found that the retail market has continued a trend towards lower regional concentration on the supply side – consumers in all regions now have a greater choice of retailer than ever before. To support these encouraging trends, the Authority is pursuing initiatives on the demand side to enhance competition for the long-term benefits of consumers. These initiatives include What's My Number and the retail data project, including considering improvements in access to electricity consumption data, the ability to compare retail tariffs and transparency of consumer electricity charges.

This paper extends the Authority's work and investigates how the availability of retailer tariff information affects retail competition. The body of paper is structured into five sections:

- Section two reviews the nature of the competitive process and how market frictions can impede consumer engagement and competitor rivalry.
- Section three investigates the availability of tariff data and the existing rules applying to the availability of this data.

[3] The Ministerial Review discussion paper, http://www.ea.govt.nz/our-work/consultations/advisory-group/options-for-increasing-consumers-propensity-to-compare-and-switch-retailers/.

- Section four investigates whether greater availability of retail tariff information would enhance or reduce the competitive process to the long-term benefit of consumers
- Section five considers consumer and retailer behaviour and the searching process
- Section six looks at the policy options available to enhance competition by improving tariff data availability and makes recommendations.

2. Competition and market frictions

2.1 Competition is a process of rivalry

At its core, competition is a process of rivalry between sellers (or between buyers) to win and retain sales (or supplies), analogous to a sporting competition. It implies independence of action and the absence of collusion or coordination, where the conduct of each rival affects and constrains the conduct of others. No participant in a competitive market can conduct themselves without regard to the behaviour of other participants.

As the parallel concept of sporting rivalry implies, competition is essentially about conduct. Competition is the process by which firms try to undercut each other's prices, or improve their product range or service delivery relative to rivals, hence driving prices down toward cost and delivering to consumers the products they want by the most efficient and convenient means.

Competition is also the process by which additional resources are directed to the products and services of greatest consumer demand. Suppliers seek to discover product innovations that will appeal to certain customers, and to discover those customers that are least expensive to serve – for example, by offering discounts to prompt payers or loyal customers. The task of suppliers is not only to discover what consumers want, but also to discover how best to communicate this to consumers to persuade them to engage sufficiently to purchase the product offered.

Markets in which competitors constantly vie to meet (and to create) consumer needs at efficient costs and prices are referred to as being workably competitive. The idea of workable, or effective, competition has been adopted as a benchmark for public policies which seek to promote competition.[4] The Authority interprets the term competition in its statutory objective to mean 'workable competition' in which "sellers compete on price, quality, location and/or service, or by differentiating their goods or services from their rivals, or through their sales and marketing effort, or via a combination of those activities."[5] Respected Australian competition economist, Maureen Brunt, described workable competition as:[6]

> *"… a situation in which there is sufficient rivalry to compel firms to produce with internal efficiency, to price in accordance with costs, to meet consumers' demand for variety, and to strive for product and process improvement".*

Workably competitive markets are therefore generally in a state of change rather than equilibrium.

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4 The New Zealand Commerce Act, for example, defines competition as 'workable competition'.

5 Electricity Authority, Interpretation of Statutory Objective, February 2011, paragraph A.15, available at http://www.ea.govt.nz/about-us/strategic-planning-and-reporting/foundation-documents/ page 12, A.15

6 Brunt M. (1970), "Legislation in search of an objective", in J.P.Nieuwenuysen (ed.), Australian Trade Practices: Readings, Melbourne, Cheshire, p.238.

2.2 Models of 'perfect competition' do not provide guidance for market regulation

Economists are generally careful to point out that the economic textbook theory of perfect competition is an artificial concept. It establishes the formal conditions for certain theoretical outcomes associated with allocative efficiency. For perfect competition, in an economic textbook sense, products must be homogeneous, the number of buyers and sellers are infinite, there are no economies of scale, all parties act independently and have perfect information, and there is free movement of resources – nothing is regulated.

The theory of perfect competition describes an equilibrium condition, in which all firms earn a normal rate of return and resources are efficiently allocated, such that there is no incentive for anything to change. In this equilibrium condition the process of competition almost ceases to exist.[7] Firms in a perfectly competitive equilibrium do not alter their prices, do not advertise or differentiate their products or attempt to reduce their costs or innovate.

Hence, the equilibrium conditions of perfect competition provide little guidance for regulators dealing with real world impediments to competitive processes. A regulator cannot assume that interventions modelled off perfect competition theory – such as providing everyone with access to all information or requiring supplier offers to be more homogenous – will improve market outcomes to the benefit of consumers.[8] Distinguished economist, William Baumol, referred to such initiatives as 'Regulation Mislead by Misread Theory'.[9]

2.3 Engaged consumers improve competitive process

Many approaches to workable competition have tended to focus more on the supply side of markets. Competition analyses have examined geographic scope, and substitutes in each geographic market, market structure (the number and size of the firms participating or potentially participating), the likelihood of potential entrants, barriers (legal, regulatory, and economic) and the pricing and marketing behaviour and practices of firms (including innovation and the quality of service). However, in recent decades there has been an

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7 Hayek, F.A. (1948), "The meaning of competition" in F.A.Hayek, *Individualism and Economic Order,* George Routledge & Sons, London.

8 Austrian economist Hayek characterised the absurdity of trying to replicate the conditions of 'perfect competition' as follows: "The belief in the advantages of perfect competition frequently leads enthusiasts even to argue that a more advantageous use of resources would be achieved if the existing variety of products were reduced by compulsory standardization. …[They] believe that the variety of people's tastes should be disregarded and the constant experimentation with improvements should be suppressed in order to obtain the advantages of competition. It would clearly not be an improvement to build all houses exactly alike in order to create a perfect market for houses, and the same is true of most other fields…." FA Hayek, "The Meaning of Competition", Princeton University, May 20, 1946, reprinted in Hayek, Individualism and Economic Order, London: Routledge and Kegan Paul, 1948.

9 Baumol, W. J., (2005), Regulation Mislead by Theory: *Perfect Competition and Competition – Imposed Price Discrimination*' AEI-Brookings Joint Center 2005 Distinguished Lecture Presented at the American Enterprise Institute September 22, 2005.

increased focus on investigating the characteristics of demand in workably competitive markets.[10] This focus on the demand side of the market is a complement rather than alternative to supply focused competition analysis.

The literature finds that workably competitive markets are enhanced when both consumers and suppliers engage effectively in the buying and selling process. Active and confident consumers and vigorously competing firms work together to promote workable competition and deliver long-term benefits to consumers. Markets of this type create a virtuous cycle. This reinforcing relationship is illustrated in Figure 1:

Figure 1 Virtuous circle of a well-functioning market

Source: Electricity Authority, "Retail data project: access to consumption data" Consultation Paper, 15 July 2014, Wellington, New Zealand, Page 10.

If consumers are less engaged in the buying process then suppliers will find it harder to win market share by providing what consumers most want. This will reduce consumer benefit because suppliers will have less incentive to compete to provide the desired services. Suppliers will therefore be less likely to innovate and the long-term benefit to consumers would be lower than it would have been had consumers been more engaged in the market.

Passive consumers do not provide the same type of constraints on firms as active consumers do. In economic terms, this reduction in price sensitivity is similar to a general reduction in both the product's absolute elasticity, and its substitutability (or cross-elasticity) with other

[10] See for example, Consumer information and workable competition in telecommunications markets, Colton, Roger D., Journal of Economic Issues 27.3 (Sep 1993): 775; Determining When Competition Is "Workable": A Handbook for State Commissions Making Assessments Required by the Telecommunications Act of 1996 David Chessler and Associates for The National Regulatory Research Institute, page 88 and 89; Consumer Choice and Competition Policy: A study of UK energy markets, Giulietti, Monica., Waddams-Price, Catherine., Waterson, Michael., Economic Journal. Oct 2005, Vol. 115 Issue 506, p949-968.

products.[11] Such reductions in substitutability can translate into a lessening of the intensity of competition – a softening of competition – and, as a result, higher prices for consumers.

2.4 Market frictions impede consumer engagement

2.4.1 Search and switching costs

Market frictions can restrict the ability of consumers to identify and switch to alternative suppliers. They can also constrain competing retailers from identifying customers who could be served at lower cost. These frictions reduce competitive pressure and consumer welfare.

Two different forms of friction have been studied in the economics of industrial organisation. One source of friction is the *search costs* that consumers face in gathering information about alternative suppliers. The costs incurred by consumers in gaining information about the range of supplier offers available to them tend to reduce the effectiveness of price competition and lead to higher prices.[12] The key role of search costs in obstructing the ability of consumers to access information, and the impact this has on competition, was shown nearly forty years ago by Diamond in his famous paradox. The paradox occurs, when despite there being multiple firms, those firms can charge monopoly prices. If there are material search costs, and consumers think that firms are all charging at the same level, consumers may not be bothered searching for better prices but simply choose a firm at random. The best response of firms is then to charge a monopoly price to these consumers.[13]

Another friction is the *switching costs* that consumers may incur as a direct result of changing suppliers, perhaps due to additional effort or lost loyalty discounts.[14] This paper does not focus on switching costs. Instead it considers whether the availability of tariff information raises search costs. Appendix 1 provides an overview of switching and switching costs in New Zealand.

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11 This point is discussed in respect of switching costs within Klemperer, but the point is more general, (1987), P.D. Klemperer, (1987), Markets with Consumer Switching Costs, Q. J. Econ., 102(2), 375-394.

12 Enrique Fatas et al (2013) *Behavioural economics in competition and consumer policy* (ESRC Centre for Competition Policy: University of East Anglia, UK), p.43.

13 P. Diamond, (1971), A Model of Price Adjustment, J. Econ. Theory, 3(2), 156-58. This theory may be a partial explanation of why the Authority has found consumers in the same region paying very different prices for electricity. An important group of passive customers may believe search costs to be too high and firms, though their tariff structures, might be able to charge higher than efficient prices to these customers.

14 See for example Baye M.R., Morgan J. and Scholten P. (2006) *Information, Search and Price Dispersion* in Handbook on Economics and Information Systems", T. Hendershott (ed.) Elsevier Press, Amsterdam on search costs and Farrell and Klemperer (2007) *Coordination and Lock-In: Competition with Switching Costs and Network Effects* in Handbook of Industrial Organization, Vol. 3", M. Armstrong and R. Porter (eds), North-Holland, on switching costs.

2.4.2 Search costs are likely to be more anti-competitive in electricity retail market

As a general proposition, search costs are more anti-competitive and welfare-damaging than switching costs in markets where there are multiple suppliers.[15] Search costs tend to be more detrimental to the competitive process because:

- The decision to incur search costs must be made at a time when a consumer is relatively uninformed and is incurred whether or not the consumer decides to switch suppliers. On the other hand the cost of the switch can be weighed against the expected benefit and the consumer can decide whether the expected benefits exceed the costs of switching.
- An increase in search costs prompts consumers to search fewer firms and the consumer may remain unaware of potential benefits from alternative suppliers.

Because search costs are incurred early, and on the basis of poorer information, consumers can be more easily deterred from moving on to switching at this earlier point. An example is a 1996 study which looked at telephone wiring charges among other telecommunications services and concluded that information barriers and search costs for consumers could be material.[16] Another example for the energy sector was a 2005 study of consumer choice in the United Kingdom gas and electricity retail markets.[17] This study found that a majority of consumers were unlikely to change their gas supplier even though most knew they had the opportunity. The study found that search and switching costs were too high relative to the benefits.

The idea that search costs could be more significant than switching costs in impeding competition in the New Zealand electricity retail sector might help to explain differences in recent UMR research findings. The UMR *Charge Transparency* survey, undertaken for the Authority, found that 45 per cent of respondents thought it easy to compare power company offers[18] which probably equate to search costs. Whereas the UMR research (2014) *Shopping around* survey[19] found 74 per cent of respondents rated switching power companies as easy. Switching appears to be easier than searching. A higher proportion, 49%, of New Zealand consumers are "not likely" to shop around compared with electricity consumers in Australia, Alberta, and Texas (32% to 35%).[20] New Zealand retailers are, however, more likely to approach consumers (see 3.2.1 below).

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15 Chris Wilson, (2012), *Market frictions: A unified model of search and switching costs,* European Economic Review, 56(6), 1070-1086.

16 Determining When Competition Is "Workable": A Handbook for State Commissions Making Assessments Required by the Telecommunications Act of 1996 David Chessler and Associates for The National Regulatory Research Institute, page 88 and 89.

17 Consumer Choice and Competition Policy: A study of UK energy markets, Giulietti, Monica., Waddams-Price, Catherine., Waterson, Michael., Economic Journal. Oct 2005, Vol. 115 Issue 506, p949-968. 20p

18 https://www.ea.govt.nz/dmsdocument/17313, Page 25

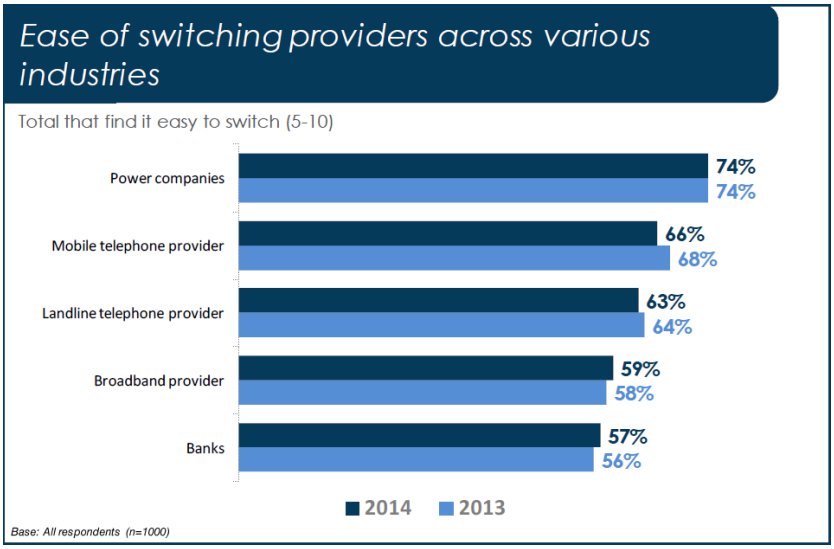
19 UMR research (2014) Shopping around for electricity retailers: a quantitative study among the general public (Electricity Authority: Wellington, New Zealand)

20 Bruce Smith, Electricity Authority, http://www.aperforum.org/wp-content/uploads/2013/12/NZ-Benchmarking-competition-and-efficiency-Bruce-Smith.pdf

Furthermore, the UMR survey found that consumers consider the power industry the easiest in which to switch providers as illustrated in Figure 2 below. It would appear that the What's My Number campaign has altered perceptions about ease of switching.

This contrasts with research from the Netherlands in 2007 which found that perceptions about the length of time taken to switch electricity supplier were a barrier to switching. Around 46 per cent of Dutch consumers believed it would take half a day to a day to find and sign up to a new supplier while 30 per cent of consumers thought that switching would take a few hours or less.[21]

Figure 2 Consumer perceptions of ease of switching across industries



Source: UMR research (2014) *Shopping around for electricity retailers: a quantitative study among the general public* (Electricity Authority: Wellington, New Zealand), p.59.

The extent to which the relative availability of tariff information gives rise to market frictions that impede workable competition will be influenced by:

- the existing availability and ease of understanding of tariff information
- supplier behaviour in response to an increase in comparative information
- consumer behaviour in response to an increase in availability of tariff information.

Section 3 below assesses the existing availability of tariff information, with the following sections considering supplier and consumer responses to tariff information.

[21] Marc Pomp and Victoria Shetstalova (2007) 'Switching costs in Netherlands energy markets: can liberalisation bring benefits to small customers?', *De Economist* (2007) 155, 305-321 page 310 Table 3.

3. Availability of tariff information

3.1 Existing rules on tariff information

A starting point for analysing real world markets is to recognise that all markets operate within rules and almost all markets have rules about the release of information, especially price information. In the New Zealand context, these rules are set by the Electricity Industry Participation Code 2010 (the Code). These rules have as their objective consumer protection; they also have the objective of reducing the costs of exchange and enhancing competitive rivalry. This section reviews, briefly, these rules as they relate to tariff information before considering the availability of tariff information directly from retailers or comparator sites.

As with participants in other organised markets (stock exchanges, commodity markets), participants in the New Zealand electricity market are subject to detailed market rules; the Code. Market rules tend to become more extensive and more complex in liberalised markets; terms such as the 'free-market' and 'de-regulation' are misnomers.[22]

Market rules generally become more extensive in competitive markets because well designed market rules reduce the costs of exchange. All markets provide individuals and firms the means to engage in exchange with others to improve their well-being. Economists call these gains from co-operation, or exchange, "gains from trade"; the term is synonymous with a net gain in economic welfare. These gains from trade are reduced by the costs involved in making the transaction.

Market rules reduce the costs of exchange, and hence increase the gains from trade, by addressing many real world hurdles to mutually acceptable transactions. These hurdles stem from identifying "the parties to the transaction, their reliability, credit worthiness, promptness, honesty, and flexibility; the qualities of the good; and the circumstances of the trade."[23] Market rules address these transaction costs through requiring participants in the market to meet certain requirements. As Coase observes:[24]

> *All exchanges regulate in great detail the activities of those who trade in these markets (the times at which transactions can be made, what can be traded, the responsibilities of the parties, the terms of settlement, etc.), and they all provide machinery for the settlement of disputes and impose sanctions against those who infringe the rules of the exchange. It is not without significance that these exchanges, often used by economists as examples of a perfect market and perfect competition, are markets in which transactions are highly regulated (and this is quite apart from any government regulation that there may be). It suggests, I think*

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22 See for example, S.K. Vogel, Freer Markets, More Rules: Regulatory Reform in Advanced Industrial Countries, Cornell University Press, 1998.

23 Lester G Telser and Harlow N, Higinbotham, "Organized Futures Markets: Costs and Benefits", Journal of Political Economy 85, no. 5 (1977): p. 969.

24 Ronald H Coase, The Firm, The Market and The Law, Chicago University Press, 1988, p. 9.

correctly, that for anything approaching perfect competition to exist, an intricate system of rules and regulations would normally be needed.

In line with other organised markets, the New Zealand electricity market currently specifies rules about the release of wholesale price information (including generator offer data) to other market participants. The Code is currently silent on the release of tariff information to consumers and third parties.

3.2 Sources of comparative tariffs

Although there are currently no rules in the Code governing disclosure of tariff information, consumers currently have access to information on retailer tariffs through two main channels:

- from retailers directly - websites, approaches by competing retailers, responses from the 'incumbent' retailer, etc
- comparator web sites.

3.2.1 Direct information from retailers

A number of retailers post tariff information on their websites. For example, Budgie, Genesis, Nova and Mercury all provide rates online. Meridian used to publish its rates card,[25] but now asks customers to contact it for its prices.[26] Contact and Trustpower provide their tariffs linked to where the customer lives via a map based web tool.[27] This variation in approach means it is not easy for a customer to compare electricity retail tariffs through an internet search.

Surveys undertaken by the Authority suggest that retailers have become more proactive in making direct approaches to consumers (see Table 1 below). The proportion of consumers approached by a electricity retailer in the past 2 years is substantially higher in New Zealand, at 69 per cent, than in Australia, Alberta, and Texas (36% to 47%).[28] More proactive retailers will increase the price information available to consumers, as retailers attempt to attract customers and retain existing customers.

Table 1 Residential consumers approached by retailer in the past two years

	2011	2012	2013	2014
Proportion of respondents	58%	66%	68%	69%

25 https://www.meridianenergy.co.nz/home/SearchForm?Search=rate+card&action_results

26 https://www.meridianenergy.co.nz/your-home/new-customers/

27 See https://www.trustpower.co.nz/for-your-home/power; and http://www.contactenergy.co.nz/aboutus/pricingPlans?

28 Bruce Smith, Electricity Authority, http://www.aperforum.org/wp-content/uploads/2013/12/NZ-Benchmarking-competition-and-efficiency-Bruce-Smith.pdf

Source: UMR research (2014) *Shopping around for electricity retailers: a quantitative study among the general public* (Electricity Authority: Wellington, New Zealand), p.7

3.2.2 Electricity comparison sites in New Zealand

In recent years price comparator websites have become increasingly available and important source of information for consumers. Comparator sites collate information from suppliers and provide consumers with access to current product information including price. Generally the type of information exchanged on electricity retail price comparator websites in New Zealand and elsewhere includes:

- application of the customer's consumption data and retailers' prices to calculate a range of annual bill/price for the customer
- use of the retailer's current prices, or close to current if updating tariff data is lagged
- the tariff is usually publicly available on retailer websites or in sales brochures etc.

The customer can therefore compare the annual bill/price (and retail terms and conditions) of the retailers participating on the website. We identified four New Zealand sites:

What's My Number

The What's My Number (WMN) public advertising campaign was a central initiative in the Authority's programme to enhance competition on the demand side. What's My Number commenced on 29 May 2011 and has run since then. It aims to encourage consumers to 'shop around' for electricity and to switch providers if a better deal was available. The campaign provided consumers with information about their ability to switch, the ease of switching and the savings that could be made by switching. This advertising campaign was facilitated by online tools, including a What's My Number website (still operating) and links to the Powerswitch website (See Appendix 1 for further detail).

Powerswitch

Powerswitch is an internet-based price comparison tool operated by Consumer NZ, an independent, not for profit membership-based organisation. Powerswitch aims to be an informative tool for consumers and to encourage competition in the electricity and gas markets. All except one of the retailers operating in New Zealand are included on Powerswitch.

Powerswitch received $1.5 million per year for three years under a multi-year appropriation, from the Consumer Switching Fund (CSF) until June 2014. This arrangement was administered by the Ministry of Consumer Affairs now part of the Ministry for Business, Innovation and Employment (MBIE). The multiyear appropriation has been extended by a year but no additional money has been provided. MBIE has a current commitment to Consumer NZ of $135,000 for the 2014-15 financial year.

Switchme

Switchme is a New Zealand owned independent online comparison service for the electricity suppliers of New Zealand. According to the website, Switchme was launched in 2009 and was the first comparison and signup service in New Zealand. The site is free to consumers

and claims to be an accurate service. The aim of the site is to establish if there is a cheaper deal to be found for household power bills. The comparison can be done online, or alternatively consumers can call the customer service team for advice, comparisons and switches on the free 0800 number. There are 12 power companies listed on the Switchme website. Switchme also offers to organise the switch for consumers.

Fast Connect

Another type of service operating in New Zealand is Fast Connect which works as a utility broker (http://www.fastconnect.co.nz). For consumers that are moving house, Fast Connect can arrange electricity, gas, phone, internet and Sky connections in one phone call. Fast Connect claims that different companies offer promotions through it which can save customers money. These promotions are not offered through the companies directly. This type of service, while not purely a comparison site, is a new type of innovative service.

3.2.3 Few energy comparator sites in New Zealand

New Zealand has relatively few comparator sites compared to Australia or the United Kingdom (countries which have had full retail competition for similar periods of time as New Zealand). In Australia, a google search of "compare energy prices" results in the listing of numerous energy price comparison sites. These sites include both commercial and government sponsored sites. In the United Kingdom, the regulator, Ofgem lists 11 comparator sites on its web pages which it has accredited.[29] Some brief additional comments on the Australian and United Kingdom comparator sites are included in Appendix 2.

New Zealand is of course a much smaller market than either Australia or the UK and hence a small number of price comparator sites might be expected. However, there are more price comparator sites for airfares and mortgages in New Zealand than there are for electricity retailers, which provides anecdotal support for a conclusion that New Zealand consumers are currently served by relatively few comparator sites.

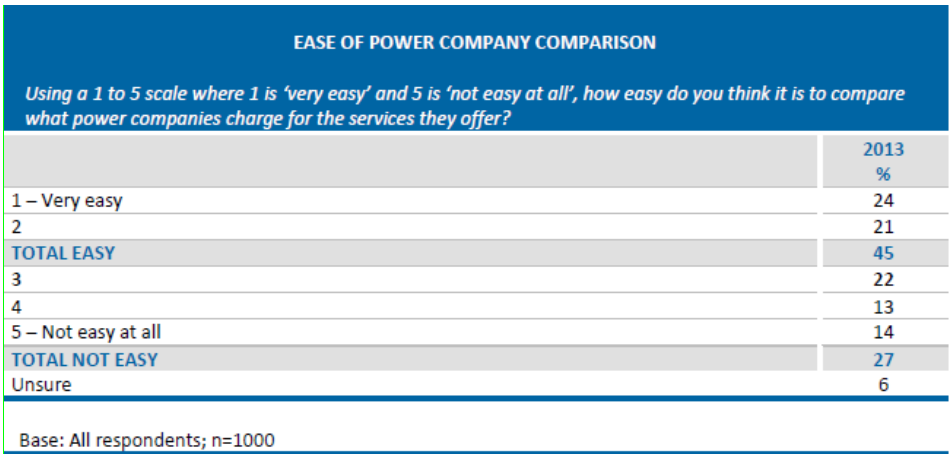
3.3 Satisfaction with available tariff information

As shown in Figure 3 below, overall, less than half, 45 per cent, of respondents to the UMR *Charge Transparency* survey thought it easy to compare power company offers.[30] The others found it not easy (27 per cent) or were neutral on the issue (22 per cent).

[29] http://www.goenergyshopping.co.uk/en-gb/help/comparison-sites

[30] https://www.ea.govt.nz/dmsdocument/17313, Page 25

Figure 3 Customer satisfaction with available information



EASE OF POWER COMPANY COMPARISON

Using a 1 to 5 scale where 1 is 'very easy' and 5 is 'not easy at all', how easy do you think it is to compare what power companies charge for the services they offer?

	2013 %
1 – Very easy	24
2	21
TOTAL EASY	45
3	22
4	13
5 – Not easy at all	14
TOTAL NOT EASY	27
Unsure	6

Base: All respondents; n=1000

Source: UMR research (2014) *Report: charge transparency* (Electricity Authority: Wellington, New Zealand), p.25.

Of the 27 per cent who did not think it was easy to compare offers, 27 per cent of those customers (7 per cent of total customers) gave the reason as different plans and rates. This was followed by 25 per cent citing difficulty in understanding what the customer was being charged and 22 per cent who thought there was a lack of transparent information. The fourth most common reason mentioned, at 19 per cent, was that it was hard to find the information. 14 per cent also thought comparisons were difficult due to there being no standard rate across companies. Only 2 per cent of these respondents said it was too time consuming to compare power company charges.

A small portion of the focus group participants liked the idea of being able to compare 'apples with apples' – e.g. an effective rate, published by power companies or the government, perhaps on a stand-alone website. Of the 27 per cent who thought it was not easy to compare retailer offers, 30 per cent thought a standard comparable rate would be helpful and 20 per cent thought an independent website comparing rates would be useful. (Note, this is a small percentage of survey respondents as, 30% of 27% is just 8%).

The ease of understanding New Zealand's electricity tariffs appears to be better than those in the United Kingdom. In the UK, 37 per cent of consumers found it easy (very easy or fairly easy) to compare tariffs compared to 45 per cent in New Zealand. In the United Kingdom 39 per cent found it difficult to compare tariffs compared to 27 per cent in New Zealand.[31]

The UMR research (2014) *Shopping around* survey found that just under half (46 per cent) of respondents reported they were likely to visit an independent electricity price comparison website.[32]

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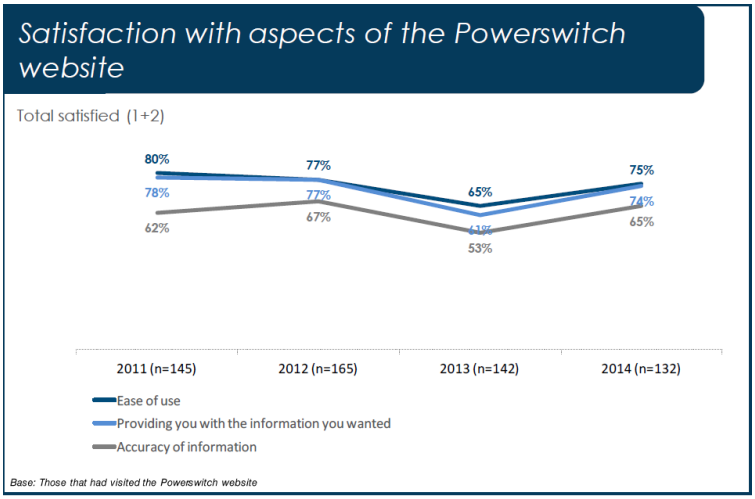
31 Retail Market Review Baseline Survey, Report prepared for Ofgem, July 2014, page 33. See page 1 for more information about the Ofgem survey.

32 UMR research (2014) Shopping around for electricity retailers: a quantitative study among the general public (Electricity Authority: Wellington, New Zealand), p 33

The *Shopping around* survey also found that 73 per cent of respondents were aware of the What's My Number (WMN) campaign (down from 82% in 2013).[33] 31 per cent reported that they had visited the What's My Number website in 2014, and 13 per cent reported visiting the Powerswitch online comparator tool. Visits to these websites were more common amongst respondents who were younger, male and on higher incomes. Those on lower incomes and in older age groups were less likely to have visited these sites. This points to the important differences in approaches to searching and switching between different customers.

The *Shopping Around* survey commissioned by the Authority found that the satisfaction of those who had used the Powerswitch website was high. As shown in Figure 4, around 75 per cent rated the site easy to use and 65 per cent were satisfied with the accuracy of information provided.

Figure 4 Users' satisfaction with Powerswitch website



Source: UMR research (2014) *Shopping around for electricity retailers: a quantitative study among the general public* (Electricity Authority: Wellington, New Zealand), p.39.

The *Shopping Around* survey found that 57 per cent of respondents considered an independent price comparison website (such as Powerswitch) an effective strategy to encourage people to switch and for people to compare prices. About the same portion, 54 per cent, thought advice from a consumer advocate would be effective.

Overall, awareness of What's My Number and satisfaction with Powerswitch appear high. However, only a portion of the customer base uses these comparison sites and some groups of customers are underrepresented in using them (discussed further below).

[33] Ibid p.34.

3.4 Anticipated changes in availability of comparative price information

3.4.1 Future of Powerswitch

Reasonable numbers of New Zealand retail electricity consumers appear to be searching, collecting information relatively easily, and are satisfied with search tools such as What's My Number and Powerswitch. However, Powerswitch faces growing challenges in keeping pace with the material increase in consumption data coming from smart meters and innovation in pricing plans offered to customers. It faces pressures in the following areas:

- **Agility**: Powerswitch was built in the early 2000s, when most retailers had few tariff options. It will face challenges in being sufficiently agile to incorporate the increasing complexity of tariff offerings and niche consumer information needs. For example, it may need to incorporate new suppliers which are offering alternative price plans that can be more responsive to wholesale electricity prices (and hence different price risk profile for consumers), such as Flick. It could also face pressure to integrate distributed generation into its assessment tool so that it can provide better information to consumers with solar panels or other household generation options.
- **Timeliness**: Powerswitch is not designed to update tariffs in real-time. There can be lags in the prices seen by Powerswitch users. This could mean it is difficult to reflect promotions such as weekend specials etc into the comparison tool in a timely way. These data lags may flow onto the Authority which receives this information for monitoring purposes.[34]
- **Accuracy**: We understand from the Authority that there are no standard formats for provision of data to Powerswitch. Powerswitch operates on a voluntary participation basis by retailers, so there are no contractual specifications regarding process or formats, which may risk data inconsistencies (e.g. the start date of new prices which can in turn affect the accuracy of the time series). Powerswitch also does not have access to the ICP-level data in the Registry or the network supply points (NSPs) developed by the Authority. It therefore uses regional definitions based on proxies.

These limitations means estimates of savings for individual users may not be precise, though the extent of this inaccuracy is unknown. Inaccuracies could reduce consumer trust and confidence in the tool. However, some industry participants consider the margin of error is not a material impediment to making meaningful price comparisons.[35] Because it is a key provider of comparison services, we also understand that Powerswitch is, at times, under pressure from retailers querying their ranking in search results; this monitoring by retailers should limit the extent of errors.

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[34] The Authority pays Powerswitch $12,000/year to receive database updates monthly.

[35] Refer to the Authority's website https://www.ea.govt.nz/development/work-programme/retail/retail-data/consultations/ submissions of Mighty River Power, Nova, Orion, Pioneer, Powerco on the retail data project: access to consumption data.

3.4.2 Potential growth of other internet comparison sites

In recent years price comparator websites have become increasingly available and important as a means of collating information from suppliers and providing consumers with access to current product and price information. Price comparator websites have characteristics of what economists refer to as two-sided markets.

Two-sided markets act as intermediaries between consumers and retailers, but do not enter the supply chain by on-selling services. They seek to match the demands of the customer with the products and services of the retailer. The two-sided model provides 'network' benefits to consumers and retailers by:

- reducing search costs for consumers by decreasing the need for consumers to approach individual retailers
- reducing acquisition costs for retailers by providing access to a pool of consumers through the platform.

Because of network effects, platforms are subject to increasing returns to scale. Commercial success depends on a platform's ability to attract both buyers and sellers to improve the chances of finding a valuable match. The more buyers and sellers on the site, the greater the chances of a viable match being found, and the value provided by the site increases.[36]

To achieve sufficient scale operators of platforms carefully price discriminate, charging less to price sensitive groups. For example, many platform providers make access free to consumers, and charge suppliers or sell advertising. They do this to attract sufficient customers to make the network attractive to suppliers. This is a variant of Ramsey pricing[37] in which welfare is maximised if rates are set on each class of customers so that those that are inelastic, or least responsive to changes in prices, are charged most while those that are elastic, and most responsive to price changes, are charged the least.

These characteristics of web comparator sites means there is a premium for providers to build customer numbers quickly and results in mature two-sided network industries usually being dominated by a handful of large platforms. Examples include the domination of personal computing operating systems by Microsoft Windows; domination of Adobe for reading PDF documents; Amazon for sale of books and eBay for reselling items (Trademe in New Zealand); and domination of Visa and Mastercard for payment by credit card; and Google as the dominant search engine. In the New Zealand context, it is possible that the publicly funded Powerswitch site may have crowded out other participants.

These real world examples also illustrate that while there are strong economies of scale, potentially combined with familiarity and herd behaviour, which lead to dominant sites, no site compares all suppliers in a workably competitive market nor is any site comprehensive in including all prices. There are typically a plethora of specialist sites targeting specific consumer demands – for example, web comparator sites dedicated to cars or yachts or other particular types of consumer products compete with general sites such as Trademe, often by providing additional specialist information. Consumers searching for the best deal may search more than one site, or search the comparator site and some supplier web sites

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[36] Gamper (2012), p.343.

[37] Frank P. Ramsey, A Contribution to the Theory of Taxation, 37 ECON. J. 47, 47 (1927).

directly. Suppliers who participate on sites may also have price promotions or deals which are only available directly from the supplier, such as trade discounts or 'grab a seat' air travel, or are available on some comparator sites but not others (for example, a hotel comparator site might still have discounted rooms available when another site has found customers for its allocation).

Some studies suggest that the development of price comparator sites are impeded through lack of consumer trust. In a study of comparator sites in the United Kingdom, for example, Gamper (2012) found that consumers did not trust comparator sites, due to the lack of full market coverage and concerns about biased information arising from the sites commission revenue from participating suppliers.[38] In addition, some sites used debatable assumptions to generate results, meaning the quoted prices/savings may not be reliable. Similar concerns are raised in European Commission studies.[39] Perhaps reflecting these concerns, the regulator in the United Kingdom has set up an accreditation scheme for energy price comparator sites. In the Australian national electricity market the energy regulator has established an energy comparison website (see Appendix 2).

These studies also point to the incentives on retailers, with an established retail base, not to provide information to comparator sites, especially when a substantial proportion of consumers are passive (the impact of passive versus active consumers on competitive processes is discussed further below).

The studies and anecdotal observations of comparator web sites would suggest that this service:

- requires access to 'head line' tariffs which retailers may or may not be incentivised to provide (considered further below)
- in a market with several retailers with an increasingly wide range of energy products (and product offers combined with other services and products) some differentiation among comparator sites can be expected; this innovation and specialisation provides benefits to consumers
- it may be unrealistic to expect that one site could cater for the range of product offerings, and access to a range of product offering may outweigh the additional transaction costs for consumers in searching more than one site
- comparator sites targeting different consumer groups might negotiate access to tariffs and other service characteristics not available to consumers through other channels to market.
- disclosure requirements (e.g., which retailers are covered on the site, form of payments by suppliers, etc) might be needed if consumer trust is lacking (the survey research undertaken by the Authority, discussed above, does not identify such concerns with New Zealand's levy funded comparator sites).

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38 Gamper HC., (2012). 'How Can Internet Comparison Sites Work Optimally for Consumers?' Journal of Consumer Policy, May 2012.

39 European Commission. (2012). *Staff Working Paper Bringing e-commerce benefits to consumers*. SEC 2011 1640 (provisional version). Brussels: European Commission.

3.4.3 Incentives on retailers to facilitate comparative tariff information

Ability and incentive to 'shroud' prices

Increasing competitive market pressures may cause retailers to provide additional tariff information by, for example, providing products which make a virtue out of being simple for consumers to understand.[40] If some suppliers price in a way that is complex and difficult for consumers to understand, then in a workably competitive market with a reasonable number of competitors, this may provide other suppliers with a competitive opportunity for customer acquisition or differentiation:[41]

> *If consumers recognise the search costs they incur when dealing with complex pricing, they may choose to patronize firms that offer less confusing tariffs and more easily navigable websites. This gives incentives for firms to build reputations for transparent pricing*[42].

However, the economic literature also suggests that there may be equilibria (situations with little incentive to change) in which all firms "shroud prices" and exploit consumer biases and none has a unilateral incentive to correct this situation.[43] Strategic behaviours by firms to raise search and switching costs by making it difficult for consumers to understand the price they pay and to compare that price with those of competing suppliers, are known by terms such as spurious complexity, "confusopoly", obfuscation and shrouding.

These strategies by suppliers can raise search or switch costs for consumers as follows:

- **Assessing offers**: Firms can raise search costs by making key information difficult to assess, for example, by making tariffs unnecessarily complex (sometimes referred to as 'shrouding'). Complex information can make it difficult for consumers to compare products and identify better deals. Firms may also use price promotions and framing to distract and distort decision-making.[44] Research also suggests that consumers do not tend to look at pricing terms that are not provided upfront.[45] Firms may exploit this by

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40 See, for example, C. Shapiro, (1995), Aftermarkets and Consumer Welfare: Making Sense of Kodak, Antitrust L. J., 63(2), 496. See also H. Beales, R. Craswell and S. Salop, (1981), The Efficient Regulation of Consumer Information, J. L. and Econ., 24(3) §1B, 491-539

41 An example of this in the New Zealand market might be the provision by both Mercury and Genesis to their customers of downloadable AMI consumption data.

42 Enrique Fatas et al (2013) *Behavioural economics in competition and consumer policy* (ESRC Centre for Competition Policy: University of East Anglia, UK), p.34.

43 See X. Gabaix and D. Laibson, (2006), Shrouded Attributes, Consumer Myopia, and Information Suppression in Competitive Markets, Q.J. Econ., 121(2), 505-40

44 A. Tversky and D. Kahneman, (1981), The Framing of Decisions and the Psychology of Choice, Sci., 211 (44810), 453- 458, show how psychological principles govern the perception of decision problems and the evaluation of options.

45 M. Grubb, (2009), Selling to Overconfident Consumers, Amer. Econ. Rev., 99(5), 1770-1807, analysed U.S. mobile phone data to investigate whether the three part tariffs seen within the U.S. mobile phone industry were developed as a means of capturing consumers' overconfidence. He found this was the most plausible of different explanations for the tariff structure. Grubb argued that the model could be reinterpreted more widely to explain the use of flat rates and late fees in rental markets, and teaser rates on loans.

putting more of the price into add-on services; restructuring their tariffs,[46] adding clauses within the terms and conditions; or making price searching harder (for example, by drip pricing— where the full price is not transparent upfront and additional charges are added possibly after the customer has agreed to the 'headline' price).[47]

- **Cost of accessing information:** Firms may exploit differences in consumers' search costs. For example grocery shoppers may be more interested in the cost of their overall basket of goods than they are in the prices of each item. Search costs mean that rational consumers will not take too much time and effort searching for the lowest price for low cost items. Search costs also will vary with customer characteristics. So retailers can use sales to attract customers who are price elastic and prepared to search while most of the time charging higher prices for those who are inelastic and can't be bothered searching for various reasons.[48]
- **Acting on information and analysis**: Recent developments in behavioural economics indicate that consumers may display more inertia than traditionally suggested, perhaps due to overconfidence in their capacity to improve things later.[49] Firms, knowing that consumers display this inertia, can increase switching costs. They can also use defaults and automatic enrolments, or use time limited offers to inhibit switching.

A number of these strategies would be difficult to pursue in the New Zealand retail electricity market. Given the homogenous nature of electricity there are limited service variables for firms to use. These could include differing fixed and variable rates, time of use charges, promotions and bundling. However, methods such as drip pricing do not appear to be used as they are, for example, in airlines.

Hence, we turn to whether incentives exist for retailers to make assessing comparative price information more difficult for consumers.

3.4.4 Insufficient active consumers to push retailers to provide comparative tariff information?

The proportion of active consumers in the market can play a key role in determining whether firms have incentives to reveal their prices or exploit consumer biases by keeping prices hidden. As the proportion of passive consumers decline, there may be too few of them for firms to base their price structure on. A large group of passive consumers may have the opposite effect. Giulietti et al. (2005) found that there were not enough motivated

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46 M. Eisenberg, (1995), The Limits of Cognition and the Limits of Contract, Stan. L. Rev., 47(2), 211-59.

47 G. Ellison and S.F. Ellison, (March 2009), Search, Obfuscation, and Price Elasticities on the Internet, Econometrica, 427-452, who argue that economists should think about firms' active incentives to obfuscate as well as consumers' incentives to search.

48 Enrique Fatas et al (2013) *Behavioural economics in competition and consumer policy* (ESRC Centre for Competition Policy: University of East Anglia, UK), p.34.

49 For example, DellaVigna and Malmendier (2006), 'Paying not to go to the gym', Amer. Econ. Rev, 96(3), 694-719, suggest that consumers might overestimate their propensity to cancel automatically renewed contracts.

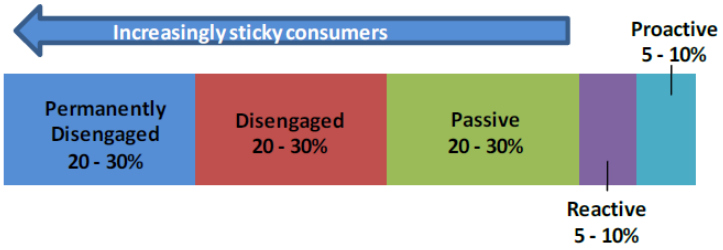
customers in the United Kingdom gas market to apply enough competitive pressure on firms.[50]

Some degree of price dispersion is possible in the New Zealand electricity retail market given the numbers of passive customers. Around two thirds (67 per cent) of *Shopping Around* survey[51] respondents reported that they had not sought information in the past year to help making a decision about switching.

Of the third of respondents to the *Shopping Around* survey who reported they had sought information in the past year to help make a decision about switching, about 37 per cent had switched (that is, about 12 per cent of respondents).[52] Hence, on the basis of this survey, about 12 per cent to 33 per cent of customers could probably be categorised as active.

This proportion of active customers appears to compare well with the United Kingdom. Around 10 per cent to perhaps 20 per cent of customers in the United Kingdom might be characterised as active; that is, customers defined by Ofgem as proactive and reactive in its 2011 retail market review.

Figure 5 Ofgem's segmentation of consumer engagement



Source: Ofgem The Retail Market Review - Findings and initial proposals 2011[53]

Ofgem categorised proactive consumers as likely to have switched supplier or tariff within the last year. These customers research alternative offers and will switch supplier without prompting. Ofgem's reactive consumers were also likely to have switched supplier or tariff within the last year. They do not necessarily shop around or plan to switch, but may switch as a result of an encounter with a sales agent. Passive consumers were those who reported switching at some time in the past, but have not in the last year. Many have switched once but having made an initial saving with their first switch they are not particularly likely to switch again.

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51 Electricity Authority : Shopping Around for Electricity Retailers : A quantitative study among the general public. February 2014 : https://www.ea.govt.nz/consumers/whats-my-number/annual-review-of-the-whats-my-number-campaign/ Page 19

52 Ibid Page 19

53 Ofgem presented the percentages as ranges because they were based on both quantitative and qualitative work, and reflect the fact that consumers may shift groups over time.

Research has shown that there are incentives on suppliers to retain existing customers, as long-term customers exhibit lower price sensitivity, increased predisposition to engage in positive word of mouth and a greater resistance to attempts by competitors to attract them.[54] The implication is that incumbent suppliers have incentives to impose barriers to searching and switching for those customers they want to retain, and also for new customers they do not wish to acquire (as it would be less profitable for them to do so).

Hence, with some two-thirds of New Zealand retail customers remaining passive, and with retailers facing incentives to retain existing higher value customers, it is not clear whether the New Zealand retail market has reached the stage of development where retailers face strong incentives to be transparent about their tariffs. An implication from the studies, which show it is possible for shrouding and similar behaviour to be sustained, is that markets may require a catalyst to change from an equilibrium in which firms do not have an incentive to reveal tariffs to an equilibrium in which all firms need compete by lowering search costs and communicating the value of their services well.

3.5 Summary: availability of tariff information

Our review of the availability of tariff information identified some positive developments from a competition perspective:

- there is a high rate of satisfaction by consumers who use Powerswitch
- retailers have become more proactive in directly contacting consumers with price offers and in countering offers by competitors.

However, the overall impression is that improvements are possible to the availability of tariff information:

- around 27 per cent of consumers do not find it easy to compare retailer offers, according to the UMR *Charge Transparency* survey (and a further 22 per cent were neutral)
- not all retailers publish tariff information on their web sites, and it is not easy to find tariff information given some retailers require customers to call their call centres
- New Zealand has relatively few retail electricity comparator web sites
- the primary source of comparative information currently is Powerswitch, which exists because of regulatory initiatives.

It is not clear whether the New Zealand retail market has reached the stage of development where retailers face strong incentives to be transparent about their tariffs to compete:

[54] Literature summarises in Juan Pablo Maicas Lopez, Yolanda Polo Redondo and Fco. Javier Sese Olivan (2006) 'The impact of customer relationship characteristics on customer switching behaviour', *Managing Service Quality* 16(6) (556-74).

- in electricity retail markets, strategic behaviour by firms to raise search costs are likely to take the form of making comparative price information more difficult for consumers to access
- only a third of retail customers could be described as active leaving the potential for retailers to price discriminate.

4. Competitive impact of improved availability of price information

4.1 Information may be pro or anti-competitive

Accurate information allows consumers to compare prices and terms of goods and services, shop around and seek the best deal, enhancing rivalry between suppliers. The competitive gains and long-terms benefits from active and confident consumers outlined in section 2.3 rely on consumers, or their agents, making effective choices in terms of competing offers which in turn means being able to compare prices.

However, the potential for competitive gains does not in of itself make the case for a regulatory intervention. In the text book model of perfect competition, consumers and suppliers have perfect information. In the real world, the availability of comparative information on supplier prices can facilitate or harm the competitive process. Thus, it may be optimal, in policy terms, for information not to be shared due to collusion concerns even if in individual instances that information would provide benefits to consumers if shared. What matters is whether, more often than not, the practice will turn out to be harmful or beneficial.

There is a general consensus in competition economics that certain information flows to suppliers can harm market outcomes.[55] The same information that is beneficial to consumers may facilitate collusion between suppliers, or reduce competitive pressure, which in turn harms consumers.

4.1.1 Risk of coordinated behaviour

As outlined in section 2.1 competition is a process of rivalry which relies on independence of action where the conduct of each rival affects and constrains the conduct of others. Information about prices can dull this rivalry and allow firms to engage in, and sustain, tacit or explicit coordinated behaviour.[56]

Better information reduces the number of possible focal points on which price coordination may take place and therefore makes it easier to pick a single point. The Danish concrete market provides an example of where a regulatory intervention aimed at providing consumers with greater price information is likely to have caused more harm than good. The Danish regional concrete markets were relatively concentrated with only a small number of firms operating so the transparency of prices through a price comparator may have assisted in tacit collusion.

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55 Bennett M., and Collins P., (2010), 'The Law and Economics of Information Sharing: The Good, the Bad and the Ugly.' *European Competition Journal,* August 2010: p 311.

56 Bennett and Collins (2010), p.320.

Danish Concrete Market

In 1993, the Danish Competition Council collected and published information on transaction prices for two grades of ready-mixed concrete in three regions of Denmark. The aim appears to have been to increase transparency of prices and thus assist consumers to shop around to put pressure on firms to lower their prices.

Analysis conducted by Albaek et.al, showed that the following the publication of prices:[57]

- Average prices of the reported grades of concrete increased by 15-20 per cent within less than a year. This compared to an inflation rate of 1-2 per cent and no change in the price of the key ingredient cement.
- Locally, the prices converged significantly across the firms serving the same market.[58]

Contrary to the regulator's intention, the result of regulatory intervention appeared to have been to facilitated collusion/coordination of prices within local areas.

In December 1996, the Danish regulator stopped the publication of concrete prices and reforms of competition laws removed emphasis on the creation of market transparency.

Similarly, Waterson (2001) points out that while centralised provision of information in the United Kingdom acted to increase transparency, if there are a small number of firms, information on prices (or sales) can assist them in acting collusively.

4.1.2 Reduced competitive pressure

Similarly, an intervention which required retailers to publish information which retailers would typically keep commercially confidential may cause more competitive harm than good. These competitive effects were set out by Mighty River Power in its submission to the Authority on its Issues Paper: Retail Data Project:[59]

> *Retailers publish their headline prices on Powerswitch, Whatsmynumber and their own websites, and from time to time also offer promotional rates through these websites and other 'above the line' promotional channels.*
>
> *Retailers also frequently compete through the use of "below the line' discounting and promotional offers. These are generally offered via direct selling campaigns, are not published in 'above the line' mediums and are often limited to specific market segments…*
>
> *Direct selling and 'below the line' discounting allows retailers to manage their portfolio considerations by providing the flexibility to quickly and efficiently target the regions where*

[57] Albaek S., Mollgaard P., and Overgaard P., (1997). 'Government-Assisted Oligopoly Coordination? A Concrete Case.' *Journal of Industrial Economics,* Volume XLV. no. No.4 December 1997: pp. 429-443.

[58] Concrete can only be kept in a truck mixer for about two hours after being mixed, unless additives that delay hardening are mixed in. Therefore, under normal conditions, concrete is transported short distances, e.g. twenty miles from the production site. Hence, a supplier can only serve a geographically small area.

[59] Mighty River Power, submission to the Electricity Authority, Issues Paper: Retail Data Project, 11 March 2014, page 1 - 2.

a particular selling objective exists. Such an objective might be to support regional 'above the line' campaigning with direct selling, to grow the sales book in a particular area to match wholesale market risk or position or to exploit a particular competitive market opportunity. All of these objectives contribute to a positive competitive environment across regions. Requiring retailers to publish a full set of prices, including 'below the line' discounts and incentives will substantially restrict retailers from using these important competitive tools and will be detrimental to regional competition levels.

With only headline offers visible, a retailer seeking to acquire customers must "beat" the offers of other retailers by a margin to ensure that their acquisition offer is well clear of any 'below the line' pricing in the market that is invisible to it; complete transparency would erode this consumer benefit.

4.2 Tests for whether information likely to be pro or anti-competitive

Bennett and Collins provide an analysis of the likely effects on competition of types of information flows.[60] At one end of the range, individualised future pricing or quantity intentions shared in private by firms are highly likely to be harmful.

Sharing future pricing intentions directly between competitors is probably the most useful information in enabling them to reach a focal point, and hence is the most harmful. Sharing future pricing intentions is useful to firms because it allows competitors to communicate where they would like to be, without having to commit to the price. By communicating its intention, a firm can determine whether competitors will follow, without having to implement the increase. Hence communicating future pricing intentions allows firms to signal to each other and reach a tacit understanding on a higher price without a risk of sales loss if they are not followed.[61] Firms only face the risk of loss of sales once they act on that understanding and one of their number breaks the cartel.

At the opposite extreme, aggregated past information on non-strategic variables such as cost, which are shared in public, are highly unlikely to be harmful. However, this combination of circumstances – aggregated information, public, historic and cost-based, is also likely to have the least value to consumers. This is because it fails to provide consumers with current price information about individualised services.

Relevant policy choices therefore are likely to lie between these two extremes, where the extent of benefit or harm depends on a number of circumstances. As Figure 6 illustrates, there are several combinations of information along the continuum between the two extremes:

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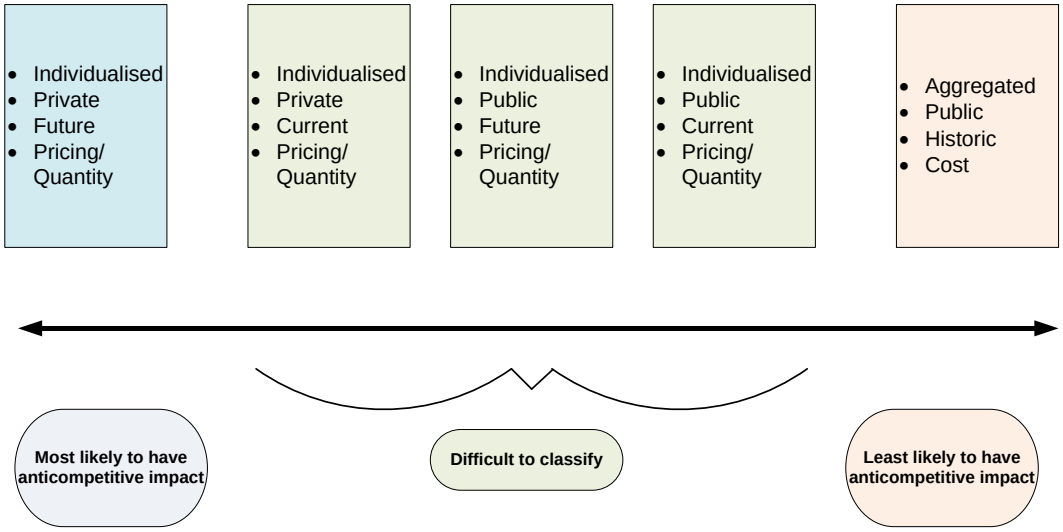
60 Bennett M., and Collins P., (2010), 'The Law and Economics of Information Sharing: The Good, the Bad and the Ugly.' *European Competition Journal,* August 2010: pp. 311-337.

61 The harmful nature of communicating price intentions is reflected in the Commerce Act 1986 prohibition on price fixing and cartels.

Figure 6: Likely effect on competition of different information exchanges



Source: Bennett and Collins (2010), page 333.

Sharing information about current or past behaviour may not be as useful to competitors as information about future behaviour in identifying focal points. However, information about past behaviour may still generate focal points through two mechanisms:

- when there is a price leader in the market, public announcements of current price information from this price leader may create a focal point around which similar price increases may be tacitly implemented by other firms
- sharing information about past or current costs or demand may make it easier for firms to come to a tacit understanding on a focal point for coordination, for example, by providing firms with a clearer idea of each other's position in the market, or where prices change frequently (in volatile markets, current prices can indicate future prices if they can provide clear behavioural indicators).

In some cases, current information on strategic variables may be similar to the disclosure of future information. For example, if price changes occur frequently and can be changed with little cost, then information on current prices may play a role in signalling future intentions. However, currently changing retail prices requires a mail-out and 30 days notice under the Code.

Competition authorities are typically also concerned not only about the content of information exchanged but also the manner in which information is shared. Direct communication between competitors, even if that information is available from other sources, is generally viewed sceptically as it suggests competitors may use the information to jointly determine commercial decisions.[62]

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62 The New Zealand Commerce Commission for example cautions firms not to exchange price information with competitors, see 'Practical tips for businesses when engaging with competitors' at http://www.comcom.govt.nz/business-competition/fact-sheets-3/price-fixing-and-cartels/

Sharing information which firms would otherwise consider as commercially confidential or sensitive, such as innovations in service offers, may also harm consumers by discouraging firms from investing in innovation. For some products and services, patents can protect a firm's commercial interest when information cannot be protected by commercial secrecy (However, patents are unlikely to feature in retail electricity service offerings).

4.3 Improved availability of electricity retail tariff data and competition

Our discussion in section 2.3 outlined the competitive gains and long-terms benefits from active and confident consumers. These gains rely on consumers, or their agents, making effective choices in terms of competing offers which in turn relies on being able to compare prices – a comparison between competing offers for retail electricity cannot be completed without an understanding of price. Our analysis in section 3 concluded that improvements are possible to the availability of tariff information. The discussion above suggests increased availability of tariff information would be unlikely to cause harm to the competitive process (that is, is likely to be pro-competitive on the whole) where that information:

- concerns historic or current prices and does not include information about future intentions
- would likely be made public in any event; that is, the price information is already available on the supplier's web site or available to the public upon request (but may be difficult or time consuming to access)
- changes relatively infrequently (if prices change frequently, current prices can signal future intentions).

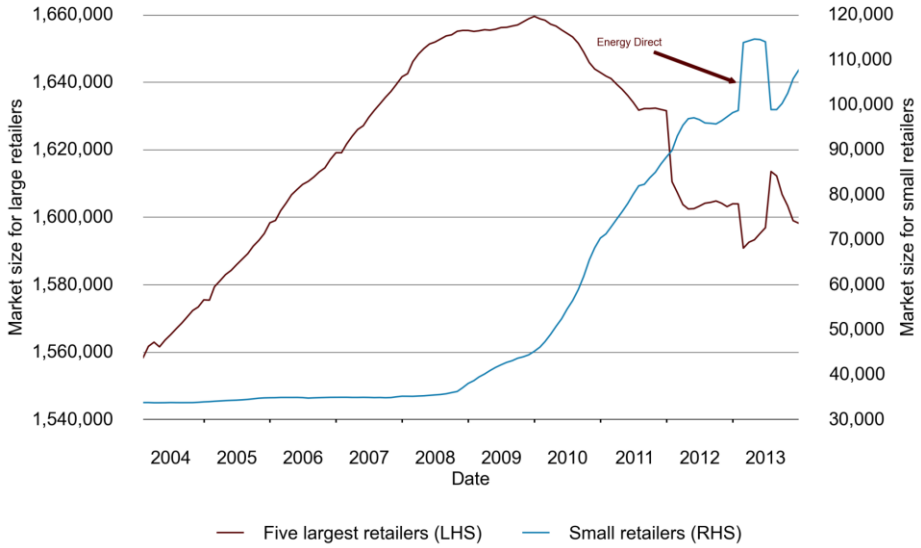
Given these characteristics, the economic tests outlined in Bennett and Collins above would predict that increased availability of electricity retail tariff data would be highly likely to be pro-competitive. Greater availability of tariff data would allow customers to compare across products and increasing the intensity of competition, without unduly increasing opportunities for collusion among retailers.

If the electricity market were highly concentrated, greater disclosure of current prices might still carry the risk of making it easier for firms to arrive at a focal price without the risk of losing sales as a result of implementing a price increase. Currently there are 17 energy retailers operating in the New Zealand market with some targeting specific types of customers. Around 93 per cent of retail customers (measured by Installation Connection Points) are held by five retailers (by ownership, rather than brands). Nationally, market shares of the top 5 retailers range from 12 per cent to 26 per cent. There are variations from region to region. Some regions are reasonably concentrated e.g., Bay of Plenty where Trustpower held 73 per cent of ICPs as at 31 December 2014.[63]

[63] EMI (beta) site http://www.emi.ea.govt.nz/Reports collected 12 February 2014.

The Authority monitors market structure as an indicator of competition, along with market conduct and performance.[64] The measures the Authority uses to assess trends in market structure – the Herfindahl-Hirschman Index (HHI) and the concentration ratio (CR)[65] - have been improving over time.[66] The HHI has fallen from over 6000 in 2003 to under 3111 in November 2014.[67] In addition, the shares of smaller retailers have been growing materially since 2009 as shown in Figure 7.

Figure 7 Retail electricity market shares of larger vs small retailers



Source: Electricity Authority: Electricity Market Performance: 2013 year in review

While the market remains relatively concentrated, the market share is dispersed about five retailers which suggests that there is no one dominant player. A few regions retain high concentration levels but these are falling (and the market is best viewed as a national market

64 The structure-conduct-performance paradigm which underlies the HHI measure is often criticised for its emphasis on one-way causation from (exogenous) structure, through conduct, to performance. In practice, conduct and performance affect market structure, e.g. investments in endogenous sunk costs such as advertising and promotion, research and development affect concentration and entry barriers; firms sometimes engage in strategic entry deterrence; profits affect the incentives for entry and expansion and hence affect market structure; and the more successful firms in a market tend to get bigger, again affecting market structure. However, the framework remains a useful and frequently adopted tool kit for the analysis of competition.

65 HHI is the sum of the squares of the percentage market shares in a particular market. It has an upper bound of 10,000 for a monopoly. CRx is the sum of the market shares for the largest x players.

66 See Electricity Authority website: Electricity Market Performance: 2013 year in review. http://ar2013.publications.ea.govt.nz/Retail+market+becomes+more+competitive/Retail+market+structure+concentration+falling

67 The HHI metric is drawn from: EMI (beta) site http://www.emi.ea.govt.nz/Reports/Dashboard?reportName=D_R_MC&category=Retail&reportDisplayContext=Dashboard.

from a competition perspective[68]). The lack of a dominant player indicates that it would be unlikely that a retailer could use the current tariff data from comparator sites, such as Powerswitch, or competitor websites anti-competitively for setting a focal point price. A price leader may occur in an oligopolistic market where a dominant retailer could act as a price leader; however, the national retail market could not be characterised as 'oligopolistic'.

In addition, comparator sites such as Powerswitch give users an option of inputting their volume data which can be private to them and their current provider. The tariff data is also not a forecast of future pricing intentions of retailers but an attempt to show current pricing which can have inbuilt time lags. On this basis, price monitoring by competitors of each other is unlikely to be assisted by comparator sites relative to simply monitoring each other's tariffs on their respective websites. Should Powerswitch be developed further so that it provides greater accuracy and real-time tariff updates it would make it marginally more useful for anti-competitive purposes such as price signalling and setting of price focal points. However, this change is likely to be marginal given the continued privacy of individual consumers volume data and the eroding concentration in the electricity retail market overall.

4.4 Presumption in favour of greater availability of tariff data

For consumers to engage actively and confidently in the market they must be able to compare prices. Our analysis in section 3 concluded that improvement is possible to the availability of tariff information. This section finds that greater availability of tariff information is unlikely to cause harm to the competitive process. Hence, greater availability of tariff information would improve consumer engagement and therefore competition and is unlikely to impede competition; that is, greater availability of tariff information is likely to be pro-competitive on the whole.

As the Authority has a statutory objective to promote competition, these conclusions result in a presumption in favour of action by the Authority, if an option exists which is likely to do more long-term good than harm to consumers.

[68] The Commerce Commission has held the view that there is a national market for retail customers, while noting that in some circumstances it may be appropriate to adopt narrower regional markets, see Investigation Report , Commerce Act 1986 S 27, S 30 and S 36 Electricity Investigation, 21 May 2009, para 195. In a national market, prices will still vary from region to region, due to variations in cost (for example, wholesale energy). However, in a national market the prices in one region will be correlated statistically (move together over time) with prices in other regions.

5. Supplier and consumer response to improved tariff information

5.1 Potential responses by suppliers and consumers

Any intervention by the Authority to increase the availability of tariff information could potentially alter the behaviour of both suppliers and consumers. This section considers the factors likely to influence the design of an intervention to provide greater availability of information in a manner which will promote, and not harm, the long-term benefit to consumers.

5.1.1 Recognising and allowing differentiation by retailers

Electricity retailers compete by differentiating their offers and prices. Suppliers seek to discover those customers that are least expensive to serve, for example, direct debit customers, prompt pay customers dual fuel customers and those that accept online billing – and compete for their custom by offering discounts. Suppliers also seek to discover product variations that will appeal to certain customers. This might include bundling the sale of electricity with other products such as gas or telecommunication services.

Importantly, in workably competitive markets retailers can also be expected to offer different terms to customers that might otherwise be in similar circumstances. There is no economic basis for assuming that competition will be characterised by electricity retailers offering similar terms to different customer groups, as this would imply equal mark-ups over wholesale costs (and wholesale costs may also vary for each customer, depending upon consumption profile and the exposure to price or volume risk taken by the retailer). Similar prices or offer terms may correspond to some concepts of "fairness", but do not reflect commercial reality.

Examples of price differentiation from other workably competitive markets include student and senior discounts to movie theatres, airline pricing (two individuals travelling at the same time in the same class seat may have paid vastly different prices for their ticket). The wholesale electricity market also demonstrates that efficient prices (and hence the amount of overhead recovered from a particular customer) can vary considerably for a variety of reasons, regardless of how well informed and engaged customers are.

A growing economic literature demonstrates that this differentiation in pricing can be a characteristic of strong competition (rather than an indication of market power):[69]

> *"… in a broad range of market types and conditions, where consumers can be separated into distinct groups with different demand elasticities and in which the market's commodity cannot easily be resold by one group to another, market pressures will prevent any equilibrium in which the product price is uniform. Not only will each firm be forced to adopt discriminatory prices, but each firm is likely to be forced to adopt a unique vector of prices, each of which is dictated by the market. Thus this paper seeks to show why price discrimination may occur – and may occur frequently - not despite relative ease of entry (of other competitive pressures) but because of it. In fact, I will show that in highly competitive markets, firms may have no choice. Competition can force them to adopt the vector of profit-maximizing discriminatory prices."*

The assumptions involved in Baumol's analysis – customer groups with different demand elasticities, no easy resale, and overhead costs to recover - characterise the retail energy sector.[70]

Analysis by Waterson (2001) similarly recognised that competition in electricity retail markets will involve attempts by retailers to differentiate their offers.[71] Waterson demonstrated how consumers' searching behaviours and switching decisions can have a significant impact on suppliers' competitive responses. He posited that, in markets for homogeneous products, all with fixed costs, such as electricity, suppliers would aim to distinguish themselves by service differentiation or by seeking out market niches through price discrimination.

In a recent review of regulatory interventions in the electricity market in the United Kingdom, former regulator Stephen Littlechild concluded that policies in the market to limit differential pricing:

> *".. would not hasten the transition to a more competitive market, nor merely disrupt that transition. It would actually prevent a competitive market by imposing a concept of a "fair" outcome which is different from what a fully competitive market would entail.*

Littlechild argued that since 2008 UK energy regulator Ofgem had imposed increasingly severe restrictions on suppliers to the residential retail market. Initially, non-discrimination conditions aimed to "remove unfair price differentials", particularly between suppliers' prices between regions. In making this intervention, the regulator expected that prices to other customers would increase to maintain revenue neutrality.

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69 Baumol, W. J., (2005), Regulation Mislead by Theory: *Perfect Competition and Competition – Imposed Price Discrimination*' AEI-Brookings Joint Center 2005 Distinguished Lecture Presented at the American Enterprise Institute September 22, 2005, pp 2-3

70 Some of these characteristics distinguish electricity from other retail commodities, such as petrol, and hence competition in electricity retail markets can be expected to evolve differently – it is more difficult, for example, to price differentiate in petrol markets because of the ease at which the product can be on sold (e.g., a student discount would be undermined by parents asking their children to fill up the family car).

71 Michael Waterson (2001) 'The role of consumers in competition and competition policy', Warwick Economic Research Papers No.67. Paper prepared for a plenary session at the EARIE meeting in Trinity College, Dublin, August/September 2001.

Littlechild also singled out that subsequent regulatory interventions on the number and types of tariffs aimed to encourage customers to engage in the market; the objective of these interventions were to standardise retailer offers to make it easier for consumers to choose between retailers. The policy interventions prohibited many discounts and tariff types that customers valued, especially vulnerable customers. The outcome was reduced competition, customer switching fell by half, and profits of major suppliers increased by nearly £1 billion, at the expense of customers.[72]

The strong findings from the economic literature, and the empirical experience in the United Kingdom, is that any regulatory intervention in the New Zealand electricity retail market to ensure greater availability of tariff information should not impede or curtail price or offer differentiation by retailers. An intervention which limits or encourages retailers to reduce experimentation or narrow the dimensions of product service over which they compete would have a high risk of doing more harm than good.

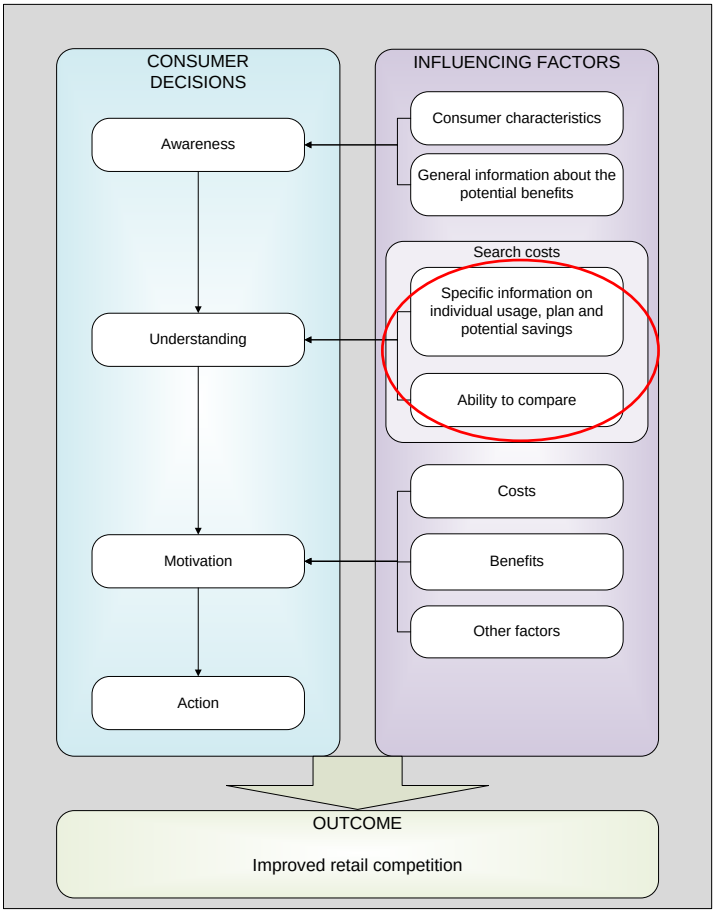
5.2 Consumer decision-making

In concept, improved availability of tariff information can assist consumers to make sound purchasing choices, allowing them to make well-informed and well-reasoned decisions that reward those firms which best satisfy their needs. To seek insights into what form of improved information availability would drive the biggest gains for consumers, this section explores the consumer searching process and considers limits on consumer decision-making indicated by behavioural economics.

Figure 8 below illustrates how search costs fit within the range of factors that influence generic consumer decisions. The figure shows the four stages of a consumer's decision-making process and links those stages with factors, including availability of information, which may influence consumers.

[72] Littlechild, S., (2014), 'Promoting or Restricting Competition?: Regulation of the UK Retail Residential Energy Market since 2008', EPRG Working Paper 1415, Cambridge Working Paper in Economics, September 2014.

Figure 8 Factors influencing consumer decision-making



Source: Electricity Authority "Improving transparency of consumers' electricity charges" Consultation Paper 24 June 2014, Page 7

The influencing factors in Figure 8 match to four steps in consumer decision-marking. Firstly awareness, then understanding, followed by motivation, driven by the perceived reward, and finally action to switch.

Sparking awareness

A study by Keaveney (1995) researched the actions of service firms, or their employees, that cause customers to switch from one service provider to another.[73] This study provides an example of a more comprehensive way of thinking about what sparks awareness or desire to search and switch, the first step for a consumer to become more engaged in the market. Keaveney identified a model of customer switching behaviour in service industries with eight main causal triggers of seeking to switch:

[73] Susan Keaveney (1995) 'Consumer switching behaviour in service industries: an exploratory study', *Journal of Marketing* Vol. 59 (April 1995), 71-82.

- pricing
- inconvenience
- core service failures (e.g. service mistakes and billing errors)
- service encounter failures
- response to service failures (e.g. negative responses to enquiries)
- competitive activity
- ethical problems
- involuntary switching (e.g. customer moves or supplier closures).

The Keaveney study found that often combinations of causal factors interacted to cause customer switching. This is consistent with our understanding that electricity retailers in New Zealand, for example, place particular focus on events that spark awareness, such as shifting house.

One implication is that comparative tariff information may have a greater competitive impact in encouraging active consumers when it is available in association with events which trigger customer awareness. The Electricity & Gas Complaints Commissioner, for example, includes on her web site a link to Powerswitch. This is consistent with Watson et al. (2002) finding that dissatisfaction by a consumer with its current retailer, sparked by large price increases or an unexpectedly large bill, is the catalyst to switching.[74]

A further implication is that comparative tariff information need not be fully comprehensive, or precisely accurate, to spark awareness. The What's My Number website, for instance, could spark awareness without including all permutations of retailer tariffs.

Consumer characteristics

Consumer-specific factors such as household energy usage, income and education, influence how aware a consumer is of the opportunities to pursue savings (by switching or making alternative energy-related investment and usage decisions). A number of studies, both in New Zealand and overseas, have shown that electricity consumers are diverse in their propensity to search and switch. For instance, the '*Shopping Around*' survey found that older, low income and those who spent less than $100 per month on electricity were all less likely to have searched.

Waddams Price et al (2013) found evidence of consumer heterogeneity, with their findings suggesting that 'the existence of a number of inactive consumers given the number of active consumers, means that uniform policies across the board are unlikely to be effective'.[75] The question then becomes where to target, and then how best to intervene for these differing groups of customers:

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74 Anna Watson, Howard Viney and Patrick Schomaker (2002) 'Consumer attitudes to utility products: a consumer behaviour perspective', *Marketing Intelligence and Planning* 20/7(2002): 393-404.

75 Catherine Waddams Price, Catherine Webster and Minyan Zhu (2013) Searching and switching: empirical estimates of consumer behaviour in regulated markets, CCP Working paper 13-11, p.32.

> *Where some but not all consumers are able and willing to process information, the more interventionist the remedy, the greater the potential to harm active consumers by reducing what is on offer, making it less likely that they will be able to secure their preferred choices. Strongly interventionist remedies also run the danger of increasing moral hazard as more and more consumers 'switch off', further exacerbating the need for remedies. The difficulty with markets where some but not all consumers are willing and able to engage fully with the markets is to judge, first, whether the behaviours of active consumers benefits those who are inactive and, second, if not, whether the two groups can be segmented so that the intervention can be focused solely on the inactive part of the market without imposing any negative externalities on the active part.*[76]

The differences in information needs between active, 'sophisticated' consumers and passive consumers appear to be the form in which information is provided. For example, Flores and Waddams Price (2013) stated that using the internet more often increases the probability of switching only for some consumers:

> *Thus, even if the government focuses on promoting the use of internet, for example through price comparison web pages, such a policy would probably have only a small effect on switching electricity provider'.*[77]

There is a key balance to be struck between reducing search costs for some groups without creating new distortions that disincentivise the searching or switching behaviours of others.

Vulnerable customers

Sub-optimal decisions arising from inadequate or misleading information, and complex services and pricing, tend to particularly affect vulnerable consumers, such as those who are older, who lack access to the internet, and/or who have English as a second language, poor literacy/numeracy, low education and/or low incomes. A 2008 Eurobarometer survey on consumer switching found that vulnerable consumers tended to switch less frequently, and found it more difficult to compare offers from different service providers.[78] Similar conclusions were reached by Waddams Price et al.[79]

Xavier (2011) makes the point that targeting the information needs of vulnerable consumers can have benefits for most other consumers too. For example simpler information is preferred by low literacy consumers because it is easier to understand, and by high literacy consumers because it reduces the time to process the information.[80] Xavier also notes that it

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76 Enrique Fatas et al (2013) *Behavioural economics in competition and consumer policy* (ESRC Centre for Competition Policy: University of East Anglia, UK), p.93.

77 Miguel Flores and Catherine Waddams Price (2013) *Consumer behaviour in the British retail electricity market*, CCP Working Paper 13-10, p.18.

78 Cited in Dr Patrick Xavier (2011) *Behavioural economics and consumer complaints in communication markets.* A report prepared for the Australian Communications and Media Authority in connection with the public inquiry 'Reconnecting the consumer', p78. 'Vulnerable' was defined as aged over 65, living in rural areas, low level of education, out of work and/or without access to the Internet.

79 Catherine Waddams Price, Catherine Webster and Minyan Zhu (2013) Searching and switching: empirical estimates of consumer behaviour in regulated markets, CCP Working paper 13-11, p.32.

80 Xavier (2011) p.6, 49.

is not necessarily more information but *better* information (perhaps even *less*) that is required and that it should be presented in an easily comprehensible format. Additional information may overwhelm consumers, distract them from important factors, and cause them to make decisions with less reflection rather than more, due, for example, to cognitive limitations as discussed below.[81]

Understanding

As outlined in section 3 (and discussed in further detail in Appendix 1), there appears to be a reasonably high level of awareness (73 per cent) of the What's My Number campaign and hence of the ability to change retailers, the ease of switching, and the savings available from switching.

Motivation

UMR research results on the New Zealand retail electricity market show that over 80% of survey respondents who have switched in the last two years cited financial reasons.[82] These results are consistent with the Centre for Competition Policy survey and other empirical studies in the United Kingdom.[83] The Centre for Competition Policy survey found that the most frequent reason for searching was the same across all United Kingdom utility markets: 'felt price too high of current supplier'. Of those who did not search, the two most frequently given reasons were 'I am happy with what I have', and 'too much bother'. The third main reason in the electricity market for not searching or switching was 'too little saving'. Of the respondents who searched but did not switch, the most common reason was 'could not find better offer'.

The quantum of savings that will make switching worthwhile and any other benefits such as other product offerings and service quality are clearly a key motivation for searching and switching. Any estimate of financial gain made by consumers will rely on comparative information of tariffs offered by retailers.

Consumers will have different judgements about what quantum of savings is sufficient to motivate them to switch (depending on, inter alia, their income, and the proportion of their household expenditure they currently spend on electricity). Flores and Waddams Price (2013) found that the strongest driver of switching across various consumer segments was expectation of gains from switching, but also that the strength of this relationship varied strongly across different consumer segments. A consumer's motivation to obtain the savings that are available will also be influenced by the cost of switching (actual or perceived). Switch costs are incurred after decisions to search and switch have been taken. However, search costs will influence future searching and switching behaviour through word of mouth effects. Switching costs are discussed in Appendix 1.

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81 Xavier (2011), p.14, 18.

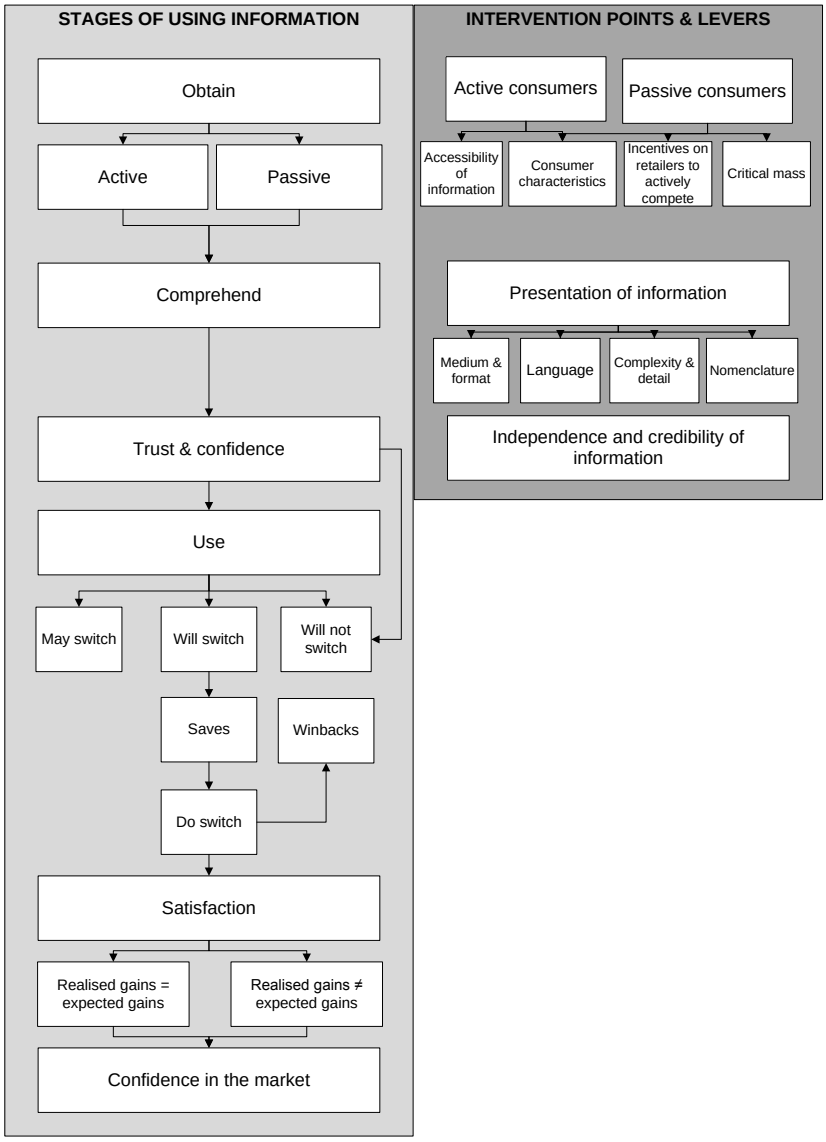
82 UMR research (2014) *Shopping around for electricity retailers: a quantitative study among the general public* (Electricity Authority: Wellington, New Zealand), p.23.

83 See for example, Catherine Waddams Price, Catherine Webster and Minyan Zhu (2013) Searching and switching: empirical estimates of consumer behaviour in regulated markets, CCP Working paper 13-11.

5.3 The searching process

Figure 9 illustrates other relevant facets of how consumers may acquire and use specific information in the searching process and the intervention points and levers that exist.

Figure 9 Information, searching and the decision-making process



Source: Sapere

5.3.1 Obtaining information

Information may be provided cheaply and almost instantaneously via word of mouth, from telephone call to a retailer (perhaps after being on hold) or through an online comparator tool (after a few minutes of entering data). However, it will cost a lot more, and it is likely to take several days to arrive, if requested from a retailer on a bespoke/ad hoc basis and delivered by post.

Figure 9 shows how consumers can obtain information actively or passively. Active consumers will deliberately search out information on the potential gains from switching, and the costs/ease of doing so. In the Centre for Competition Policy survey one of the most important factors differentiating consumers who actively searched was whether they have switched other products, leading to the conclusion that some consumers have greater propensity to actively participate in markets than others.[84]

Switching may also occur with only minimal searching – consumers may receive information passively such as being approached directly by retailers (e.g. door to door sales), e.g. the Centre for Competition Policy survey found that in the UK electricity market, the second most frequent reason for searching was 'sales and visits'.[85]

5.3.2 Comprehending information

Consumers need to understand the information they have acquired or received. Searching reduces uncertainty and increases confidence in the estimated savings.[86] The motivation from a given level of expected savings will vary depending on consumer characteristics (such as level of education and literacy) and the way it is provided. The format will be important e.g. complexity, use of graphics, text, numbers, nomenclature (of different tariff plans), jargon/technical language, language (i.e. other than English), file format etc. The medium is also influential e.g. online (website, email, social media), hard copy, verbal (face-to-face, over the phone).

5.3.3 Trust and confidence in the information

Consumers need to have trust and confidence in the accuracy and veracity of the information, in particular the estimates of potential savings and the likelihood of these savings being sustained over time. Comparisons of available offers are estimated on the basis of past consumption. One reason why consumers may not believe that potential savings are reliable is the difficulty of estimating 'demand shocks' e.g. changes in consumption patterns (such as purchase of additional new appliances (e.g. clothes dryer) and changes in family circumstances). Surveyed consumers that respond that they unable to find a better deal may reflect uncertainty that the best deal now will still be the best deal in the future.[87]

The source of information can be important: 'people typically trust fellow group members more than they do outsiders'.[88] Ek and Söderholm (2008) note the importance of word of mouth and social interactions in decision-making about whether to change electricity

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84 Enrique Fatas et al (2013) *Behavioural economics in competition and consumer policy* (ESRC Centre for Competition Policy: University of East Anglia, UK), p.74.

85 Door to door activities were subsequently curtailed by the regulator.

86 Miguel Flores and Catherine Waddams Price (2013) *Consumer behaviour in the British retail electricity market*, CCP Working Paper 13-10, p.6.

87 Enrique Fatas et al (2013) *Behavioural economics in competition and consumer policy* (ESRC Centre for Competition Policy: University of East Anglia, UK), p.68.

88 Enrique Fatas et al (2013) *Behavioural economics in competition and consumer policy* (ESRC Centre for Competition Policy: University of East Anglia, UK), p.56.

supplier. They frame this in the context of 'push' and pull' factors that influence the decision to reassess the current situation and to switch or not switch:

> *'Push' and 'pull' effects can also be mediated through social norms, i.e., through the interactions with and perceived expectations from friends, neighbours, family and other households in general. Social interaction may trigger individuals to rethink their current situation and thus actively investigate alternatives. In addition, if an individual is uncertain about the future cost savings associated with an active choice to change electricity suppliers, others' behaviour and/or opinions may play an important role in the decision-making process.*[89]

Miguel Flores and Catherine Waddams Price (2013) also found that some consumer segments are more likely to search when they receive information about potential better deals from friends and family, highlighting that the source and medium of information can have varying effects on different consumer groups.[90] Encouraging active consumers to influence their passive counterparts may have strong pro-competitive benefits.

5.3.4 Using information

Having obtained information, consumers need to consider and process it. The resulting decision options include switching, not switching at the current time, and negotiating with current supplier for a better deal and potentially being won back.

5.3.5 Satisfaction post-switching

For those consumers that make an active decision to switch, their subsequent satisfaction will be affected by the extent to which the actual benefits match the expected benefits. This in turn will affect their confidence in the market.[91] This will affect their word of mouth recommendations about their experience and so have important flow on effects to others in their social groups as it provides them with information, understanding, trust and confidence to act or avoid acting if switching has resulted in a bad experience.

5.3.6 Confidence in the market

Ultimately the combined experiences of consumers along with other influences such as social, political and economic factors will determine their views about and confidence in the market.

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89 Kristina Ek and Patrik Söderholm (2008) 'Households' switching behaviour between electricity suppliers in Sweden', *Utilities Policy* 16 (2008) 254-261, pp.256-57.

90 Miguel Flores and Catherine Waddams Price (2013) *Consumer behaviour in the British retail electricity market*, CCP Working Paper 13-10, p.14.

91 Analysis by Ganesh, Arnold and Reynolds (2000) tests the propositions that consumer satisfaction post-switching is dependent on a number of factors, including their level of pre-switching satisfaction with their incumbent supplier. Jaishankar Ganesh, Mark J. Arnold and Kristy E. Reynolds (2000) 'Understanding the customer base of service providers: an examination of the differences between switchers and stayers', *Journal of Marketing* July 2000 64(3) (65-87).

5.4 Behavioural limitations on consumer decision making

A number of studies have found that consumers' behavioural limitations may also exert a strong influence on competitive outcomes in markets. Examining the UK electricity market, Waterson (2001) found that, despite very high consumer awareness of their ability to switch and financial gains from doing so, few people had switched following the introduction of inter-regional competition two years beforehand. Many perceived the costs of searching and switching to be high. Around 30 per cent of survey respondents thought it would take a full day or more to switch, even with the existence of an online price comparator tool, and two intermediaries offering online switching services.

Waterson concluded that the lack of competitive outcomes at the time to be 'largely, the result of the behaviour of consumers'.[92] He suggested that, in less mature markets such as electricity, consumers 'may need substantial assistance in challenging established players'.[93]

This effect has been found in a number of other service markets such as telecommunications internet services and banking where choice of supplier is possible but many consumers do not switch service providers even when the tariff plans they are on are not the best value for money. Moreover, when they do choose, some select a new tariff plan that is more expensive. Wilson and Waddams Price (2010) have estimated that only a range of between 8 per cent and 20 per cent of United Kingdom consumers who have switched opted for the best tariff given their annual consumption levels. They also found that between 27 per cent and 38 per cent switched to a more expensive tariff.[94] Some aspects of behavioural economics offer explanations as to why consumers can be sticky and choose financially sub-optimal plans.

Cognitive limitations or bounded rationality

Consumers cannot collect and process all the available information relevant to making a rational decision. Consequently, they may employ a number of techniques, such as heuristics (rules of thumb) to simplify decision-making (e.g. ignoring technical information). This links to the UK Centre for Competition Policy survey findings that those consumers who did not search found that searching is "too much bother".[95] If searching is difficult, and the information presented in a way that is difficult for consumers to understand, then they will more easily give up thereby reducing competitive pressure on firms.

Sitzia et al (2012) found, in a laboratory-setting experiment, that having a mix of tariffs of different complexity is sufficient to increase sub-optimal outcomes by about 14 per cent, rising to 22 per cent when all tariffs are complex. Results also showed that having a higher

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92 Waterson (2001), p.15.

93 Waterson (2001), p.20.

94 Chris M. Wilson and Catherine Waddams Price (2010) 'Do consumers switch to the best supplier?', *Oxford Economic Papers* 62(4), 647-668.

95 These findings are discussed in Enrique Fatas et al (2013) *Behavioural economics in competition and consumer policy* (ESRC Centre for Competition Policy: University of East Anglia, UK), pp.63-66.

number of tariffs increased sub-optimal switching by around 23 per cent.[96] These static laboratory findings point to a potential negative effect of information clutter.

Taken at face value, the findings by Sitzia et al contrast with Baumol's and Littlechild's arguments (see section 5.1.1) that workable competition relies on innovation and diversity. However, consumers do not necessarily desire less choice. Research from the UK suggests that some consumers may value more complex pricing if it means retaining choice – a survey of rail customers found that the majority preferred a more complicated system with some low price options over a simplified system with fewer low cost options. Similarly, research by Ofgem found that consumers did not wish green tariff options to be removed[97].

Real world competition is dynamic and market participants operate and learn over time. This can mean that in dynamic and diverse markets there is pressure on firms to differentiate from their peers by providing better, clearer information as a customer acquisition strategy.

Consumer inattention

Consumer inattention refers to the tendency of people to only give attention to a subset of the information or options. It can be rational to ignore information. People could be expected to give their attention to up to the point at which the cost of attention equals the expected benefit. They then rationally ignore some information. Boundedly rational people may ignore or fail to give enough attention to 'small print' for example, which might result in poor outcomes.

Unlike other consumer goods e.g. petrol, there can be few regular transactions with retail electricity (12 per year, for most consumers). Hence, there might only be 12 prompts in a year to compare suppliers. In addition these invoices are made in arrears and can require little from the consumer, for example direct debit. Supply also continues when no decision is made.

The main event that sparks awareness to search and switch is on moving house. So usually consumers (unless proactively approached with marketing) must actively investigate alternative suppliers. The findings of Sitzia et al (2012), referred to above, emphasise the importance of consumer inattention: 'by neglecting the role of inattention, the role of complexity is overstated. An effect of tariff complexity remains but is smaller when inattention is a problem'.[98]

Endowment and anchoring effects

Behavioural economists have identified that people value a good more if they already hold it than if they do not. In other words, their endowment is treated as a reference point or an anchor and undue importance is attached to it. These effects can also be understood as a preference for the current situation unless the incentive to change is particularly compelling

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96 Stefania Sitzia, Jiwei Zheng and Daniel John Zizzo (2012) 'Complexity and smart nudges with inattentive consumers'.

97 Studies cited in Stephen Littlechild (2014) *Promoting or restricting competition?: regulation of the UK retail residential electricity market since 2008*. University of Cambridge Energy Policy Research Group Working Paper 1415.

98 Stefania Sitzia, Jiwei Zheng and Daniel John Zizzo (2012), p.27.

which leads to status quo bias. This may account for the consumer inertia observed in service markets such as retail electricity.

Certainty, biased beliefs and loss aversion

If consumers are uncertain that they will be rewarded from switching they will be less inclined to search in the first place. Behavioural economics studies have shown that people tend to place greater weight on lower probability events and prefer certainty (their beliefs are biased).[99] For example, they may believe they are more likely to be dissatisfied after switching than an objective assessment of the probability of such as loss. This may stem from more focus on the likelihood of a poor switching experience or post switching retailer price hikes etc. than on the probability of gaining.

People also tend to be loss averse. They evaluate gains and losses differently, with greater weight assigned to losses than to equivalent size gains, relative to the status quo or to expectations. This loss aversion makes people avoid searching and switching. They tend to prefer the 'devil they know' because it provides certainty and is low cost.

This suggests that to counter consumer stickiness to the 'devil they know' it is necessary to entice them with a gain from switching that is quite material and certain compared to their current service plan.

Herd behaviour

When information is imperfect people may converge on the same choice of action as a result of copying the decision-making of others. If few people are persuaded to search and switch it may discourage others from trying other service providers. This can be considered rational behaviour if a consumer believes that the people whose behaviour they are copying are better informed than they are.[100]

The tendency for people to converge on a choice of action can be a pro-competitive trait if active or sophisticated consumers provide sufficiently positive accounts about their searching and switching experiences that they set off an information cascade. People may imitate the choice behaviour of others even if they hold little information that points to the value of switching.

There are a number of features of electricity markets which may contribute to sub-optimal consumer decisions and lack of active engagement:

- **No full substitutes:** Although other energy sources can meet some household energy needs (such as space heating, hot water heating and cooking), electricity is generally still required for lighting and appliances so demand can be inelastic.
- **Electricity is homogeneous.** Beyond basic attributes of continuous, reliable supply, and sustained frequency and voltage, electricity does not differ by supplier. Retailers must therefore compete on price and service quality dimensions. This means

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99 Kahneman, D., (2011), Thinking fast and slow. Part IV Choices. Penguin.

100 Enrique Fatas et al (2013) *Behavioural economics in competition and consumer policy* (ESRC Centre for Competition Policy: University of East Anglia, UK).

differentiation and innovation tend to focus on additional product offerings such as dual fuel or telecommunications services, or additional offerings such as online consumption information, bill smoothing, choose your payment date, and so on.

- **Electricity costs are often low priority**. The demand for electricity is indirect, derived demand (consumers want the services it provides such as lighting and heating, rather than electricity per se). It is also a relatively small proportion of most households' expenditure, this means electricity costs are of low priority or concern to some consumers and of much more concern when it represents a significant portion of income.

5.5 Aligning incentives

Section 4 of this paper concluded that improvement is possible to the availability of tariff information and that greater availability of tariff information would be highly likely to be pro-competitive. The analysis in this section has added two further strong findings.

First, economic literature and the empirical experience argues that any regulatory intervention to ensure greater availability of tariff information should not impede or curtail price or offer differentiation by electricity retailers. An intervention which limits or encourages retailers to reduce experimentation or narrow the dimensions of product service over which they compete would have a high risk of doing more harm than good.

Second, consumers are heterogeneous which means that a single source, or uniform across the board approaches to information dissemination are unlikely to improve outcomes for all customer segments. The question is how and where best to intervene for differing groups of customers.

Interventions targeting information requirements should be aligned with the incentives on suppliers, and be designed in such a way that they increase the incentives on consumers to engage in the market. Xavier summarises his suggestions for information transparency and disclosure (which have general relevance) as follows:

- The information should be aligned with service provider incentives, such that providers support the objectives of the measure.
- The behavioural outcomes sought should be clear to the policy maker.
- The information provided should be 'framed'/presented in a manner that is simple and of value to consumers, and should provide sufficient incentive for providers and consumers to change their behaviour beneficially.
- The information requirements should fit with the wider pro-competitive regulatory system and also with existing regulations concerning information requirements.[101]

Xavier (2011), Cited in Dr Patrick Xavier (2011) Behavioural economics and consumer complaints in communication markets. A report prepared for the Australian Communications and Media Authority in connection with the public inquiry 'Reconnecting the consumer', p.6.

6. Policy response options

6.1 Initiatives to lower search costs

This section draws together our findings to answer the question of whether there is a case for the Authority to act to make it easier for customers to access, understand and use retail electricity tariff data. It also investigates options for achieving this.

The literature indicates that improving the effectiveness of market information is likely to be strongly pro-competitive. However, a number of caveats exist as complex information can lead to less engagement by consumers in markets, and a higher level of transactions that do not give consumers the best value. It is also evident that retailers can have incentives to make searching and switching difficult for consumers. Markets that exhibit these characteristics do not operate as effectively as they could.

The risks of poor market outcomes are linked to whether healthy workable competition exists. When it does, the market not only delivers cost effective supply of electricity in general, but it also spurs retailers to provide better customer information including tariff data. Retailers will vie to provide clearer, better information if they can gain a competitive advantage from doing so. Workable competition also reduces the risks that increased availability of comparative tariff information might assist tacit or overt collusive behaviour between retailers.

As outlined in Section 4.3 the New Zealand electricity market is not characterised as having a dominant price leader. New Zealanders also believe that switching power companies is relatively easy, a third are active customers and 45 per cent think it easy to compare power company offers. In addition, retail tariff data is available from retailers and they have been providing data to the levy funded Powerswitch comparison site voluntarily following the 2009 Ministerial Review findings. These are all positive indicators. However, despite the increasing level of competition many customers remain passive or disengaged and those on lower incomes and in older age groups are more commonly in these categories.

There is also potential for development of comparison sites to be retarded by a tangle of competing standards and protocols for data provision. For those using electricity, this would delay them enjoying the net benefits that would come from comparison sites putting downward pressure on the cost of searches.

So despite level of competition in the electricity retail market, the lack of interest by a large group of customers suggests that there might be long-term benefits for consumers from the Authority undertaking initiatives that improve the availability of tariff data to lower search costs and encourage greater activity by consumers.

Pro-competitive initiatives that the Authority could take to achieve this goal include:

1. The Authority encouraging the industry to continue to supply comparator sites such as Powerswitch with tariff data and to work with the industry to standardise the format in which this data is provided.
2. The Authority could formalise the current voluntary arrangements by amending the Electricity Industry Participation Code 2010 to require retailers to provide tariff data to

comparison sites. This could be achieved by adding tariff data to the definition of "Code Information" in the Code.

3. The Authority could also amend the Code to require retailers to provide tariff data to the Authority itself; the Authority would build and operate a data hub and provide the data onto others, such as the comparison sites.

Under the first option the Authority would encourage the disclosure of tariffs through standard protocols. This could include standard formats for information sharing between retailers and price comparator sites (not standardised offer formats). This approach would focus on formats to aid these parties only. This could be beneficial for comparison sites as it would make it easier for them to make tariff information more accurate, timely and easier for consumers to understand. This would reduce cognitive limitations and lower barriers to searching and switching for consumers. Simpler access to data and standard formats should also allow the sites greater latitude to innovate.

Currently there are no formal requirements for retailers to provide Powerswitch with their tariff data. Although there should be commercial pressures to ensure that this continues to occur, retailers could decide that the political pressure to provide this information has waned and cease providing it. In addition, the commercial disadvantages of making this data available may outweigh the commercial advantages for some retailers which could withdraw from the sites. We understand that two small retailers currently do not provide information to Powerswitch. Reduced information would reduce the value of these sites for consumers. If a material number of retailers ceased to provide comparison sites with their tariff data in a timely and usable way, it could raise search costs in the market overall and harm consumers.

There can be regulatory risks in relying on entities to comply with a regulator's unwritten expectations, as these circumstances are subject to misunderstandings (and in extreme cases manipulation). If a regulator wishes to intervene in a market, there is a case for it doing so transparently and on the basis of an explicit cost-benefit analysis. If the expected benefits are not sufficient to justify a Code change then it must be questionable whether the regulator should intervene at all.

In light of these uncertainties it may be advantageous for the Authority to clarify expectations and codify the supply of tariff data.

The Authority currently receives data from Powerswitch and has powers to ensure it can access data. The third option would see it using the Code to ensure it was directly fed tariff data by the retailers. It could then process the data and forward it onto comparator sites or provide the comparator site itself. This could provide some benefits and may make the Authority's monitoring role marginally easier but seems unnecessary given the competitiveness of the market and the Authority's powers to request any information it might need to carry out its role. There would also be a heightened risk under this approach that the Authority would (possibly unintentionally) encourage a standardisation of retailer offers, which would reduce competitive pressure.

6.1.1 Other initiatives

The literature has underlined that consumers have different characteristics and any initiatives need to target approaches to market segments to be effective. It may therefore be necessary to investigate other mediums of communication to reach vulnerable customers more directly and effectively than relying on the internet. The Authority has been active in partnering with

and training the Citizens Advice Bureau and other community agencies on how to compare and switch electricity retailers.[102] It is beyond the scope of this paper to review the work done by the Authority with community agencies, but the Authority may be able to draw from that experience to indirectly gain access to the 15 per cent of customers that were categorised as "uninformed strugglers" by the UMR report (2014). Another strategy could be to target self-informed actives, who formed 18 per cent of customers and seek to encourage referrals or word of mouth marketing techniques to spread interest in searching and switching from these customers to those segments which are more passive.

6.2 Policy options for electricity retail tariff comparison

Following the 2009 Ministerial Review the Government chose to use the Consumer Switching Fund, including the What's My Number and Powerswitch initiatives, as a key means of encouraging competition in the New Zealand retail electricity market. Five years later, these Consumer Switching Fund comparator sites dominate the market and there appears to be only one commercial electricity price comparison site operating (Switchme) along with combined utility comparison site (Fast Connect). However, Powerswitch is currently only funded at maintenance levels. It will therefore be increasingly difficult for it to provide a comprehensive and accurate service to consumers, because of the increasing use of smart meters and the increasing pricing innovation and complexity that they are likely to cause.

The Government may be able to improve its current policy of levy funding comparator websites. It has a number options available. The three main options include:

- Return to former Consumer Switching Fund levels of financial support including a provision to update Powerswitch to be able to address the agility, timeliness and accuracy challenges it faces.
- Remove all Powerswitch funding and rely on the growth of commercial comparator sites to provide electricity tariff comparison services to customers.
- Authority takes over the role of providing the electricity retail comparison site.

The options have a number of advantages and disadvantages as outlined in Table 2 below.

[102] The Authority has provided training to 77 Citizens Advice Bureau agencies across the country, and to 59 other organisations such as branches of the New Zealand Federation of Family budgeting services offices, Salvation Army, and some Returned Services Association offices, etc

Table 2 Comparison sites options

Option	Who pays?	Advantages	Disadvantages
Option One Powerswitch funded to continue operations	Cost levied on electricity retailers passed through to customers	Primary trusted and independent site Scale and network advantages maintained	Costs to customers Crowding out of private sites may reduce innovation in comparison services Need to increase levy to pay for further site development
Option Two Private comparison sites take over role as Powerswitch funding ceases	On site advertising or retailer commissions	Current levy scrapped No crowding out so greater incentives to innovate	Potential problems with consumer trust given funding options Retailers may stop providing tariff data to sites Potential complexity in comparison site options for consumers
Option Three Authority takes over comparison site role	Levy on electricity retailers passed through to customers	Primary trusted site Some additional improvements in linkages to other data possible Scale and network advantages Potential to start with new more capable site design	Crowding out private sector comparison sites Potential for regulatory creep into retail price control

Source: Sapere

6.2.1 Centralised versus commercial approaches

Our research has highlighted that regulators need to be wary of constraining choice and or providing opportunities to tacitly or even overtly collude as the Danish concrete market and UK retail electricity market interventions demonstrated. Overall, the characteristics of retail competition mean an intervention to create a single, comprehensive, comparator site, such as Option 3 would be unlikely to improve results for consumers. This view depends on the relative net benefits and risks that attach to the competitive approach (Option 2) to providing comparison services versus the more centralised approaches (Option 1 or Option 3). While the more centralised approaches could have some scale, integrity and simplicity advantages over a competitive approach, we do not think these are large enough to warrant a

centralised strategy. In our view, a single site strategy is likely to result in higher search costs in the long run by impairing the ability of retailers to differentiate/target customer groups compared to a more open and competitive approach to comparison sites. In addition, the relative scale, integrity and simplicity disadvantages of the commercial approach could be mitigated by various measures.

6.2.2 Levy funding or commercial revenues?

Centralised approaches are likely to drive higher costs for electricity levy payers. In addition government funded websites are likely to 'crowd out' commercial players. Arguably if government is funding the website, retailers are receiving a free ride in attracting consumers and advertising. This could be offset to the extent that the lower customer search costs provided by the Consumer Switching Fund sites are increasing pressures on retailers to supply their services more efficiently. However, a similar benefit to consumers could be achieved by private sector comparison sites providing these services instead, as occurs in the United Kingdom. Australia has a mix of commercial and regulator operated comparator sites as discussed in Appendix 2.

Should the role of comparison services pass back to the private sector, these comparator sites would face the same challenges and would need to make some choices about their revenue streams. The options for funding of commercial comparison websites could include:

- charging the retailer only (retailer subsidising the customer)
- charging the customer only (customer subsidising the retailer)
- charging both the retailer and customer (allocation of costs on some basis), and/or
- funding through advertising.

The price discrimination principles, and common internet based revenue models, suggest charging based on users relative elasticities of demand. Consumers are likely to shun having to subscribe or pay to use such a service. As with other two sided markets retailers are likely to be the least price sensitive so face higher charges. So Ramsey pricing and network economics leads market platform owners to charge retailers while building maximum customers by making the service free to this group. Unless comparison sites charge in this way they will fail to achieve scale and benefit from network effects. This charging approach is likely to benefit all users as more consumers will get greater value from a more inclusive site and retailers will get access to an enlarged market at lower costs of acquisition.

Our report has canvassed some of the potential pitfalls of comparator websites. Gamper and others pointed to potential problems with site trustworthiness and heightened complexity.[103] However, the Fair Trading Act (1986) provides a legal weapon against false or misleading advertising or claims. While that may provide some defence against these potential problems, the Act may be a blunt instrument to use to encourage transparency of

[103] Gamper HC., (2012). 'How Can Internet Comparison Sites Work Optimally for Consumers?' Journal of Consumer Policy, May 2012.

these sites as they are not selling anything directly and may still be able to manipulate their data in a way that harms or hoodwinks customers.

Should a commercial approach to comparator websites by pursued, our research points to potential value in:

- disclosure of which retailers are covered on the site and the types of products available
- disclosure of the form of funding that is received from retailers as some of the funding may be commission based and/or advertising revenue
- development of protocols for information sharing between retailers and price comparator sites.

This type of regulatory intervention is likely to be unnecessary if a centralised approach to comparison sites is taken as the levy would likely be the main source of funding. It could, however, be a helpful backstop role should a commercial strategy be used as it should enhance consumer understanding and trust. This approach could follow the Ofgem example in accrediting websites using a confidence code.

Should the electricity levy continue to provide the main source of revenue for electricity comparison, rationalising the activities of WMN and Powerswitch is a sub option that could lead to savings compared to continuing to run both initiatives concurrently.

6.3 Recommendations

We recommend that standard formats for information sharing between retailers and price comparator sites be developed in close consultation with the industry. The Code would be amended to require retailers to make tariff data available (in a form which makes it available to comparator sites such as Powerswitch). The Authority should work with the industry to standardise the format in which this data is provided.

This proposal seems likely to provide greater net benefits to consumers than simply relying on the current good faith of participants for the provision of tariff data to comparator sites.

In addition, we recommend that a commercial approach to comparator websites (Option Two) be explored further because it is also likely to provide greater net benefits to consumers in the long run, primarily though greater latitude for innovation of the comparison sites.

We recommend the Authority continue its efforts to targeting specific customer segments, and particularly vulnerable customers, with information tailored to their specific needs.

Should a commercial strategy for future comparison websites be selected, we recommend that the Authority consider an accreditation scheme for disclosure of information on these sites covering which retailers are participating and the form of funding they are providing to the site to assist in building consumer trust and confidence.

Appendix 1: Switching in New Zealand's retail electricity market

Consumer switching fund

A number of initiatives were launched following the 2009 Ministerial Review. The Consumer Switching Fund (CSF) was one of these and was established in 2010. It allocated $15 million over three and a half years to a contestable fund, with the objective of increasing retail competition by creating more informed and active electricity consumers. This tranche of funding for the CSF ended on 30 April 2014.

The central programme was the What's My Number (WMN) public advertising campaign. WMN commenced on 1 November 2010 and has run since then. It aimed to encourage consumers to 'shop around' for electricity and to switch providers if a better deal was available. The campaign provided consumers with information about their ability to switch, the ease of switching and the savings that could be made by switching. This was facilitated by online tools, including a WMN website and links to the Powerswitch website (discussed below).[104]

An evaluation of the CSF commissioned by the Ministry of Business, Innovation and Employment (MBIE) estimated that consumers who switched as a result of CSF projects (including the WMN campaign) received savings of between $33 million and $41 million ($524 per customer or $175 per year) if they received the savings for three years. The evaluation reported that most of the direct effects of the CSF were welfare transfers from retailers to consumers. Excluding these transfers left allocative efficiency benefits of around $2.10 per customer per year (between $0.2 million and $0.25 million in aggregate over three years). The evaluation found no clear evidence of the impact of the CSF on competition.[105]

The switching process

New Zealand has one of the fastest switching times in the world. From the consumer's perspective, all they need to do it to contact the retailer they wish to switch to and the new retailer will complete the process, which takes an average of four and a half days.[106]

Switching rates

New Zealand's overall switching rates are the second highest in the world (Figure 11). Figure 10 shows the number of monthly switches, which has increased significantly since 2008 but

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104 *Proposal for increasing consumers' propensity to compare and switch retailers*. Report by the Retail Advisory Group, 4 March 2014, p.4.

105 Covec (2013) *Evaluation of the Consumer Switching Fund*. Prepared for the Ministry of Business, Innovation and Employment, 28 November 2013.

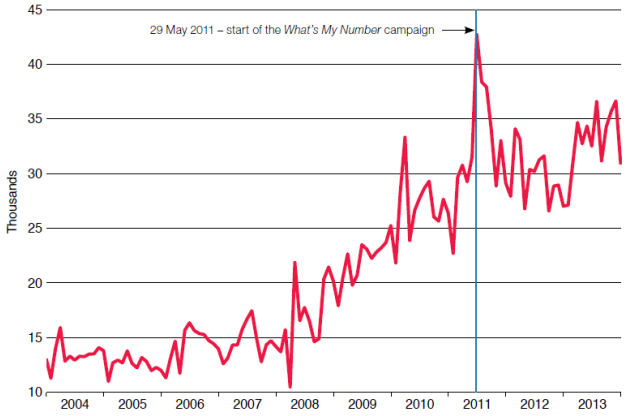
106 *Proposal for increasing consumers' propensity to compare and switch retailers*. Report by the Retail Advisory Group, 4 March 2014, p.6.

flattened out over recent years. Annual switching rates have increased from around 10 percent of customers in 2006 to around 20 percent in 2011, and has since remained at or above this level.[107]

The latest *Shopping Around* survey found that 31 per cent of households have switched retailer in the past two years.[108] Males were more likely to have switched than females, and more likely to have changed as a result of active searching behaviours, in particular finding a better deal online using a price comparison website (28 per cent of males compared to 15 per cent of females) and approaching another company to switch (18 per cent compared to 11 per cent). Females were more likely to have switched as a result of being approached by another company (62 per cent compared to 47 per cent of males).

Switching potential is also high, with 2013 survey data showing that 71 percent saying it was worthwhile reviewing electricity providers regularly.[109]

Figure 10 Monthly switches, all customer connections 2004-2013



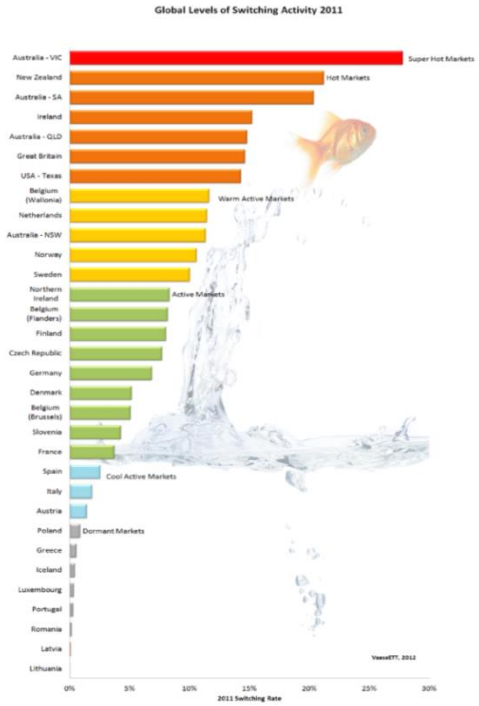
Source: Electricity Authority (2014) *What's My Number: competition and choice - a review of the 2013 campaign*, p.1.

[107] Electricity Authority (2014) *Proposed Code amendment – saves and early win-backs*. Consultation paper, 24 June 2014, p.3.

[108] UMR research (2014) *Shopping around for electricity retailers: a quantitative study among the general public* (Electricity Authority: Wellington, New Zealand), p.17.

[109] UMR research (2014) *Shopping around for electricity retailers: a quantitative study among the general public* (Electricity Authority: Wellington, New Zealand), p.11.

Figure 11 Switching rates 2011



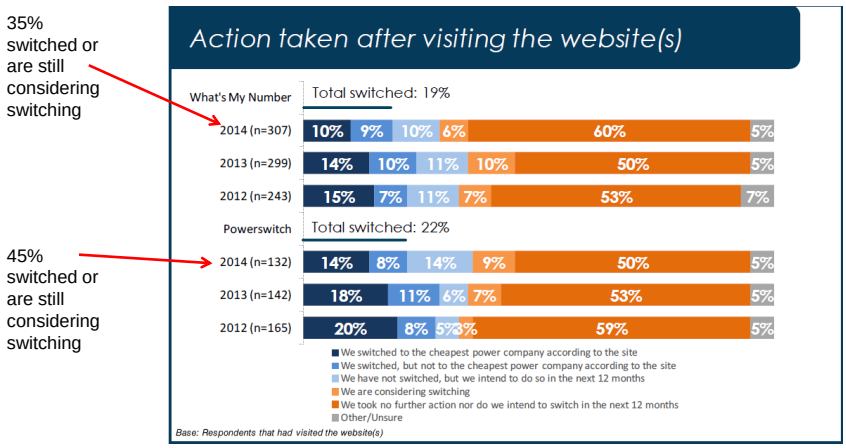
Source: VaasaETT (2012) *World energy retail market rankings 2012*, p.11.

A large proportion of people who visit price comparator websites subsequently switched or are still considering switching (35% for What's My Number and 45% for Powerswitch) (Figure 12).

The survey data indicates that the WMN campaign has had differing effects on the various consumer segments. For instance, the 'Old Status Quo' segment is much less likely that other segments to visit the WMN website and to switch retailers. Data also suggest that the campaign was more successful in reaching what is considered to be the lowest hanging fruit, or early adopters.[110]

[110] *Proposal for increasing consumers' propensity to compare and switch retailers*. Report by the Retail Advisory Group, 4 March 2014, p.12, 13.

Figure 12 Action taking after visiting comparator tool websites



Source: UMR research (2014) *Shopping around for electricity retailers: a quantitative study among the general public* (Electricity Authority: Wellington, New Zealand), p.37.

Reasons for switching

Consistent with United Kingdom research, reasons for switching in New Zealand are primarily financial, with over 80 percent of survey respondents who have switched in the last two years citing financial reasons (Table 3).

Table 3 Reasons for switching

REASONS FOR SWITCHING *What were your reasons for switching power companies on the most recent occasion you switched?*	2014 %
Base: n=	**305**
Personal approach from a power company with a better deal	43.1
A financial incentive from the power company	20.5
High bill from your previous power company	19.3
Moved home	8.2
Poor customer service from previous power company	2.5
Visit to price comparison website	2.5
Power company offers flexibility on when or how to pay	1.6
Recommendation from friends or family	1.5
Inaccurate billing from previous company	1.3
Power company also supplies gas and offers a discount for having both gas and electricity on the one bill	1.1
Energy saving advice from a power company	0.8
Desire to have gas and electricity with the same supplier	0.7
Wanted a power company who produces electricity from sustainable sources	0.7
Company closed/ was overtaken by another company e.g. Empower	0.7
Solar power wasn't compatible with previous company	0.6
Visit to power company website	0.2
Other	2.9

Source: UMR research (2014) *Shopping around for electricity retailers: a quantitative study among the general public* (Electricity Authority: Wellington, New Zealand), p.23.

In New Zealand, a UMR study (2011) found that although price was critical to switching, attitudes to switching were far from homogeneous. It segmented people into five clusters each with their own distinct attitudes, traits, demographic profile, media preferences and propensity to switch. They comprise Bargain Hunters (12% of the population), Battler Mums (26%), Generation Y (15%), Affluent, time-poor sceptics (26%) and Old, Status Quo (21%). These segments were in descending order of propensity to switch. UMR noted that

understanding the nature of these segments would enable strategies to encourage switching to be finely targeted and to make best use of resources.[111]

Reasons for not switching

The main reasons for not switching are that consumers are happy with current power company/think they will match any deal and are happy with the service from current power company (Table 3). Results were similar between the *Shopping Around* and *Charge Transparency* surveys.

The role of information in the decision to not switch was not a factor for about half the surveyed group, but sizeable proportions stated that it was (Table 5). Māori and Asian respondents were more likely to feel that not being able to understand information and work out the best deal had been a factor in the decision to not switch.

Table 4 Reasons for not switching

REASONS FOR NOT SWITCHING *What are the main reasons for not switching?*	
	2014 %
Base: n=	**695**
Happy with service from current power company	40.8
Happy with price of current power company/current power company will match any deals	28.2
Switching seemed too much hassle	13.2
Too busy to investigate the best deals available	5.9
Did not trust there would be real gains from switching	5.2
Offer(s) were no cheaper	4.5
Have not got round to looking into this	3.4
Lack of information on best deals available	2.3
Was already locked into a contract	1.8
No other power company would take on my household	1.2
Current power company made a counter offer when I mentioned I was going to switch	0.8
Concerned there might be a problem with continuity of supply if we switched	0.7
Did not want to get locked into a contract	0.4
Have other services with the company	0.4
No other options/ limited choice of companies	0.4
Concern about losing the rebate from the community owned lines company	0.3
Electricity is such a small cost to my household it's not worth it	0.3
Concern about connection or disconnection fees	0.1
Unsure	1.6
Other	4.3

Source: UMR research (2014) *Shopping around for electricity retailers: a quantitative study among the general public* (Electricity Authority: Wellington, New Zealand), p.21.

Flores and Waddams Price (2013) found that, for UK consumers, the correlation between searching and switching decisions was only weak.[112] Their results showed that estimates of the time and ease of switching did not significantly affect their propensity to switch, with respondents in their study no more likely to have searched or switched if they expected the process to take longer.[113]

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111 See UMR (2014) *Consumer Switching : A Qualitative and Quantitative Study*, February 2011Final Report page 55 for details of these segments and their characteristics.

112 Miguel Flores and Catherine Waddams Price (2013) *Consumer behaviour in the British retail electricity market*, CCP Working Paper 13-10, p.13.

113 Miguel Flores and Catherine Waddams Price (2013) *Consumer behaviour in the British retail electricity market*, CCP Working Paper 13-10, p.17.

Table 5 Role of information in decision not to switch

IMPACT OF INFORMATION QUALITY ON SWITCHING *Using a 1 to 5 scale where 1 means 'a lot' and 5 means 'not at all', how much were the following a factor in stopping you switching?*	1 A lot %	2 %	TOTAL 1+2 %	3 %	4 %	5 Not at all %	TOTAL 4+5 %	Unsure %
Not being able to understand information and work out the best deal	17	11	28	15	11	43	54	3
Not having the information to be able to compare deals	23	12	35	13	9	40	49	3
Base: Those that have not changed power companies in the past two years; n=686								

Source: UMR research (2014) *Report: charge transparency* (Electricity Authority: Wellington, New Zealand), p.52.

Of visitors to price comparator websites, and who took no further action and did not intend to switch in the next twelve months, the most common reason was they were already on the cheapest plan, followed by the size of available savings (Table 6). The latest *Shopping Around* survey found that larger savings were needed to make searching on a comparators website worthwhile, with a third of respondents (34%) wanting savings over $200, compared to 26% in 2013.

Table 6 Reasons for not switching after visiting What's My Number website

REASONS FOR NOT INTENDING TO SWITCH AFTER VISITING WHAT'S MY NUMBER *You say you do not intend to switch after visiting the website, why is that, what are your reasons?*	2014 %
Base: n=	**184**
I'm already on the cheapest plan	40
Website said I would not save much by switching	25.7
Not enough time/ too lazy	4.6
I am happy with my current provider	4.6
The website is confusing	4.1
I negotiated a better deal with my current supplier	3.8
I didn't trust the number it gave me	3
I had never heard of the companies provided as options	1.8
Other companies are not available in my area/ there is limited choice	1.8
The website was inaccurate	1.4
Loyalty to my current company	1.2
Current company uses sustainable energy	1.2
Currently on contract	1.1
Website didn't take into account information like dividends and discounts	1.1
Other	3.9
No specific reason	3.7
Unsure	0.6

Source: UMR research (2014) *Shopping around for electricity retailers: a quantitative study among the general public* (Electricity Authority: Wellington, New Zealand), p.38.

New Zealand research into the behaviour of 'stayers' (consumers of service industries including electricity, who searched but did not switch) found that overall, the key reasons for staying with their current provider was lack of a critical negative incident. This was followed by familiarity with current service provider and having a history with their current provider,

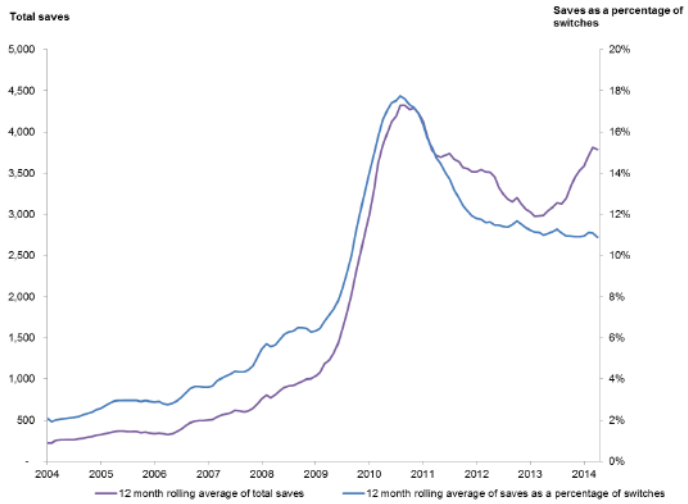
and fear that alternatives may be worse or no better.[114] Reasons for not switching therefore include both negative/push factors and positive/pull factors.

Retailers' responses – saves and win-backs

When a retailer is informed that one of their existing customers is intending to switch, they may respond by contacting the customer to try and retain or "save" them. This includes approaches to customers up to two months after the switch has been completed. During this time, the switch may be cancelled (and reversed). Firms also run "win-back" marketing strategies that target recent switchers in an effort to entice them back to their original retailer.

The rate of saves as a proportion of total switches peaked at 18 per cent in 2010 and has since fallen to around 11 per cent since (Figure 13).[115]

Figure 13 Saves (switch withdrawals) - 12 month rolling average



Source: Electricity Authority (2014) *Proposed Code Amendment – saves and early win-backs.* Consultation paper, 24 June 2014, p.4.

A survey of retailers undertaken by Sapere in 2014 found that retailers use a system of prioritisation to identify which switching customers they will contact. The most common criteria used are credit history and profitability, with the latter reflecting consumption but also the costs relating to that customer. No retailer surveyed reported offering non-standard tariffs or prompt payment discounts to switching customers.

The 2014 UMR research into switching behaviours found that around half of respondents who had switched had been approached by their existing retailer to try to convince them not to switch (Table 7). The most common tactic, reported by 40 per cent of respondents, was to

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114 Mark Colgate et al (2007) 'Back from the brink: why customers stay', *Journal of Service Research* February 2007 9(3) (211-28).

115 Electricity Authority (2014) *Proposed Code Amendment – saves and early win-backs.* Consultation paper, 24 June 2014, pp.3-4.

offer a credit. Around two thirds of those who were offered a credit on their account were offered under $150 and the remaining third were offered $150 or more. Overall, around 10 per cent accept the offer and cancel the switch.

Almost all of the potential switchers surveyed (93 per cent) were contacted by their existing retailer. Reasons given to convince them to stay were similar to those for switchers. For those who switched then switched back, the most common reason was the incentive offered by the original retailer.[116]

Table 7 Arguments used to save customers

ARGUMENTS USED TO CONVINCE CUSTOMERS TO STAY ONCE SWITCHING UNDERWAY *What did your old company say to convince you to stay?*	Considered switching %
They offered a credit/financial incentive	43
They offered a better deal (general)	25
They offered a cheaper deal	12
They offered a fixed rate	8
Told they were on contract and would have to pay a fee	8
Questioned the other company's offer e.g. whether GST included	6
They matched the other company's deal	5
Did a price comparison with other company and were similar/cheaper	4
Said they were a valued/loyal customer	3
Explained their perks such as prompt payment discount, meter reading	3
Checked if they really wanted to switch	2
Offered cheaper gas	1
Put us on a different plan	1
Other	2
Nothing/unsure	2

NB: Due to being multiple response, percentages may add to more than 100%
Base: All respondents that had considered changing power companies in the past year and heard back from their old company once they had got a new supplier to start switching them over

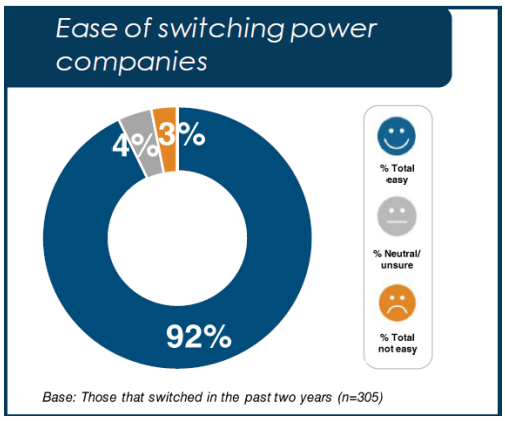
Source: Electricity Authority (2014) *Switching experiences research: a quantitative study, April 2014, p.21.*

Satisfaction post-switching

The majority (92 percent) of *Shopping Around* survey respondents who had switched in the last two years found it to be an easy process.

[116] Electricity Authority (2014) *Switching experiences research: a quantitative study, April 2014.*

Figure 14 Consumer perceptions of ease of switching



Source: UMR research (2014) *Shopping around for electricity retailers: a quantitative study among the general public* (Electricity Authority: Wellington, New Zealand), p.24.

Information required to inform switching decisions

Table 8 sets out the sort of information required for consumers to assess the potential gains, and the various sources of this information.

Table 8 Information required to compare retail offerings

Information required	Sources of information (* - active)
Address	Bill Online account*
ICP number	Bill Online account*
Current retailer	Bill Online account*
Current tariff plan name	Bill Online account*
Current usage (ideally one year of consumption data)	Monthly usage on bill Usage (including annual consumption) available on request from retailer* Online account*
Interval data	If a smart meter is installed this is useful data particularly for more time of use oriented plans
Alternative tariff plans available (including other plans with current retailer)	Power Switch* Word of mouth Active approach from other retailer

Information used in Powerswitch

Consumers need to enter the following information into the Powerswitch tool:

- The region in which they live
- How many people live in their house
- Whether there is usually someone home during the weekdays
- Method of hot water heating
- Year hot water cylinder installed (three date range options provided) (and if electric and pre 2000, whether the cylinder has had an after-market insulation-wrap installed)
- Whether they have solar water heating or a wetback/solid fuel heating
- The main type of household heating method
- Other types of home heating used
- Whether the home is insulated
- Method used for cooking (gas, electric)
- Their current electricity supplier
- What tariff plan they are on
- Consumption data from their power bill – the amount of power used and the period the bill covers (start and finish dates) – if they don't have this the tool can estimate usage based on the above information.

The tool then provides the user with a list of available tariffs, including:

- Name of supplier
- Type of tariff plan
- Customer service rating (if available)
- Any special conditions
- Date price last changed
- Estimated annual savings
- Estimated annual cost.

Results can be refined by:

- Discount (electronic and prompt payment or prompt payment only)
- Contract term (fixed or open)
- Billing type (online).

According to the Powerswitch website, the only supplier not currently included in the tool is Bosco Connect, which only provides electricity to a limited number of apartment buildings.

Appendix 2: Comparator websites in Australia and United Kingdom

6.3.1 Comparator sites in Australia

In Australia, a google search of "compare energy prices" results in the listing of numerous energy price comparison sites. These sites include both commercial and government sponsored sites.

Most notably, on 1 July 2012, the Australian Energy Regulator (AER) launched the 'Energy Made Easy' price comparison website (www.energymadeeasy.gov.au) which it said was intended to help small customers compare energy offers available to them. The website also provides information on the energy market, energy use, and consumer rights and obligations. The price comparison function is available to customers in all jurisdictions that apply the National Energy Retail Law.

The AER's involvement in an energy comparison site has resulted from policy concerns about the complexity of the energy market hindering customer involvement. The AER explained that the complexity of the energy market and regulatory processes have made it difficult for consumers and their agents to participate meaningfully. In the AER's view this has affected customer confidence in the energy market, its regulation and its outcomes.

The Energy Made Easy website is intended to be a key source of trusted information on the energy market, consumer protections and available retail energy offers. The AER intends to continually improve the website to maximise ease of use and consumer accessibility.[117]

The AER stated that the recent policy reforms have focused on strengthening customer engagement with the regulator and energy businesses. The AER is therefore acquiring significant new retail market functions and continuing a shift from jurisdictional to national regulation of the energy sector, both in the design of the regulatory framework and its application. The reforms introduce new consumer protections and underpin the AER's Energy Made Easy website. A strategic priority for 2013–14 is to use its new functions to build consumer confidence.[118]

The AER's website cautions consumers about commercial switching sites. The AER website contains the following information:

> *Commercial switching services will offer to find you a better deal for your energy service. Similar to comparison services, you will need to provide them with information about your current energy bills and usage. You can normally do this online or by phone.*
>
> *The switching service will then cancel your existing agreement and sign you up to the new retailer that you have chosen. It is important to know that some switching services have*

[117] Australian Energy Regulator (2013), *Strategic Priorities and Work Program 2013-14*, p.10.

[118] Australian Energy Regulator (2013), *Strategic Priorities and Work Program* 2013-14, p.3.

preferred retailers and may also receive a commission from retailers for switching customers to them.

If you use commercial switching websites it is important to remember:

- *Switching services do not always compare all offers from all energy retailers. You may not be provided with the 'best' or 'cheapest' offer available.*
- *Not all switching services quote the same price for the same deal or offer. They may have been provided different quotes by energy retailers.*
- *Switching services may not explain the terms and conditions associated with moving to a new contract. You may find that you are charged an early termination fee by your current retailer, or do not make the savings you anticipate because you haven't met the terms and conditions of the new contract.*
- *Switching services can calculate quotes in different ways. Entering information into different websites can make it hard to compare quotes.*

This type of caution by the AER may discourage consumers from using commercial sites and encourage them to instead use the AER website.

6.3.2 Comparator sites in the UK

In November 2014, Ofgem, launched a 'go energy shopping' campaign. This was in response to consumer demand for impartial advice on how to compare tariffs in the gas and electricity markets.

The website does not provide a price comparison tool but rather accredits comparison services. It includes:

- New tools to help people compare the different tariffs. (Ofgem explains that this 'Tariff Comparison Rate' is a quick way of comparing tariffs from different suppliers – but it is not personalised to the consumer).
- A glossary explaining the language used on bills
- Links to other useful sites, including comparison services accredited to Ofgem's Confidence Code. There are 11 accredited sites listed by Ofgem.[119]
- A step-by-step guide that visitors can download and keep, or to give to friends and relatives without internet access.

[119] http://www.goenergyshopping.co.uk/en-gb/help/comparison-sites