



# Energy bill contents and bill requirements: Literature review

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## CONTENTS

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<b>1. Executive summary</b>	<b>2</b>
<b>2. Behavioural factors affecting the understanding and use of energy bills</b>	<b>5</b>
<b>3. Bill complexity and accessibility</b>	<b>6</b>
3.1. Academic literature: complexity	6
3.2. Stakeholder feedback to AEMC: complexity	9
<b>4. Energy efficiency</b>	<b>12</b>
4.1. Academic literature: efficiency	12
4.2. Stakeholder feedback to AEMC: efficiency	15
<b>5. Comparison and switching</b>	<b>19</b>
5.1. Academic literature: switching	19
5.2. Stakeholder feedback to AEMC: switching	21
<b>6. References</b>	<b>24</b>
6.1. Academic Literature	24
6.2. Submissions to AEMC consultation	27

## 1. Executive summary

On 18 March 2021, the Australian Energy Market Commission (AEMC) released its final rule determination tasking the Australian Energy Regulator (AER) with developing a set of guidelines for retailers determining bill content and billing requirements (AEMC, 2021). BETA prepared this literature review to help identify a) the major issues with energy bills, b) proven methods of improving bills, and c) remaining gaps in the literature. While this literature review aims to cover most of the key research relevant to identifying gaps in relation to energy bill contents and billing requirements, it was not a full systematic review and so does not claim to be comprehensive.<sup>1</sup>

BETA and the AER subsequently developed a research plan to address the gaps identified in the literature review.<sup>2</sup> This literature review examines three bill content areas:

- Bill complexity and accessibility
- Energy efficiency information in bills
- Bills as a tool for promoting switching

For each area we have summarised findings from the literature, as well as feedback provided by stakeholders during the AEMC submission process. Relevant behavioural insights are also highlighted which will be utilised to inform the development of billing interventions in the next stage of this research.

**Complex bill content and structures** are confusing for consumers in the energy market. Retailers and consumer groups contest what causes this confusion, but there are matters where evidence in the literature is clear on the changes that can improve energy bills. Replacing text with graphs, using conversational language, reducing the amount of information, and providing important information on the first page are proven ways to improve bill comprehension. Further research should test whether standard presentation of key plan characteristics and plain language definitions of technical terms improve understanding.

Providing consumers with feedback on their energy usage is an effective way to engage and educate them on their **energy efficiency**. However, issues with the format and delivery of usage feedback in Australia mean that many consumers have problems understanding this information. Existing research does not clarify the ideal format and mode of delivery for this and the information could be improved to help consumers whilst reducing costs for businesses.

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<sup>1</sup> We published an earlier version of this literature review to coincide with the release of BETA's 'Improving Energy Bills: Interim Report' and the AER's subsequent consultations on the Better Bills Guideline. In this final version, the section on benchmarks (section 4.1.2) was updated to reflect a recent literature review specifically on this topic (Frederiks, 2021). We also took the opportunity to make minor updates or corrections to the sections on usage feedback (section 4.1.1) and switching (section 5.1.1).

<sup>2</sup> The details of that research plan, along with the results, can be found at: <https://behaviouraleconomics.pmc.gov.au/projects/improving-energy-bills>

Making bills easier to compare is a crucial step in **encouraging switching**, but more active promotion of switching services in bills themselves also motivates inert consumers.

Standardisation of key terms between retailers will help consumers make better decisions when comparing plans. However, switching providers is often difficult. Encouraging ‘within provider’ switching (i.e. to a cheaper plan offered by one’s current retailer) may be an easier and more effective method for helping consumers. So-called ‘best offer’ notices<sup>3</sup> and other calls to action on bills need further investigation to identify how they can be used to aid consumer switching.

This review identified findings that are supported by consistent evidence and/or stakeholder feedback. It also identifies several areas that would benefit from further research. These ‘gaps’ may reflect inconsistent findings, challenges in generalising findings from other contexts, inconclusive evidence, or simply a lack of evidence.

### Findings supported by consistent evidence and/or stakeholder feedback

1. Energy bills include complex content that can make them difficult to understand and cause confusion for consumers.
2. Bill simplification, based on evidenced-based behavioural principles, can reduce the cognitive load that bills place on consumers, making them easier to understand and effectively use.
3. Drawing on the available literature, stakeholder submissions and broader evidence from behavioural science, we identified four key principles for the design of energy bills:
  - a. Language: Use simple, conversational language.
  - b. Presentation: Make the bill visually attractive.
  - c. Salience: Make the key information salient
  - d. Structure: Order the information carefully and logically.

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<sup>3</sup> ‘Best offer’ notices provide consumers with details of a better energy plan available to them. They were implemented for all bills in Victoria on 1 July 2019.

## Gaps in the literature

1. Simple *definitions of technical terms* (e.g. kilowatt-hours, tariffs) should be tested to determine whether they would improve comprehension of bills
2. The efficacy and format of *peer comparison (benchmarking) usage graphs* should be tested to improve comprehension for consumers and reduce costs for businesses receiving complaints. However, a real-world trial would be needed to determine their impact on actual usage.
3. Different displays of total usage in *historical usage graphs* should be tested to improve comprehension of bills.
4. Communication of *solar power* in bills should be tested to help consumers evaluate the value of their solar system, optimise their consumption, and smooth demand on the grid.
5. The presentation of *calls to action* (for switching behaviour) should be tested to ensure understanding while minimising consumer distrust.
6. A standardised *summary of plan characteristics* placed on the front page should be tested for its potential to improve comprehension of a plan.
7. The impact of *moving non-essential information* off bills and/or delivering it through alternative means (such as a link from the bill to a website) should be tested to determine whether it would improve comprehension.

## 2. Behavioural factors affecting the understanding and use of energy bills

### Behavioural insights terminology

**Cognitive overload** is a tendency to become overwhelmed by large amounts of information. Cognitive overload may lead us to forget things and delay decisions.

**Familiarity heuristic** is where familiar things are favoured over novel things. This is because familiar things typically feel like they pose a lower risk.

**Framing** is the way a choice or option is presented. Framing can highlight either the positive or the negative aspects of the same decision, leading to changes in relative attractiveness.

**Hassle costs (or friction costs)** are the non-financial costs associated with choosing or switching.

**Loss aversion** is encapsulated in the expression 'losses loom larger than gains' as the pain of a loss is psychologically about twice as powerful as the pleasure of an equivalent gain. Loss aversion can result in not switching if the losses (such as the time to search) weigh more heavily than the potential financial gains.

**Omission-commission bias** is when people feel more pain from an error if they actively committed time and effort to make the choice rather than if they passively omitted to make a choice.

**Over-confidence and planning fallacy** are when people incorrectly anticipate they will take action later (for example, to find a new deal when an introductory contract expires), but then do not actually take any action when the time comes.

**Present bias** is where people inflate the immediate implications of their decisions when compared with future impacts. This is linked with procrastination, which can occur because people put off decisions, even those in their best interests.

**Salience** is the quality of being particularly noticeable or prominent.

**Social norms** are the accepted standards of a group. People are heavily influenced by the behaviour considered acceptable in a group or by society.

### 3. Bill complexity and accessibility

#### Key points: complexity

- Many consumers spend relatively little time engaging with their bills, partially because they find the information confusing and difficult to understand.
- Cognitive overload and confusion when reading energy bills is partly caused by consumers' low energy literacy, but can also be caused by complex and inconsistent language, large amounts of information, and confusing layouts.
- Bills in the market are not meeting best practice standards, with retailers blaming excessive regulation for consumer confusion while consumer groups argue it is due to complex plan characteristics.
- We identified four key principles for the design of energy bills:
  1. Language: Use conversational language and plain English, aiming for a year 7-8 reading level. Remove jargon or technical terms where possible.
  2. Presentation: Make the bill visually attractive. Use a combination of text, diagrams and tables.
  3. Salience: Include key information on the front page. (At a minimum, this includes: the amount due, billing period, due date, how to pay, and any discounts that have been applied.) Only include one graphic for the 'amount due'. Use colour, boxes and bold sparingly to highlight key information.
  4. Structure: Group the bill contents into common themes (e.g. how to pay, understand your bill, understand your plan). Order information carefully and logically, use headings, and draw out key facts.

#### 3.1. Academic literature: complexity

##### 3.1.1. Attention

Consumers generally have low levels of energy literacy (Gardner and Nilsson, 2017).

Consumers struggle to describe how electricity is distributed to their homes, and do not know the components of energy costs. There is also a lack of understanding of the differences between standard and market offers, and how individual behaviour relates to energy costs.

Complexity in bills can act as a major barrier to engagement as many consumers may become inattentive and avoid looking for information that is both beneficial and freely available (Russell, Hagmann and Loewenstein, 2017). A lab experiment studying inattention and consumer engagement in electricity and gas markets supports this finding (Sitzia et al., 2015). The experiment finds making participants complete unrelated tasks during the decision process increases the number choosing the default option over superior options.

The bill's formatting and presentation is important for drawing and holding attention. Evidence from focus groups suggests that a combination of text, diagrams and tables may be more

effective than single-format bill presentations (Roberts and Baker, 2003). A framework BETA developed for improving the design of government forms (the 'WISER framework') is also relevant: it recommends making the form (or bill) visually attractive, using boxes and bold sparingly to highlight key information (BETA, 2020). It further recommends ordering information carefully.

**BI box: Make it Easy**

Presenting information in a simple and salient way – using plain and consistent English, limiting the amount of information presented, and utilising white space – helps consumers better attend to and understand information presented.

Complex terminology reduces consumer attention and limits the information they take out of a bill. Presenting technical terms using graphics improves understanding by raising attention. Furthermore, conversational language in a bill improves attention and understanding. BEWorks (2016 pp12-13) show that using a conversational tone (such as 'What do I owe?' and 'When should I pay by?') improves the understanding of bills. Similarly, BETA's WISER framework for improving government forms recommends aiming for a year 7-8 reading level, and removing jargon where possible (BETA, 2020).

### **3.1.2. Technical language**

Consumers struggle to understand the different aspects of electricity tariffs and cannot distinguish between, for example, watt (W) and kilowatt-hour (kWh; Karjalainen, 2011). Furthermore, the term 'kWh' lacks meaning for consumers because of its lack of tangibility to actual usage activities (Ofgem, 2009 pp15-16). Information – such as how much you can do with 1 kWh of electricity – improves the accessibility of kWh information by providing concrete examples of real-world usage (BEWorks, 2016 pp15-16).

Time of Use (TOU) details also create confusion. Consumers can fail to interpret the information correctly and make mistakes mapping consumption to costs. A study from BEWorks (2014 pp52-54) shows that consumers have better comprehension and recall of TOU information when traditional TOU terms 'On-Peak, Mid-Peak, Off-Peak' are renamed to, for example, 'Most expensive, Average, Least Expensive'. The interventions also increased consumers' intentions to move consumption to non-peak times of the day. However, they noted that the widespread use of the 'Peak' terms had allowed consumers to familiarise themselves with the language and learn the meaning over time.

### **3.1.3. Total content**

What content should be prioritised on an energy bill is a contested question. Research conducted by retailers, governments and academics, as well as BETA's past research

(BETA 2018), broadly agrees that, at a minimum, the front page of the bill should contain information on the amount due, billing period, due date, how to pay, and any discounts that have been applied.

Providing more information does not itself lead to increased comprehension and can lead to cognitive overload and confusion. For example, BEUC (2017) shows that bills in France and the Czech Republic are overloaded with content but do not improve comprehension. They identify the following problems with the format of bills: the large size of electricity bills, confusing layouts, excessive data, and missing references to independent organisations offering energy advice. However, a shorter bill is also not necessarily simpler: additional information that is relevant or useful to energy consumers, and that is presented clearly and with minimal complexity, can make a bill easier to understand.

#### **3.1.4. Layout**

The bill layout also matters for consumer comprehension and engagement. A European Commission (2018) study finds a ‘best practice’ bill, which clearly and coherently lays out important information, increases the number of correct comprehension answers from participants when compared with a ‘current market practice’ layout. At the same time, consumers rated the ‘best practice’ bill higher on subjective measures of how easy it is to understand.

The most important factor in the layout of a bill is the first page. Consumers primarily look at what is on the front page of a bill and like having the most important information available upfront (BEWorks, 2016 p21; Ofgem, 2009 pp17&28). BETA’s previous research using eye tracking suggests that detailed information on the bill may be rarely used (BETA, 2018). Although this user testing only involved a very small sample, it found that consumers want the billing period, due date, amount due, and discounts to appear upfront on the bill. In a different context, a trial in the UK by the Financial Conduct Authority (2016) shows that a disclosure intervention encouraging consumer switching between savings accounts had a positive effect when it was displayed on the front page, but no effect when displayed on the second or third pages.



## 3.2. Stakeholder feedback to AEMC: complexity<sup>4</sup>

### 3.2.1. Tariff structure

In their submissions to the AEMC, energy retailers broadly agree that energy bills are too long and too complex, but laid the blame for this on regulation creep within the existing National Energy Retail Rules (NERR) (AGL submission, 2020). Alinta (2020) states that “excess of regulation is what has caused the bills to be as complex as they currently are”. Several retailers referred to their own consumer research findings, in which customers expressed a preference for shorter bills. For example, Energy Australia’s (2020) research finds that customers want to know: “Who is it for and from?”; amount due, due date, and how to pay; breakdown of the costs involved; itemised usage; benefits/discounts applied and rate changes; and usage summaries and comparisons (year on year). Likewise, Momentum Energy (2020) recommends mandating essential information for inclusion in the bill and “allowing a retailer to provide access to the other elements of Rule 25 in a manner which is more in line with customer preferences” to reduce complexity.

While energy retailers suggest that customers might prefer to see a simple bill most of the time, the Queensland Council of Social Services (2020) points out that an energy bill is a starting point when considering switching plans or deciding to invest in solar or batteries, and that “if the bill is not understandable or not sufficiently comparable, these can be barriers to taking action or making decisions” (2020). Essential Services Consultative Group members reported that clients facing hardship and experiencing difficulties with bill payment had major difficulty understanding their bills. These difficulties are due to bills’ overall complexity, inconsistent and changing formats, information density, illogical organisation, and gaps in the bill content (Queensland Council of Social Services, 2020).

Although energy retailers blame the complexity of bills on the existing regulations, there are additional sources of complexity. Accurassi (2020), a company that runs a comparison service, and Powerpal (2020), a company that installs home energy monitors, have experience trying to read and interpret bills from different companies. Accurassi attributes the complexity in comprehending energy bills to “multiple pages, multiple periods which contain rate variations (eg. especially for three-monthly bills), complex to understand plan types, and rate types”. Similarly, Powerpal says “there is a lack of consistency as to how pricing structures and conditional discounts are presented between retailers which makes it challenging to accurately read tariff information from bills”.

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<sup>4</sup> Some elements frequently identified as complex in the submissions will be described elsewhere in this literature review, namely benchmarking graphs, energy efficiency and energy usage information, and information relating to new technologies (solar, batteries, etc).

### 3.2.2. Technical language

The Energy and Water Ombudsmen for South Australia, New South Wales, Queensland and Victoria prepared a joint submission based on their complaints data (EWON, EWOV, EWOQ and EWOSA, 2020). They mention that nomenclature is confusing (controlled load tariffs are often confused with off-peak tariffs) and tariffs are not clearly labelled. For example, business tariffs are not explicitly described on a customers' bill, causing some customers to be charged at the wrong rate for extended periods.

The proposal to standardise the technical language used in energy bills enjoys broad support from across the submissions. Origin (2020) notes that "AER ought to establish a direction-setting out consistent and simple nomenclature not just for bills, but for use in all communications accessed by the customer such as Plan information documents and Energy Made Easy." AGL (2020) points out a table in the Retail Pricing Information Guidelines (RPIG) already covering energy language standardisation. While many submissions draw attention to problematic terms and the desirability of plain language terms or presenting complex terms with clear definitions, no evidence indicated which terms are preferable or objectively better.

Consumers struggle with the term kilowatt-hours. Powerpal (2020) states that "The breakdown of consumption and charges on bills use complex terms such as kWh, controlled load and peak/offpeak/shoulder along with a collection of seemingly random billing periods which can be hard for even trained professionals to interpret". The Energy Project (2020) suggests when abbreviations are used in a bill, a short glossary should be added to provide definitions.

### 3.2.3. Layout

Uniting Communities (2020) and The Energy Project (2020) support vulnerable consumers to improve energy efficiency and negotiate a better deal on their bills. Their experience assisting with the interpretation of multiple bills has led them to state: "the lack of direction concerning billing formats has led to bills that are complicated, confusing and difficult to digest". They reviewed seven current retailer billing templates and highlighted a range of issues and solutions. In particular, they recommend standardising the information and layout of the first page to present essential information only.

Most energy retailers who provided submissions *do not* support prescription of the layout and formatting of bills, but there are some exceptions. Next Business Energy (2020) supports consistent positioning of National Meter Identification (NMI) information. Energy Australia supports limiting the size of the bill to two pages and placing key information on the first page. Consistent layout of essential information on the first page is broadly supported by Ombudsman schemes, Accurassi, the Public Interest Advocacy Centre, Combined Pensioners and Superannuants Association of NSW Inc., and Uniting Communities/The Energy Project.

The Energy Project notes that inconsistent formats should be fixed through standardisation in the information and layout of the first page of bills: “In our view, the first page of an energy bill is the most important page of the bill. It is often the only page consumers will read (for a variety of reasons) and as such, should contain essential information only” (Energy Project, 2020).

## Reflections

- Evidence for standardisation of nomenclature, simplification of bills, and placement of essential information on the first page is strong and supported by both the literature and stakeholder submissions.
- Consumers generally learn terminology over time and will benefit from the consistent use of terms between retailers, however, it will help to identify which technical terms should be replaced with a consistent approach across the industry.
- Research that explores the use of alternative mediums, particularly through digital technologies, will help highlight ways in which information could be removed and bills made simpler without customers losing access to important information.
- Complexity in plan characteristics is not *caused* by energy bills, so simplifying bills will not necessarily make it easier to understand the plan, but there is still an opportunity for bills to be used to address this problem.
- In most energy bills, plan characteristics (variations in rates, periods, discounts) are not described explicitly but appear within the invoice as a line item, whilst customers on TOU tariffs are rarely provided with any information about when their rates change. (This reflection was based on our review of a range of actual energy bills, rather than on the academic literature or stakeholder submissions.)
- Developing and testing key plan information statements on bills could help solve issues with cognitive overload by providing consumers with an easy-to-understand summary of their plan.

## 4. Energy efficiency

### Key points: energy efficiency

- Energy consumption and efficiency information is currently shared through bills in two main ways: historical energy usage charts and peer comparison (benchmarking) charts.
- A recent literature review by CSIRO concluded that: “Presenting electricity consumption benchmarks on household bills is likely to benefit some, but not all, customers.” It made a series of recommendations to improve benchmark design and delivery. This includes techniques that may address potential ‘boomerang effects’ for consumers who have below-average usage.
- Retailers and Ombudsmen point to large numbers of complaints about peer comparisons on bills and the cost this has on both firms and consumers.
- Other interventions such as smart meters and in-home displays (IHDs) have much larger impacts on energy efficiency than other types of usage feedback.
- Information on bills does not capture the entire usage story for solar customers resulting in a significant amount of customers failing to get accurate energy usage data in their bills

### 4.1. Academic literature: efficiency

#### 4.1.1. Usage feedback

There is some evidence that usage feedback on bills have a small impact on encouraging energy efficiency. A real-world trial with 700 households in Helsinki in 1990-92 tested the impact of sending – alongside the bill – a feedback letter containing information about historical consumption (Arvola et al., 1993). Consumers who received the feedback letter reduced their electricity usage by around 1.5 per cent compared to those who did not.

A recent online experiment conducted in multiple EU countries tested variations in how usage feedback was presented on an energy bill, varying by: location (first or second page), detail (monthly or quarterly), and benchmark (relative to historical usage or an average household) (EU, 2018 Section 7.3). It did not find evidence that these variations in how consumption data was presented had an impact on participants’ understanding of their energy usage or their intention to manage their energy consumption.

#### 4.1.2. Peer comparisons (benchmarking)

This section summarises the findings of a recent, thorough review of the literature on electricity bill benchmarks (Frederiks, 2021). That review concluded that:

“Presenting electricity consumption benchmarks on household bills is likely to benefit some, but not all, customers. Some segments of the population may respond in different

ways to the benchmarks, with evidence suggesting that there may be a subset of households (e.g. below-average energy consumers) who do not benefit from the current design and delivery of this information.” (Frederiks, 2021, pv)

The literature review adds, however, that two sets of factors may moderate the effects of benchmark data on consumers. First, the efficacy of benchmarks may be affected by their design and delivery, such as: the visibility and credibility of information, choice of reference or comparison group, or the mode and frequency of delivery. Second, the efficacy of benchmarks is likely to be affected by the individual characteristics of consumers, such as their baseline level of consumption and the extent to which their behaviour deviates from the benchmark.

The literature review concludes with a series of recommendations for the future design and delivery of energy consumption benchmarks in Australia (Frederiks, 2021 Section 4.1). At a general level, it endorses a current AER guidance note (AER, 2020), which recommends that retailers use ‘graphical and/or pictorial formats to present the benchmarks in a way that is easy for customers to understand’. In addition, it makes the following recommendations.

*Visibility and placement of information:* benchmarks should be clearly visible and prominently displayed on consumers’ bills.

*Credibility and trustworthiness of information:* there are low levels of consumer trust in the retail energy sector so having the benchmarks associated with or endorsed by a reputable official source (e.g. government, consumer watchdog or consumer advocacy group) may help to enhance consumer trust and confidence in the information

*Meaningfulness and interpretability of information:* Consider what type of information is most meaningful and interpretable to individuals. For example, displaying the benchmarks in terms of dollars/money spent may make the information more meaningful, relevant and interpretable.

*Relevance and personalisation of information:* The reference/comparison group should be as similar to the consumer as practically possible and relevant to their own identity.

*Combine descriptive and injunctive norms:* To reduce the risk of a ‘boomerang’ effect among low energy users who are already performing better than the average in terms of energy conservation, it is important to combine the benchmark data (akin to a descriptive norm) with an injunctive norm that offers social approval and positive reinforcement for desirable behaviour (for example, a smiley face or words of encouragement).

*Consider the reference group:* When displaying benchmark data, a household’s energy consumption can either be compared to the ‘average’ consumption of the reference group or to a higher-performing group (e.g. the most efficient 20% of households from the reference group). Consideration should be given to the potential benefits of the latter.

*Add practical energy-saving tips:* Consider including simple, easy, and practical advice alongside the benchmarks to inform consumers about what steps can be taken to save energy.

*Standardisation of information across retailers:* Australian energy retailers currently present benchmark data on customer bills in different ways. There may be value in exploring whether retailers can agree on a single, standardised format for displaying energy consumption benchmarks on the bills of residential customers.

#### **BI box: Peer comparison**

Social comparisons can be powerful drivers of human behaviour. Cialdini's (1987) work suggests norms are more influential when people can identify their similarity with the peer group. A well-known UK Behavioural Insights Team trial found including the statement "9 out of 10 people pay their tax on time" in communications with individuals who owed taxes increased payment rates by 15 per cent. The effect was strongest with localised social norms – "9 out of 10 people in [your county of residence] pay their tax on time" (BIT, 2012).

#### **4.1.3. Real-time information**

Direct feedback through in-home displays (IHDs) was the most effective way to drive increased energy efficiency activity. Providing real-time household electricity feedback through IHDs reduced energy usage by up to 9 per cent (Schultz et al., 2015). The displays were most effective when they combined usage feedback with the cost of the electricity or normative feedback comparing them to the usage of similar households. Jessoe and Rapson (2014) also found that households with IHDs alongside a price increase warning reduced usage by around 10 percentage points more during peak demand events than households who only receive price warnings.

A meta-analysis of the effects of non-price interventions on energy conservation (Andor and Fels, 2018) supports these conclusions. They find that the most effective behavioural interventions are real-time feedback through online and in-home displays, which had a higher effect than letters.

#### **BI box: Timely information**

There is usually a limited window to alter an individual's behaviour during the decision making process. Education delivered at the precise moment it is needed most will improve the quality of the application (Benartzi, 2015).

#### **4.1.4. Smart meters**

A large-scale real-world study by Ofgem and UK energy retailers (2011) shows that interventions using smart meters are frequently successful and have large energy savings. The

effectiveness was due to more sophisticated real-time displays and more frequent and accurate historic feedback and billing.

#### **4.1.5. Billing programs**

Bill smoothing and direct debit policies reduce the salience of usage and increase the total amount of energy consumers use. Sexton (2015) shows that enrollment into automatic bill payment programs induces a 4 per cent increase in electricity consumption. Similarly, bill smoothing caused a 6-7 per cent increase in electricity consumption. He concludes that these billing programs interfere with energy and environmental policy goals and increase residential consumers' bills by around \$47 per year.

#### **4.1.6. Other interventions**

In the real-world study by Ofgem and UK energy retailers (2011), apart from two exceptions with minor effect sizes, there was no reduction in energy consumption from interventions including energy efficiency advice, self-reading of meters and financial incentives to save energy.

A meta-analysis of the effects of non-price interventions on energy conservation (Andor and Fels, 2018) found that commitment devices, goal setting and labelling had the potential to reduce energy consumption to a small degree. However none of the 44 studies included in the analysis tested these methods in the context of energy billing.

## **4.2. Stakeholder feedback to AEMC: efficiency**

Content in the submissions concerning energy efficiency relates to three main issues (beyond the comprehension of kilowatt hours discussed earlier):

- Energy peer comparison charts (also known as benchmarking charts)
- Historical energy usage charts
- Solar energy

### **4.2.1. Peer comparison charts (benchmarks)**

Energy retailers suggested that consumers generally do not like the peer comparison charts. The retailers claim that the peer comparison charts have “caused unnecessary consumer distrust, complaints and costs” (AGL, 2020). Energy Australia (2020) and Next Business Energy (2020) echo this sentiment. Ergon Energy (2020) describes similar customer complaints about issues with the benchmarking graph and claims that “each customer is unique and there are too many variables in a household to correctly depict such information on a comparison graph”. There was also some agreement from a consumer perspective, with the joint submission from four Ombudsmen (EWON, EWOV, EWOQ and EWOSA, 2020, p.5) saying that benchmarking

graphs cause “confusion and complaints” and that these problems are “not seen regarding usage over time charts”.

Other submissions, by contrast, were broadly supportive of peer comparison charts (benchmarks) and focused on how they could be improved. The Department of Energy and Mining SA (2020) supported retention of consumption benchmarking to encourage further behavioural changes but suggested the current method of calculating benchmarks should be reviewed to determine whether it was fit for purpose. The Public Interest Advocacy Centre (PIAC, 2020) suggested benchmarks should be better presented, and the Queensland Council of Social Services (QCOSS, 2020) proposed they should be standardised. (Presently regulations require energy retailers to include the benchmark in bills but do not set a strict format, saying only that it has to be in either a ‘graphical or tabular format’.)

The Australian Energy Council (AEC, 2020) took an intermediate position, proposing that bill benchmarks should be available to customers but not required to be included on bills.

The AER (2021) states that “in developing the guideline, the AER will [...] consider the utility of consumption benchmarks as part of their research to help inform the guideline including how to best present this information”. There are three key issues here:

- Do consumers find benchmark information useful?
- What proportion of consumers struggle to understand the benchmarking information?
- To what extent do benchmarking graphs influence energy efficiency behaviours?

#### **4.2.2. Historical energy usage charts**

Charts showing energy consumption over the previous 12 months are generally well liked by retailers and customers, although some retailers contend that more granular information could be provided through other means. The charts give information about seasonal patterns of energy consumption and are rarely the subject of complaints.

Aurora Energy (2020) describes an important issue with the usage comparison over 12 months. Not only is the usage comparison quite different when based on a smart meter (monthly) than when based on manual meter reads (quarterly), but sometimes the manual meter reads are replaced by an estimation, which can be very misleading for customers.

Presentation of the charts varies, and there seems to be a lack of data showing whether this information is presented best as a bar graph, a line graph, or with the usage broken down as peak or off-peak usage. Discussion of energy consumption charts in the submissions centres around consumer preferences and complaints, but lacks evidence on comprehension and impact on consumption.



### **4.2.3. Solar energy**

The joint submission from the four Energy and Water Ombudsmen highlighted customer dissatisfaction with communications about solar on energy bills: “Customers have provided feedback that the inclusion of solar usage and inputs on accounts is unclear on many current bills. Customers report wanting clear information on how much solar is used internally as well as the volume exported. It is recommended that future billing requirements establish how solar information can be provided clearly and simply” (EWON, EWOV, EWOQ and EWOSA, 2020).

## Reflections

- Energy bills are an important touchpoint for delivering usage information to customers, making them an attractive avenue to use when trying to encourage energy efficiency activities.
- Consumers consistently say they primarily use their bill as a means to pay for their energy, raising questions about how much they engage with energy efficiency information.
- A lack of clear evidence raises doubts that consumers are reacting to peer comparisons in their bills the same way as when presented in energy reports. Further research is needed to clarify if consumers find peer comparisons useful in bills, if it actually changes behaviour (and, if so, whether it creates 'boomerang effects' in the wrong direction), and if they could be improved by comparing consumers to their most efficient neighbours.
- While usage information can help consumers to make more energy-efficient decisions, the effect sizes are small when compared to other interventions such as smart meters and IHDs. Improvements to bills that encourage the adoption of these systems could be a more effective method of increasing energy efficiency across the population.
- Lack of effective solar data on bills prevents customers from making the most of their solar by shifting usage times to save money and reduce pressure on the grid in peak demand times.
- Consumers with solar panels do not receive information on their bills about their self-consumption. This potentially results in an underestimation of their total energy usage and the value of their solar PV system.
- It may not be possible for data about internal solar usage to be communicated on the bill, however, with 21 per cent of Australian households having solar panels, this is a clear area for improvement in energy bills.

## 5. Comparison and switching

### Key points: comparison and switching

- There is significant literature on general switching costs or friction costs in service markets. One key cost is the time and effort to gather and evaluate information to switch but there are several others.
- The structure of and information on bills play an important role in making the switching process easier and acting as a trigger for consumers to act.
- Including QR codes or links to comparison services significantly reduces the amount of effort required to look for a plan.
- Standardising terminology removes some switching costs by reducing the time and effort required to compare different plans and is broadly supported by all stakeholders.
- Calls to action work best when presenting lower rates or more savings available and when consumers are given only one alternative option, rather than many.
- Letters and emails are other proven methods of increasing switching rates in the energy market.

### 5.1. Academic literature: switching

#### 5.1.1. General barriers to comparison and switching

There are many barriers to switching (Jones et al., 2002). First, searching for and comparing alternative products takes time and effort, especially when there are many suppliers in the market and the product is complex in nature. Consumers have to search for alternatives, sift through the available information, and then evaluate the options.

Second, there are the fees and transaction costs involved in the actual process of disconnecting or re-connecting an energy service. When changing service providers, customers may perceive initial costs such as set-up and closing fees (or switching fees) to be too great even if, over time, they would be financially better off if they switched. Schleich, Faure & Gassmann (2018) provide empirical evidence for such 'present bias' within the electrical contract switching context, with more patient individuals showing increased propensity to switch.

There may be additional psychological and behavioural barriers to switching. Some consumers have a bias towards the status quo i.e. their current retailer (Dubé et al., 2010; Guney & Richter, 2018). This may be due to a disposition towards brand loyalty (Dick & Basu, 1994; Hortaçsu et al., 2017). Alternatively, a preference status quo may reflect fears associated with being worse off if they switch (Burnham et al., 2003). For example, previous BETA research found that 56% of people were concerned switching could lead them to a worse plan (BETA, 2018). Finally, consumers may simply think all retailers are 'the same' and there is no point to switching.

Inserting a 'call to action' into a bill, by drawing attention to other market offers, as well as using standardisation may address these barriers and are discussed further below.

### **5.1.2. Standardisation**

Being able to compare deals easily is the first step in driving switching behaviour. Research in the UK market (Fletcher, 2016) showed a lack of standardised language contributed to communications from retailers that were not easy to compare. In general, standardising language increases consumers' ability to accurately compare offers and make better decisions.

The benefits of standardisation are seen in studies of other markets around the world. For example, in the Massachusetts health insurance market, Marzilli and Starc (2016) find that product standardisation improved consumers' choices (e.g. a shift towards more generous coverage in their health insurance plan). In contrast, adding complexity during the decision-making process, such as through bundling or different time of use plans, caused a small increase in the number of people who chose to stick with the default when there were better offers available (Sitzia et al., 2015).

### **5.1.3. Number of options**

Cognitive overload means consumers are more likely to switch when given fewer options rather than more. Evidence from laboratory and real-world experiments support this. The Financial Conduct Authority (2016) found that statements that provided two better rates available in the savings market lead to less switching than statements only providing one better rate option. Sitzia et al. (2015) also showed that, when participants were given 24 electricity plans to choose from, over 50 per cent of their choices were suboptimal: this fell to around 30 per cent when they were given just 4 options.

### **5.1.4. Call to action and comparison to a 'best offer' or reference price**

Calls to action on bills such as 'best offer' information can counter status-quo bias and increase switching behaviour, but the effects of generic encouragements to switch are less clear. Annual statements in the UK savings market with a switching box containing information on the best rates available from your supplier increased switching from 3 per cent to 6 per cent (FCA, 2016). However, another study (EU, 2018) finds no difference between bills with and without comparison prompts when testing if participants compare deals or choose the cheapest deal.

#### **BI box: Status quo**

Individuals will disproportionately stick with the status quo and maintain their current or previous decision (Samuelson and Zeckhauser, 1988).

When energy retailers advertise an electricity plan, they are required to show how it compares to a 'reference price'. This is a benchmark price for electricity set by the Australian Government based on average electricity use in the relevant area and meant to make it easy for consumers to compare different electricity plans and prices. A study by the Behavioural Insights Team examined the best ways for retailers to communicate this price comparison, and concluded that "Descriptive language (for example, 'the benchmark price set by the government', rather than 'the reference price') was most effective in increasing consumer comprehension" (BIT, 2020).

### **5.1.5. Non-bill communications**

Other forms of communication outside of the bill can encourage switching. Marzilli et al. (2017) ran a study using nudges to increase switching in the US health marketplace. They found letters and emails encouraging the use of an independent switching service increased visits to the website but did not have a significant effect on switching rates. A laboratory experiment by the European Commission (2020) also showed that removing switching costs and sending reminders can increase switching of financial products.

Similar trials conducted in energy markets have also shown the effectiveness of non-bill methods in promoting switching activity. Ofgem (2017) sent letters to consumers on standing variable tariffs informing them of three cheaper market offers available. The letters increased the average rate of switching to 2.9 per cent from a baseline of 1 per cent and were more effective when sent by the customer's own supplier than when sent by the regulator. Similarly, the Behavioural Insights Team (BIT, 2015, pp19-20) increased visits to a government website on switching energy retailers by up to 20 per cent through prompts placed on the outside of Winter Fuel Notification letters. In another trial, digital and SMS reminders increased internal switching in the banking market by 8-9 percentage points (FCA, 2016).

## **5.2. Stakeholder feedback to AEMC: switching**

In submissions to the AEMC, competition and consumer switching is addressed in three ways:

- Mandatory inclusion of retailer's 'best offer' information in the bill (if the consumer is not on the optimum plan for their consumption) and information about Energy Made Easy (as a comparison service)
- Presentation of plan information to enable consumers to easily compare their plan characteristics with competitors.
- Standardisation of bills to enable them to be readable (preferably machine-readable) by consumer switching websites.

### 5.2.1. Calls to action: 'best offer' and links to Energy Made Easy

In their submission, the AER (2021) says that they will research 'best offer' information statements on bills: "We note that the AEMC has received competing submissions on whether a bill should state if the customer is receiving the retailer's 'best offer'. Whether the benefits of such a requirement would outweigh the costs is a matter that would need to be carefully considered by the AER in making the proposed guidelines".

#### **BI box: Call to action**

Research suggests "in providing information about benefits or risks of engaging in certain actions, people are far more likely to respond to that information if they are simultaneously provided with clear, explicit information about how to do so" (Heath and Heath, 2010).

AGL comments that "the Victorian 'best offer' message which is required on customer bills is yet to be reviewed by the Essential Services Commission Victoria as to whether it is effective in delivering better consumer outcomes. We note submissions to the AEMC's draft determination, including those by Ombudsman, that it has increased customer confusion and distrust of their energy retailers" (AGL, 2001). However, the Ombudsman's submission argues that only a very small sample are confused by or distrustful of the notice, and that the highly prescriptive requirements in Victoria are able to be blunted in some cases (not as eye-catching as the regulation intends them to be). Energy Australia notes that 'best offer' regulations required 9 months to implement in Victoria, while for Origin it took 4 months.

The Public Interest Advocacy Centre (PIAC, 2020), Combined Pensioners and Superannuants Association of NSW Incorporated (2020), and ACT Council of Social Services (2020) all believe that bills should present 'best offer' information and clearly refer to Energy Made Easy. At present, links to Energy Made Easy appear in a section of the bill around energy efficiency and don't refer to the website as a comparison service. Queensland Council of Social Service (QCOS, 2020) saw this information as secondary to the primary purpose of the bill and noted it should only be considered where evidence showed it achieves its intended switching objective and does not interfere with the bill's primary purpose.

### 5.2.2. Plan comparison

Plan and tariff information is rarely included explicitly in bills. The Public Interest Advocacy Centre call for bills to "clearly stipulate what type of tariff and the times that different charges apply". Queensland Council of Social Services described many consumers being misled into thinking that they will pay less for electricity at off-peak times when they are not on a TOU tariff. The Department of Energy and Mining SA recommend that some space on the bill should be dedicated to promoting the Energy Made Easy service and identifying what bill information can be used in the service. When consumers *do* use the Energy Made Easy service, (or do any

other kind of comparison) they need to compare the plans displayed with their current plan to make an informed decision. If their existing plan isn't clearly described on the bill (and may not be easy to find on the retailer website if it is no longer available to new customers) then it becomes very difficult to evaluate.

### **Plan comparison**

Qualitative research in the Australian energy market found many consumers “felt that there was too much choice, and desired greater ease in being able to compare plans” (Gardner and Nilsson, 2017).

### **5.2.3. Making bills machine readable**

The ACCC suggests that the AER may wish to explore how links or codes on bills could be used to streamline the Energy Made Easy user experience and further broaden its appeal and profile (ACCC, 2021). The ACCC say that consumers are inattentive and “the arrival of a bill is the best natural trigger point to engage consumers and attract attention”. Suggested solutions involve incorporating available comparison tools into the bill using links, QR codes, and a reference price. Powerpal (2020) also recommends the mandatory inclusion of QR codes on energy bills (as per the UK), to enable bills to be machine readable, as well as to make it easier for customers to access accurate consumption and tariff information.

### **Reflections**

- Encouraging consumers to switch energy retailers is generally quite a difficult task due to behavioural barriers including inertia and status quo bias. While new policies such as the Default Market Offer limit the consequences for consumers who do not switch, there are still substantial gains for those who do.
- Improving consumer understanding of their bills will make the comparison process easier and help them to make informed decisions about switching by removing friction costs and reducing the cognitive load associated with researching options and making a switch.
- Making comparison easier is most impactful when consumers make the conscious decision to search for a better deal but many consumers are unaware of the gains available from switching.
- It is hard to test whether calls to action will increase switching rates without observing the actual behavior of consumers in a real-world setting. However, it is possible to test ways of making the process smoother and less complicated. This should increase the possibility that if someone does switch, it is to a plan that is going to save them money.
- Alternative delivery methods for switching information will help get attention from consumers who ignore the information when presented on bills.

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Energy bill contents and bill requirements: Literature review

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