ON THE WIRE

March 2013, edition 35.

A fair and efficient market?

Consumer expectations are essentially quite simple when it comes to the energy market. Consumers want to keep their lights on, pay a fair and reasonable price for their energy use, and be treated fairly (supported by quality consumer protections).

In general, should these exist and the balance be maintained, consumers are happy and markets can prosper. But when these conditions vary—should services fail, prices become unaffordable or terms and conditions unfair—cracks begin to appear in the market and consumers lose confidence and become disengaged.

Energy contracts and markets are already complex for consumers, and energy prices are increasing, impacting affordability for many. More 'flexible' prices, to be introduced in Victoria this year, is likely to increase confusion. Further, consumer complaints are suggesting that consumer protections, particularly in relation to terms and conditions of contracts, are inadequate to ensure consumers are confident and engaged. This inadequacy is exacerbated by industry-specific regulation not aligning with general consumer protections in the Australian Consumer Law (**ACL)**.

The ACL provides that unfair contract terms in consumer contracts may be declared void. An example of an unfair term is one that permits, or has the effect of permitting, one party to vary the upfront price payable under the contract without the right of another party to terminate the contract. However, in energy-specific regulations (including the National Energy Customer Framework and the Energy Retail Code in Victoria permit retailers to change the price of fixed term contracts without the right of a consumer to exit the contract without penalty. Energy retailers can also lock consumers into contract rollovers at terms they haven't actively agreed to.

The ability for energy retailers to unilaterally vary energy prices at any point in a customer's 'fixed term' contract, or to rollover customers without explicit informed consent, erodes any fairness or equity in the market.

To restore balance to the energy market, to truly support demand side participation, privileges such as these for businesses need to be overturned and consumer rights restored.

We welcome feedback on the information provided in *On the Wire*. Further, we encourage you to forward the newsletter throughout your networks.

Production of *On the Wire* is funded by the Consumer Advocacy Panel. To subscribe to *On the Wire*, please email info@consumeraction.org.au with the words "Subscribe to On the Wire" in the subject line. The next edition of *On the Wire* is scheduled for release at the end of June 2013.

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ON THE WIRE – MARCH 2013

1. Regulatory developments

1.1 Standing Council on Energy and Resources (SCER)

1.1.1 Response to Power of Choice

Over recent years, the Australian Energy Market Commission (AEMC) undertook a review which sought to develop a reform package for the National Electricity Market, specifically to provide "households, businesses and industry with more opportunities to make informed choices about the way they use electricity and manage expenditure". The review was branded "Power of Choice".

The AEMC made several recommendations to SCER, with the broad objective of ensuring overall consumer demand for energy services to be met by the "lowest cost combination of demand and supply side options."

SCER's response to the AEMC's Power of Choice recommendations focused on nine reform areas. SCER 'agreed in principle' to most of the reform areas, while some remained in the hands of the jurisdictions.

The reform areas are:

- **Building consumer awareness, education and engagement**—such as development of a communication/education strategy with a focus on different capacities to participate in the market across/within consumer sectors.

- **Engaging with consumers**—provision of energy management services to residential and small business consumers through revising the current protection arrangements (in the National Energy Customer Framework).

- **Consumer information**—through initiating a rule change to ensure residential and small business consumers have better access to electricity consumption data, in particular about how their usage will affect their electricity bills.

- **Enabling Technology (metering)**—specifically this relates to facilitating access and contestability in electricity (smart) meters, including enabling retailers *or* distributors to install meters (and removing the option of governments to mandate a rollout). It also encourages open access and common communication standards within the meter to enable consumers to access the services enabled by smart meters (eg direct load control).

- **Demand Side Participation in wholesale electricity and ancillary services markets**—to enable demand management initiatives to be recognised within the market and rewarded as such;

- **Efficient and flexible pricing options**—this reform looks to phase in "efficient and flexible retail pricing options for residential and small business consumers" based on cost reflective network pricing structures (SCER believes it should be optional for consumers), i.e. higher costs at peak times, lower costs at shoulder or off-peak times. This would be accompanied by an education campaign, a review of energy concession and efficiency programs and state price regulations, the introduction of consumption bands, and new standard price offers. It would also include improving the existing consultation to ensure that consumer impacts are taken into account in price structures/design.

- **Distribution network incentives**—including a rule change that will provide an appropriate return for demand management projects which deliver a net cost saving to consumers and ensuring the Australian Energy Regulator can have regard to non-network market benefits when assessing efficiency of expenditure; and flexibility in annual tariff process.

- **Distributed generation**—with a focus on developing a national approach to Feed in Tariffs (FiT), where the value of time varying tariffs is included to encourage owners of distributed generation to maximise the export of their energy during peak demand periods.

- **Energy efficiency measures and policies that impact or integrate with the NEM**—including ensuring greater coordination of regulatory schemes with the objective of achieving greater recognition of the value for peak demand reductions.

More information can be found here:

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1.1.2 Limited Merits Review – Consultation Regulation Impact Statement

On 7 March 2012, an Expert Panel of Professor George Yarrow (Chair), Dr John Tamblyn and the Hon Michael Egan, commenced a review into Limited Merits Review, which is a process that allows regulated network businesses to appeal decisions of the independent energy regulator, the Australian Energy Regulator (AER). The Panel's Final Report was published on 9 October 2012, and is available here. It recommended significant reforms, finding that the existing system resulted in consumers paying $3 billion additional to network businesses over the last five years.

In December 2012 SCER announced a process to address the findings of the Panel's Final Report which may potentially include amending legislation, before the end of 2013. The process which will include:

- a Regulation Impact Statement process, entailing a formal consultation period (commenced);
- publishing the final SCER policy position; and
- drafting and consulting on any necessary legislative amendments.

Following that announcement, in December 2012, SCER released a Consultation Regulation Impact Statement on the Limited Merits Review to identify and implement any necessary changes to the merits review framework. Submissions closed in February. A full list of submissions can be found here.

Consumer representatives recommended that a revised form of Merits Review should only be maintained with full implementation of the Expert Panel's recommendations. The Expert Panel recommended that there be a single ground of appeal, being a "materially better decision" and a definition of materially preferable decision as one that best serves the interests of consumers. Consumer representatives agreed that such an approach would change the risk-reward calculation of networks considering appealing, ultimately meaning lesser appeals. The ultimate focus of merits review should be on the overall price/revenue determination, rather than the assessment of specific components (or constituent parts) of that decision—as the latter allows electricity and gas networks to cherry pick parts of the decisions less favourable to them to

appeal. Absent either of those outcomes the strong view is that access to merits review should not be maintained.

The final SCER policy position is expected in the coming months. Consumer representatives will closely review legislative reforms that are due to follow.

More information can be found here.

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1.1.3 National Energy Consumer Advocacy Body

On 23 November 2012, as part of their energy market reform package, the SCER agreed to develop a proposal for a national energy consumer advocacy body. On 22 January 2013 Dr John Tamblyn and Mr John Ryan were appointed by the SCER Energy Market Reform Working Group to provide advice for SCER's consideration on an effective model for a national energy consumer advocacy body.

A significant amount of work had been completed within the consumer sector, prior to the announcement of this review, to develop a proposal to improve national energy consumer advocacy. This included the report, Making Energy Markets Work (published in 2011), authored by Gordon Renouf and Polly Porteous and culminated in a detailed business plan for a new organisation, to be known as Energy Consumers Australia Ltd (ECA). A number of consumer organisations presented the ECA business plan to Governments in November 2012. It was proposed that ECA would work to advance the interests of all Australian residential and small business energy consumers, and would have sufficient technical capacity to bring a robust consumer position to energy market reviews and processes. Importantly, ECA also would undertake its own research and analysis, ensuring it maintained a proactive advocacy agenda.

In response to the consultation process run by the expert panel, a number of submissions have been made. A large number of consumer organisations have submitted to the process, providing information supplementary to the original business plan for ECA. Submissions can be found here.

The outcomes of the review will be presented to SCER at its meeting in May 2013.

More information can be found here.

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1.1.4 National Energy Customer Framework

The NECF commenced in the Australian Capital Territory and Tasmania (for residential and small business electricity customers) on 1 July 2012. It has most recently commenced in South Australia, on 1 February 2013.

New South Wales and Victoria are due to commence the NECF as soon as is practicable. As noted in the previous edition of On the Wire, the Victorian government is in the process of introducing the NECF under the guise of a revised Energy Retail Code, regulated by the Victorian Essential Services Commission, prior to it being enacted by Parliament. Queensland is yet to consider its position on application of the NECF.

More information can be found here.

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1.1.5 South Australia – Retail Price Deregulation

Alongside the implementation of the NECF in South Australia, the government elected to follow through on the AEMC recommendations from its review of competition in South Australia, which found that effective competition exists, and as of 1 February 2013, deregulated retail energy prices.

The decision to deregulate electricity prices was also based on significant lobbying by AGL and Origin following a price determination by the South Australian regulator in October 2012, which would have delivered price reductions to electricity standing contract customers of 8.1 %. AGL launched legal proceedings through the Supreme Court to prevent the regulator making a final price determination.

The subsequent decision to deregulate came about as part of an agreement between the retailers and the South Australian government resulting in cuts to standing contract prices fixed for two years (4.5% for AGL customers, 1% for Origin customers) and AGL withdrew its legal proceedings against the regulator. South Australian customers lost out on the bigger cuts that would have resulted from the ESCOSA final determination.

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1.2 Productivity Commission

As reported in the previous edition of On the Wire, the Productivity Commission released a draft report in November 2012 to primarily inform the Australian Government about "whether there are any practical or empirical constraints on the use of benchmarking of network businesses and then provide advice on how benchmarking could deliver efficient outcomes, consistent with the National Electricity Objective (NEO)".

Key recommendations from the Draft Report offered a nationally-focussed, package of reforms to address the major, interlinked regulatory barriers to the efficiency of electricity networks, including:

- a poor focus on consumers, despite their interests being the overarching objective of the regulatory regime;
- inadequate demand management and thus ability for consumers to respond to market signals;
- costly ways of achieving, and sometimes excessive, reliability requirements which potentially pushes prices up for consumers (particularly in cases of 'gold plating');
- state regulatory arrangements and network business ownership which looks at the difference between private vs state and is largely a push for privatisation;
- the resourcing and capacity of, and structural arrangements for, the regulator to ensure they can adequately fulfil their regulatory obligations;
- the regulatory rules, and the ability of the regulator to apply them and whether additional powers may be necessary.

More information including the key recommendations of the Commission, can be found in the Draft Report, here.

The Commission plans to prepare a final report to forward to the Australian Government by 9 April 2013.

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1.3 Australian Energy Regulator (AER)

1.3.1 Better Regulation

Following on from changes to the National Electricity Rules (NER) and National Gas Rules (NGR) that were published by the Australian Energy Market Commission on 29 November 2012. the AER is tasked with implementing changes to the NER and NGR, launched as a Better Regulation program. The focus of the Better Regulation is to "deliver an improved regulatory framework focused on promoting the long term interests of electricity consumers".

Better Regulation to launch the work it will be doing to develop guidelines across:

Expenditure forecast assessment guideline
Rate of return guidelines
Expenditure incentives guideline
Service provider consumer engagement guideline
Shared assets guideline
Power of choice implementation
Confidentiality guideline
Consumer reference group
Consumer challenge panel

Given the work in transitioning to the new rules, the AER has delayed the onset of the NSW and ACT Electricity distribution price reviews by 12 months, and the next Victorian, Queensland and South Australian Electricity Distribution Price (EDPR) reviews by 6 months. The development of the guidelines will coincide with Framework and Approach paper for the NSW/ACT EDPR and inform the AER's processes.

We welcome this work and its renewed focus on consumer interests. We have concerns however at the the level of "consumer engagement" that is expected but also what it actually means in light of network regulation.

Network regulation is complex and it is very unlikely "average" consumers are able to understand or judge important issues such as price-service mix and huge information asymmetries. In general, consumers just want reliable power at cheapest cost and the AER has the role of ensuring long-term consumer interests are met.

There is a risk networks will be able to satisfy new consumer engagement guidelines for example, by simply undertaking a survey and having a customer committee. While these things should be done as a matter of course, in the interests running an effective business, it shouldn't mean that the role of the regulator is reduced. Network regulation needs resources and expertise to effectively challenge business proposals and determine that they're in customer interests. We are wary of this being left to consumers alone, and nor should it be. The regulator has clear objectives under the National Electricity Law, which should inform every aspect of its regulatory responsibilities.

For more information from the AER, visit www.aer.gov.au.

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1.3.2 Consumer Challenge Panel

As agreed as a part of the Council of Australian Government's (COAG) energy reform agenda in December 2012, the AER is charged with establishing a Consumer Challenge Panel to support enhanced engagement with consumers and their representatives. The AER have included this as part of their Better Regulation Program outlined above.

The AER has determined that the Panel of experts will be appointed to "provide advice and input to the AER on network businesses' revenue determinations and the Guidelines that set out our approach to this work". Key responsibilities of the Panel will include:

- assist in ensuring that the consumer view is more fully considered as part of AER decisions on energy network revenue determinations
- assist the AER in challenging the network businesses on their spending proposals and how these have been informed and shaped by the businesses' own customer engagement
- liaise with the AER's Customer Consultative Group and other consumer representatives to ensure it can identify key issues of concern; provide an effective consumer focus in network revenue determination processes; and build capacity so these representatives can more effectively contribute to future network revenue determination processes
- provide advice on consumer perspectives to other organisations (such as SCER, AEMC) as requested.

Further, the AER expects the Panel to determine how well network businesses engage their customers in developing their revenue proposals but also to be focused on providing consumer input into the more complex, technical issues of network revenue determinations and whether proposed network expenditure is justified in terms of outcomes for customers (and whether the AER meets its objectives under the NEL, ie whether its overall decision is in the long term interests of consumers).

Expressions of interest for Panel Members will be sought by the AER in April 2013 and the panel will be established by 1 July 2013.

More information about the Consumer Challenge Panel can be found here.

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1.3.3 AER NSW Framework and Approach 2014 – 2019

The AER has published the first stage of its Framework and Approach papers for the NSW distribution determination, focusing on classification of each business' services, the form of control to apply to those services and the AER's decision on dual-function assets. The period of the determination includes an initial, transitional period (1 July 2014 – 30 June 2015) and is followed by a subsequent regulatory control period (1 July 2015 – 30 June 2019) and will be carried out under the new National Electricity Rules (the result of the recent AEMC rule change).

The Framework and Approach has been released to Endeavour Energy, Essential Energy, AusGrid and ActewAGL. Their initial proposals are due 31 January 2014.

More information can be found here.

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1.4 Australian Energy Market Commission (AEMC)

Reviews

1.4.1 Differences between actual and forecast demand in network regulation

SCER have directed direct the AEMC to undertake a review that considers the "differences in actual compared to forecast demand in economic regulatory determinations" and "the merits of the Australian Energy Regulator considering these differences when making a determination".

The truncated review process has included the publication of Terms of Reference by the AEMC in mid-February, followed by a workshop held in Melbourne on 28 February 2013, with presentations by a number of stakeholders including the Australian Energy Regulator, the Energy Networks Association, the Alternative Technology Association and Grid Australia.

Demand forecasts have been highlighted as an issue as the ability of distribution businesses to forecast correctly to be poor, and at the expense of the broader consumer base who pay for incorrect forecasting. This review seeks to identify how consumers can benefit from changes (reductions) in demand through more accurate forecasting.

The findings of the review are to be presented to SCER by 31 March 2013.

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1.4.2 Review of Competition in the Retail Electricity and Natural Gas Markets in NSW

SCER provided the AEMC with a request to "undertake a review and provide advice on the state of competition in the New South Wales electricity and natural gas retail markets for small customers". This review follows those undertaken in Victoria (2007), South Australia (2008) and the Australian Capital Territory (2009).

The AEMC has specifically asked for advice on:

- the state of competition and the extent to which it is deemed effective for small electricity customers (i.e. customers consuming less than 160 megawatt hours per annum) and small natural gas customers (i.e. customers consuming less than 1 terajoule per annum);
- the availability and take up of time of use tariffs and the impact of time of use tariffs on competition; and
- based on that assessment, advice on ways in which the effectiveness of competition can be improved (where competition is found not to be effective) as well as possible implementation strategies for the removal of retail price regulation for small electricity customers and small natural gas customers in NSW, regardless of the state of competition. This is to include advice for an option to gradually roll back retail price regulation through a reducing eligible consumption threshold.

The AEMC published an Issues Paper on 13 December 2012. Submissions to the Issues Paper closed 8 February 2013.

Key issues raised by consumer organisation the Public Interest Advocacy Centre (PIAC) include a strong need for "regulatory, customer protection, consumer information and implementation

issues" to be resolved in order to secure a successful transition to a deregulated electricity market and that effective competition needs to firmly be established to achieve this. PIAC has the view that in some regions of NSW, effective competition clearly does not exist.

PIAC also made a number of recommendations to the AEMC for review, relating to the transition to a deregulated market. These included:

- a separate examination of competition in each of the three electricity network areas;
- investigating the rate at which consumers change their gas supplier without changing their electricity supplier;
- investigating the impact of late -payment fees on the effectiveness of competition;
- a ban on all early termination fees;
- no gradual rollback of price regulation in line with consumption thresholds;
- price deregulation to only occur after a comprehensive consumer information campaign has been undertaken and independently assessed as having been effective; and
- the NSW Government to retain the power to easily re-regulate prices if competition becomes ineffective in NSW retail gas and electricity markets.

More information can be found in PIAC's submission here.

On 28 February 2013 the AEMC published its consultant reports; Roy Morgan - Business survey report, Roy Morgan - Customer focus group report, Roy Morgan - Residential survey report, Sapere - Retailer interview report and a public forum was held on 20 March 2013.

The AEMC must provide its final advice to SCER no later than 30 September 2013.

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1.4.3 Review of the national framework for distribution reliability and the Review of the national framework for transmission reliability

Reliability has significant implications for energy network revenues and more importantly the prices that consumers pay for energy. If reliability standards are too high, network costs increase and so do consumer bills. If reliability standards are too low, consumers are at risk of having substandard service and potential blackouts.

Details of these and additional reviews can be found here.

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Rule Changes

1.4.4 National Electricity Amendment (Access to NMI standing data) Rule 2013

On 15 November 2012, the AEMC received a rule change request from EnergyAustralia relating to access to NMI standing data under the National Electricity Rules by retailers and their authorised agents—and on 14 March 2013, the AEMC published a rule change proposal.

The rule change request relates to access to NMI standing data under the National Electricity Rules by retailers and their authorised agents and is seeking to clarify retailer obligations

following an AER compliance bulletin related to "how the AER will treat confidentiality requirements for energy, metering and NMI standing Data".

The goal of the clarification is to "allow the authorised agents to perform consumer acquisition and other relevant services on behalf of a retailer" and amend the NER to permit retailer authorised agents to access NMI standing data.

This means that while a consumer's consumption data will still be protected at this time, other personal details such as the location of the NMI (the physical address) will potentially be available to non-financially responsible retailers and retailer agents. It needs to be clear what role in the market these 'agents' are playing, and for what reason they or the non-financially responsible retailers need this information (or any other information) to fulfil their function. For example, will this enable retailers to better target their marketing and/or consumer interactions? We question what this will potentially cost consumers, financially and in general consumer rights.

This is only the tip of the iceberg when it comes down to access and information issues—we look forward to an opportunity to get to the heart of them in a process which will be played out through the Power of Choice rule changes later this year.

A consultation paper has been released to assess the issue, with submissions due 26 April 2013. More information can be found here.

Details of additional Rule changes can be found here.

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1.5 Select Council on Climate Change

As part of the Equipment Energy Efficiency (E3) Program, an element of Australia's energy efficiency strategy as agreed by Australian, state and territory governments - and in response to the issues of peak demand - the Select Council on Climate Change has released a consultation regulation impact statement (RIS) Mandating 'Smart Appliance' Interfaces.

The goal of the RIS is to enable the direct load control (DLC) market to develop. DLC enables household appliances (for example, air conditioners, pool pumps, water heaters and electric vehicle chargers) to be remotely controlled to manage (and reduce) the demand for electricity at peak times. The RIS focuses on mandating that key appliances must have a demand response interface – which in turn would allow communication links between appliances and the electricity network.

The proposal, should it be implemented, will create a DLC market that should permanently offset 3-5 years of peak demand growth. Further, *if* those benefits were passed on to all householders, it *could* reduce electricity bills from "$60-$120 per household per year from 2014-2028".

Submissions to the RIS are due **Friday 3 May 2013** and public consultation meetings will be held:

Wednesday 3 April – Sydney
Thursday 4 April – Brisbane
Friday 5 April – Melbourne
Monday 8 April – Perth
Tuesday 9 April – Adelaide

More information can be found here.

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2. Consumer advocacy

2.1 The Power to Save, *Victoria Johnson and Damian Sullivan, Brotherhood of St Laurence*

The Power to save, a new report from the Brotherhood of St Laurence presents an equity assessment of the Victorian Energy Savings Initiative (also known as the VEET scheme). The research has highlighted differences in the distribution of the benefits of the scheme in different areas of metropolitan Melbourne, that contrast in relation to relative levels of advantage and disadvantage.

The Energy Saver Incentive (VESI[1]), is the largest residential greenhouse gas emissions reduction scheme in Victoria. In Phase 1, it required energy retailers to fund emissions reductions by purchasing certificates created by accredited operators making energy efficiency improvements in homes such as replacement of light globes and upgrading of hot water services.

As energy prices increase, VESI presents a significant opportunity for Victorian households to reduce their greenhouse gas emissions and their exposure to rising energy prices. It is, however, crucial that more disadvantaged households are treated equitably and have the opportunity to participate fully in the scheme. According to recent modelling, households that implement measures covered by the scheme will save $308 over the first five years of the scheme[2], those that don't participate will save $38.80 between 2012 and 2015[3].

VESI operates across the state, but our analysis was limited to metropolitan Melbourne. We investigated the distribution of improvements, and hence of potential savings, across more advantaged and disadvantaged areas of the city. We did this by comparing the rate of Victorian Energy Efficiency Certificates (VEECs) created in different postcode areas aggregated by Australian Bureau of Statistics SEIFA Index of Relative Socioeconomic Advantage and Disadvantage quintile. Our analysis of the 2009–11 phase of the VESI in metropolitan Melbourne produced mixed results:

- Relatively disadvantaged areas have received a greater share of the total VESI benefits, measured by Victorian Energy Efficiency Certificates (VEECs), than more advantaged areas.
- The higher rate of VEECs created in disadvantaged areas reflects the high proportion of VEECs created through replacement light globes, primarily compact fluorescents (CFLs), and replacement high efficiency showerheads (for example Figure 1).
- Disadvantaged areas have received fewer of the measures which cost more to install and result in higher returns, such as hot water services, space heating and insulation (for example Figure 2).
- Relatively advantaged areas have received more of the high-value, high-return measures including hot water service replacements.

[1] We refer to Victoria's Energy Saver Incentive (ESI) as the VESI to distinguish it from other energy savings initiatives including the proposed National Energy Savings Initiative (NESI).

[2] Department of Primary Industries (DPI) 2011 *Regulatory impact statement Victorian Energy Efficiency Target regulations part 2*, DPI, Melbourne, viewed 16 August 2011, (assuming $1,104.50 annual electricity bill) <http://www.dpi.vic.gov.au/__data/assets/pdf_file/0006/97584/VEET-RIS-22032011_part2.pdf>.

[3] Authors' calculation based on price per MWh [from ACIL Tasman (2011) Energy market modelling - expansion of the ESI scheme. Melbourne, Department of Primary Industries and ibid.DPI (2011)] and average household energy consumption 4000 kWh for a household with gas hot water and heating from ESC (2011b)

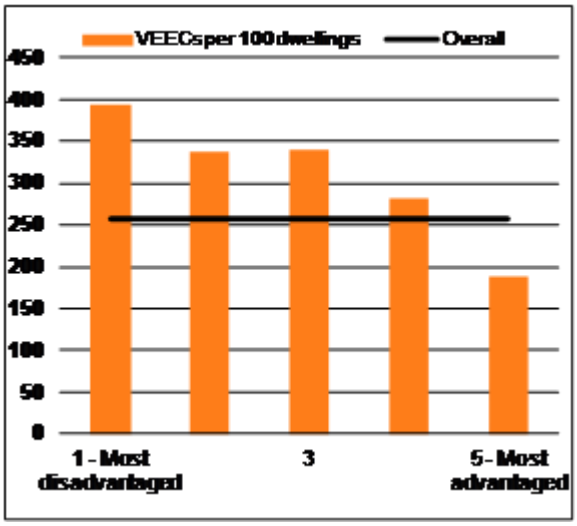

Figure 1: Lighting replacements

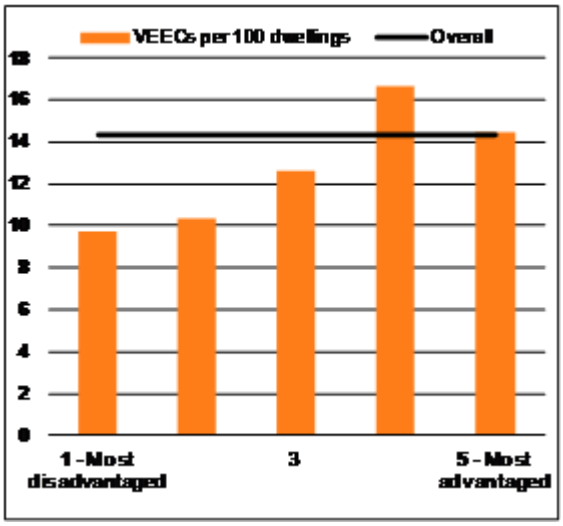

Figure 2: Hot water upgrades

The results reported in *The power to save* have important implications for the scheme in the future. In particular, as the scope for light globe and showerhead replacements is exhausted, low-income households are likely to receive less benefit from the scheme, relative to other households. This is largely because the co-contributions required for measures that are more expensive, are unaffordable.

Recommendations

Our equity analysis points to important recommendations to ensure all Victorians are able to benefit from the scheme.

To foster equitable outcomes for the VESI scheme across different socioeconomic groups, the Victorian Government should:

- Introduce additional financial incentives for low-income households to access higher value measures.
- Investigate the viability of on-bill financing and low-interest loans as potentially affordable credit mechanisms to assist households to access higher cost energy efficiency upgrades.
- Investigate the effectiveness of specific targets for disadvantaged households participating in the scheme.
- Introduce an additional financial incentive for providers that deliver multiple retrofit measures in one house.

In addition, the Victorian Government should:

- Develop programs that involve landlords in the scheme.
- Promote greater links between VESI and other residential energy efficiency programs.

The results of this study also have implications for the proposed National Energy Savings Initiative. The Australian Government should incorporate these recommended improvements in their design for that scheme.

The power to save: An equity assessment of the Victorian Energy Saver Incentive in Metropolitan Melbourne is available at http://www.bsl.org.au/pdfs/SullivanJohnson_Power_to_save_equity_assessment_of_VESI_Melbourne_2012.pdf

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2.2 Avoiding the Peak – The Value of Grid Connected Storage, *Damien Moyse, Alternative Technology Association*

Over the years, the Alternative Technology Association has conducted lots of research into the costs and benefits of stand alone, or grid connected, distributed generation systems.

When talking with energy consumers about these types of systems, some of the questions that people tend to ask us are:

- Is it worth me using batteries to meet my peak demand avoid paying peak tariffs?
- When will it be viable to get rid of my electricity supplier and totally disconnect from the grid?

For homes with typical levels of energy consumption (i.e. 15 – 30 kWh per day), previous research by ATA has demonstrated that for the purposes of complete disconnection, the capital and running costs of a stand-alone power system is, in the short term at least, likely to remain prohibitive for the majority of consumers wanting to completely isolate themselves from the grid.

However given the range of time-of-use tariffs coming into the electricity market (and in particular in Victoria, from 1 July this year), ATA thought it was worthwhile to research the value proposition to an electricity consumer of using grid-connected battery storage, charged from the grid during off-peak times, for use during peak events.

We considered a scenario where the batteries were assumed to be charged during the off peak, and the peak time (or shoulder time on weekend) consumption supplied by the batteries was assumed to be in the order of 12 kilowatt-hours (kWh) per day.

A total of 365 days (or peak periods) were used, which obviously reflects all weekday and weekend afternoon peak periods for one calendar year.

Whilst peak tariff rates are often only likely to apply on weekdays, many currently available time of use tariffs have a 'shoulder' rate that applies over weekend peak periods that are still higher than the off-peak overnight charging rate.

An analysis period of 10 years was chosen for the research, in line with the life expectancy of well maintained batteries that are not excessively discharged.

ATA chose lithium-iron phosphate batteries for the modelling exercise. This was primarily due to their ability to handle deeper discharges over many cycles, as well as their tolerance of higher discharge rate than lead-acid batteries.

Table 1 below lists the capital costs for the battery system:

System Component	Capital Cost
Capital Cost of Battery Bank	$9,909
Capital Cost of Battery Management System	$300

Capital Cost of Inverter	$6,525
Balance of System Cost	$3,000
Total Capital Cost	**$19,734**

We then set about researching current time-of-use (ToU) tariffs that are available, in order to understand the costs of charging batteries during off peak times, and the value of the benefit (i.e. the avoided tariff) of using the electricity stored within them during peak times.

A quick analysis of national price comparator websites suggested that NSW has the highest peak electricity tariffs in Australia – with some peak rates rising as high as 58 cents per kWh (after GST) over a 6-hour period from 2pm to 8pm. This tariff value is not surprising given the level of network investment currently happening in NSW.

So using the NSW tariffs as a guide, and including recent AEMO forecast increases in electricity prices for NSW, the ATA calculated the necessary retail tariff rates to achieve a positive net present value within a 10 year analysis period.

This included consideration of the off-peak rate (paid to charge the batteries); and the peak (weekday) and shoulder (weekend) rates (i.e. the costs to be avoided by drawing on the battery bank instead of the grid).

On the basis of all of the parameters above, we found that when the off-peak tariff is in the range of 10 to 14 cents per kWh:

- the peak tariff must be at least 72 cents per kWh higher than the off-peak tariff (i.e. between 82 cents and 86 cents per kWh); and
- the shoulder tariff must be at least 22 cents per kWh higher than the off-peak tariff (i.e. between 32 cents and 36 cents per kWh);

for the investment in the batteries to break even over 10 years.

The required peak and shoulder tariff differentials (from an off-peak rate of 12 cents per kWh), for both 10 year and 7 year paybacks is outlined in **Table 3** below:

Peak to Off-peak Tariff Differential	**Battery Investment Payback Period**
Peak tariff is 72 c/kWh higher than off-peak Shoulder tariff is 22 c/kWh higher than off-peak	10 years
Peak tariff is 96 c/kWh higher than off-peak Shoulder tariff is 31 c/kWh higher than off-peak	7 years

It should be noted that of the currently available ToU tariffs in NSW or elsewhere that ATA has sighted, the difference between their peak and off-peak rates are not currently high enough to obtain payback times of 10 years or less. With higher peak tariff rates, or improved battery efficiency, this of course may change in the near future.

In more remote locations at the end of long powerlines, the business case for grid-connected battery inverter/charger systems may not rely purely on the tariff rates, but also on the benefit

of the avoided cost of an upgraded connection for a customer who is looking to increase their electrical capacity.

There's also potentially the avoided the compensation that some distribution network operators are paying customers for poor reliability in fringe of grid areas (which is significant in some parts of rurlal Australia).

As the retail market for ToU evolves, it is likely that tariffs with high enough differentials between the peak and off-peak will be seasonal (i.e. may only be high enough in summer) and will likely have a shorter peak duration (probably 2 or 4 hours). Consumers will need to be aware of this in considering different tariff options.

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2.3 Staying on top on Energy Costs – the Home Energy Saver Scheme, *Tejopala Rawls, Kildonan Uniting Care*

Households struggling with their energy bills can now get help via the Australian Government's Home Energy Saver Scheme (HESS). This is a national program coordinated by Kildonan UnitingCare and funded by the Australian Government to support 100,000 low-income Australians by the end of 2014-15 to manage the cost of their household energy bills.

HESS helps people in three ways. You can call a nationwide Helpline on 1800 007 001 for simple energy saving tips. You can also book in for a free community energy saving talk by calling the same Helpline. But the largest element of assistance comes in the form of a free home visit from a HESS Worker who can suggest ways to save energy tailored to each household. Again, you can call the Helpline to book for one of these.

The service is free, impartial and easy to access. It offers impartial and expert advice and support to anyone who is facing payment difficulty with their gas and electricity bills. Advice is tailored to each person. The aim is to put the individual householder back in control of their energy costs. Very often it does more than that by also putting clients in touch with other support services. HESS workers also often assist clients to talk to their gas and electricity retailer to sort out any issues such as concessions that may not have been applied or to help set up a payment plan.

The householder benefits as the scheme can help in developing more control and confidence in managing energy costs and a reduction in financial stress.

Energy companies also stand to benefit because HESS helps people manage their energy bills before they get into debt and also helps with the process of getting out of debt if needed.

The scheme is delivered through collaborative partnerships. There are nineteen not-for-profit HESS Service Providers nationally, with a national HESS Helpline and over 100 HESS Workers located across Australia. The scheme is part of the Australian Government's Clean Energy Future and is administered by the Department of Families, Housing, Community Services and Indigenous Affairs (FaHCSIA). A number of energy retailers refer customers to the program. Kildonan UnitingCare in Melbourne co-ordinates the program. All collaborate closely with other Community Service Organisations, Financial Counsellors and No Interest Loans (NILS) providers.

So, who is eligible to access the program? Criteria are much broader than simply those with a concession card and can be as broad as simply any household where the income is in the

bottom 40% of the Australian population. For a full list of eligibility guidelines please see the web page (see below).

For more information go to www.fahcsia.gov.au/hess , call the HESS Helpline on 1800 007 001, or email the HHESS National Coordinator, Tejopala Rawls, on HESSNC@kildonan.org.au

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2.4 Getting the most out of smart meters for consumers, *Gabrielle Breen, Moreland Energy Foundation*

Many energy consumers have a limited understanding of energy, their own energy consumption or the operation of the competitive market for retail energy supply. This risks undermining the effectiveness of retail competition and the uptake of energy efficiency and conservation measures by limiting consumers' ability to make informed decisions about purchasing and consuming energy. The introduction of smart meters was intended, in part, to remedy this problem by providing consumers with access to data about their electricity consumption. However, the impact of this data will depend upon the extent to which it can be presented in a useful way to consumers. This in turn relies on consumer centred design and technology, supportive regulations and effective communications around smart metering infrastructure. Unfortunately, there is a dearth of Australian studies on the consumer experience.

Over 2012, the Moreland Energy Foundation (MEFL), with funding by the Consumer Advocacy Panel, explored how a range of demographically diverse residents in high-density housing respond to the provision of their electricity consumption data via a web portal, using the case study of the innovative development The Nicholson in Coburg, Victoria.

The 'My energy dashboard' web portal (the dashboard) developed by MEFL for The Nicholson with support from then VicUrban achieved a 21% uptake rate by residents through intensive promotions and community engagement. Dashboard users tended to be in their thirties (some with young families), educated, middle to lower income, often home owners, and already engaged on energy for environmental reasons. They reported finding the dashboard design user friendly and valued most of the features; however there was a strong demand for real-time data (which was largely unavailable due to technical and project budget reasons).

Dashboard users reported an improved awareness of their energy use and energy actions they could take, and to a lesser extent the associated costs and environmental impacts. Increases to their concern for these things however, were less pronounced, and relatively few practical actions were taken (or intended to be taken) following the use of the dashboard. This finding was supported by an analysis of the electricity consumption data for dashboard users, and appeared to be primarily because most of these residents had already undertaken energy saving actions.

In contrast, many non-users of the dashboard either didn't know about it, understand what it was for or how to use it, lacked time, or had no internet access.

Sentiment towards smart meters was mixed across both users and non-users of the dashboard. Overall, about half of residents understood smart meters and half were positive about their benefits; however half were neutral about their roll out. With a couple of exceptions, there

appeared to be no link made by residents between smart meters and beneficial energy services such as the dashboard.

While there were no regulatory barriers experienced in this project, obtaining stakeholder 'buy-in' was somewhat of a challenge, as many had little direct incentive to support the initiative. Several recommendations are derived from the case study experience, which largely support the literature and recommendations by other energy, welfare and consumer advocacy organisations.

In terms of engaging the community on web portals, consideration should be given to how to move beyond the 'technically savvy' and 'energy engaged' early adopters. Since feedback technologies and the concept of understanding energy consumption data are both relatively new in Australia, it is timely to develop a comprehensive and evidence based communications plan that encompasses energy literacy, smart meters and feedback technologies. Such a plan should utilise multiple methods of communications, a market segmentation approach informed by a comprehensive market analysis, and partnering with organisations known to and trusted by residents. Communications should form part of a broader national set of simple messages and graphics around consumer benefits from smart meters and also address consumer understanding of flexible pricing.

It is essential to establish a comprehensive and principles-based consumer protection and safety framework regarding smart metering infrastructure and energy data access. Such a framework should include defined data access rights for consumers, obligations for data custodians, interoperable data formats and appropriate monitoring and regulation. It should also address specific issues relating to the timeliness of data supply, third party access and price disparity. Regulatory reform must occur in a timely manner to avoid issues such as possible compliance questions around web portal data provision by parties other than retailers (raised in the June 2012 AER Compliance Bulletin). Furthermore, it should focus on smart meter services and not the technologies themselves, and be coordinated and consistent across national and jurisdictional processes and regulations.

For a copy of the "Residential Energy Information Portal Evaluation Project: A case study of the Nicholson, Melbourne" report go to www.mefl.com.au/news-and-events/item/1022.html

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