Utilising communications to drive consumer demand for GreenPower

David Rodgers
BCom (Marketing, Management) PGDip (Energy Studies)

School of Engineering & Energy
Murdoch University
2012
DECLARATION

Except where otherwise indicated, this dissertation is my own work based on research I have conducted throughout 2012.

David Rodgers
ABSTRACT

The Australian renewable energy industry represents an opportunity for Australia to move away from a reliance on fossil fuels and harness clean and secure energy for the future. The GreenPower initiative has been implemented to help facilitate the growth of this industry, by providing consumers with the option to pay a premium for electricity generated by renewable sources. This initiative gives customers a degree of control over the development of renewable generated electricity capacity, which can be encouraged by both governments and energy utilities for mutual benefit.

Governments and energy utilities have a vested interest in the growth of this industry, whether to ensure emission reduction commitments are met, adhere to mandatory renewable energy targets (MRET) or to use as a source of potential competitive advantage. These interests can be realised through increasing consumer demand for GreenPower which can be achieved through targeted communications campaigns.

Those consumers with the greatest propensity to purchase GreenPower have been identified to hold pro-environmental views and altruistic attitudes. This audience could be targeted through communications which utilise the elements of behavioural economics; social influence and choice architecture. Furthermore this communications approach could be extended to leverage the uptake of existing customers to increase demand and uptake amongst a wider audience.

This strategy is not proposed as a replacement for existing policy mechanisms such as the MRET or the carbon tax, but rather as an additional measure which could be successfully
implemented by governments and/or energy utilities in a cost effective manner. The ability of communications to increase consumer demand for GreenPower is supported by academic literature and it is believed is an important step in helping this initiative realise its full potential.
# CONTENTS

Declaration .......................................................................................................................... 2

Abstract ............................................................................................................................... 3

Contents ............................................................................................................................... 5

Acknowledgements ............................................................................................................. 8

Section 1. Introduction .......................................................................................................... 9
  1.1 Methodology .................................................................................................................. 11
  1.2 Aims and objectives ...................................................................................................... 12
  1.3 Potential contributions ................................................................................................. 13

Section 2. The GreenPower initiative .................................................................................. 15
  2.1 Overview ....................................................................................................................... 15
  2.2 Consumer options ........................................................................................................ 15
  2.3 Current success ............................................................................................................ 17
  2.4 Previous communications strategies .......................................................................... 20

Section 3. The role of communications .............................................................................. 23

Section 4. Understanding the audience ............................................................................ 26
  4.1 Potential customer profiling ....................................................................................... 26
  4.2 Existing customer profiling ......................................................................................... 28
  4.3 Customers from comparable markets .......................................................................... 29

Section 5. Behavioural economics ..................................................................................... 32
  5.1 Social influence ........................................................................................................... 33
5.1.1 Herding ........................................................................................................34
5.1.2 Social norms ...............................................................................................35
5.1.3 Fairness .........................................................................................................37
5.2 Choice architecture ..........................................................................................39
  5.2.1 The decoy option .......................................................................................40
  5.2.2 Framing .......................................................................................................41
  5.2.3 Anchoring ....................................................................................................41

Section 6. Recommendations: Practical communications strategies ..................44

  6.1 Target audience .............................................................................................44
  6.2 Creative approach .........................................................................................45
  6.3 Considerations ...............................................................................................47
    6.3.1 Consideration 1: .....................................................................................47
    6.3.2 Consideration 2 .....................................................................................48
  6.4 Outline of key strategies ..............................................................................50

    Strategy 1 - Leverage key influencers ..............................................................50
    Strategy 2 - Provide means for customer recognition & self promotion ..........51
    Strategy 3 - Advise residents of community consumption ..............................52
    Strategy 4 - Utilise choice architecture in communications ............................53
      Strategy 4.1 - Use the decoy option to favour 100% GreenPower alternative ...53
      Strategy 4.2 - Frame the option to purchase GreenPower most effectively ......54
      Strategy 4.3 - Establish a favourable price anchor .......................................55

  7. Conclusion ......................................................................................................58

  8. Reference list ..................................................................................................60
ACKNOWLEDGEMENTS

I would like to thank Nicole Hodgson who has provided me with guidance and assistance throughout the research and writing of this dissertation.

Nicole helped me look past my own pre conceived ideas and keep an open mind to the findings of my research.
SECTION 1. INTRODUCTION

As a result of social and political pressure, reducing greenhouse gas (GHG) emissions has become a key focus of governments around the world. Given the industry’s significant contribution to emissions production, electricity generation has been the focus of much of these efforts. Thus far Australian governments have largely relied on policy mechanisms in an attempt to reduce emissions attributed to electricity generation, as seen through the implementation of the Mandatory Renewable Energy Target (MRET) in 2001 and most recently evidenced by the introduction of a national carbon tax. Whilst this dissertation does not negate the potential success of such mechanisms, it will examine alternative approaches to reducing emissions that could be implemented in parallel. Specifically the focus here will be on how emissions reduction could be achieved in the electricity generation industry, by increasing the demand for electricity produced by renewable resources, through utilising communications.

The following international and domestic data puts the potential scope of emissions reduction from electricity generation into context. Globally over 80% of electricity is produced by non renewable resources, predominately coal, gas, oil and nuclear (International Energy Agency 2011, 24). In 2011 the International Energy Agency (IEA) estimated over 40% of the world’s CO₂ emissions were attributable to electricity and heat production (IEA & OECD 2011, 67). Domestically the reliance on fossil fuels is even greater, with over 92% of electricity being generated by non renewable resources (Australia. Department of Resources Energy and Tourism 2011, 21) and electricity alone
contributing approximately 36% of all GHG emissions (Australia. Department of Climate Change and Energy Efficiency. 2011, 6). Further emphasising Australia’s contribution to emissions attributable to electricity generation is the fact that Australia’s per capita electricity consumption is four times that of the global average – subsequently resulting in Australia’s total per capita GHG emissions also being four times greater than the global average (IEA 2011, 48-49).

GreenPower (as it referred to in the Australian market) provides consumers with access to electricity generated from renewable resources at a premium price. The nationally coordinated GreenPower initiative is an important step in developing the generation capacity and demand for renewable electricity nationally and has the potential to play a significant role in reducing Australia’s reliance on fossil fuels and subsequently decreasing GHG emissions. Furthermore it provides consumers with the opportunity to exercise some degree of control over the demand for renewable electricity generation and in turn influence how the industry develops domestically. This level of control available to consumers also presents an opportunity to governments and energy utilities with a vested interest in the growth and development of Australia’s renewable energy industry. The following dissertation will examine how this opportunity could be leveraged through communications to increase the uptake of GreenPower in the domestic residential electricity market, focussing on Sydney.

In section 2, Australia’s GreenPower initiative will be explained, highlighting the options available to residential customers and current levels of uptake. Section 3 will identify the role of communications in influencing behaviour and purchase decisions, emphasising the
importance of understanding the motivations of consumers. In section 4, international and domestic research will be examined to identify the characteristics of customers with a stated willingness to pay a premium for GreenPower, as well as existing GreenPower customers (In addition, the motivations of customers in comparable markets will also be examined). Section 5 will explore the field of behavioural economics to gain a better understanding of the range of factors which influence a consumer’s purchase decision, focusing on the concepts of social influence and choice architecture. Following this, section 6 will propose a target audience and creative approach to be utilised, prior to finally outlining elements of a practical communications strategy which could be implemented by governments and/or energy utilities to increase the uptake of GreenPower.

1.1 METHODOLOGY

While initially primary research had been planned as part of this dissertation, following extensive desktop research it was clear there was substantial relevant material from both domestic and international research projects and case studies readily available. Much of this information and data was the result of substantial projects, significantly beyond the scope of this dissertation and the decision was made to focus on a review and synthesis of the existing literature. The majority of the desktop research is examined in section 4; *Understanding the audience* and section 5; *Behavioural economics*. In section 4 numerous international studies on existing GreenPower customers and those with a stated willingness to pay a premium for GreenPower are examined in order to determine similar
characteristics among these existing and potential customers to allow communications strategies to be designed and targeted. While no such research was able to be found on the Australian market, comparable industry research will be examined to ensure the international findings are applicable domestically. Furthermore Australian Bureau of Statistics (ABS) data on the GreenPower initiative is examined, helping to paint a quantitative picture of domestic awareness levels and uptake rates.

Section 5 focuses on behavioural economics and makes use of extensive research and academic papers in this relatively new field, to identify how consumer’s behaviour and purchase decisions are influenced. Many examples from different studies are provided in this section which both identify and explain ideas and concepts from this field which could be applied to communications strategies to increase consumer demand for GreenPower. The combination of these research findings will form the basis of recommendations made for practical communications strategies in section 6.4.

1.2 AIMS AND OBJECTIVES

The overall objective of this dissertation is to propose practical communications strategies, which could be implemented by governments and/or energy utilities to increase the demand for GreenPower and subsequently reduce GHG emissions.

The strategies proposed in section 6.4 of this dissertation challenge the recommendations of similar papers (Ottman 1997) (Rundle-Thiele, Paladino and Apostol 2008), which use an information deficit approach to conclude that increasing consumer awareness and education of the environmental issues associated with electricity
consumption, is the most effective communication strategy to increase the demand for GreenPower. While it is not challenged that such an approach is important and that awareness and education are likely to impact consumer demand, this dissertation will attempt to establish that awareness alone has a limited effect on consumer uptake of GreenPower and furthermore that such a communications approach may be inferior to alternate, more cost-effective communications strategies, leveraging concepts from behavioural economics.

1.3 POTENTIAL CONTRIBUTIONS

GreenPower offers governments numerous potential benefits including helping to meet emissions reduction commitments, developing the domestic renewable energy industry and securing clean and reliable energy for future generations. The potential benefits to utilities include helping to offset costs associated with meeting their MRET and could also serve as a point of differentiation from the competition. Australia’s electricity markets are extremely competitive, typified in Victoria which is recognised as one the most competitive in the world (Ferguson 2012) and enabling a point of difference can be valuable to utilities. This strategy is currently being employed to an extent by many of Australia’s utility companies and can be seen through a brief examination of two of the largest energy utilities; Origin and AGL.

On Origin’s website and in various marketing materials, the company claims to be “Australia’s number one green energy provider” (Origin 2012). Similarly AGL claim on their website to be “Australia’s leading renewable energy company” (AGL 2012). By
prominently making these claims both of these companies clearly see to benefit of trying to position themselves favourably from a renewable energy perspective and marketing their GreenPower products is a way to establish such a position.

This dissertation provides an examination of elements of the GreenPower market and recommends practical communications strategies that could be implemented by governments and energy utilities to increase consumer demand for GreenPower and realise the above benefits.
SECTION 2. THE GREENPOWER INITIATIVE

2.1 OVERVIEW

GreenPower is an option available to electricity consumers in which they pay a premium for a certain percentage of their electricity to be generated by renewable sources. Options generally range from 10% to 100% and consumers are assured this amount of electricity will be added to the grid from renewable sources through the GreenPower accreditation program (GreenPower 2012b par 2). The accreditation program has been in operation since 1997, originally established by the NSW government and now a joint initiative between the ACT, NSW, SA, QLD, VIC and WA Governments (Australia. NSW Trade & Investment 2010, 6). In the first year of operation the scheme required retailers to source 60% of their GreenPower from either new renewable sources or from increased capacity of existing renewable sources. This percentage was increased over the following years and now retailers are required to source 100% of their GreenPower from generators built post 1997. This ensures the key objective of the initiative is met; “to encourage the installation of new GreenPower generation facilities” (Australia. NSW Trade & Investment 2010, 6) and prevents retailers from relying on renewable generation schemes such as the Snowy Hydro, which was in operation well before 1997.

2.2 CONSUMER OPTIONS

As of June 2012 nine electricity retailers were offering GreenPower options to Sydney consumers. The pricing structure offered by retailers differed vastly as identified in Figure
1 below. Depending on the retailer and the percentage of GreenPower the customer purchased, they might pay a flat fee on a daily, weekly, monthly or quarterly basis or have a premium added to their kilowatt hour (kWh) usage charge, either for their total electricity consumption or specifically for the percentage of GreenPower they purchased. The right hand column of Figure 1 one attempts to simplify these offerings by bringing each back to an approximate premium paid per kWh based on the NSW residential average electricity consumption of 7,300 kWh annually (Australia. Office of Environment & Heritage 2012). As demonstrated the price premium ranges from $0.03 to $0.15 per kWh.
Figure 1: GreenPower options available to Sydney consumers

<table>
<thead>
<tr>
<th>Retailer</th>
<th>GreenPower (%)</th>
<th>Pricing structure</th>
<th>Equivalent premium per kWh*</th>
</tr>
</thead>
<tbody>
<tr>
<td>AGL</td>
<td>10</td>
<td>$1.10 fee per week</td>
<td>$0.08</td>
</tr>
<tr>
<td></td>
<td>20</td>
<td>$1.80 fee per week</td>
<td>$0.06</td>
</tr>
<tr>
<td></td>
<td>100</td>
<td>$0.055 premium per kWh</td>
<td>$0.06</td>
</tr>
<tr>
<td>Australian Power &amp; Gas</td>
<td>100</td>
<td>$6.00 fee per week</td>
<td>$0.04</td>
</tr>
<tr>
<td>Country Energy</td>
<td>10</td>
<td>$1.30 fee per week</td>
<td>$0.09</td>
</tr>
<tr>
<td></td>
<td>20</td>
<td>$2.00 fee per week</td>
<td>$0.07</td>
</tr>
<tr>
<td></td>
<td>50</td>
<td>$4.50 fee per week</td>
<td>$0.06</td>
</tr>
<tr>
<td></td>
<td>100</td>
<td>$8.00 fee per week</td>
<td>$0.06</td>
</tr>
<tr>
<td>Dodo Power &amp; Gas</td>
<td>10</td>
<td>$0.06 premium per kWh^</td>
<td>$0.06</td>
</tr>
<tr>
<td></td>
<td>100</td>
<td>$0.06 premium per kWh</td>
<td>$0.06</td>
</tr>
<tr>
<td>Energy Australia</td>
<td>10</td>
<td>$14.30 fee per quarter</td>
<td>$0.08</td>
</tr>
<tr>
<td></td>
<td>25</td>
<td>$0.33 fee per day</td>
<td>$0.07</td>
</tr>
<tr>
<td></td>
<td>50</td>
<td>$0.033 premium per kWh</td>
<td>$0.07</td>
</tr>
<tr>
<td></td>
<td>100</td>
<td>$0.066 premium per kWh</td>
<td>$0.07</td>
</tr>
<tr>
<td>Integral Energy</td>
<td>10</td>
<td>$0.011 premium per kWh^</td>
<td>$0.11</td>
</tr>
<tr>
<td></td>
<td>20</td>
<td>$0.0297 premium per kWh^</td>
<td>$0.15</td>
</tr>
<tr>
<td></td>
<td>50</td>
<td>$0.033 premium per kWh^</td>
<td>$0.07</td>
</tr>
<tr>
<td></td>
<td>100</td>
<td>$0.0743 premium per kWh</td>
<td>$0.07</td>
</tr>
<tr>
<td>Origin Energy</td>
<td>25</td>
<td>$1.00 fee per week</td>
<td>$0.03</td>
</tr>
<tr>
<td></td>
<td>50</td>
<td>$0.0154 premium per kWh^</td>
<td>$0.03</td>
</tr>
<tr>
<td></td>
<td>100</td>
<td>$0.0308 premium per kWh</td>
<td>$0.03</td>
</tr>
<tr>
<td>Red Energy</td>
<td>100</td>
<td>$0.053 premium per kWh</td>
<td>$0.05</td>
</tr>
<tr>
<td>TRUenergy</td>
<td>10</td>
<td>$0.0036 premium per kWh^</td>
<td>$0.04</td>
</tr>
<tr>
<td></td>
<td>20</td>
<td>$0.0073 premium per kWh^</td>
<td>$0.04</td>
</tr>
<tr>
<td></td>
<td>50</td>
<td>$0.0181 premium per kWh^</td>
<td>$0.04</td>
</tr>
<tr>
<td></td>
<td>100</td>
<td>$0.0363 premium per kWh</td>
<td>$0.04</td>
</tr>
</tbody>
</table>

* Based on average NSW home using 7,300 kWh of electricity annually (Australia. Office of Environment & Heritage 2012).
^ Premium applied only to GreenPower
# Premium applied to total consumption

2.3 CURRENT SUCCESS

Since 2005 quarterly and annual data has been released on the GreenPower schemes success nationally, specifically indicating the number of GreenPower customers and the
total GreenPower sales (GreenPower 2012a). The Australian Bureau of Statistics (ABS) has also conducted research relating to the GreenPower scheme through its *Environmental Issues: Energy Use and Conservation* study released every third year beginning in 1999. Interestingly this study measured the awareness of the GreenPower scheme by state and in 2008 also examined consumers’ willingness to pay a premium for GreenPower. While these statistics are not extensive records over an extended period of time, they do provide a good overview into the uptake rate of GreenPower by NSW residents and also a look into how awareness and willingness to pay for GreenPower has evolved over recent years. This data is presented in Figure 2 below.

**Figure 2: GreenPower in NSW**

![Image of GreenPower data chart](adapted_fromABS.png)


As mentioned previously the GreenPower initiative began in 1997 and over the eight to
ten years following its implementation, awareness levels remained reasonably consistent at around 25% as depicted in Figure 2 above. By 2008 however awareness had increased markedly to close to 50% where it would remain when measured again three years later in 2011. Customer uptake grew gradually from 2004 to 2006 and experienced significant growth in 2007 and 2008 with the NSW customer base reaching close to 230,000 in 2009. The following two years are of particular interest; awareness levels remain relatively unchanged between 2008 and 2011, however customer numbers declined rapidly during 2010 and 2011, dropping to almost 170,000 in NSW - a loss of close to 60,000 customers over a two year period. While willingness to pay statistics are not available for 2011, it is logical to assume these declined in line with customer numbers. Anecdotally this decrease in GreenPower consumption coincides with the global financial crisis and it seems reasonable to assume this affected demand for GreenPower. This assumption is backed by research conducted by Mewton and Cacho (2011, 384) who conclude the GreenPower market in Australia is sensitive to price. Moreover In pre campaign market research conducted for the Carbon Down campaign (2009), examined briefly in the following section, which promoted uptake of GreenPower in Victorian businesses, it was discovered that their primary concern at the time was the global financial crisis and its effect on their business (Carbon Down 2009, 7).

Based on the research outlined above the assumption can be made that awareness levels of the GreenPower initiative have a limited effect on uptake. It is fair to assume that awareness levels have some impact on uptake (with zero awareness of GreenPower we could expect zero uptake) however as depicted in figure 2 the relationship between the
two is non-linear. This finding is of significance as it demonstrates that awareness should not be the sole objective of a communications initiative aiming to increase consumer demand for GreenPower, which will be considered in section 6 when proposing practical communications strategies.

2.4 PREVIOUS COMMUNICATIONS STRATEGIES

Some communications initiatives have been implemented domestically by governments and energy utilities over recent years to encourage the uptake of GreenPower. After initial desktop research and discussion with the GreenPower marketing department, it is clear this has been reasonably limited in extent and GreenPower is often considered a secondary message after energy conservation. Some examples of these domestic campaigns are outlined below.

Origin Energy implemented its *Sustainability Drive* promotion in 2011 which asked residents around Australia to send in videos of what they and their neighbours were doing to conserve energy in their homes and chose four winners from around the country who shared in $1 million of energy conserving prizes, including 100% GreenPower for 12 months (Origin Energy 2012). While the focus of this campaign was on energy conservation initiatives rather than GreenPower, GreenPower did receive some exposure. Unfortunately objectives and evaluation results of this campaign are not readily available. Anecdotally the YouTube clip from Origin explaining the competition and entry details has received just over 12,000 hits, while many individual videos uploaded by entrants have received fewer than 100 hits (YouTube, 2012). While this is by
no means an accurate measure of the campaign’s performance it can be assumed based on these figures that entrants videos did not receive a great deal of interest from the public.

Running over two years beginning July 2009 and ending June 2011, the Victorian Government in partnership with Victorian Employer’s Chamber of Commerce and Industry launched the *Carbon Down* project. The objective of the initiative was to help “Victorian business to reduce carbon emissions and prepare for the new ‘low carbon economy’ of the future” (*Carbon Down* 2011, 2), focussing primarily on small to medium enterprises. Through the campaign website choosegreenpower.com.au, the initiative provided an avenue for businesses to send in copies of their most recent electricity bill which would then be assessed free of charge and a brief report sent back to the business highlighting their options for purchasing GreenPower, the associated costs and emission savings. By reducing barriers to uptake GreenPower and in some circumstances saving businesses money on their electricity bill, the initiative achieved some success resulting in increased uptake of GreenPower and reduced emissions across Victorian small to medium enterprises (*Carbon Down* 2011, 3).

In 2006 and 2009 respectively, the Victorian and the NSW governments both implemented communications campaigns using the same ‘black balloons’ creative approach which used balloons being inflated by everyday household appliances as a visual representation of the emissions they produce (*Australia, Department of Premier & Cabinet 2012*). The primary objective of these campaigns was again to encourage energy conservation in the residential electricity market by creating awareness of how...
appliances in the home contribute to GHG emissions and prompted the audience to seek more information available online about how to conserve energy (Australia, Department of Premier & Cabinet 2012).

These campaigns, at least in Victoria, have been in part attributed to the increased uptake of GreenPower products by residents (Rood 2007). While this does seem reasonable, in neither the Victorian nor New South Wales campaign is the GreenPower initiative mentioned, with the focus being solely on awareness of the issue of household emissions and the environmental and financial benefits of saving power. In both instances the final call to action prompts the audience to a website with further information on saving energy. If these campaigns did in fact contribute to the increased uptake of GreenPower without specifically promoting the initiative, a further assumption can be made that a communications campaign focussed primarily on promoting GreenPower to the residential market has a high potential for success.

The anecdotal evidence of the indirect success of domestic campaigns in encouraging the uptake of GreenPower in the residential market, combined with the success of the Carbon Down campaign lay a promising foundation for the objective of this dissertation. In the following section the role of communications in influencing consumer decision making will be briefly examined before going on to highlight the support for communications as a tools to increase demand for GreenPower in academic literature.
SECTION 3. THE ROLE OF COMMUNICATIONS

Communications has been used as a tool by government and private enterprise to influence people’s behaviour and decisions for many years. You only have to watch television, read the newspaper or engage with any other mainstream media to see evidence of this on a daily basis. We are inundated with messages from organisations attempting to influence us, whether it is to stop smoking, not speed on our roads, purchase a certain brand of running shoes or entrust your savings to a particular bank.

GreenPower is somewhat of an unusual product to market as you are asking customers to pay a premium for a service that will remain unchanged in their experience. The premium is paid in good faith that a reflective amount of electricity will be added to the grid from a renewable source(s) – presenting a significant challenge for a potential communications campaign.

While it may be widely accepted that communications campaigns can be successful in influencing consumer decision making, implementing a communications campaign is by no means a guarantee of success. Many elements have to be considered when designing a communications strategy, the most important of which is arguably understanding your target audience (Bell and Emory 1971). It is essential that those developing communications strategies understand the key motivating factors of their target audience and are able to design communications strategies to leverage these. As Rundle-Thiele, Paladino and Apostol state “the nature of the potential green consumer must be
understood to be able to introduce valuable incentives to increase consumer uptake” (2008, 182).

The role of communications in increasing the demand for GreenPower has notable academic support. Mewton and Cacho (2011, 384) conclude communications campaigns to be the most cost effective policy option to increase the uptake of GreenPower available to Australian governments. A comprehensive study commissioned by the U.S. Office of Energy Efficiency and Renewable Energy published in 2002, examined the GreenPower markets of sixteen countries (Bird, Wustenhagen & Aabakken). The study similarly concluded that “aggressive” communications campaigns could play a vital role in uptake of GreenPower in a given market and attributed the substantial success of Norway’s GreenPower initiative in part to communications efforts (Bird, Wustenhagen & Aabakken 2002, 61). Furthermore the authors state that a lack of targeted communications “is one of the most important factors limiting consumer response” to GreenPower (Bird, Wustenhagen & Aabakken 2002, 4). Finally a broader study on consumers propensity to purchase green products concluded “the green market is under exploited by marketers” (Pickett-Baker and Ozaki 2008) and goes on to suggest an increased use of communications to promote green products.

Further to the anecdotal support from existing campaigns examined in section 2.4, the above academic findings provide substantial encouragement for the objective of this dissertation. As identified above, understanding your audience is crucial to a successful communications campaign. The following section will examine existing domestic and
international research to identify the motivations of potential and existing GreenPower customers.
SECTION 4. UNDERSTANDING THE AUDIENCE

In order to design a communications campaign to increase the uptake of GreenPower amongst consumers, it is essential to gain an understanding of what motivates their purchase decisions. If we can identify and understand the motivating factors for consumers to purchase GreenPower we can then leverage these factors through communications to increase uptake.

While extensive research into the characteristics of Australian GreenPower customers was not discovered, numerous studies from other countries are available providing us with an adequate insight into the motivations of this audience. These studies have looked at customers’ willingness to pay a premium for GreenPower in markets where this product was, at the time, not available, as well as studies which identify the characteristics of existing GreenPower customers in established markets. We will firstly look at two studies of potential GreenPower customers followed by two studies of existing GreenPower customers and finally look at a comprehensive UK study which examines both. Following this the motivating factors of consumers in comparable markets in Australia will also be examined to offer a broader perspective and ensure the results of domestic research correlate with that conducted overseas.

4.1 POTENTIAL CUSTOMER PROFILING

In 2002 Rowlands, Scott and Parker undertook a study which identified electricity customers with a stated willingness to pay a premium for GreenPower and aimed to
identify similar characteristics among this audience. Of the 466 responses collected in the Waterloo suburb of Ontario Canada, the following five similarities among the audience were deemed statistically significant; Ecological concern, liberal political views, altruism, level of education and locus of control. Locus of control can be defined as the extent to which one feels they control their own fate (Baumeister and Vohs 2007, 530) and in this context can be thought of as to what extent a consumer feels the outcomes of their purchase decision make a difference. Surprisingly, the variable ‘knowledge’, which identified those audience members who had an understanding of the current sources of electricity generation in the region, had no statistically significant correlation with potential willingness to pay a premium for GreenPower.

A similar study conducted in Germany in 2010 (Gerpott & Mahmudova) set out to prove various hypotheses about the characteristics of German electricity consumers with a stated willingness to pay a premium for GreenPower. Among the predictions confirmed by the study, which involved the telephone survey of 267 households, were the importance of social norms and influence of friends and family of the decision maker. In addition, not surprisingly, those with strong attitudes towards environmental protection were also shown to have a higher propensity to purchase GreenPower. The authors also hypothesised that those consumers with adequate factual knowledge of GreenPower generation and the process and implications of switching to this service would also have a higher propensity to purchase. Similarly with the Canadian study this relationship was not established.
4.2 EXISTING CUSTOMER PROFILING

While the previous two studies examined looked at the characteristics of consumers in relation to their willingness to pay a premium for GreenPower, the following two studies look at the characteristics of existing GreenPower customers. The first study was undertaken in Holland and identified trust in the GreenPower supplier, perception of ease of switching to GreenPower, knowledge of renewable energy sources, pro-environmental attitudes and actual pro-environmental behaviour, as all statistically significant characteristics of existing customers (Arkesteijn & Oerlemans 2005). Interestingly this research found knowledge of renewable energy sources was a key similarity amongst actual GreenPower customers, in contrast to the findings of the two previous studies examining potential customers with a stated willingness to pay for GreenPower.

The second piece of research was undertaken in the U.S. by Kotchen and Moore where mail surveys were sent to existing GreenPower customers as well as customers who had not taken up GreenPower (2007). In correlation with the findings identified in each piece of research examined above, GreenPower customers were more likely than non-customers to have altruistic attitudes and share environmental concerns.

Finally research undertaken in the UK examined a range of earlier studies (including those referenced above) and went on to conduct comprehensive research on actual and potential adoption of GreenPower by UK residents (Diaz-Rainey & Ashton 2011). In line with the previously referenced findings this research project concluded that attitudinal
factors were of greater importance than demographic factors and level of knowledge on energy issues, concern for the environment and locus of control were key characteristics of actual GreenPower customers and those with the highest willingness to pay. Income was the only demographic factor with statistical significance, with those from higher income brackets having a slightly higher propensity for GreenPower.

4.3 CUSTOMERS FROM COMPARABLE MARKETS

As it does not appear that similar research to that examined above has been conducted in the Australian market, comparable industries have been looked at to examine the motivations of consumers who purchase similar pro-environmental products to ensure these correlate with the findings identified above and to provide a level of confidence that the overseas research is transferable to the Australia GreenPower market.

The first industry examined for comparison is the airline industry, specifically the option consumers have to ‘carbon offset’ their flight when purchasing an airline ticket. This option sees the customer pay an additional fee in good faith that the airline will undertake appropriate action (such as tree planting) to offset the carbon produced by that flight (specifically the percentage attributed to that particular passenger). This product was chosen for comparison as it shares important similarities with GreenPower as the additional price premium or additional fee paid does not result in an improved customer experience, nor is it something tangible that may offer passengers a perceived social benefit.
An article from the *Journal of Sustainable Tourism* looks at the socio-demographic characteristics of those passengers who did carbon offset their flights (Mair 2011). An equal number of Australian and UK residents were surveyed and approximately 16% of Australians stated they had carbon offset a flight in the past compared to less than 5% of UK residents. Among the demographic similarities between those who had carbon offset a flight in the past, were these members of the audience were more likely to be younger males and have a slightly higher level of education than those who had not.

Unsurprisingly, and consistent with motivations for purchasing GreenPower, customers who had carbon offset a flight in the past were more likely to hold pro-environmental attitudes than those who had not.

The second and final comparison made is with those who have a propensity to donate to environmental charities or causes. This has been selected due to the similarities that can be drawn between donating to an environmental charity and purchasing GreenPower. As Ottman explains in her article - *Renewable energy: Ultimate marketing challenge*, renewable energy purchased through a GreenPower scheme “is added to the communal power grid in place of fossil-fuel generated electricity, consumers do not receive the product for which they pay the premium” and hence “represents a form of donation” (1997). An Australian study conducted by Reeson in 2008 and commissioned by the CSIRO points out that intrinsic environmental motivations such as altruism (whether pure or impure) are an important indicator of a person’s propensity for pro-environmental behaviour such as donating to an environmental charity. This again correlates with the international research of potential and existing GreenPower customers examined above.
Based on the numerous research studies explored, those consumers with altruistic attitudes and pro-environmental views have the greatest propensity to purchase GreenPower. Following this a high locus of control and some knowledge of renewable energy technology are also factors more likely to be shared by those with a stated or established willingness to pay for a premium GreenPower. Identifying these similar characteristics among existing GreenPower customers and those most likely to become GreenPower customers is important for two main reasons; firstly it identifies the motivations of existing and likely customers which could potentially be encouraged or instilled in the wider audience. Secondly it identifies a potential target audience to be focused on who share these characteristics. How this particular audience could be focussed on will be explored further in the following two sections; behavioural economics and practical communications strategies.
SECTION 5. BEHAVIOURAL ECONOMICS

Behavioural economics challenges the assumptions of the ‘rational economic actor’ in neo-classical economic models and instead ‘observes people as they actually behave’ (Ariely 2008). Behavioural economics “combines the techniques, methods, and theories of psychology and economics to research, learn about, and explain the economic behaviour of real people” (Baumeister & Vohs 2007, 105). An area of much interest within this field focuses on consumer purchase decisions and the factors which influence these. Behavioural economics concepts will be used to assess these motivating factors particularly for GreenPower or comparable ‘green’ consumers in order to determine how these factors could be leveraged through communications.

As evidenced in the previous section of this dissertation, consumers with a propensity to purchase GreenPower tend to share common altruistic attitudes and pro-environmental views. Classical economic theory dictates “consumers will seek to maximise their self interest” (McFadden 2001, 51) when making a purchase decision. As a consumer who purchases GreenPower is unlikely to ever see or experience the outcomes of their purchase, their purchase decision does not sit within the definition of rational behaviour in a classical economic context.

Behavioural economics examines a range of factors that influence a consumer’s purchase decisions and offers further insights into what may motivate them. For the purpose of this dissertation, social influence and choice architecture have been identified as the two factors with the greatest ability to influence the uptake of GreenPower in the residential
electricity market. These will be explained then examined with relevant examples to demonstrate how these affect a consumers purchasing behaviour and subsequently how they could be leveraged through communications to increase the uptake of GreenPower.

5.1 SOCIAL INFLUENCE

Social influence can simply be defined as “the various ways in which people impact one another” (Douglas, Goldstein and Braver 2012, 91). A classic example of this effect was demonstrated by Asch (1951) where participants of a research study were asked to identify which one of a series of lines presented was equal to the comparison line also presented. The participants were in groups of five and the first four to give their answer in each group had been instructed how to respond by the researcher unknowingly to the fifth respondent. The experiment was ran multiple times and in the first rounds the first four respondents answered correctly and in nearly every case so did the fifth respondent. However when further rounds were conducted and the first four respondents had been instructed to give an incorrect response approximately 75% of fifth respondents also gave this incorrect response on at least one occasion - despite the simplicity of the task. This experiment demonstrates the significant influence social influence can have on decision making even to the point where people will make seemingly irrational decisions.

The following sub sections will examine three related areas of social influence that could be utilised through communications to increase the uptake of GreenPower. The areas are herding, social norms and fairness.
5.1.1 HERDING

The concept of herding, also referred to as the bandwagon effect, explains how the decisions of a few can have significant impact on the decisions of many. This is best illustrated through a simple example provided by Banerjee (1992, 798-9) summarised as follows; when deciding between two empty restaurants (A and B) a couple with no prior knowledge of either restaurant’s food or service decide at random to dine at restaurant A. The next couple that walks by also looking for restaurant assume restaurant A is superior to B as it has customers and B does not and also choose A. This pattern continues and restaurant A ends up full and B remains empty. While a customer’s decision between two potential restaurants is very different to a customer’s decision whether to pay premium for GreenPower, this example clearly demonstrates the concept of herding, where the decision of few customers influence the decision of many.

Consumer herding behaviour is commonly exploited through communications across a vast range of industries. Monteiro and Morga-Gonzalez provide examples of such strategies which include; book publishers advertising their best-selling titles and music and movies promoted by their album sales or box office takings respectively (2003, 402). This strategy however isn’t exclusive to entertainment products as in the examples given above, but can be seen throughout other industries. A recent example of such a campaign which aligns with the following two social influence factors to be examined (social norms and fairness) can be seen through the Kony2012 campaign. This campaign aimed to make Joseph Kony, a Ugandan guerrilla leader indicted by the International Crime Commission for crimes against humanity, famous (Goodman and Preston 2012).
While this campaign operated on numerous emotive levels there was undoubtedly an
element of herding behaviour observed with the campaign and resulted in phenomenal
(albeit short lived) exposure online, most notably more than 40 million YouTube views
within 4 days of being launched (Goodman and Preston 2012).

This strategy was also used in part by the not for profit organisation Heal The Bay who
were successful in lobbying Long Beach City Council in California to ban single use plastic
bags from grocery stores, pharmacies and convenience stores (Heal the Bay 2011).

Similar to the Kony2012 campaign, Heal the Bay created a video titled The Majestic
Plastic Bag and utilised social media to generate awareness and support for their
campaign. The range of examples provided above, demonstrate the effect herding can
have in generating a particular response from consumers or the public, regardless of the
industry it has occurred in, and presents an opportunity for increasing GreenPower
uptake which will be explored in section 6.

5.1.2 SOCIAL NORMS

Social norms are a key element of social influence and refer to the standard of behaviour
expected of people within a community (Matsumoto 2009, 503). Ewing (2001)
investigated the influence of social norms amongst other factors in household
participation in curb-side recycling. Whilst curb-side recycling is not directly comparable
to GreenPower initiatives, as it does not involve a voluntary fee or premium to be paid
for the service, it does however share similarities in that it involves a sacrifice on behalf of
the consumer (albeit minor) for the benefit of the environment.
Two key points identified in Ewing’s research were the household’s level of participation in the recycling program were significantly influenced, firstly by the expectations and participation of other members of their household and community, and secondly by their level of altruism. The influence of household / community members is consistent with the importance of social influence found in Gerpott & Mahmudova’s 2010 study on potential GreenPower customers referenced previously, highlighting the importance people place on the expectations of others in making their decisions. Ewing’s second point on altruism is consistent with much of the research examined in section 4 of this dissertation and reinforces this as a key motivating factor for pro-environmental behaviour.

Furthermore Nolan et al. (2008) conducted a study in California, looking at the motivating factors of residents to save electricity with similar findings. In the first of two studies conducted residents were asked a series of questions which broadly fit into the following three categories; how often do you try and conserve energy, why do you try and conserve energy and what are your general beliefs about energy conservation – each question had numerous options for which respondents would have to assign an answer i.e. always, sometimes, never or very important, slightly important, not important etc. The alternative options for the second category of questions on why respondents tried to conserve energy had the following four options; (a) that using less energy saves money, (b) that it protects the environment (c) that it benefits society (d) that a lot of other people are trying to conserve energy. The results showed respondents identified protecting the environment as the most important factor, followed by benefits to society, saving money and least important that other people were doing it.
The alternative options for the third category of questions on respondent’s general beliefs about energy conservation had the following four options; (a) how much do you think conserving energy will benefit society? (b) how much do you think conserving energy will protect the environment? (c) how much money do you think you can save by conserving energy in the home? (d) how often do you think your neighbours try to conserve energy? When the results of these answers were compared to the results of the first category of questions (how often to you try and conserve energy) correlation between reported energy conserving behaviours and general beliefs about energy conservation were established. Contrary to the self-reported reasons for trying to conserve energy detailed above, “the strongest predictor of energy conservation was the belief that other people are doing it” (2008, 916).

In alignment with Ewing’s findings, these results clearly demonstrate that social norms significantly influence consumer behaviour - whether consciously or not. As these two examples both involve pro-environmental behaviour on the side of the consumer, it is clear that the expectations of the community are important factors to consumers when making decisions in this context.

5.1.3 FAIRNESS

The final example of social influence on consumer decision making looks at the idea of fairness and aligns closely with both herding and social norms examined above. Fairness can be thought of as a consumer’s ethical conscience that motivates them to make purchase decisions which has a positive impact society in some way. This is closely linked to social norms as it often arises from consumers feeling obliged to act in a certain way as
others in their community are doing so and it is ‘fair’ that they do the same. To illustrate this point two examples will be provided from Thaler and Sunstein (2008).

The first example is of an experiment conducted by the Minnesota tax department in an attempt to encourage greater tax compliance by residents (Thaler and Sunstein 2008, 72). Four different messages were sent out to different groups with very different approaches to try and persuade residents. One approach told residents about the important projects and initiatives their taxes would be used for, another threatened the penalties resulting from noncompliance, a third provided information and support for residents having difficulties completing the required tax forms and the final option told residents that 90% of Minnesota residents complied with tax regulations. Of these four approaches the only option that had a significant impact in increasing tax compliance was the final option.

The second example again comes from the Californian energy industry where consumers were advised on their electricity bill the average electricity consumption within their community and whether they were above or below this average (Thaler and Sunstein 2008, 74). After providing this information, those consumers using more than the community average reduced their consumption and those using less than the average increased their consumption – effectively cancelling each other out. The next element added to consumers bills was a simply smiley face for those residents using less than the average or a sad face for those using more. After the inclusion of this graphic, those consuming more than the average further reduced consumption and those who had previously increased their consumption after learning they consumed less than average
also reduced consumption. Thaler and Sunstein put this down to the simply emotional signal this graphic gave consumers.

Both examples show consumers being influenced by both social norms and the idea of fairness when making their decision. In the taxation compliance example residents increased compliance seemingly because other residents were and they felt a responsibility to do the same. Interestingly in the second example electricity consumers increased or decreased their consumption based on the community average and we can assume consumers who used less than the average thought it was ‘fair’ they used more and the opposite true for consumers using more than the average. This insight is of particular importance in identifying that communicating social norms to consumers can have potential desired and undesired effects. This is an essential consideration when implementing communications leveraging social influence and highlights the numerous possible outcomes which need to be considered.

5.2 CHOICE ARCHITECTURE

Choice architecture involves designing the way in which alternative options to a decision will be presented to a consumer, with the knowledge that how these options are presented will likely affect the decision made (Johnson et al. 2012, 488). A choice architect has a range of tools at their disposal to influence the decision maker and in the context of this dissertation provides significant potential for increasing the uptake of GreenPower in both existing and new customers. This section will focus on three elements of choice architecture, namely the decoy option, framing and anchoring.
5.2.1 THE DECOY OPTION

Contrary to what could be considered rational decision making, consumer choice can be altered through the inclusion of an inconsequential outcome(s) presented amongst the alternative options (Kahneman 2003, 1458). When presented with a range of options to choose from for a given product, these options can be carefully designed to make the customer more likely to select the desired outcome, often this can be achieved through the use of a ‘decoy’. As Ariely (2008, 1-23) explains in his book *Predictably Irrational*, the decoy is an option presented among alternatives which has been included not because it is likely to be popular with consumers (it is actually unlikely to be chosen by consumers at all) but because it is likely to affect the consumer’s perception of the alternative options. One of the many examples Ariely provides to demonstrate this point is options available for a magazine subscription. This particular magazine offered the following three subscription options; i) *online only for $59*, ii) *print only for $129*, iii) *print and online for $129*.

After testing this choice architecture amongst university students, Ariely found that when presented with all three options students were most likely to select option iii) – *print and online*, however when presented with only options i and ii most students chose option i) – *online only*. In this example option ii is clearly the decoy as this is inferior to option iii. A consumer would be irrational to select option ii) – *print only* when for the same price they could select option iii and receive both the print and online subscriptions. By simply providing this decoy option students concept of value was seemingly altered making option iii more appealing.
5.2.2 FRAMING

Similarly with the use of a decoy, how alternative options are presented to consumers can also have a significant impact on the outcome(s) selected. As Biswas and Grau explain “framing the same information in different manners can influence consumer decision making and choice behaviour” (2008, 400). A key behavioural factor to consider when framing alternative options is loss aversion. Loss aversion stems from the fact that people generally perceive a loss more negatively than they positively perceive a gain of an equal amount. Thaler and Sunstein use a relevant and simple example to demonstrate this characteristic (2008, 40); when promoting energy conservation, highlighting the potential financial losses that will result from not conserving energy is a more effective way of framing this outcome to a consumer than highlighting the potential financial savings, i.e. presenting the outcome as ‘not conserving energy will cost you $x amount per year’ is more effective in prompting people to conserve energy than ‘energy conservation will save you $x per year’. Through simply framing the options available to customers in a way which highlights the negative (loss) rather than the positive (gain), the propensity of customers who select the desired outcome(s) can be increased.

5.2.3 ANCHORING

The final piece of choice architecture to be examined is anchoring. Anchoring is based on the assumption that a consumer will use an initial price (whether arbitrary or not) as an anchor when deciding how much they are willing to pay for a particular product. As Tversky and Kahneman explain, in a decision-making environment where consumers are determining the amount they are willing to pay, they will often “make estimates by
starting from an initial value that is adjusted to yield a final answer”, however “different starting points yield different estimates, which are biased toward the initial values” (1974, 1128). Setting a favourable anchor for new or existing GreenPower customers could similarly affect their willingness to pay for this product and in turn be used to increase uptake levels.

To use another example from Ariely to demonstrate (2008, 28-31), students were given a sheet of paper with a list of random products, each student was then asked to write the last two digits of their social security number next to each item. Next the students were asked whether they would pay that amount in dollars (the combination of the last two digits of their social security number) for each item and directed to indicate this on their sheet with a simple ‘yes’ or ‘no’. Finally students were then asked to write down the maximum amount they would be willing to pay for each item. Consistent with Tversky and Kahneman’s explanation above, students had indeed used this initial arbitrary price when deciding the maximum they would be willing to pay. The results demonstrated those students who started the exercise with the lowest price anchor (a social security number ending in 00 to 19) were willing to pay the lowest amount for each item and those students with the highest price anchor (a social security number ending 80 to 99) were willing to pay the most for each item. This example clearly demonstrates the effect price anchors can have on consumers’ willingness to pay for a product and subsequently their purchase decision.
The three elements of choice architecture briefly explored above could all be implemented as part of a communications strategy to increase the uptake of GreenPower. By carefully designing how GreenPower options are presented to customers, leveraging the elements of choice architecture identified above, uptake levels and percentages of GreenPower purchased could both be expected to increase. Practical examples of this strategy will be given in the following section.
SECTION 6. RECOMMENDATIONS: PRACTICAL COMMUNICATIONS STRATEGIES

Prior to recommending practical communications strategies that could be implemented by governments and/or energy utilities to increase the uptake of GreenPower, the target audience and creative approach will firstly be explained and outlined. By establishing these two elements communications can then designed and targeted most effectively.

6.1 TARGET AUDIENCE

The overarching goal of this dissertation is to identify how communications could be used most effectively to increase the uptake of GreenPower amongst Sydney electricity consumers. The ideal outcome would see all consumers opting to purchase at least some percentage of GreenPower however, in reality there will always be some consumers (possibly the majority) who will not opt to pay a premium for such a product. Given this consideration, combined with the knowledge that the budget governments or utilities may allocate to promoting GreenPower will always be finite, efforts must be focused in order to achieve the best possible outcomes.

For this reason it is proposed that investment in communications should be primarily focussed on those audience segments with the greatest propensity to purchase GreenPower, identified earlier as those consumers with altruistic attitudes and pro-environmental views, followed by those with a high locus of control and some knowledge of renewable energy technology. Targeting this segment is likely to result in the best
possible outcome in terms of GreenPower uptake and return on communications investment.

While focussing efforts on what may be a relatively small segment of the audience may appear to limit the potential effectiveness of communications strategies, this is proposed as a strategic step in attempting to also reach a wider audience. As has been evidenced in section 5.1, consumer decision making can be significantly affected by social influence. By initially focussing efforts on consumers with the greatest propensity for GreenPower initial success can be optimised. This strategy can then be broadened to leverage the uptake of GreenPower amongst these customers, to encourage uptake in the wider audience through social influence and choice architecture.

6.2 CREATIVE APPROACH

As explained by Belch and Belch (2001, 266 - 270) there are two broad creative approaches a communicator can utilise to engage their target audience, these being either rational or emotional. A rational approach relies largely on the assumption that consumers will make rational decisions based on the information presented to them and generally entails focussing on the practical benefits of using a particular product or service. In the case of GreenPower a rational approach could involve presenting consumers with facts on emissions produced by traditional electricity generation, explain how these emissions contribute to climate change and present GreenPower as the favourable alternative.
Conversely an emotional approach plays on consumer’s feelings and may target specific emotions which can be classified as either personal feelings; such as joy, pride, security and fear or social based feelings; such as recognition, status, affiliation and embarrassment. An emotional GreenPower campaign may overlook the statistics on emissions and climate change and aim to instil pride in the consumption of GreenPower or a sense of embarrassment or guilt in those not consuming GreenPower.

Whilst deciding on a creative approach is a crucial part of a communications strategy it is important to appreciate that rational and emotive approaches are by no means mutually exclusive and can often both be necessary to optimise communications (Albers-Miller and Stafford 1999). As Belch and Belch (2001, 272) go on to explain “consumer decisions are often made on the basis of both emotional and rational motives and attention must be given to both elements in developing effective advertising.” Furthermore a 2005 study examining the effectiveness of functional (rational) appeals and emotional appeals in Green marketing (Hartmann et al. 9), found the most effective approach involved combining both strategies.

As identified in the behavioural economics discussion in section 5, consumer rationality cannot always be relied on and in many circumstances is not evident at all. Despite this, a rational approach highlighting the facts of electricity generation and its contribution to emissions and climate change, it can be assumed is an important motivator for the target audience who hold pro-environmental views and altruistic attitudes. As this audience has been identified as having the greatest propensity for GreenPower, elements of a rational
creative approach should be considered and combined with an emotional approach to most effectively engage this target audience.

Amongst the wider audience who may not share the same level of environmental concern or altruism, elements of a rational appeal are less likely to be effective. As evidenced in the section 5.1, emotional factors have significant influence on consumer purchase decisions in the context of GreenPower and comparable markets, particularly with respect to social influence. This was typified by Nolan et al. (2008) who demonstrated that while consumers stated reasoning for conserving energy was out of concern for the environment their actual behaviour was most closely influenced by the behaviour of neighbours in their community. Emotive communications leveraging elements of social influence such as social norms and fairness could be effective in not only prompting greater uptake of GreenPower amongst the target audience, but also with those who may not share the same pro-environmental views or altruistic attitudes but are similarly influenced by emotive factors such as the actions of others.

Based on the above discussion it is recommended that a combination of rational and emotional appeal is used when communicating with the target audience and solely an emotional appeal used when targeting the wider audience.

6.3 CONSIDERATIONS

6.3.1 CONSIDERATION 1:

*Attempting to increase the prevalence of environmental concern and altruism.*
Before proposing the communications initiatives that could be implemented, a possible strategy has been ruled out for consideration. As identified in the research findings in section 4 of this dissertation, a prevalence of environmental concern and altruism is consistent with existing GreenPower customers and those with a stated propensity to purchase GreenPower. This trend suggests that increasing the prevalence of environmental concern and altruism amongst the audience could subsequently result in increased uptake of GreenPower.

This strategy has been overlooked for two main reasons; firstly, to achieve such an objective is likely to involve a sizeable campaign and respective budget. Secondly and more importantly, in section 2 the assumption was established that overall awareness has a limited affect on GreenPower uptake and in section 5.1, in the relatable context of energy conservation, it was shown that while environmental concern may be given as the main reason for conserving energy, social influence was in fact more important. Based on these findings it is assumed a strategy aiming to increase environmental concern and altruism amongst the wider audience is likely to be an inferior strategy to targeting those amongst the audience with the greatest propensity to purchase GreenPower and leveraging their uptake through social influence and choice architecture to reach a wider audience.

6.3.2 CONSIDERATION 2

*Budget constraints of governments and energy utilities.*
Governments and/or energy utilities looking to increase the uptake of GreenPower through communications will invariably have limited budgets. Given this consideration the suggested communications strategies provided will focus on channels likely to be readily available, which avoid the need for expensive traditional media such as television, press, radio and outdoor. The assumption is made that governments and energy utilities looking to implement such initiatives will have access to customer databases, facilitating communications through channels including; direct mail, electronic direct mail, bill inserts and telemarketing. Other key, cost effective digital channels will be considered, particularly social media, synonymous with social influence.
6.4 OUTLINE OF KEY STRATEGIES

Based on the preceding research and discussion, the following four practical communications strategies are outlined. While these strategies are all based on insights and findings from academic research and case studies, pre implementation qualitative testing is an essential step to undertake prior to implementing any such initiative, if outcomes are to be maximised.

STRATEGY 1 - LEVERAGE KEY INFLUENCERS

As discussed above, social influence can have a significant effect on consumers’ purchase decisions. This type of social influence presents an opportunity for certain members of a community to be utilised for the purpose of promoting GreenPower. Existing GreenPower customers who are active communicators within their community would be ideal candidates. Their communications activity could be through any channel whether it is through social media or involvement in a local community group, with the key focus being on encouraging others to become GreenPower customers.

While some people passionate about environmental issues and/or renewable energy may be willing to take on such a role if approached (or may already be doing so), this pool of influencers could be expanded by offering incentives. A possible incentive which may encourage community action would be to pledge a donation to a community fund or project once a certain amount of local customers signed up to GreenPower. This strategy leverages social influence by both promoting the use of GreenPower by existing
customers and incentivising the uptake of new customers with the pledge of a community donation. Such an approach may also be effective in establishing a social norm, if it becomes somewhat of an expectation within the community that residents purchase GreenPower.

**STRATEGY 2 - PROVIDE MEANS FOR CUSTOMER RECOGNITION & SELF PROMOTION**

Social influence could again be leveraged by providing customers with the means to promote the fact they are GreenPower customers and encourage them to do so. Simple options to facilitate this exist through social media where mediums such as Facebook and Twitter could be used to provide GreenPower customers an avenue to show their ‘friends’ or ‘followers’ that they are GreenPower customers. This could be simply achieved through sending existing GreenPower customers a request to ‘Like’ GreenPower on Facebook or a simple tweet from the organisation at the customers hash tag letting their followers now they are signed up to GreenPower.

This strategy is a digital version of a common approach employed by charities, when after making a financial donation you will be given a badge, ribbon or similar. This allows to donator to receive recognition for their donation, influence others to act similarly, and helps spread awareness for the course. This more traditional approach should also be extended to GreenPower customers and is particularly relevant to those who are not active on social media. This could be achieved through providing customers with a sticker
or a similar piece of collateral that could be displayed prominently on their home in a similar manner to the common neighbourhood watch stickers.

**STRATEGY 3 - ADVISE RESIDENTS OF COMMUNITY CONSUMPTION**

As demonstrated in section 5, advising people that their peers in the community are behaving a certain way can have a definitive influence on changing their behaviour or in this case their purchase decision. By simply advising those consumers who do not purchase GreenPower that a certain amount of people within their community are purchasing the product could appeal to their sense of fairness, and if the amount of existing customers was large enough could also be established as a social norm. This could be achieved through including the information on customer’s electricity bills, including a separate insert with the bill or as a separate piece of mail altogether. As in the Thaler and Sunstein example given in section 5.1.3, emotive graphic icons may also be useful for inclusion. If uptake in the community was particularly low an example from interstate or overseas may be able to be utilised.

Care must be taken to avoid potentially adverse outcomes by advising those existing customers of the amount of people in the community who do not purchase GreenPower, as was the outcome in the Thaler and Sunstein example where residents in California who were advised they were using less electricity than the community average increased their consumption (2008, 74).
STRATEGY 4 - UTILISE CHOICE ARCHITECTURE IN COMMUNICATIONS

Choice architecture is a powerful tool for influencing peoples decisions as demonstrated in the various practical examples provided by Ariely (2008), given in section 5.2. As outlined in section 2, GreenPower customers in Sydney, depending on their supplier, have the option to choose the percentage of GreenPower they would like to purchase ranging from 10% to 100%. Applying choice architecture strategies to the communications customers must engage with when making this purchase decision, the percentage of GreenPower chosen by new and existing customer can be maximised. The following are three practical examples of how this could be achieved.

STRATEGY 4.1 - USE THE DECOY OPTION TO FAVOUR 100% GREENPOWER ALTERNATIVE

Figure 1 in section 2.2 breaks down the GreenPower options available to Sydney customers by supplier, GreenPower percentage alternatives and finally approximate price premium per kilowatt hour. As shown many suppliers charge customers the same (or marginally smaller) premium whether they purchase the minimum or maximum GreenPower alternative. By manipulating the pricing structure of the alternatives and incorporating a decoy option, the amount of consumers purchasing 100% GreenPower could be maximised.

This could be achieved in numerous ways, an example of which is as follows:

Country Energy customers for example, have four GreenPower alternatives to choose from; 10%, 20%, 50% and 100% each for a flat weekly fee of $1.30, $2.00, $4.50 and
$8.00 respectively. The calculations in Figure 1 (section 2.2) demonstrates that based on NSW average household electricity consumption this represent a per kilowatt hour premium of 9, 7, 6 and 6 cents respectively. While there is some value to the consumer in purchasing 20% over 10%, or 50% over 20% this is only marginal and there is no increased value in going from 50% to 100%. An alternative to this pricing would be to leave the 10% and 20% alternatives at their current price and increase the 50% alternative to $7 or even $8 per week. This would clearly make the 50% option inferior to the 100% option and make it comparatively more attractive to customers. This could be done more aggressively by also increasing the price of the 10% and 20% options, however such a strategy would risk excluding customers not willing to commit to the monthly fee associated with the 100% alternative and saw no value in the lesser alternatives.

STRATEGY 4.2 - FRAME THE OPTION TO PURCHASE GREENPOWER MOST EFFECTIVELY

In addition to how the price of alternative GreenPower options are presented to customers, the way in which GreenPower as a whole is presented is also very important in promoting uptake. As explained in section 5.2.2, how a decision is framed when presented to a consumer can have a significant impact on their decision, and loss aversion is a common trait which can be exploited. When communicating to electricity consumers presenting GreenPower as an alternative to standard electricity, loss aversion principles can be introduced. As GreenPower does involve paying a premium, if loss aversion is to be used, it must focus on emotive elements rather than rational. 

54
There are various ways such a strategy could be implemented and the following alternatives combine loss aversion with elements of social influence outlined earlier in this section.

While many ‘Green’ marketing efforts for products and services focus on the benefits of customers taking a certain action, applying a loss aversion principle suggests focusing on the negatives may be more effective. Rather than communicating to electricity customers that by purchasing GreenPower they will be reducing emissions and investing in renewable energy technology, it could be presented that by not purchasing GreenPower the customer is adding to emissions or neglecting the need for support and investment in renewable energy. This may seem an aggressive approach and if not properly tested prior to going to market could have potentially adverse outcomes. However, if designed correctly and combined with key social influence insights, could be highly effective in increasing the uptake of GreenPower. For example “by not purchasing GreenPower you are missing the opportunity to help reduce emissions and develop renewable energy technology as x amount of your community are already doing”. Such an approach utilises loss aversion and social influence to encourage GreenPower uptake.

STRATEGY 4.3 - ESTABLISH A FAVOURABLE PRICE ANCHOR

As demonstrated in section 5.2.3 the price consumers are willing to pay for a certain product can be significantly affected by a price anchor. By establishing such a price anchor in the scenario when customers are deciding whether or not to purchase GreenPower and what percentage of GreenPower to purchase, selection of the desired
outcome(s) can be optimised. As with the previous example this could be done in a
countless number of ways, two possible examples are as follows.

Comparing the additional cost of GreenPower to a customer’s electricity consumption
could set a favourable price anchor, furthermore this could be emphasised by comparing
different periods i.e. “last year your household spent $2,500 on electricity, for an
additional $8 per month you could be consuming 100% GreenPower…”.

Alternatively the cost of GreenPower could be compared to an arbitrary item customers
are likely to consume on a regular basis which could set a favourable comparative price
anchor. i.e. “for the cost of a cup of coffee 50% of your weekly electricity could be
GreenPower…”.

Utilising communications strategies to increase demand for GreenPower is supported by
the numerous academic studies referenced earlier in this dissertation. The specific
strategies recommended above however are in contrast to some of those provided in
some studies which are based around more traditional communications approaches, such
as suggesting a focus on raising awareness and increasing education levels as the most
effective way of promoting GreenPower. While it is not disputed that awareness levels
and education are important in increasing the uptake of GreenPower, based on the
research in this dissertation it is felt these strategies are inferior to those provided.

It has been shown that firstly awareness of GreenPower has a limited effect on customer
uptake and secondly a value action gap exists amongst consumers where a stated
propensity to consume a certain way does not correlate with actual behaviour. The
strategies recommended above are based on elements of behavioural economics and rely on social influence and choice architecture to avoid these barriers. Furthermore, these strategies are modest in the resources they require and are subsequently more attainable to governments and/or energy utilities with limited budgets. Despite the relative modesty of these strategies, the research in this dissertation suggests they have a high potential for success.
7. CONCLUSION

Reducing emissions attributable to electricity production is unlikely to be achieved on a large scale without a multifaceted approach taken to address this issue. As mentioned in the introduction, policy instruments seem to have been favoured by governments and are likely to play an important role in achieving this goal, but should not be relied on in isolation. The GreenPower initiative represents a significant opportunity to contribute to the development of the renewable energy industry and by increasing the demand for electricity generated by renewable sources amongst consumers, this initiative can be optimised.

This dissertation demonstrates the scope for alternative communications initiatives to be implemented in parallel with broader policy initiatives, to increase the uptake of GreenPower and reduce emissions associated with traditional forms of electricity generation. The studies of existing and potential GreenPower customers demonstrate similar traits amongst those with the greatest propensity to purchase GreenPower. Concepts of behavioural economics have been identified which could be implemented through communications to effectively firstly target those with the greatest propensity for GreenPower and secondly leverage the existing customers base to increase demand amongst the wider audience. Furthermore, elements of choice architecture have been identified as valuable tools to be exploited to both increase the uptake of GreenPower and the percentage of GreenPower chosen by customers.
Utilising the research provided in this dissertation and considering the strategies recommended, governments and energy utilities could utilise communications as a means to increase consumer demand for GreenPower, reduce GHG emissions and help develop the renewable energy industry.
8. REFERENCE LIST


http://www.carbondo.pdf

http://www.carbondo.pdf


*Environment and Behavior* 33 (6): 733-64.


http://www.healthebay.org/node/1515

http://www.iea.org/co2highlights/co2highlights.pdf


