Retail Advisory Group

Review of barriers to group switching and mass-market aggregation

Discussion paper

12 February 2014

Note: This paper has been prepared for the purpose of the Retail Advisory Group (RAG). Content should not be interpreted as representing the views or policy of the Electricity Authority.

Contents

1 Introduction and purpose

1.1.1 The Retail Advisory Group (RAG) is responsible for providing independent advice to the Electricity Authority (Authority) on the development of the Electricity Industry Participation Code 2010 and electricity market facilitation measures.[1] This includes providing advice to the Electricity Authority Board (Board) on the development of retailer/customer interface issues and any other relevant policy matter in regards to retail market services.[2]

1.2 Purpose of this project

1.2.1 The Authority has requested the RAG to undertake a review of barriers to group switching and mass-market aggregation.

1.2.2 The purpose of this project is to examine the benefits of consumers aggregating by establishing or joining buying groups (group switching) and to investigate whether there are barriers inhibiting group switching. In particular, the project is to examine:

a) the opportunities for, and potential benefits of, household or small business consumers aggregating to negotiate terms and conditions with electricity suppliers that are more favourable than each consumers could achieve individually

b) whether there are factors limiting group switching and whether there are factors discouraging retailers from engaging with buying groups

c) whether there is anything the Authority can or should do to facilitate group switching.

1.3 Purpose of this paper

1.3.1 The purpose of this paper is to address the issues raised by working with the information available, to seek views and feedback on the evidence and conclusions reached, and identify gaps and further work as required.

1.3.2 Document structure

This discussion paper is structured as follows:

a) section 2 provides some background information including examples of group switching in New Zealand and internationally

b) section 3 outlines some of the underlying premises of group switching and mass market aggregation, and outlines approaches to estimating the potential scale of the opportunity

c) section 4 considers the actual and potential barriers to group switching and mass market aggregation and whether these could be resolved by regulatory intervention

d) section 5 provides preliminary results of the analysis of the extent of the problem and potential benefits from resolving it

e) section 6 outlines a set of intervention recommendations

1.4 Submissions

1.4.1 The RAG's preference is to receive submissions in electronic format. It is not necessary to send hard copies of submissions unless it is not possible to do so electronically. Submissions in

[1] Electricity Authority, *Terms of reference for the Retail Advisory Group*, paragraph 1

[2] Electricity Authority, *Terms of reference for the Retail Advisory Group*, paragraph 3

electronic form should be emailed to RAG@ea.govt.nz with "RAG – Review of barriers to group switching and mass market aggregation" in the subject line.

1.4.2 If submitters do not wish to send their submission electronically, they should post one hard copy of their submission to one of the following addresses:

Retail Advisory Group
c/o Electricity Authority
PO Box 10041
Wellington 6143

Retail Advisory Group
c/o Electricity Authority
Level 7, ASB Bank Tower
2 Hunter St
Wellington

1.4.3 Submissions should be received by 5pm on [six weeks following release]. Please note that late submissions are unlikely to be considered. The Authority will acknowledge receipt of all submissions on behalf of the RAG. Please contact the Submissions' Administrator if you do not receive acknowledgement of your submission within two business days.

2 Background

2.1.1 In recent years, small electricity consumers in New Zealand, and elsewhere in the world, have sought to establish consumer buying groups to negotiate and purchase electricity deals on behalf of group members. The expectation is often that a group of consumers will be able to negotiate more favourable terms and conditions than each consumer might individually achieve as a result of collective buying power.

2.1.2 In New Zealand, specific examples of group buying of electricity services include:

a) the Ashburton Trading Society via its ATS Energy services unit negotiates with electricity (and gas) retailers on behalf of its members[3]

b) the Kiwi Energy Trust, established in March 2013, is an extension of an earlier Nelson area initiative seeking to bring together up to 100,000 retail electricity customers with the aim of using collective buying power to negotiate lower prices from electricity suppliers[4]

c) in October 2013 the New Zealand Grey Power Federation announced a partnership with Pulse Utilities to form a new retail brand, Grey Power Electricity, offering electricity exclusively to Grey Power members.[5]

2.1.3 To date, there is mixed experience and evidence of the effectiveness of buying groups in New Zealand. Business groups (such as Ashburton Trading Society) have successfully negotiated with retailers on behalf of their members, whilst in 2012 the All of Government Tender was able to gather competitive price offers for a diverse range of loads and locations for Government departments and associated entities.

2.1.4 However, buying group efforts with a mass-market focus seem to have experienced difficulties in achieving their objectives and goals. For example, press reports suggest that in its earlier regional form, Kiwi Energy Trust was aiming to collect 20,000 retail electricity customers registered on its website by 30 April 2013.[6] They had signed up around 3,000 retail electricity customers towards the end of May 2013,[7] later revising the branding to a national approach with a target of more than 100,000 consumers and entering discussions with the New Zealand Grey Power Federation about the possibility of forming a national alliance. That has not happened, however, and the 64,000-member Grey Power federation has gone ahead and formed a company, Grey Power Electricity, in partnership with Pulse Energy. The charismatic leader of the organisation has lost the mayoralty of Nelson, and the Trust has not updated its blog, Facebook page, or made a press release since late May 2013.

International experience with group buying in electricity markets

2.1.5 Some overseas jurisdictions have considerable experience with electricity buying groups at the household level. Much like the Kiwi Energy Trust approach, in overseas jurisdictions, the formation of electricity buying groups to facilitate group switching generally operate on an opt-in

[3] Refer http://www.ats.co.nz/About+Us/Services/energy.html

[4] Nelson Energy Team Trust, 2013, Power in numbers – Nelson Energy Team Trust launches new initiative to combat soaring power bills, Media Release, 20 March 2013

[5] Grey Power Federation Inc, 2013, Launching Grey Power Electricity, Media Release, 12 September 2013

[6] Basham, L, 2013, Support for bid to cut power bills, Nelson Mail, 21 March 2013

[7] Miccio A, 2013, Interview on Fresh FM (D Garner, interviewer), Nelson, 24 May 2013

model where the buying group invites retail electricity customers to join to benefit from better terms and conditions the group hopes to negotiate with electricity suppliers.

Small scale private group switching scheme in the Netherlands

2.1.6 In the Netherlands in May 2011 two private individuals set up the Met de Stroom Mee website (which roughly translates as "go with the flow") whereby they sought the registration of 10,000 households who would agree to let Met de Stroom Mee negotiate on their behalf, directly with electricity suppliers.[8] It was free for individuals to join and there was no legal commitment to agree to the negotiated price and switch supplier. Met de Stroom Mee then went about securing bids from competing electricity retailers. In the end, out of the 10,000 registered households, a total of 6,630 decided to take up the Met de Stroom Mee offer. It is claimed the households that took up the offer saved on average €300 per annum.

Consumer advocacy group organised switching campaign in the United Kingdom

2.1.7 In the United Kingdom an energy buying group known as the Big Switch was organised by the online campaign group 38 Degrees and the consumer group Which?. The Big Switch was able to sign up 287,365 people, of whom over 37,000 decided to switch over to the electricity and gas offers provided by the Big Switch deals. It is claimed that participants in the Big Switch saved on average £222.22 per annum on their electricity and gas bills.[9]

Commercially oriented large scale switching scheme in Australia

2.1.8 In Australia, the One Big Switch is a for profit company that has organised several energy buying groups in South Australia, Victoria, New South Wales and Queensland for electricity and gas for households that have registered on its website and then decide on whether to take up an offer once it has been negotiated with an electricity retailer. The One Big Switch then takes a commission from electricity retailers that it contracts with.

2.1.9 More than 250,000 people have registered for the One Big Switch electricity offer. According to One Big Switch, more than 60,000 electricity and gas accounts were switched over to One Big Switch offers, while another 50,000 households used the campaign to get a better offer from their existing providers.[10]

Municipal aggregation in the United States

2.1.10 However, some jurisdictions in the United States of America use an opt-out model within which local governments (supported by state legislation) negotiate on behalf of their residents unless their residents specifically decide to opt out of the arrangement. In the USA, the states of Massachusetts, Ohio, Rhode Island, New Jersey, California and Illinois have legislated for municipal aggregation. So far, municipal aggregation has been pursued most aggressively in Ohio where there are more than 2 million retail electricity customers participating in municipal aggregation.

[8] Scott-Smith, L, 2011, Going Dutch: Local Government and Fuel Poverty, New Local Government Network, London

[9] Which?, 2012, More than 36,000 people make The Big Switch, retrieved from http://www.which.co.uk/news/2012/06/more-than-36000-people-make-the-big-switch-287912

[10] Lentini, R, 2012, 100,000 homes in a winning crusade, Daily Telegraph August 24 2012, p. 4

2.2 Underlying rationale and benefits

2.2.1 Group buying has long been used for corporate procurement, via industry-specific buying consortia or broadly based group purchasing organizations.[11] In the business-to-business (B2B) group buying context, co-operatives of independent grocers, convenience stores, or retail hardware stores have long existed in the United States as well as in Europe.[12] The advent of the Internet has helped businesses with no prior affiliation more easily aggregate their demand.[13] Consumer-oriented group purchasing has also been greatly facilitated by the internet: the New Zealand based discount voucher website *Treat Me* is a good example of the type of group purchasing arrangements facilitated by the internet.

2.2.2 There are two main sources of potential benefits from group buying and mass market aggregation. The first relates to savings that arise from a re-balancing of bargaining power and the impact this has on transaction outcomes (primarily, but not limited to, customer price). The second is in the area of transaction costs.

2.3 Uneven distribution of bargaining power

2.3.1 A basic underlying premise of group buying and mass market aggregation is an uneven distribution of bargaining power between buyers and sellers in a particular market. This asymmetry of power is usually present in favour of the seller (supply side), although there is no reason to suggest that it couldn't occur on the demand side as well.

2.3.2 The distribution of bargaining power is distinct from whether or not the market is functioning efficiently and competitively. In broad terms, effective competition is about behaviour between participants on the supply side competing for a share of the demand for their services or goods. The issue of bargaining power, however, is focused on interactions between sellers and buyers and the outcomes of those interactions.

2.3.3 In the context of a retail electricity market, the argument could be made that market participants occupy unequal bargaining positions: electricity is an essential service, so by and large, consumers have no choice in whether or not they use electricity, and consumers are generally not in a position to negotiate the contract terms and conditions (particularly price) with their electricity retailer.

2.3.4 On the other hand, consumers are able to choose a different retailer when faced with price (and non-price) conditions they are not prepared to accept – customers have the power to shop around and find the product and service provider that best suits their needs and preferences.

2.3.5 In a market for consumer goods and services (such as retail electricity), the outcome of this asymmetry could be that buyers (consumers) are faced with higher prices than they might otherwise pay if there was a more even bargaining power. In effect, there may be a wealth transfer taking place from the buyer to seller.

2.3.6 Group buying attempts to mitigate or overcome the results of this bargaining power asymmetry and provides countervailing power on the demand side to a participant with market power on the supply side. Where terms to consumers are improved by countervailing power, the benefits to

[11] Lu & Boutilier, 2012, p. 723

[12] Chen & Roma, 2011, p. 181

[13] Lu & Boutilier, 2012, p. 723

consumers are primarily wealth transfers (there may also be allocative efficiency gains from prices better reflecting costs at the margin).

2.3.7 Customers may obtain a better deal (lower price) than they might have had they not joined the buying group. This price reduction may not necessarily be a result of the buying group negotiating a better deal than is already available for individual consumers in the first place. Rather, the buying group might facilitate improved customer engagement and prompt some consumers who wouldn't have otherwise sought out a better offering to switch retailers.

2.4 Reduced transaction costs

2.4.1 Transaction costs are the cost associated with participating in a market and buying and selling goods and services. Transaction costs are the search and information costs (costs associated with finding a product or determining which product to buy), bargaining costs (costs associated with the purchasing process itself), and policing and enforcement costs (the costs associated with ensuring the good or service is provided as per contractual terms, or performs as expected).

2.4.2 Savings in transaction costs are an economic efficiency gain and can contribute to a net economic improvement in society.

Q1.	Are you aware of any current or defunct residential electricity buying groups in NZ? If so, what do you consider have been the main reasons for their success or failure?
Q2.	How does the success of electricity buying groups in NZ compare to that of buying groups in other services in NZ? Do you consider there are other services where buying groups have been particularly effective? If so, what are these areas?
Q3.	Do you consider there is uneven bargaining power between customers and retailers in NZ's retail electricity market? If not, why not?

3 Estimates of potential benefits of effectively facilitating group switching

3.1 Size of the opportunity for group switching (numbers of customers affected)

3.1.1 Estimating Potential switching numbers

NZ has approximately 1.7 million residential ICPs. However for a range of reasons the number of customers likely to participate in group switching schemes is likely to be far smaller than this.

This paper explores two approaches for estimating the potential number of customers switching via group-switching schemes. The resulting estimates can be used as a multiplier for the estimated quantity of benefits derived in the following sub-section.

The first approach is a top-down approach using overseas experience as a guide for participation levels.

The second approach uses a bottom-up approach by looking at the range of sectors and types of aggregation and comparing across other products in New Zealand.

3.1.2 Top- down approach: Likely switching numbers based on overseas experience

Table 1: Overseas group switching participation rates and conversion rates

Scheme	Country	Sign up numbers	Sign-up as a percentage of market	Conversion rate (switches as a percentage of sign-ups)	No of ICPs switched if scaled to NZ market
Big Switch	U.K.	287,000	1.21%	13%	2,665
One Big Switch	Australia	250,000	2.88%	24%	11,740
Met de Strom Mee	Netherlands	10,000	0.16%	66%	1,768

Source: Electricity Authority

The data in Table 1 suggests that the opportunity for group switching in NZ is relatively small. However, a number of factors may be worth considering regarding this outcome.

- Relative success of group-buying schemes across all sectors to date suggests that NZ customers are more open to the concept.
- Reasonably high profile and widespread customer dissatisfaction with energy costs in NZ may increase propensity to switch compared to other markets.
- The schemes looked at here are not comprehensive in each country hence the results may not be representative.

NZ has relatively high switching rates, compared to other markets, so if the group switching numbers are taken as a percentage of overall switches, the results are as shown in Table 2

However, given the relatively small overall size of the NZ market, and the underlying 'sticky' nature of energy consumers it would still be reasonable to expect that only a modest number of customers would participate in group-switching schemes.

Table 2: International group switching results factored by underlying switching rates

Scheme	Country	Country switch rate	Switches	% of country switches attributable to group scheme	Equivalent number of ICPs in NZ
Big Switch	U.K.	12%	37,000	1.30%	5,946
One Big Switch	Australia	17%	60,000	4.06%	18,645
Met de Strom Mee	Netherlands	14%	6,600	0.74%	3,409

Source: Electricity Authority

Based on the results of this approach, RAG estimates that an annual switching rate of approximately 10,000 customers could be expected if group switching schemes were effectively facilitated.

3.1.3 Bottom up approach

a) Range and extent of aggregation types: regional, sectoral, affiliation, interests, profiles

To date, experience suggests that aggregation works most effectively when those being aggregated have some form of commonality, for example:-

Table 3: Estimates of switching numbers arising from a range of group switching schemes

Scheme	Common factor	Size of pool	Take-up rate	Conversion (numbers)
Nelson Energy Trust	People who live in Nelson	45k	6%	3,000
RD1	Farmers who buy supplies from RD1	5k	20%	1,000
Grey Power Electricity	Members of Grey Power	64k	10%	6,400

Given that it is possible to conceive of any number of possible aggregating factors, and that eventually all customers will be part of several of these, the size of the group switching opportunity is a function of the rate of creation of buying groups, the number of people targeted and the take-up rate.

For example, if we say there are 5 new aggregators/buying groups established per year, and each of these appeals to a group of 50,000 customers, with an uptake rate of 10% on average, then the size of the opportunity can be estimated at 25,000 customers per annum.

b) Potential for new entrant (boutique) retailers

To some extent, small retail-only participants, particularly those with a "boutique" focus, i.e. focusing on a particular niche of the market, are acting as buying groups by purchasing blocks of power from larger suppliers on behalf of their customers.

The number of small retailers is growing and many have specific niches, e.g. Payless Energy is Dunedin only, Hunet is primarily Auckland and focusses on serving recent immigrants.

To date the number of customers signed up by these retailers has been relatively small, however based on potential extrapolated growth rates their market share could become significant over time.

c) Potential for brokering, energy services, aggregator participants

Brokers

Brokered transactions offer consumers an option whereby a third party 'do the shopping around for them', in theory providing the best price available without the hassle of contacting a range of suppliers. Brokered transactions are well established in the home loans and insurance sectors.

In the home loans sector, broker services have achieved 40% penetration of the market in NZ, 43% in Australia, 68% in the United States (although this elevated level is largely due to federal lending authority involvement). In terms of current customer switching rates, this suggests that brokers could eventually be responsible for 150,000 to 200,000 switches per annum, more if the switching rate continues to grow.

In the insurance market, the insurance brokers association of NZ claims that *"[IBANZ] Members write $2.3 billion of premiums annually out of a gross market premium of approximately $3.5 billion."* [14] This corresponds to a market penetration of 65%.

However, in both cases, this penetration was achieved over a number of years, so whilst the potential impact of brokered energy services is substantial, it is unlikely to be felt for some time.

However, given the potential impact of establishing a brokered services model, at least in terms of consumer switching numbers, it seems appropriate that consideration be given to current barriers to establishment of these services.

Energy Services

Energy Services providers are similar to brokers in that they may advise consumers to switch providers in order to get a better deal, however they may also provide a range of other advice, information and assistance to consumers about managing their energy consumption and costs.

Existing energy service providers include Energy Link, SmartPower and Energy and Technical Services. Most of these parties generally focus on larger customers.

A number of additional energy services providers have indicated an interest in entering the NZ market, but have also pointed to barriers, in particular access to consumption and tariff information asymmetries.

Demand aggregators

Demand aggregation is primarily employed to provide ancillary services or load response services such as peak management. However, a demand aggregator is also in a similar position to a group-

[14] http://www.ibanz.co.nz/Category?Action=View&Category_id=41

buying scheme in that it controls a substantial quantity of load that it may be able to negotiate favourable rates for the supply of. Having already put in place metering and contractual arrangements, the incremental cost to the consumer and the demand aggregator of agreeing energy supply rates should be very low. Demand aggregation to date has focussed on industrial scale loads. However, with the advent of smart meter technology, it is conceivable that the same approach could be applied at a residential scale.

3.1.4 Sustainability of switches and switching rates.

There are two separate issues to be considered here.

Customer retention

This issue is how long a switched customer stays with the new retailer, or continues to participate in the group-buying scheme. This is an important issue in terms of both sustainability of switching rates, which is discussed next, and regarding the potential benefits to consumers, retailers and aggregators.

The degree of loyalty or stickiness any given buying scheme is able to instil in its customers is likely to determine how long they will stay. Some of this will be about providing advantageous rates, although there may be other factors, such as convenience or customer service. It is not clear what the ideal balance is for the market as a whole, given that customer stickiness is a large part of the reason for the group-buying opportunity in the first place.

What is clear is that those schemes that are able to readily hold onto customers will be substantially more successful than those who are not.

Switching rates

Projections of the size of the opportunity over time are highly dependant on assumptions regarding switching rates. To date we have seen consistent and substantial growth in switching rates, however the sustainability of this over time is uncertain. If all customers were willing to switch suppliers once every 4 years, then 25% switching rates are sustainable indefinitely. However, many customers have never switched, and may never do so. This reduces the pool of potential switching customers, meaning that either switching rates will fall after a period of time, of the frequency at which customers that do switch change suppliers will need to increase in order to maintain current switching rates.

Q4.	What are your views on the concepts and methodologies presented regarding estimation of potential customer numbers?

3.2 Aggregation models and relevant cost structures

To accurately estimate benefits arising from increased aggregation and group-buying we need to consider the cost structures and services provided by various aggregation models

- Customer marketing channels/bundling (e.g. ATS, RD1). The customer is already held by the group, cost to the retailer is any tariff difference plus any ‘sweetener’ to the aggregator. Based on the published RD1 rates and for an 8,000 kWh customer the numbers look like:
    - 2% additional prompt payment discount =$50 per annum
    - 0.1c per kwh = $8 per annum

- Sweetener = Unknown, estimate $0 to $50 per additional customer.
- Total cost to retailer = $58 to $108 per annum per customer.
- Note that in general rural customers (particularly dairy farms) are high users, so the actual costs to the retailer are higher, however this type of customer may also be more profitable for the retailer. Credit and profile benefits are discussed in a later section.

- Dedicated buying group/broker, usual business model is that retailers pay per customer, hence cost to retailers will be the tariff discount plus the broker fee. The broker/aggregator will have their own marketing and staff costs which will need to be met from the broker fee (and any client fees).
  - Nominally broker fees are 1% of deal for home loans. For example, brokering a $200,000 loan pays approx. $2,000. Bank earns approx. 6% p.a. interest, or 2% margin p.a. plus fees etc. So comparable approach for typical electricity customer would be 1/6th of annual energy costs or 50% of nominal retail margin, both of which come out at approx. $320 to $390 per customer.
  - Alternately Australian brokerage model is based on 0.66% upfront plus 0.18% p.a. This would look like $268 per electricity customer upfront with ongoing fee of $73 p.a. whilst customer is retained.
  - Hence depending on stickiness of switched customers the use of a broker model may increase or decrease direct marketing costs for retailers.
  - There may additional customer benefits from better advice, transfer of information etc. This appears to be a large part of the current mortgage broker offering (rather than just a price advantage).
- Agency (tax refunds etc.) model works by charging the customers a portion of their private benefit, thereby avoiding any direct cost to the retailer.
  - e.g. Tax Refunds charging structure 18% for refunds over $50 (min $18, max $500)
  - hence for a customer nominally saving $250 per year to switch, this model would charge them $45 (assuming that benefits were measured over a single year)
  - Economic benefits likely to accrue via reduced customer search cost and increased customer savings as agencies are incentivised to make the process easy and to show the customer genuine savings.
- Charity model (grey power) is altruistic and seeks to maximise savings to the customer. May not even cover its own costs.
- Arbitrage/trader model seeks to maximise own profit by undercutting posted prices sufficiently to gain customers but no more. Minimal direct benefits to customer and retailer but substantial dynamic efficiency potential.

Q5.	Do you consider the analysis of aggregation models and costs presented here is sufficient to inform the issue at hand?

3.3 Size of potential benefits: Customer acquisition cost

3.3.1 Customer acquisition costs believed to be in the range of $150 to $170 per customer. Assuming a 25% switch rate on 1.7 M households and assuming 50% of these are retailer initiated, this represents marketing spend of around $32M pa. Reducing this cost (or making expenditure more effective) means either less retail overhead (good for efficiency) or more switching (good for competition).

3.3.2 Further, if marketing cost savings translate into discounts to customers directly then customers will see direct benefits.

3.3.3 Different models of aggregator have different impacts on customer acquisition cost.

- Consumer bundling (e.g. RD1) represents a saving of $42 to $112 per customer in marketing costs
- Broker model imposes a cost of $250 to $390 per customer acquired, an increase of $100 to $200 per customer.
- Agency model $0 cost to retailer. Impact on marketing spend is uncertain.
- Charity model (e.g. Grey Power) similar to consumer bundling in marketing cost impact.

3.3.4 Hence overall benefits from this factor depend on relative penetration rates of the various aggregator models.

3.4 Size of potential benefits: Customer search cost

3.4.1 Current search costs are largely unknown, and are likely to be highly variable. What we do know is that customer search costs are sufficient to prevent switching by 75% to 80% of customers, despite apparent average savings of $145 p.a. This sub-section looks at approaches for determining search cost, and assessing the potential impact of group switching schemes on this.

3.4.2 The basic hypothesis being tested in this section is that group switching schemes encourage switching and increase consumer welfare by lowering the cost to the consumer of searching for the best deal and initiating a supplier switch.

<u>Proposed model for consumer search cost</u>

Consumer search cost is a function of time taken, availability of time, access to required search resource, and perceived cost per unit of time.

- Time taken

Depending on level of computer literacy, knowledge of the industry, thoroughness of search, the time taken to perform a search can vary widely. Estimates of time taken can vary from 5 minutes to several hours.

The Authority's 'What's my number?' campaign aimed (among other things) to reduce search cost by simplifying the process to create a rapid estimate of savings available.

An estimate of the distribution of this variable could potentially be derived from existing customer survey results.

- Availability of time

In theory customers all have the ability to set aside the required amount of time, but a range of competing demands, interests and priorities can result in an apparent limitation on the availability of the time required. In general consumers who are fully employed, have young children and/or dependant family members will have lower availability of time and will perceive a higher search cost if all other factors are equal.

- Access to required search resource

Most NZ consumers have ready access to the internet through one means or another. The incremental cost of using this resource to search for alternate energy providers is low. There may be an opportunity cost for some consumers in terms of access to a device, or limited windows for unrestricted access (for example during a work lunch break) that may present a barrier to searching.

- Perceived cost per unit of time

Most consumers value their time at greater than zero cost. Those who are employed may value time at or near the rate at which they are paid. Unemployed or retired consumers may apply a comparatively lower rate. The distribution of pay rates for NZers should be readily available from statistics data.

A basic resolution of these factors would indicate a midpoint of average search cost per consumer. A more accurate approach would be to develop distributions for each variable and combine these to develop a detailed search cost function.

Proposed model for consumer savings and increased switching propensity

In order for consumers to willingly incur the search cost and other costs of switching, the savings must be substantial enough to provide them a return on this investment.

The simplest approach to this would be to posit that a consumer will only switch if savings exceed search costs.

Using this approach we could determine the impact on consumer welfare of lowering consumer search costs by combining the distributions of search cost and potential savings to establish the additional number of consumers switching and savings available to them.

Note, however, that search costs are not the only cost seen by consumers looking at switching. Additional factors may include:

- time and inconvenience of altering payment methods (e.g. changing direct debits)
- understanding different bill formats
- loss of loyalty scheme points
- perception of differences in supply reliability and quality
- loss or reorganisation of additional bundled services
- changes in rebates

- perception that savings are not enduring and will be eroded over time

Modelling each of these factors adds substantial complexity to the task, so a simplified approach is suggested, which is to add a nominal margin to the switching threshold to account for these.

Illustration of proposed model using dummy data

The following charts illustrate the impact of reducing consumer search cost on switching rates and resulting consumer benefits, using some simulated data to demonstrate the concept.

Populating the model discussed in this section would enable a similar analysis of actual consumer search costs.

Chart 1 Illustrative diagram of consumer switching model

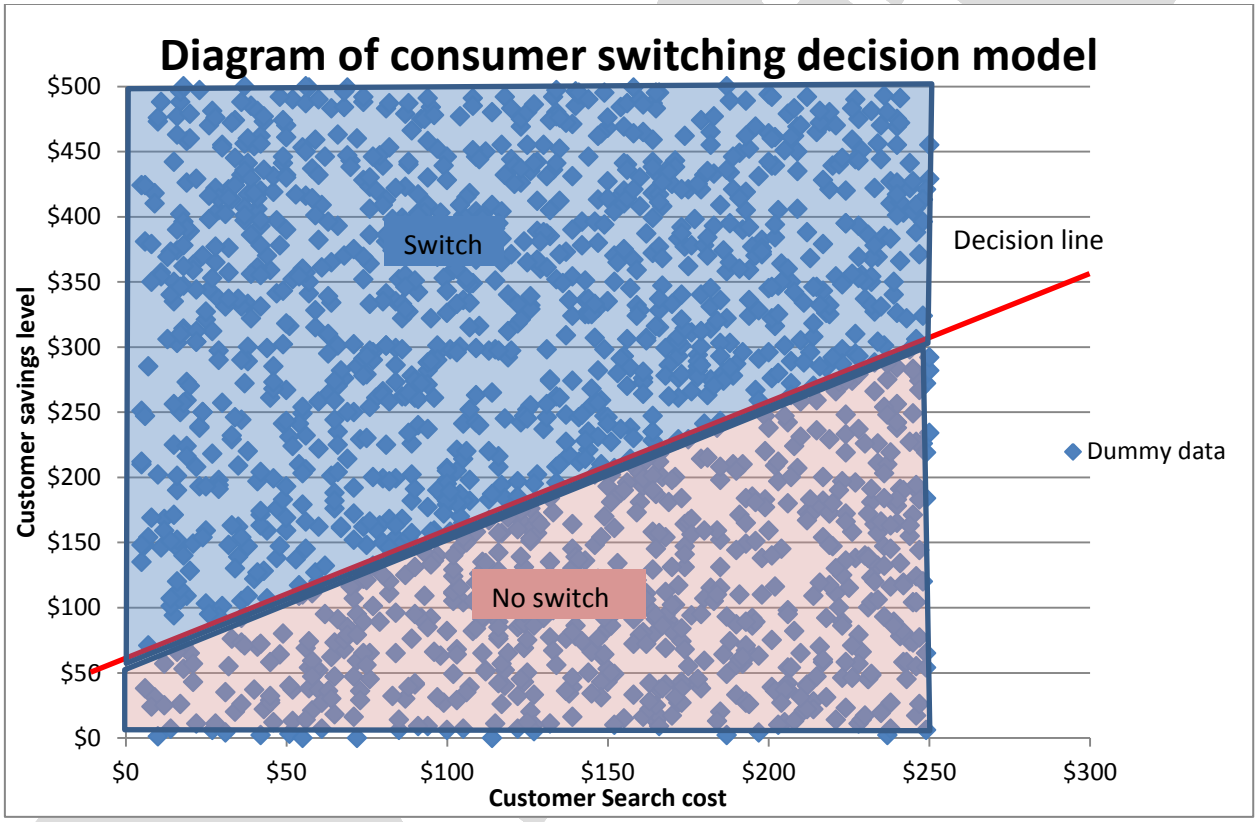
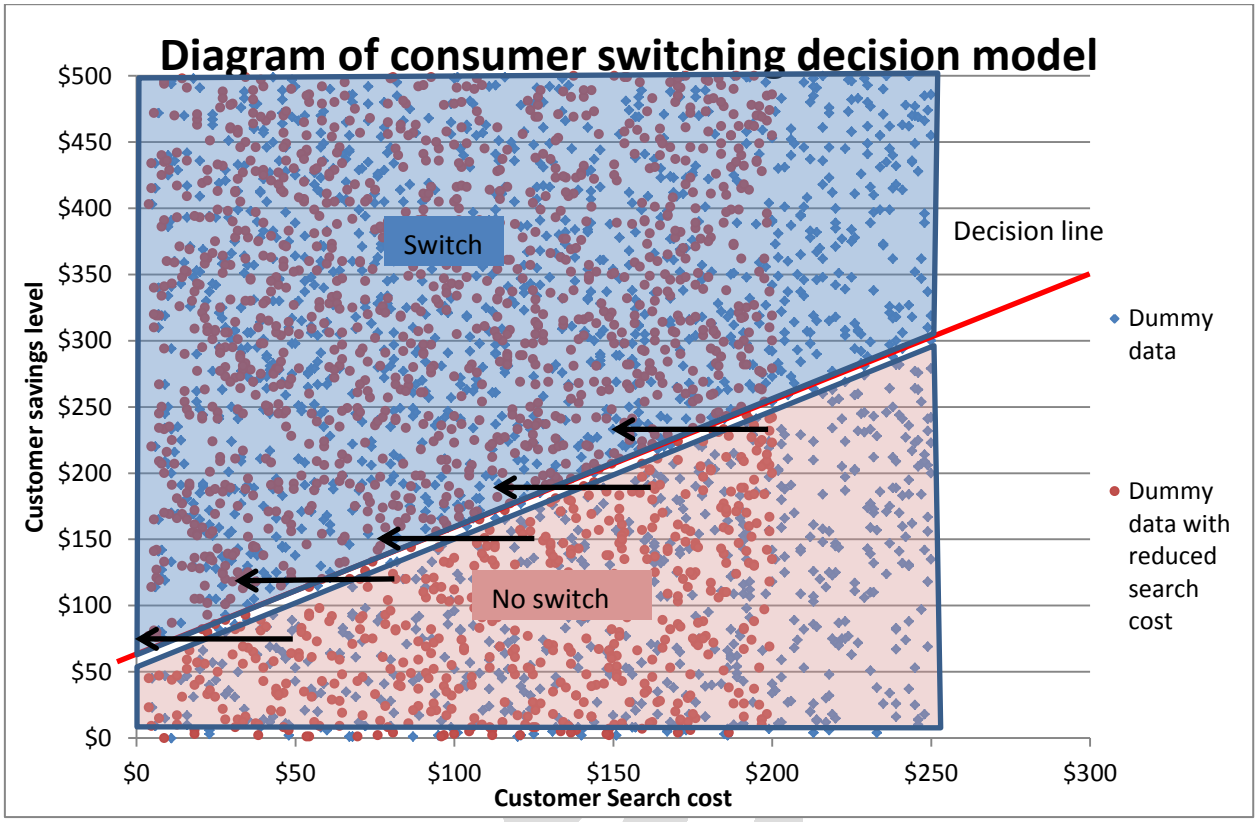


Chart 2 Diagram of consumer switching model showing impact of reduced search costs.



Recommendation for further work

Obtaining some or all of the information detailed in this section would populate the search cost model. This could then be modelled for changes in search cost to derive the resulting outcomes and benefits.

This approach would be useful to assist with comparing aggregation search cost (transaction cost) with other methods (e.g. Powerswitch). This would help to avoid the risk of "picking winners" in this regard.

3.5 Size of potential benefits: Cost –to serve reduction

The 'retail margin' is the component of a customer's bill that exceeds the actual costs of generation, distribution and transmission. It is comprised of cost-to-serve, risk premiums, and retailer profit margin.

Theoretically increased competition will drive down all three of these factors, however some of them may be largely fixed on an individual customer level, and may be markedly different for an aggregated customer base.

3.5.1 Transaction and administration costs

The costs of billing, payment collection, customer service are all substantial. Depending on the aggregation model, there exists substantial potential for streamlining of this from the perspective of the retailer (and to some extent the customer). One example is in the rural services sector where suppliers are offering group discounts on electricity services, as long as they are billed

through the services company (such as RD1 or Ashburton Trading society). It is not clear how much this saves the retailer but it seems likely that at least some efficiency exists from a payment collection point of view. Similarly from the customer's standpoint there is efficiency (and convenience) also, perhaps limited by the counterfactual of direct debit, and perhaps more relevant to businesses (in this case farms) that need to account for and code their expenditure.

3.5.2 Load profile and spot price risk modification

A standard customer offering is fixed price, unlimited volume, which exposes the retailer to a degree of spot price risk. The usual approach to this is to apply a range of risk management tools, and cover the costs of these through a risk premium that is added to the retail price.

If customers or aggregators are able to present a reduced spot price risk profile to the retailer, this risk premium can be reduced, representing a saving to both customer and retailer.

Spot price risk comes in the form of unpredictability, including volume, price and shape.

Statistically, aggregated loads will have some degree of diversity, which should reduce the size of all of these factors, however this will depend to some extent on the aggregation approach, as the degree of diversity can vary widely.

If the aggregator is attracting specific types of customer that have attractive load profiles, or a mix of customers that create a smoothed load profile relative to the generic mass market load shape, then this will be attractive to a retailer and should be offered larger discounts. However, with retailers implementing time-of use pricing and peak avoidance incentives to their mass market customers directly, it is difficult to tell if an individual customer will be better off in an aggregated deal or individually. The key factor here is likely to be the timing and penetration of direct time-of use offerings relative to the development of aggregated services. This does suggested a potentially time-limited window for group switching benefits in regards to this particular issue.

The retail data project may address one relevant feature, being the access to consumption profile data, currently held by the retailer on behalf of the customer, and therefore not readily available to other parties.

3.5.3 Risk of default/non-payment

Retailers are generally exposed to the risk of non-payment, which historically has represented substantial costs, resulting in additional charges being smeared across customers to recover these losses.

In recent years, many retailers have put in place various systems to better manage the risk of non-payment, including pre-pay metering and improved credit monitoring and vetting processes.

However, these systems are not widely liked by customers, so are only used when considered necessary, leaving retailers exposed to default risk for the majority of customers.

There is a clear potential for a group switching scheme or aggregator to take on and manage the risk of non-payment on behalf of its members, thus taking this risk away from retailers and avoiding the need for a credit risk premium.

Clearly not all aggregators will be able to provide such a guarantee more efficiently than the retailer themselves, but in cases where the aggregator holds a more important relationship with

the customer than the retailer does, or is itself involved in credit risk management, then substantial potential for efficiency may exist.

Examples of this include:-

Banks, particularly those bundling energy with other products, or applying standard fund offsetting and credit management provisions to the electricity payment amounts.

Other service providers (e.g. rural services) where the consequence of non-payment extends much further than potential disconnection.

Community groups (e.g. churches, grey power) where there is a social or reputational cost to a consumer of non-payment, and/or the group may be willing to cross-subsidise to look after any members struggling to make payments.

Q6.	Do you consider that the analytical approaches developed in this section would be useful in quantifying the potential benefits available from facilitation of mass market aggregation?
Q7.	Are there any additional benefits (for retailers or consumers) that might arise as a result of increased group buying and mass market aggregation?
Q8.	Do you consider that this work should be completed in order to further inform the issue?

4 Potential barriers to buying groups and mass market aggregation

4.1.1 Given the relatively limited experience of buying groups in New Zealand's retail electricity market to date, limited information is available on why buying groups and mass market aggregation has not been a significant feature of the New Zealand electricity sector to date.

4.1.2 It is, however, reasonably easy to compile a range of possible reasons why buying groups and mass market aggregation have not been more successful to date.

4.2 Consumer Engagement

4.2.1 Lack of consumer engagement with the electricity purchasing decisions is a potential barrier, and one that the Authority has directed substantial attention and effort towards resolving. However this is in theory also an area where buying groups are expected to provide benefits. As such any specific effort to improve customer engagement on behalf of buying groups seems misdirected.

4.2.2 As buying groups are a relatively new concept in the New Zealand electricity market, there could be a general lack of understanding about their existence and the potential benefits of involvement. Buying groups will not in general have access to large marketing budgets, so establishing a brand and customer awareness (particularly when up against incumbent retailers and their expensive ad campaigns.) In this regard it may be appropriate for the Authority to consider producing informational material and promoting the potential benefits of group-switching to consumers.

4.3 Information gaps

4.3.1 Tariffs, metering configurations

For an individual customer to make decisions about switching, they may need to understand the range of available tariffs, including the subset applicable to their specific metering configuration. This process is substantially complicated when considered a large number of individual consumers aggregated via a buying group. Unless the buying group is able to easily collate the relevant metering configurations and associated tariff options, it will be very difficult for the group to communicate with retailers and negotiate favourable rates. The Authority is investigating the possibility of improving access to consumer data and tariffs via the Retail data project.

4.3.2 Profiles and consumption data

Similarly a buying group may also face a lack of information about the usage profiles of its members. This limits the ability to undertake meaningful analysis to inform their bargaining position. The same applies to retailers considering a group buying schemes tender, without good information on the load profile being offered, the attractiveness or otherwise of the load will be unknown, and retailers are likely to be conservative to avoid taking on risk. The Authority is investigating the possibility of improving access to consumer consumption data via the Retail data project.

4.3.3 Consumer credit history

The risk of non-payment is a substantial one for retailers as it can drastically undermine the profitability of a customer. Most retailers now will undertake credit checks on new customers, and may require bonds or deposits from those with poor or insubstantial credit history.

While in theory it would be possible for a buying group to carry out the same process, effectively 'pre-vetting' consumers on behalf of the retailers, it is unlikely that this requirement would be

appealing to customers considering joining a buying group. However, without this, a retailer is being asked to take on a number of new customers without having the ability to perform credit checks on each of them individually, which may be unappealing for the retailer, or at least result in a risk premium being built into the offered price.

One way around this is for the obligation to pay to be borne by the buying group, for example where the buying group has an existing commercial relationship with the customer. In this situation it is the creditworthiness of the buying group that is relevant to the retailer which is substantially easier to determine.

4.3.4 Group formation and rules and regulations

There is limited information available about how to form a buying group. The Authority could assist by ensuring it has published clear, easy-to-follow guidelines for potential buying groups regarding the process for establishing a group and the obligations that arise.

4.4 Buying group value proposition to consumers

4.4.1 In order to join a buying group, consumers need to be convinced that the benefits of doing so are real and worthwhile.

4.4.2 Successful buying groups will provide their customers with the things that they value. Whilst this will be different for each group (or even each customer) some things will be common to all, such as:

- Confidence that a good deal is being offered, specifically regarding price
- Confidence that their electricity supply will be maintained
- Simple, fast, easy process to join the group and to process any switches
- No hidden traps, costs, or obligations
- Customers are rightly wary of schemes that sound “too good to be true”. In some cases buying groups may appear to be just that, by offering discounts without explaining why or how.

4.4.3 Successful buying groups will also be able to establish a niche or specialty, by providing their target customers with products, services or other offerings that are specifically appealing to those customers. The types of offering are essentially unlimited, but some simple examples include:

- Renewable or environmentally friendly energy
- Additional or more detailed information about energy usage and cost
- A social or peer-group component

4.4.4 To date, the limited experience of consumers in engaging with buying groups means that their expectations are largely undefined, and therefore establishing which expectations are reasonable and which are not is more difficult.

4.4.5 Further, limited experience of third party intermediaries and retailers in organising and negotiating a deal for a buying group, and guiding consumers through the process means that the process from the customer’s perspective may well be less than optimal at this stage, although it is reasonable to expect that this will improve over time.

4.5 Buying group value proposition to retailers

4.5.1 Successful buying groups will also provide retailers with sources of value over and above individual consumers. Much of this has been discussed in detail in Section 3, however there are several easily identified barriers to this value proposition at present.

4.5.2 Usage profile information

Limited information available to retailers about the usage profiles of consumers in a buying group, in contributes towards uncertainty and changes the risk profile, diminishing the retailer's enthusiasm or willingness to negotiate.

4.5.3 Customer retention problem

Retailers are willing to offer discounts and incentives to obtain and retain customers. However the premise of the buying group is to facilitate consumer switching, and buy its nature it will naturally attract customers pre-disposed to switch.

To overcome this problem, successful buying groups will need to focus on attracting and retaining consumers, for example through a positive customer experience and perception of enduring value.

They will also need to walk a fine line between providing the best deal to consumers and providing sufficient stability to retailers to be attractive.

4.6 Strategic and tactical hurdles

4.6.1 Buying groups face the "herding cats" problem of coordinating a large number of dispersed and diverse consumers. Buying groups may be able to mitigate this issue by focussing on specific parts of the market with particular offerings or negotiation rounds. For example, a local tender round timed to follow an incumbent retailer's annual price increase date could see a large number of customers 'primed' to make a decision.

4.6.2 Without sufficient information, consumers or third parties may not be prepared or able to form buying groups in the first instance. Experience suggests that this is not a problem in general, although improved information may well increase the number of buying groups formed, and reach a greater proportion of consumers.

4.6.3 Potential for all parties to experience 'first mover disadvantages', where the first mover faces considerable uncertainty and is likely to experience greater difficulties and reduced benefits than those who follow. Obvious areas where this could occur include pricing, contractual terms, simplicity of process, expectation of members, and retailer obligations. This issue is to some extent mitigated by the experience accumulated to date by the genuine first movers. It is also worth recognising that there is often a 'first mover opportunity' wherein the gap between the market and the optimum is larger, and there is a greater gain to be made by being the first party involved in closing it.

4.6.4 Early buying groups may not be able to offer members precise information, or commit to the outcomes of negotiations. Similar uncertainties around outcomes would exist for retailer also. A potential solution to this issue is one used in highly innovative areas, which is the principle of "fail small, fail early, fail often". Using this approach, early buying groups would work with smaller

numbers of customers than they might eventually plan to, so that if things went poorly then these learnings could be applied without spoiling the concept for all of their potential customers.

4.6.5 Internal business considerations of the retailer may diminish its willingness or preparedness to engage with buying groups, for example where they identify a risk that competition for bulk market share may lead to reduced profit margins. This issue may be resolved to some extent by the buying groups ensuring their value proposition to retailers is sufficiently attractive. In the event that retailers remain unwilling to engage, then efficient market theory suggests they would be displaced in the long term. If a more rapid resolution was required, some form of regulatory intervention (e.g. mandatory participation in tender rounds) could be considered.

4.7 Regulatory barriers

4.7.1 An initial review has not identified any particular regulatory barriers to the formation of buying groups. However the following factors may be sub-optimal in terms of an ideal regulatory environment.

4.7.2 Switching process

Current switching rules and processes (including customer contracts) are focused on switching by an individual customer (or ICP) and are based on there being a direct retailer-customer relationship. The benefits arising from a group-buying process are substantially undermined and the difficulties substantially increased if each customer is required to initiate the switch individually as they are now. Similarly, the timeframes required in the switching process are realistic for individual customers, but may be daunting if a retailer is required to process thousands of switches in the same time period. Therefore it may be appropriate to consider a review of the switching process to explicitly allow for switching through group-buying schemes.

4.7.3 Registry Structure

The existing registry structure is based on there being a direct retailer-customer relationship. This effectively precludes or complicates some types of group-switching arrangements. Consideration of the registry structure is also important in a wider context, and any changes intended to facilitate group-switching would need to be consistent with changes required to facilitate other developments.

4.7.4 Low user fixed charge regulations

The existing low-user fixed charge regulations require any retail offering to include both low and normal fixed charge options. This potentially limits innovation, complicates group-switching activities, and reduces the clarity of offerings. The RAG has a project on its workplan to review these regulations, however this work is not scheduled to start until 2015. Some potential solutions for group switching schemes to work effectively within the regulations include:

a) Divide groups by consumption volume and therefore applicable fixed charge. This solution is less than perfect as it reduces the size of any groups and cumulative load, and needs to be a flexible division to ensure that individual customers can still choose the best deal for them.

b) Negotiate a single price deal for the whole group, and then allocate fixed charges appropriately to comply with the low user fixed charge regulations. This could effectively become a form of cross subsidy within the group which would be less than ideal.

4.8 Summary

The above discussion is summarised in Table 4 below.

Table 4: Summary of identified potential barriers and possible solutions/interventions

Number	Problem	Impact	Potential solutions	New/Existing Authority work
1	Customers not engaged with electricity purchasing decision	Buying groups struggle to acquire customers, customers miss out on savings	General promotion of the benefits of switching.	Existing: CSF or any replacement of it. No specific intervention for group switching.
2	Customers not aware of buying groups and potential benefits of involvement	Buying groups struggle to acquire customers.	Promote understanding of how buying groups work and the benefits available	New: Factsheets and explanatory material about buying groups. Website listing active groups and key features.
3	Insufficient information about tariffs and metering configurations for buying groups to aggregate customers and find good deals	Buying group offerings will be either overly generic or overly customer specific, both of which undermine value to the customer	Improve access to tariff and metering configuration information.	Existing: Retail data project
4	Insufficient information about consumer profiles and consumption data	Buying groups cannot effectively bargain with retailers based on the load offerings they have	Improve third-party access to consumer profile and consumption information	Existing: Retail data project
5	Insufficient information about consumer credit history available to buying group and retailers	Retailers are wary of picking up customers who are a poor credit risk.	Buying groups could 'pre-vett' consumers. Buying groups could manage credit risk on behalf of the retailers via their relationship with the customer.	NA
6	Buying groups are	Consumers do not	Develop guidance and	New: Factsheets or

	not providing a strong value proposition to consumers	engage with buying groups as they do not perceive value	information to assist buying groups in understanding consumer needs and improving their value proposition	information papers about consumer preferences and desirable characteristics of buying groups
7	Buying groups are not providing a strong value proposition to retailers	Retailers do not engage with buying groups readily or actively	Develop guidance and information to assist buying groups in understanding retailer requirements and improving their value proposition	New: Factsheets or information papers about retailer considerations and desirable characteristics of buying groups
8	Strategic and tactical hurdles	Fewer buying groups may form, and may be less successful	Highlight the opportunities represented by getting it right, in order to overcome the risks of getting it wrong. Encourage buying groups to employ small scale development approaches.	New: Authority (or alternate agency) advice and guidance to buying groups
9	Switching process	Limits reduced transaction cost benefits from group switching	Review the switching process to see if changes could be made that facilitate group switching without compromising other areas.	Existing: Review of switching process (might be out of current scope)
10	Registry structure	Complicates the group switching process	Review the registry structure and adjust consistent with overall market facilitation optimum	New: Registry structure re-design
11	Low user fixed charge regulations	Limits flexibility and innovation of group-switching offerings	Review the low user fixed charge regulations for overall impact on market.	Existing: LUFC review project.

Q9. Do you agree with the possible explanations for buying group performance to date?

Q10. Do you consider there any additional barriers not discussed here?

Q11. What are your views on the potential solutions identified?

5 Summary of conclusions from the RAG investigation.

The project brief for this investigation suggested the following three questions required answers.

5.1 How big is the opportunity?

5.1.1 A top-down estimate of customers engaging with group switching schemes based on translating international experience into New Zealand estimates approximately 10,000 consumers per annum.

5.1.2 A bottom-up estimate covering a range of sectors and existing schemes infers a theoretically unlimited switching opportunity. Applying some realistic practical limitations this approach arrives at an estimate of up to 25,000 consumers per year.

5.1.3 Different aggregation models result in different distributions of the benefits of group-switching to different parties.

5.1.4 Economic benefits arising from reduced customer acquisition costs are likely to fall within a wide range depending on the relative penetration of different aggregation models.

5.1.5 It appears to be possible to model economic benefits arising from reduced consumer search cost although further work may be required in this area.

5.1.6 Substantial benefits are expected to arise from reductions in costs to serve, although these have not been quantified in this investigation.

5.2 What are the barriers?

5.2.1 Section 4 discusses the barriers identified in detail.

5.2.2 The main conclusion reached is that there are numerous and substantial potential or actual barriers to the effective formation of buying groups.

5.2.3 The regulatory barriers identified are indirect in nature, and whilst resolving these may well improve the facilitation of group-switching they are not critical to its existence.

5.3 What might the Authority do?

5.3.1 A number of the barriers identified are likely to be reduced or removed as a by-product of existing Authority projects.

5.3.2 The regulatory barriers identified are indirect in nature and do not constitute a regulatory failure.

5.3.3 As such any specific regulatory intervention with regard to group-switching needs to be considered alongside other opportunities to enhance the performance of the market.

5.3.4 Options for resolving particular barriers were discussed in section 4, and these are discussed further in section 6.

Q12.	Do you agree with the conclusions reached in this report? If not, why not?

6 Recommendations: Potential for Authority intervention

6.1 The role of the Authority

6.1.1 The Authority's objective is to promote competition in, reliable supply by, and the efficient operation of, the electricity industry for the long-term benefit of consumers.

6.1.2 Enabling any unrealised benefits from group switching or removing barriers inhibiting group switching could promote competition and efficiency by:

a) increasing retail competition by increasing the propensity for consumers to compare and switch retailers

b) reducing transaction costs for retailers to gain customers, and for consumers to switch retailers

c) reducing transaction costs for ongoing supply of electricity to consumers

6.1.3 In addition, policy actions taken by the Authority to support the creation and use of buying groups of retail electricity customers would be consistent with the statutory functions "to undertake market-facilitation measures (such as providing education, guidelines, information, and model arrangements)" under subsection 16(1)(f) and to "to promote to consumers the benefits of comparing and switching retailers" under subsection 16(1)(i) of the Electricity Act 2010.

6.1.4 The extent to which there is a role for the Authority will be determined by the nature of any problems identified, and whether those problems are of sufficient magnitude and severity to warrant a policy response from the Authority.

6.2 The case for Authority intervention

6.2.1 Ultimately, whether there is a case for the Authority to undertake any policy actions in the area of group buying and mass market aggregation will be determined by the extent to which there is a genuine problem that can be addressed by Authority intervention at a cost that is less than the benefit achieved from the intervention.

6.2.2 Any potential intervention by the Authority would need to be consistent with its statutory objective and functions. To the extent any action by the Authority results in improvements in allocative efficiency (better alignment of prices with costs) productive efficiency (through lowering transaction costs) or improvements in dynamic efficiency (through stimulating competition and innovation) the intervention would be consistent with the Authority's statutory objectives.

6.2.3 Any intervention would have a direct cost and an opportunity cost in terms of resources. An assessment of the potential costs of an intervention would be weighed against the potential benefits identified in this paper and any further work aimed at further defining these.

6.3 Possible actions the Authority might take

6.3.1 The following are the areas of further work or Authority intervention identified in this paper:

a) Further development of the models and quantification work discussed in this paper, with a view to providing a greater level of insight into the scope and extent of the opportunity presented by group-switching.

b) The approaches developed could be used to produce information intended to act as guidance for parties interesting in forming buying groups, including the factors likely to promote success, and an understanding of the economics involved.

c) An equivalent to the Consumer Switching Fund public information/education campaign that outlines the existence of electricity buying groups and the potential benefits from joining them.

d) Further examine the existence of genuine regulatory barriers to forming buying groups, including provisions in the Electricity Industry Participation Code (2010) and develop Code amendments to resolve these.

e) Improve access to retail consumer information either as part of the retail data project or in addition to it.

f) The recent changes to the settlement and prudential arrangements may be helpful for reducing the exposure of buying groups considering acting as the credit risk counterparty on behalf of customers.

g) Reviews of and changes to Switching process and registry structure

h) Develop a comprehensive package of group switching facilitation measures including all of the above items along with other yet to be defined initiatives.

i) Encourage local councils to consider a group buying scheme (e.g. as per Dunedin, Nelson). Could combine energy bills with rates bill to reduce transaction costs and default risk

ii) Facilitate for-profit switching service entities such as One Big switch entering our market

iii) Award a prize for successful or innovative group switching initiatives

iv) Require existing retailers to respond to group switching tenders

6.4 Alignment and co-ordination with existing Authority initiatives

6.4.1 The RAG is mindful that there are a number of other overlapping projects and initiatives already underway in the area of consumer engagement and competition in the retail electricity market. These include:

a) RAG is reviewing the transparency of information on consumers' electricity charges, and whether consumers have timely access to sufficient information to make informed choices about their electricity supply;[15]

b) the Authority has commenced a project on improving access to retail data, including exploring the development of a national tariff database with open access to third parties;

c) on-going monitoring of the What's My Number campaign outcomes by the Authority;[16] and

d) an assessment of the performance of the Consumer Switching Fund and possible future actions that might be taken following the initial operation period, due to finish in April 2014.

[15] For further information, see RAG, July 2013, *Improving transparency of consumers' electricity charges – issues and options paper*

[16] For further information, see http://www.ea.govt.nz/consumer/csf/#review

e) Win-backs project

6.4.2 Accordingly, it is important that the recommendations and actions arising from this project are considered in the context of other relevant projects. For example, if there were policy interventions made in the areas of data access and electricity charge transparency, this would overcome some of the information issues faced by group buying and switching activities.

6.5 Key recommendations

6.5.1 The RAG considers that the most substantive interventions that the Authority could reasonably undertake are included in the retail data project. As such the key recommendation arising from this review is that no direct regulatory intervention be pursued in this area until the retail data project is completed (or at least more fully defined).

6.5.2 A further recommendation is that indirect regulatory activity such as promotion and education activities should be considered on their own merits and pursued accordingly.

Q13.	What are your views on the recommended options for the Authority?
Q14.	Are there other options you consider the Authority could/should consider that would fulfil its statutory objective and function?
Q15.	Do you agree with the key recommendations in section 6.5?