

Assessing the performance of the Consumer Switching Fund

Discussion paper

24 October 2012

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.

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1 Introduction

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 paper

1.2.1 The RAG has been requested by the Authority to undertake a review of options for promoting retail competition by increasing consumers' propensity to compare and switch retailers. The RAG has been requested to make recommendations to the Board by June 2013.³

1.2.2 The objective of this project is to consider the performance of the Consumer Switching Fund (CSF) and to identify what actions the Authority can take to promote to consumers the benefits of comparing and switching electricity retailers.⁴

1.2.3 Given the Authority has a statutory objective to promote competition in the electricity industry for the long-term benefit of consumers, the RAG interprets the project scope and objective as requiring the RAG to consider the effect of the CSF on competition.

1.2.4 Accordingly, the RAG considers this project entails two parts:

- a) Part 1 of the project involves undertaking a performance assessment of the CSF programmes delivered by the Authority to date. In particular, the RAG considers why performance assessment is important, how to assess performance, and how the CSF programmes have performed to date, including the effects on competition.
- b) Part 2 of the project involves consideration of the broader policy question of continuing the CSF programmes. Answering this question is very complex, but as a starting point entails analysing consumer behaviour and the state of competition in the retail electricity market.

1.2.5 The purpose of the CSF is to promote to consumers the benefits of comparing and switching retailers. This is intended to change consumer switching behaviour and ultimately, increase competitive pressures in the retail electricity market. Consequently the RAG considers the issue of consumer behaviour, and the state of retail electricity market competition as part of determining the nature of the problem and what further actions (if any) the Authority could consider undertaking to fulfil its objectives and role the retail electricity market.

1.2.6 The purpose of this paper is to outline the RAG's initial analysis of the various issues, and invite interested parties to make submissions and provided feedback on the RAG's proposed approach to completing the project. The RAG will consider submissions and feedback from interested parties to inform its decision making process and, ultimately, any recommendations it makes to the Board in relation to further Authority involvement in the retail electricity market.

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

³ Letter Carl Hansen to Peter Allport re Retail Advisory Group Workplan, 21 August 2012, p. 1

⁴ Letter Carl Hansen to Peter Allport re Retail Advisory Group Workplan, 21 August 2012, p. 2

1.3 Document structure

1.3.1 This discussion paper is structured as follows:

- a) Section 2 outlines the role, including statutory objectives and function, of the Authority in relation to retail electricity markets;
- b) Section 3 provides background information on the CSF, including performance assessment to date;
- c) Section 4 discusses CSF performance assessment, including a background on performance assessment to date, and a possible performance assessment framework;
- d) Section 5 considers the issue of consumer behaviour in retail electricity markets;
- e) Section 6 raises the issue of the effectiveness of competition in the retail electricity market in New Zealand; and
- f) Section 7 concludes and outlines possible next steps for this project.

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 electronic form should be emailed to RAG@ea.govt.nz with "RAG – Review of options for promoting retail competition" 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 The role of the Electricity Authority

2.1.1 The role of the Authority in retail electricity markets is defined by reference to the Authority's statutory objective and functions under the *Electricity Industry Act 2010* (the Act).

- 2.1.2 Under the Act, the Authority's statutory objective is to promote competition in, reliable supply by, and efficiency of, the electricity industry for the long-term benefit of consumers.⁵
- 2.1.3 In addition to this multi-part statutory objective, the Authority also has an explicit statutory function to promote to consumers the benefits of comparing and switching retailers.⁶
- 2.1.4 The Act does not prescribe how the Authority is required to achieve its objective or fulfil its functions. However, the Authority has adopted a formal interpretation of the Authority's statutory objective which informs Authority decision making, as well as advisory group and Authority staff in proposal construction and analysis.
- 2.1.5 The Authority has interpreted competition to mean workable or effective competition. Under effective competition, sellers compete on a range of factors, including price, quality, location, service, product differentiation, sales, and marketing.
- 2.1.6 At the individual consumer level, the Authority considers
- workable competition delivers benefits by keeping prices lower than they otherwise would be, and the lower prices are, the greater the benefit to an individual consumer.⁷
- 2.1.7 Given the complexities of electricity markets, the Authority takes the view that it is preferable to consider the benefits delivered by competition at an aggregate level and not at the individual consumer level.⁸ The Authority considers that workable competition delivers benefits through the creation of market efficiencies, and not wealth transfers. These benefits may arise from three sources of efficiencies:
- a) allocative efficiencies, including competitive pressures resulting in sellers setting their prices close to their marginal cost of supply and reflective of the value consumers place on the supply of that good and service;
 - b) productive efficiencies, resulting in firms minimising their underlying cost structures, and minimising consumer decision making costs; and
 - c) dynamic efficiencies, including where competitive pressures results in efficient investments in capital goods and innovation.⁹
- 2.1.8 In its interpretation of its statutory objective, the Authority notes
- facilitating or encouraging increased competition may occur on non-price dimensions, such as in regard to...the search and switching decisions of buyers.¹⁰
- 2.1.9 The policy rationale underpinning the CSF is to improve competition by promoting the benefits of customer switching.¹¹ Consequently, the CSF clearly falls within the scope of the Authority's statutory objective and function in relation to retail electricity markets.

⁵ Electricity Industry Act 2010, section 15

⁶ Electricity Industry Act 2010, section 16(1)(i)

⁷ Electricity Authority, 2011, *Interpretation of the Authority's statutory objective*, paragraph A.20

⁸ Electricity Authority, 2011, *Interpretation of the Authority's statutory objective*, paragraph A.21

⁹ Electricity Authority, 2011, *Interpretation of the Authority's statutory objective*, paragraph A.23

¹⁰ Electricity Authority, 2011, *Interpretation of the Authority's statutory objective*, paragraph A.31(a)

¹¹ Office of the Minister of Energy and Resources, *Ministerial Review of the Electricity Market – paper to the Cabinet Economic Growth and Infrastructure Committee*, p. 20

- 2.1.10 The RAG notes that in formulating advice to the Authority, it is required to provide advice and recommendations that are consistent with the Authority's objective.¹² The RAG's position is that this means the RAG needs to assess the performance of the CSF programmes and any future Authority measures in the context of the effects the CSF programmes and possible future Authority measures may have on competition.
- 2.1.11 The RAG has also been guided by the Authority's interpretation of the Authority's statutory objective.

Part 1 – Assessing the performance of the Consumer Switching Fund

3 The Consumer Switching Fund

3.1 2009 Ministerial Review

- 3.1.1 In April 2009 the Minister for Energy and Resources appointed the Electricity Technical Advisory Group (ETAG) to undertake a review of the electricity market performance. The ETAG provided its report to Government in August 2009. The ETAG made a number of recommendations across a range of areas, including competition in the electricity market, security of supply, and electricity market governance.¹³
- 3.1.2 In relation to the retail market, the ETAG noted
- anecdotal evidence suggests that in many areas, retailers are not subject to strong competitive pressure to reduce costs and margins, and provide innovative service offerings. With some notable exceptions, retailers do not appear to compete vigorously for customers, even where they offer tariffs below the incumbents.¹⁴
- 3.1.3 The ETAG went on to comment
- there appears to be room for substantial improvement in the level of competition at the retail level... there is a wide range of options for improving the performance of the wholesale and retail markets and putting more pressure on prices.¹⁵
- 3.1.4 The ETAG made recommendations covering eight areas of retail market reform. In relation to customer switching, the ETAG recommended encouraging and facilitating customer switching through provision of \$5 million per year, funded from a levy on electricity consumers, to promote the benefits of customer switching.¹⁶

3.2 CSF programmes

- 3.2.1 The Government accepted the recommendations for establishing a switching fund and for improving the Powerswitch website. More specifically, it agreed that the fund should be set up on a contestable basis for three years, and would receive \$5 million per year to be administered

¹² Terms of Reference for the Retail Advisory Group, paragraph 2.3

¹³ A copy of the ETAG's report can be accessed at: <http://www.med.govt.nz/sectors-industries/energy/pdf-docs-library/electricity-market/implementing-the-electricity-market-review-recommendations/background-papers-on-2009-review/improving-electricity-market-performance-volume-one-discussion-document-1152-kb-pdf.pdf>

¹⁴ Electricity Technical Advisory Group, 2009, *Improving electricity market performance – volume 1*, p. 42

¹⁵ Electricity Technical Advisory Group, 2009, *Improving electricity market performance – volume 1*, p. 42

¹⁶ Electricity Technical Advisory Group, 2009, *Improving electricity market performance – volume 1*, p. 59

by the Authority. From this fund, \$1.5 million per year would be administered by the Ministry of Consumer Affairs for upgrading and promoting the Powerswitch website.

- 3.2.2 The purpose of the CSF is multi-faceted. In the first instance, the CSF aims to improve customer awareness of their ability to switch electricity retailers and the potential savings available as a result of switching retailers. This will result in greater visibility of smaller or new retailers, and exercise of customer choice. In turn, this will increase competitive pressures in the market, encouraging retailers to improve their offerings through product innovation and levels of customer service. In the final instance, these pressures may manifest themselves in lower prices. Both residential and commercial (small to medium business customers) are targeted by the CSF programmes.
- 3.2.3 There are three programmes that comprise the CSF, and are administered by the Authority. The central CSF programme is the What's My Number (WMN) campaign. The purpose of the WMN initiative is to encourage customers to 'shop around' for electricity, and switch if they can find a better deal. The campaign aims to provide customers with information about their ability to switch electricity retailers, the ease of switching, and potential savings that can be made by switching. This is primarily facilitated by on-line tools, including a specific WMN website and the Consumer Powerswitch website.
- 3.2.4 In addition, a comprehensive information and marketing campaign was undertaken to coincide with the launch of the online tools. The first WMN advertising campaign was launched in April 2011, and ran until August 2011. The second WMN advertising campaign was launched in April 2012. The campaign includes television, radio and print advertising, online channels including social media, and outdoor locations such as billboards and the advertising spaces on buses.
- 3.2.5 The second programme delivered under the CSF is the development of a switching tool for small to medium sized businesses, as part of the WMN 2012 campaign. The purpose of this extension is to provide specific information and support for small and medium sized business customers. This switching tool will allow for business owners to input their electricity consumption information into the online tool, which will then automatically send the information to all participating retailers. These retailers then have the opportunity to provide competing offers of supply to the business.
- 3.2.6 The third programme delivered under the CSF is Authority contracting of switching facilitators. Under this programme the Authority has contracted with:
- a) the Citizens Advice Bureau to assist consumers to compare and switch power suppliers by explaining to them the benefits of comparing and switching power suppliers and taking customers through the WMN and Powerswitch websites as required; and
 - b) Vendor Sales Limited to train nominated budget advice centres on how to assist their clients to compare and switch power suppliers.
- 3.2.7 As per the Government's decision, the Authority also allocates and provides funds to Consumer New Zealand for upgrading and promoting the Powerswitch website. However, for the purposes of this discussion paper, this fund allocation is not considered a programme under the CSF per se, as decisions regarding how the funds are spent and the decisions made regarding the Powerswitch website are undertaken separately by Consumer New Zealand and the Ministry for Consumer Affairs.

4 Assessing Consumer Switching Fund performance

4.1 Why assess performance?

- 4.1.1 Assessing the performance of the CSF is critical to ensuring the CSF is having a positive effect on competition and competitive pressures in the market, and that the programmes supported by the CSF are providing value for money. The CSF is funded through an additional specific levy on retailers, meaning that ultimately it is consumers who pay for the CSF. The CSF represents a substantial sum of money, with a total of \$15 million being spent on CSF programmes over the 2011-2014 period. It is consistent with good public policy practice that public expenditure decisions are underpinned by thorough and informed analysis.
- 4.1.2 As the CSF is time-limited, with the CSF levy and programmes due to end on 30 April 2014, assessing the performance of the programmes to date is also an important part of establishing whether or not the Authority should undertake additional measure to promote competition and encourage customer switching in the retail electricity market.
- 4.1.3 Assessing the performance of the CSF programmes was also an implicit expectation of the ETAG's recommendation to Government which stated

the fund...should continue for as long as demonstrated benefits, in terms of savings to consumers, exceed \$10 million a year.¹⁷

4.2 Measuring performance

- 4.2.1 Retail electricity markets are very complex, with a large number of participants on both the supply and demand side. In addition, the intertwined and dynamic nature of a number of policy initiatives targeting retail electricity markets adds to the difficulty in assessing performance of the CSF. The key problem is a difficulty establishing cause and effect across the range of initiatives affecting participant and consumer behaviour in the electricity market and competition.
- 4.2.2 In a 2010 research report prepared for the Authority, Castalia Strategic Advisers (Castalia) proposed a performance framework for monitoring performance of CSF programmes. The central component of this proposed framework was monitoring price convergence in the market. Castalia noted:
- In our view, this analysis of price convergences should be the primary measure of the performance of the Switching Fund. If the Fund is having the desired effect, retailers will need to respond to competitor offers or lose valuable customers.¹⁸
- 4.2.3 Underpinning this position is the theory that in a perfectly competitive market, consumers switching from one retailer to another will result in retailers proactively responding to the increased competitive pressures with improved product offers and innovation. This will flow on to retailers lowering their prices, and over time, prices will converge to, or near, an efficient price level. Above this level, competing retailers will continue to undercut each other, bidding down prices and gaining customers. Below this level, retailers will not be financially sustainable and would go out of business. As prices converge, so too will savings available to customers. This approach also assumes that all customers actively engage in the market.

¹⁷ Electricity Technical Advisory Group, 2009, *Improving electricity market performance – volume 1*, p. 59

¹⁸ Castalia Strategic Advisers, 2010, *Customer Switching Fund Research Report – Report to the Electricity Authority*, p. 41

- 4.2.4 Using consumer savings from switching is not an ideal measure of competition as it reflects savings derived from wealth transfers between retailers and customers, and not just the savings derived from efficiency advantages.
- 4.2.5 Further, an approach based on customer savings does not take into account that, as with most competitive markets for good and services, customer behaviour results in substantially less than 100 per cent of customers actively engage in New Zealand's retail electricity market.
- 4.2.6 On the evidence to date retail electricity markets are not perfectly competitive. Quantitative analysis of retail price levels in New Zealand throughout 2011 (capturing a period before and after the WMN campaign was launched) shows that in some regions, prices and savings available converged, in other regions prices (and savings) continued to diverge.
- 4.2.7 Rather, it generally seems that in markets free of price regulation, conditions of workable or effective competition prevail owing to the presence of customer stickiness and other switching costs (derived from behavioural biases, discussed in further detail in Section 5, below). Under these market conditions, it would be expected that there would be a degree of rivalrous behaviour by retailers in relation to price levels as retailers compete to retain or acquire customers, and some price convergence may take place in certain segments of the market. However, a situation of total price convergence across all customer and tariff classes seems unlikely.
- 4.2.8 The difficulty of assessing the performance of the CSF programmes is compounded by the need to isolate the impacts on the retail electricity market due to CSF programmes from other policy initiatives undertaken at a similar time by the Authority.
- 4.2.9 Concurrent to the CSF, the RAG notes that the Authority has also continued or introduced the following market facilitation measures and Code amendments with some implications for retail competition:
- a) hedge initiatives – financial transmission rights market and new market-maker contracts for the electricity futures market;
 - b) development of model domestic contracts;
 - c) more standardised Code amendments;
 - d) development of distributor use of system agreements; and
 - e) development and review of distribution pricing principles framework.
- 4.2.10 The interactive nature of these various programs on the retail electricity market means that it is highly problematic to divorce the impact of one market initiative from another and assess the performance of a solitary policy measure.

4.3 Proposed assessment framework

- 4.3.1 *Prima facie*, the RAG is of the view that a framework relying on a number of indicators would allow for a relatively more informed assessment of CSF performance. But, any assessment will necessarily be limited by the interplay between various overlapping programs underway. For example, an increase in retailer activity could be attributed to competitive pressures from the CSF programmes, but equally could be attributed to changes in wholesale market conditions. Competition is likely to be influenced by a combination of the two initiatives.

- 4.3.2 Noting the limitations of using price savings and convergence as a measure of assessing the performance of the CSF, it is necessary to consider other observable measures to gain an understanding of the CSF's performance.
- 4.3.3 As part of their proposed performance framework, Castalia also suggested that switching rates, incumbent market share, price convergence between customer classes, and event analysis should all be monitored to allow for assessment of CSF performance.¹⁹
- 4.3.4 Some of these indicators would likely prove useful in assessing CSF performance, particularly switching rates and incumbent market share. However, there are also other indicators which could be analysed to help gauge performance of the CSF programmes.
- 4.3.5 Economic theory suggests, were the CSF increasing competitive pressures, the following would occur:
- a) there would be an increase in customer switching rates in the first instance, as customer sought out more efficient suppliers and prices;
 - b) market concentration would reduce, and market shares would become more evenly distributed between competing suppliers;
 - c) the total cost to serve all customers in aggregate would fall; and
 - d) profit margins would trend towards a competitive level sustainable by the market.
- 4.3.6 In summary, measures for assessing CSF programme performance could include:
- a) switching rates;
 - b) retailer market share and concentration;
 - c) customer attitudes and awareness levels towards the benefits and ease of switching;
 - d) lower total retailer cost to serve electricity customers in aggregate; and
 - e) changes in retailer profit margins.
- 4.3.7 Many of these indicators are often used to measure the effectiveness of competition.²⁰ Given the ultimate goal of the CSF is to improve competition in the retail electricity market, it would seem appropriate to consider these measures when considering CSF performance.
- 4.3.8 The CSF is intended to increase the propensity of customers to switch, rather than customer switching rates per se. That being said, a good indicator of whether or not customers have in fact increased their propensity (or inclination) to switch is the level of switching actually taking place in the market. Switching rates can also provide a general indication of activity in the retail market (particularly where broken down by the direction of switches). Switching rates can be observed via the number of transfers of installation control point (ICP) between retailers.
- 4.3.9 If the CSF programmes are performing as intended and increasing competition, then it could be expected that incumbent retailer shares (where they charge prices above competitors) would fall as customer switch to other retailers who can offer them better tariffs. As market shares fall, so will market concentration, as the customer base becomes (in theory) spread amongst many

¹⁹ Castalia Strategic Advisors, 2010, *Customer Switching Fund Research Report – Report to the Electricity Authority*, p. 41-42

²⁰ For example, in the Authority's Structure, Conduct, Performance framework (refer) and the Australian Energy Market Commission's reviews of the effectiveness of competition in Australian retail electricity markets (refer)

competing retailers. Market share can be measured using the percentage share of total ICPs held by each retailer. Market concentration can be measured using a concentration index such as the Herfindahl-Hirschman Index (HHI).

- 4.3.10 Changes in customer attitude and awareness towards the ease of switching could also be useful in assessing CSF performance. An increased propensity to switch would likely be reflected increased consumer awareness of their ability to switch, the benefits available from switching, and the ease with which retailers can be switched. In a market with low consumer awareness and more negative attitudes towards switching, it could be expected that customers would exhibit a low inclination to change their electricity retailer. Conversely, in markets with higher customer awareness and more positive attitudes towards switching, it could be expected that customers would exhibit a higher propensity to switch retailers (evidenced by switching rates). Customer awareness and attitudes can be measured, for example, by the percentage of customers that realise they can switch retailers, believe they can save money by switching retailers, agree that it's easy to switch retailers and so on.
- 4.3.11 The final indicators that could be used to help inform an assessment of CSF programme performance would be the extent to which there are observed changes in the total retailer cost to serve customers in aggregate and retailer profit margins. As competitive pressures increase, retailers should be forced to seek out business efficiencies and lower their controllable costs (i.e. the costs within their own control), and margins should trend towards a competitive level.

4.4 Performance assessment to date

- 4.4.1 In assessing the performance of the CSF programmes, it is important to ask if the CSF is performing as intended and having an impact on competition in the retail electricity market, what would be the observed outcomes?
- 4.4.2 If the CSF is performing as intended, then it would be expected that the outcomes listed at paragraph 4.2.5 should be observed in New Zealand's retail electricity market following the introduction of the CSF.
- 4.4.3 Noting the disconnect between markets in practice and reality, the RAG expects that if the CSF is performing as intended and achieving its objectives, at least some of these outcomes will be observed, to varying degrees.
- 4.4.4 Comprehensive analysis of the data required to make an assessment of the presence of the four outcomes above has not yet been undertaken. However, the Authority has undertaken some analysis of switching rates, concentration ratios and retailer market shares, and customer awareness and attitudes towards switching electricity retailers.
- 4.4.5 The total cost to serve all customers in aggregate and changing profit margins are much harder to measure and observe given the complexity of retail tariffs and identifying exactly how much consumers actually pay for their electricity, and identifying what an 'efficient' level of profit margin is.
- 4.4.6 Table 1 shows the total yearly switches in New Zealand since 2004. Analysis reveals a general upward trend over the period to 2012, with a pronounced increase in switches from 2008. This acceleration in switching rates in 2008 coincides with the reduction in switching time to less than 10 business days. A further upturn in switching rates in 2010 coincides with the first WMN campaign. The inference is that the WMN campaign has resulted in an increase in switching rates.

However, the increase seems to be reflective of a broader trend in switching rates and may be a temporal improvement.

Table 1 Yearly total customer switches

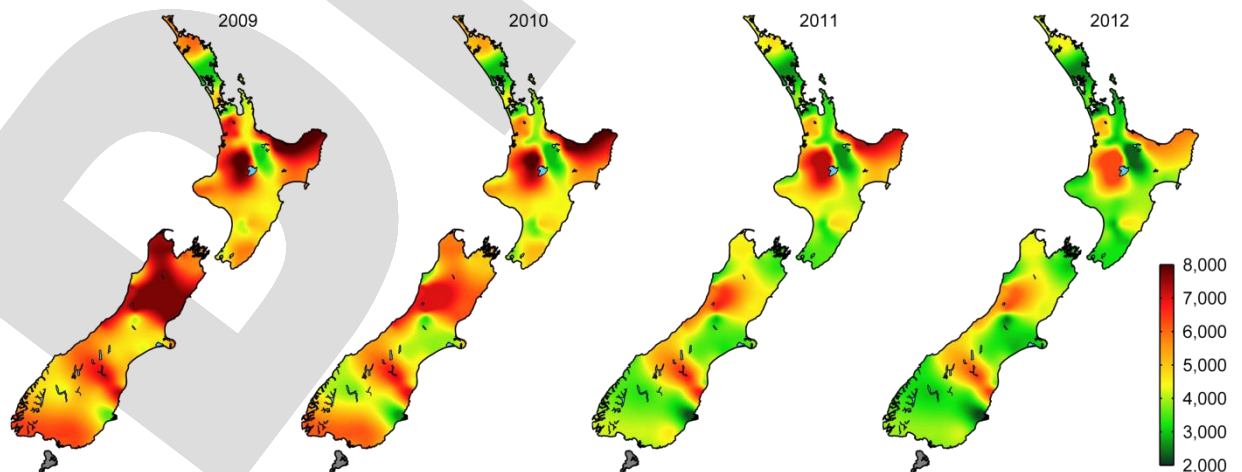
Year	Total number of switches
2004	161,686
2005	150,245
2006	172,220
2007	175,161
2008	204,078
2009	265,285
2010	325,249
2011	388,025
2012*	273,141

Source: Electricity Authority

*Note: Total number of switches in 2012 only for the first nine months of 2012 (i.e. to August).

- 4.4.7 Analysis of concentration ratios (as measured by the HHI) also reveals a reduction in firm concentration, suggesting improved competition. Figure 2 shows the changing nature of regional HHI across New Zealand between September 2009 and September 2012.

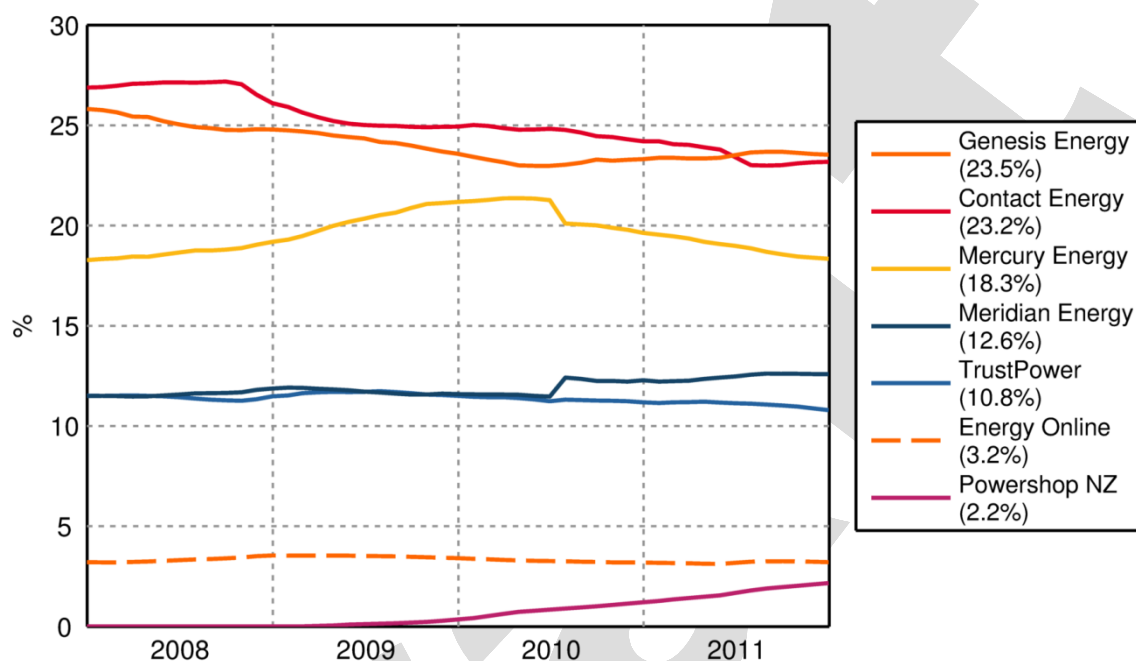
Figure 1 New Zealand HHI over time



Source: Electricity Authority analysis

- 4.4.8 Analysis of retailer market shares reveals there has been some re-distribution of the market between competing retailers suggesting the presence of increased competitive pressures over time. Changes, however, have been fairly muted with the three big retailers (Genesis Energy, Contact Energy and Mercury Energy) broadly retaining their market dominance over the 2008 – 2011 period.

Figure 2 Changes in retailer market shares over time



Source: Electricity Authority analysis

- 4.4.9 Noting the comments made previously about overlapping and concurrent policy measures designed to support competition in the market, it is unlikely that all these outcomes are solely due to the CSF. Rather, it is more likely that all relevant market measures designed to support competition are having a positive impact, and observed outcomes are not the result of the CSF in isolation.
- 4.4.10 To the extent the observed outcomes are due to efficiency improvements (as outlined in section 2) derived from the CSF, then the CSF could be said to be performing as intended. However, it should be stressed that this is only an initial high level analysis and does not represent a firm conclusion on CSF performance to date.
- 4.4.11 It is important to note that it is not possible to firmly conclude on the basis of this brief analysis that the CSF programmes are responsible (wholly or partly) for all the observed recent outcomes in New Zealand's retail electricity market. The high level observations presented here do not represent a robust and in-depth analysis of all the available evidence and information.
- 4.4.12 In addition, the timeframe captured by the data is for a very short time period which does not reflect if the market changes are permanent or temporary.

Part 2 – Consumer behaviour and competition in retail electricity markets

5 Changing consumer behaviour

5.1.1 Ultimately, the performances of the CSF programmes will be determined by the extent to which there have been changes in consumer behaviour in retail electricity markets, and impacts on competition. Therefore, in considering the question of whether or not the Authority needs to undertake further initiatives and market measures, it is necessary to also analyse consumer behaviour in retail electricity markets.

5.2 Behavioural biases and retail electricity markets

5.2.1 The 2009 Ministerial review identified customer stickiness and other switching costs as limitations on customers seeking out better (lower) priced electricity services and switching retailers. In this regards, the RAG notes that New Zealand is not unique. In 2010, the Australian Energy Market Commission (AEMC) identified customer stickiness as an issue impacting the effectiveness of competition in the retail electricity market in the Australian Capital Territory,²¹ and Ofgem have identified similar characteristics in the UK electricity market.²²

5.2.2 In trying to address the issue of customer stickiness and switching costs, behavioural economics can provide useful insights beyond standard economic theories of competitive markets. In a 2011 discussion paper, Ofgem identified four key behavioural biases that could help to explain consumer behaviour in the UK electricity market.²³ Noting the UK electricity market is obviously much larger than New Zealand's, both markets were deregulated at similar times (1998) and to the extent competition is an on-going process rather than a discrete state, the issues Ofgem identify could be relevant to consideration of customer behaviour in New Zealand.

5.2.3 In their discussion paper, Ofgem identified four consumer behavioural biases that could help explain customer stickiness and the sub-optimal outcomes in the UK retail electricity market:

- a) limited consumer capacity;
- b) status quo bias;
- c) loss aversion bias; and
- d) time inconsistency bias.²⁴

5.2.4 Under standard economic approaches, consumers have a more or less limitless appetite for information and extra information has minimal impacts on search costs. The more information about choices available, the better decisions they will make. Behavioural economics, however, suggests that consumers have a limited capacity to assess the information available to them. Limits on capacity are driven by the time and attention consumers can use to assess information, as well as the knowledge and skills of individual consumers. Complexity and the large number of tariffs on offer in retail electricity markets may mean that consumers disengage with the market,

²¹ Australian Energy Market Commission, 2010, *Review of the effectiveness of competition in the electricity retail market of the ACT*, p. 48

²² Ofgem, 2011, *The Retail Market Review – findings and initial proposals*, p. 29

²³ Ofgem, 2011, *What can behavioural economics say about Great Britain energy consumers?*

²⁴ Ofgem, 2011, *What can behavioural economics say about Great Britain energy consumers?*, p. 5

preferring not to switch retailers, or only search until they find a better deal rather than the best deal.

- 5.2.5 Status quo bias is the tendency of consumers to not change from what they are currently doing, unless they face a strong reason for changing. Status quo bias arises because consumers place higher value on goods or service they already own or know than those they don't, and because consumers fear making mistakes about purchasing decisions. Status quo bias can mean that customers will only switch when they actually feel dissatisfied or have some other significant reason to switch, rather than just to search out a better deal.
- 5.2.6 Loss aversion bias refers to the behavioural trait of consumers focusing more on the losses than the gains, and has its basis in people's fear about making an incorrect decision when making a new purchasing decision. In the context of switching electricity retailers, this can mean customer will not switch retailers simply because they have doubts about being provided electricity by another retailer.
- 5.2.7 Time inconsistency bias reflects the behavioural characteristic of consumers to value immediate rewards or satisfaction, over long-term gains or delayed satisfaction. This arises because consumers discount the future reward, and this discount varies depending on how far in the future the reward will be realised. Time inconsistency bias can mean that a customer may not switch because they place greater value on the upfront search and switching costs (incurred in the 'now') than on the savings they will make over the medium and longer term once they have switched retailers.
- 5.2.8 These behavioural biases create switching costs which, in essence, a customer who does not switch retailers when savings are available considers to outweigh the benefits of switching.
- 5.2.9 The existence of these behavioural biases, and the negative result of the consumer's individual implicit cost-benefit assessment, explain why some electricity consumers do not necessarily change electricity retailers. Analysis of survey and other evidence by Ofgem confirmed the presence of these biases amongst UK retail electricity consumers. For example, in relation to limited consumer capacity, Ofgem note that 61 per cent of consumers found it difficult to choose suppliers in the energy sector, and that 70 per cent of consumers found the number of tariffs on offer confusing.²⁵
- 5.2.10 Similarly, Ofgem consider the status quo bias is evidenced by the fact that although 89 per cent of consumers are aware they can switch retailers, and 85 per cent of switchers find switching fairly or very easy, 60 per cent of consumers say they have never switched, despite Ofgem research suggesting consumers can make substantial savings by switching. Consumers generally cite happiness with their current provider or consumer loyalty as being the drivers of their decision to maintain the status quo.²⁶
- 5.2.11 To what extent are these behavioural biases are present in New Zealand? Similar analysis has not yet been undertaken in the context of the New Zealand retail electricity market to date, so it is not possible for the RAG to definitively conclude that such biases are present or absent in New Zealand. Given retail electricity markets in both countries contain a large portion of the customer base who have not switched, and both have been deregulated for a similar length of time, the

²⁵ Ofgem, 2011, *What can behavioural economics say about Great Britain energy consumers?*, p. 11

²⁶ Ofgem, 2011, *What can behavioural economics say about Great Britain energy consumers?*, p. 12-13

RAG's initial view is that it is plausible that the same biases present in the UK retail electricity market are also present here, and would explain some of the observed retail market characteristics.

5.3 How do you change behaviour?

- 5.3.1 To the extent these behavioural biases are present in New Zealand's retail electricity market, consideration of their impact on the CSF programmes would be warranted. In particular, is it possible for measures such as the CSF to result in permanent changes to consumer behaviour, and diminish the impact of some the relevant behavioural biases?
- 5.3.2 Changing behaviour can take a long time. New Zealand's electricity market has been deregulated for 14 years, but from a practical perspective switching electricity retailers only became sufficiently low-cost (particularly time) from late-2008 when the time to process residential switches fell below 10 business days. This is a very short amount of time compared to the amount of time it was regulated for, during which people didn't have to worry about choosing their electricity retailer. To some degree, there is likely to be a generational influence on consumer behaviour and propensity to switch retailers – as younger consumers brought up in an environment of competition and choice begin to outnumber those consumers who cross-over the period of regulation and deregulation, a natural change in behaviour may take place. This proposition seems to be supported by survey evidence, which reveals that 'Generation Y' consumers are more likely than other customer segments to be aware of, and participate in, the WMN campaign.²⁷
- 5.3.3 On the other hand, it may also be the case that behavioural biases will continue to influence consumer activity in the retail electricity markets. In this instance, are there any measures that can be undertaken to mitigate the impact of behavioural biases, and enhance competition in the market?
- 5.3.4 Broadly, the following types of measures could assist in overcoming biases:
- a) intensifying competition – for example, retailers could take on a more proactive role in overcoming biases through their own education and awareness campaigns, rather than leaving it outsourced to the Authority.
 - b) Information and standardisation of information – where levels of information available to customers are low, increased quantities of information could counter the impact of behavioural biases. Where too much information is available, it may be the case that standardisation of information, or improving access to information, could improve the ability of consumers to digest and process available information.
 - c) Education – improving customer understanding and awareness of the market and market frameworks could result in consumer being able to overcome their biases.
- 5.3.5 The CSF programmes are all examples of measures which could aid in overcoming consumer biases, particularly around consumer education. However, it is likely there are other relevant measures which could also be introduced. For example:
- a) in relation to addressing limited capacity bias, perhaps it would be more useful to provide information only at the point(s) in time when consumers may be more likely to consider

²⁷ UMR Research Limited, 2012, *Consumer Switching – A quantitative study supplemented by qualitative research*, p. 9

switching retailers – for example, when electricity retailers announce price changes – or presenting information in a standardised format;

- b) in relation to addressing the status quo bias, a possible response could be to focus on times when there is a reason to switch retailers – for example, this might be the point in time after which most consumers generally receive their largest quarterly bill of the year (winter);
- c) addressing loss aversion bias could be done by an information and awareness campaign of the service standard and other non-price implications of switching retailers – educating customers that it is safe to switch retailers; and
- d) a possible response to overcoming time inconsistency bias could be to change the way in which information on savings is presented to customers – rather than telling customers the quantum of savings they stand to make, perhaps the onus should be put back onto the customer in the form of asking them how much they need to be rewarded (represented by potential savings from switching) to switch retailers?

5.3.6 In the context of the above framework, the RAG query whether changes could be made to the delivery of the current CSF programmes to improve customer awareness and competition and deliver value for money. For example, instead of a multi-month mass-market media campaign, should the CSF programmes:

- a) be more targeted based on customer segments (eg. older or lower-income customers)?
- b) focus on particular times of the year during which customers might be considering switching retailers (for example, focused on the period of time leading up to annual retailer price changes or prior to the commencement of winter)?
- c) target consumers in those regions where competitive pressures have been identified as being lower (generally regional markets) rather than taking a ‘broad brush’ approach and targeting all geographic markets?

5.3.7 Consideration of the CSF programmes in light of the extent to which it overcomes behavioural bias could usefully inform any decision on the need for the Authority to implement further measures in the retail electricity market, in line with the scope and objectives of this project.

5.3.8 Further, analysis of the extent to which there are measures available which are effective in overcoming behavioural biases could also usefully inform any future recommendation on the need for continued or further Authority action in this area.

6 Competition in New Zealand’s retail electricity market

6.1 Understanding the context for intervention

6.1.1 As noted in the introduction to this discussion paper, the objective of this RAG project is to not only assess the performance of the CSF, but also to ascertain how the Authority might fulfil its function of promoting to consumers the benefits of comparing and switching retailers following cessation of the CSF, scheduled for 2014.

6.1.2 In order to do this, however, it is necessary to have an understanding of the context in which market intervention has, and may, take place. Ultimately, the overarching policy objectives of not only the CSF programmes, but also the statutory objective and function of the Authority are to enhance competition for the long-term benefit of consumers.

- 6.1.3 For the purposes of this project, the RAG considers a broader consideration of the state of competition in New Zealand's retail electricity market is required to gain the necessary contextual understanding.
- 6.1.4 However, it is beyond the scope of this paper to undertake a comprehensive review of the effectiveness of competition in New Zealand. Such a review would represent a sizeable standalone project requiring a certain amount of resourcing. Further, such a project also falls outside the ambit of the RAG's current work-plan.
- 6.1.5 Rather, the high level analysis of competition contained below is intended to simply provide some context in which the RAG will be making its decision on recommendations to the Board.
- 6.1.6 Without a consideration of the broader issue of the current state of competition in New Zealand (even at the relatively high level) any policy decisions will, in effect, be made in a contextual vacuum which carries with it increased risk of inappropriate or poorly targeted market measures and intervention.

6.2 Assessing competition in New Zealand

- 6.2.1 As with assessing the performance of the CSF, assessing the state of competition in retail electricity markets is also a complex and challenging task. Given the market structure and dynamics, there is no single indicator that can be used to measure and assess the state of competition in retail electricity markets. As the Authority has previously commented:

No single indicator – or set of indicators – will provide definitive information on the competitiveness of the electricity market in New Zealand. Assessing the competitiveness of the industry requires a deep understanding of what is driving a suite of indicators.²⁸

- 6.2.2 The Authority's approach to considering issues of market competition is to utilise a structure, conduct and performance framework.²⁹ The underlying premise of this approach is that the structure of the market determines the conduct of market participants, and this conduct drives outcomes. The more competitive the structure, the more competitive the conduct, and (in theory) the more efficient market participant's performance.
- 6.2.3 To date, there has been no comprehensive review of the effectiveness of competition in New Zealand's retail electricity market utilising this framework. However, the RAG notes that the Authority does undertake annual reviews of electricity market performance, including the retail market and the nature of competition. For example, the 2010-2011 Electricity Market Performance Review included information on switching rates, retail price movements, and changes in retail concentration.³⁰
- 6.2.4 Extensive analysis of the competition in retail electricity markets has been undertaken in other jurisdictions, including Australia and the United Kingdom. The AEMC in particular, is currently in the process of completing reviews in each of the jurisdictions in the National Electricity Market, and to date has completed reviews of the effectiveness of competition in Victoria, South Australia, the Australian Capital Territory and is soon to commence work on its New South Wales

²⁸ Electricity Authority, 2011, *Industry and market monitoring: competition – Information paper*, p. 10

²⁹ Electricity Authority, 2011, *Industry and market monitoring: competition – Information paper*, p. 10

³⁰ For more information, refer to the Electricity Authority's *Electricity market performance 2010-2011 in review* available at <http://www.ea.govt.nz/industry/monitoring/reports-publications/annual-reviews/>

review. In completing its reviews, the AEMC utilises a framework very similar to the Authority's structure, conduct, performance approach.

6.3 State of competition in New Zealand

- 6.3.1 Noting that a thorough review using a structure, conduct and performance framework is not part of this project, it is nonetheless instructive to analyse some of the market indicators to gain a sense of the state of competition in New Zealand's retail electricity market.
- 6.3.2 In doing so, the RAG considers that a jurisdictional comparison with Victoria provides some constructive and useful context. Victoria's retail electricity market has been fully liberalised since 2009, following a finding by the AEMC that competition in Victoria's retail electricity market was effective in 2007.
- 6.3.3 Both markets are of a similar size, with approximately 1.9 million electricity customers in New Zealand and 2.6 million customers in Victoria. Victoria currently has 18 retailers actively marketing. Of these 18, three retailers (Origin Energy, TRUenergy and AGL) service 72 per cent of the market.³¹ New Zealand's retail market is comprised of 12³² retailers of which the top three retailers (Genesis Energy, Contract Energy and Mercury Energy) control 65 per cent of the market.³³
- 6.3.4 The most recent survey information available to the Authority on customer awareness and attitudes shows that 84 per cent of those people responsible paying for household bills are aware they can change retailers.³⁴ By comparison, in Victoria, more than 95 per cent of customers are aware they have a choice of retailer.³⁵
- 6.3.5 Global utilities market research think-tank VaasaETT routinely classifies Victoria as having the most active retail electricity market in the world. In its most recent global assessment of liberalised retail electricity markets, Victoria held number one spot with switching rates of around 28 per cent. By comparison, New Zealand's switching rates are currently around 20 per cent, and ranked second by VaasaETT.³⁶
- 6.3.6 The Victorian retail electricity market is now regarded as one of the most competitive ('hottest') in the world, at least when considered from the perspective of customer switching rates and churn (which should not be regarded as *the* defining characteristic of a competitive market). In 2007 the AEMC undertook a comprehensive review of the effectiveness of competition in Victoria's retail electricity market using a structure, conduct, performance-type framework and concluded that competition was effective, paving the way for market liberalisation.
- 6.3.7 Against this benchmark, it is arguable that the state of competition in New Zealand's retail electricity market is also quite high, and that the competitive market operates effectively. However, to provide a more robust and credible answer, a proper in-depth review of the effectiveness of competition in New Zealand's retail electricity market needs to be undertaken.

³¹ Essential Services Commission of Victoria, 2012, *Energy retailers comparative performance report – pricing 2011-12*, p. 12

³² This number reflects the number of parent company retailers, noting that some parent companies have multiple retail brands.

³³ Electricity Authority, 2012, *What's My Number – A changing landscape for New Zealand electricity consumers*, p. 14

³⁴ UMR Research, 2012, *Advertising Tracker – Report for the Electricity Authority What's My Number Campaign – June 2012 Results*, p. 4

³⁵ Wallis Consulting Group, 2009, *Essential Services Commission Communication Effectiveness – Final Report*, p. 7

³⁶ VaasaETT, 2012, *World Energy Market Retail Rankings Report 2012*, p. 2

7 Conclusions and next steps

- 7.1.1 As has been highlighted, completing the task requested of RAG is challenging and multi-dimensional. The RAG needs to establish an assessment framework within which to consider the performance of the CSF, undertake the performance assessment, consider the broader economic policy context, and then draft suitable options and recommendations to take to the Board.
- 7.1.2 In relation to assessing the performance of the CSF, there is no single indicator that can be relied upon. Rather, a combination of indicators should be used to help reliably inform any conclusions on the performance of the CSF to date. However, even this is fraught with difficulty, owing to the existence of other market measures and policy initiatives which will all have impact the retail electricity market in New Zealand.
- 7.1.3 Performance assessment should be undertaken, however, to ensure Authority policies remain relevant and the public expenditure is justified.
- 7.1.4 Having assessed the CSF performance, it is then necessary to make a decision on whether or not further Authority action and intervention is needed in the retail electricity market. However, this should be considered in light of the broader policy question of whether competition is effective or not. If it is simply assumed that competition is ineffective, then further Authority intervention could result in consumer welfare losses (derived from unnecessary expenditure by the Authority) and distortionary policies.
- 7.1.5 The RAG will use feedback from interested parties, and the results of further analysis in relation to performance assessment to inform its advice to the Board on the need for further Authority actions to promote to consumers the benefits of comparing and switching electricity retailers and support competition in the retail electricity market.