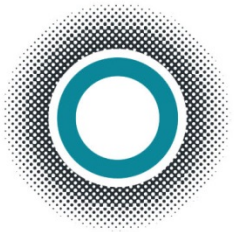

HOUSTONKEMP
Economists

Supporting Vulnerable Energy Customers

An Options Paper for the Energy Networks Association

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Disclaimer

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Executive Summary

Energy affordability has become an increasing concern in Australia over recent years as the prices paid for electricity and gas by Australian households have risen. This has placed considerable financial pressure on many households where energy bills are occupying a greater proportion of household disposable income than has been previously the case.

While we note there are indications that pressure from network price increases is easing,[1] there are a number of changes underway in energy markets in Australia that will result in higher energy bills for some consumers. Namely:

- the structure of electricity distribution network tariffs faced by households and small to medium businesses are changing, to better signal the costs of the use of the network at times of greatest demand; and
- domestic gas prices are expected to increase sharply from 2015 with the ramping up of the export of liquefied natural gas (LNG).

Prior to 2008, rising peak electricity demand and total consumption meant that rising network costs could be readily accommodated within the current structure of network tariffs (ie, where tariffs are comprised of a flat usage rate and a fixed availability component). However, the inappropriateness of this tariff structure outside of these circumstances has been made apparent with falling peak demand and consumption in recent years. For network businesses to recover their costs, usage charges need to rise by a higher rate than the rate of change in costs, because total consumption has fallen.

The current approach to structuring electricity network tariffs bears little resemblance to the underlying costs incurred to supply electricity network services, and the Australian Energy Market Commission has recently changed the rules to encourage a stronger link between cost drivers and prices, and to make that link more transparent to customers. The objective of these changes is for network prices to reflect better the costs of providing network services to individual consumers. It is important to understand that electricity tariff reform represents a distributional change in terms of how network costs are recovered and that there will inevitably be winners and losers, eg, many customers (vulnerable and non-vulnerable alike) may be significantly better off following the reform of network tariffs.[2]

As with electricity, rising gas network prices have increased average gas bills in recent years. However, prices that consumers pay for gas are set to rise even more sharply in the coming years as Australia shifts its gas production from domestic supply, to the export of LNG. Since 2010, gas producers have been building significant LNG exporting facilities (primarily in Queensland). The effect of this ramping up of export facilities on consumers is that domestic gas prices will likely increase to compete with the currently higher prices that other countries are prepared to pay for Australian gas.

When a customer's energy bill increases (whether it is a result of restructured tariffs or rising commodity prices), the impact on the customer is clearly greater the more vulnerable that customer is to begin with. When coupled with an inability to pay to improve the energy efficiency of their homes and appliances, these increases leave more and more customers vulnerable and in need of government assistance.

Current policies and programmes to support vulnerable customers have not been designed to provide support in the current, changing electricity and gas environments – and so it is timely to review current policies and programs to determine whether they are robust to the changing circumstances.

In particular, we believe that there should be a coordinated national framework that draws on the particular roles and areas of expertise of each party currently involved with the support of vulnerable customers. In particular, governments should have a central role in accordance with their social welfare functions. However, retailers and not-for-profits should also have a role given they have a direct relationship with vulnerable customers and typically have information regarding customer energy consumption, payment

[1] AEMC, *2014 Residential Electricity Price Trends*, Final Report to COAG Energy Council, 5 December 2014p. ii & v.

[2] For example, see: Brattle Group, Architecting the Future of Dynamic Pricing, 2014, p. 13; and NERA, *Economic Concepts for Pricing Electricity Network Services*, A Report for the Australian Energy Market Commission, 21 July 2014, p. iii & 42.

records, and the range of tariff products available as well as direct experience in administering hardship programs.

The role of Energy Networks Association (ENA) members, as network businesses, is to provide end-use customers with a safe, reliable and competitive supply of electricity and gas. Currently, the primary method of assisting vulnerable customers is via ensuring network businesses continue to improve efficiency and ensure that prices reflect the lowest sustainable costs. However, we believe that outside of this electricity network businesses can assist vulnerable customers with the problem of energy affordability, particularly in light of the significant change to how electricity distribution costs will be recovered as well as rising domestic gas prices.

The options for improving the assistance to vulnerable customers proposed in this paper are:

- governments could harmonise the value of financial assistance across jurisdictions, addressing gaps in assistance and replacing lump sum concession payments with payments based on a percentage of the energy bill;
- governments could consider whether eligibility for financial assistance needs to be more targeted (for example, not all energy concession card holders are necessarily vulnerable and family size is not explicitly taken into account in the amount recipients are eligible for);
- governments could address the needs of customers with long term vulnerability or clusters of vulnerable customers through providing assistance for household or community investments (eg, insulation, technology to manage their use, energy efficiency) in place of paying financial assistance;
- networks could consider options for providing greater access to information for all customers (vulnerable and non-vulnerable alike) that will enable them to make more informed choices and choose the most appropriate retail tariff for their circumstances; and
- networks could consider the case for and against social tariffs, as an option to assist vulnerable customers, and their potential usefulness in enabling the transition to more cost reflective network pricing.

Our findings are consistent with previous studies undertaken in Australia on this topic that have also called for governments to review the support offered to vulnerable customers. Specifically, these studies have called for a move to percentage based concessions, national standardisation of concession regimes, programs to improve the understanding of end-users about energy usage, and the implementation of wider eligibility criteria to reach certain family demographics. This collection of studies adds to the impetus for governments to review the current state of support available to vulnerable customers and how resilient they are to the impending structural change to network tariffs and rising gas prices.

In putting together this Options Paper, we have consulted with a wide number of stakeholders who currently provide support to vulnerable customers. We are very grateful for the insights and suggestions made by those stakeholders, which informed our own thinking as part of the development of this paper.

1. Introduction

Energy affordability has become an increasing concern in Australia over recent years as the prices paid for electricity and gas by Australian households have increased significantly. This has placed considerable financial pressure on many households where energy bills are occupying a greater proportion of household disposable income than has been previously the case.

While we note there are indications that pressure from network price increases is easing,[3] there are a number of imminent changes to energy markets in Australia that will result in higher energy bills for some consumers, namely:

- the structure of electricity distribution network tariffs are expected to change, to better signal the costs of network use to consumers; and
- domestic gas prices are likely to increase sharply with the ramping up of the export of liquefied natural gas (LNG).

It is within this context that the ENA has asked HoustonKemp to investigate the current arrangements and support provided to vulnerable customers, and to consider what role energy network businesses might play in those support arrangements. As part of this consideration we have also been asked to develop options to for consultation by ENA with stakeholders that could improve existing support arrangements.

Our approach has involved reviewing a number of recent reports that have investigated support arrangements for vulnerable customers, and investigating international approaches to supporting vulnerable customers. This information informed the subsequent conduct of a number of interviews with consumer groups, retailers and network businesses to examine options for improving existing support arrangements. This literature review and interview process has greatly informed the conclusions that we draw in this paper.

Importantly, in the context of this paper we have sought to identify options that we believe are practical and feasible, and which would enhance existing arrangements. Further work would need to be undertaken to design in detail how the options that we identify might be applied in practice.

The remainder of this paper is structured as follows:

- section 2 briefly describes what we have defined as a ‘vulnerable customer’;
- section 3 outlines current support arrangements for vulnerable customers;
- section 4 summarises the opinions of other stakeholders about current support arrangements;
- section 5 sets out the reasons supporting the development of a national framework to support vulnerable customers; and
- section 6 sets out our proposed options to improve the existing arrangements.

[3] AEMC, *2014 Residential Electricity Price Trends*, Final Report to COAG Energy Council, 5 December 2014p. ii & v.

2. What is a Vulnerable Customer?

This section defines the concept of vulnerability as it relates to energy affordability. In so doing, we highlight that a customer's vulnerability is likely to change as their own circumstances change, and as changes occur in the energy sector, in terms of both the level of prices and structure of electricity network tariffs.

2.1 Vulnerable customers defined

Currently there is no formal definition of what constitutes a 'vulnerable' energy customer in Australia.

In our opinion, a customer is vulnerable when they are at risk of experiencing *significant financial stress* due to a moderate increase in their energy bills, due to their own personal financial circumstances. Such financial stress may result in a customer missing one or a number of bill payments.

It is important to realise that a customer's personal financial circumstances are likely to change over time, and so any individual customer may move in and out of our concept of vulnerability over their life. Similarly, vulnerability is not a binary condition, ie, a customer is not simply 'vulnerable' or 'not vulnerable'. Rather, vulnerability is more accurately a continuum, where the degree of vulnerability increases with the financial stress which is caused by changes in energy costs.

Government funded payments in Australia to support vulnerable customers in areas outside of the energy sector tend to reflect this concept of vulnerability being a continuum. For example, the amounts an individual is eligible for under the Newstart allowance is greater for a single person with a dependent child or children, or after a period of continuous unemployment, than they are for a single person with no children.[4]

2.2 Implications of tariff reform for vulnerability

Anticipated changes in the structure of electricity network tariffs will affect electricity consumers in different ways, depending on a household's pattern of electricity use. Those customers that use more electricity during peak periods, and so contribute more to network costs will be asked to contribute more to the recovery of network costs. Equally customers that use less electricity during peak periods, will most likely pay less.

It is important therefore to understand that electricity tariff reform represents a distributional change in terms of how network costs are recovered and that there will inevitably be winners and losers, eg, many customers (vulnerable and non-vulnerable alike) may be significantly better off following the reform of network tariffs.[5] In particular, the consumer bill impacts of transitioning to more cost reflective network tariffs are primarily affected by the relationship between an individual consumer's consumption and contribution to system peak demand, ie:

- consumers with relatively high consumption but a relatively small contribution to system peak demand will likely experience a bill decrease; and
- consumers with low consumption but a relatively high contribution to system peak demand will likely experience a bill increases.

There is a common misconception that moving to more cost reflective network tariffs will universally be worse for vulnerable customers. However, we note that, because of the manner in which many vulnerable customers use electricity, it has been estimated that these customers will end up paying less under such

[4] Department of Human Services websites, available at: http://www.humanservices.gov.au/customer/services/centrelink/newstart-allowance

[5] For example, see: Brattle Group, Architecting the Future of Dynamic Pricing, 2014, p. 13; and NERA, *Economic Concepts for Pricing Electricity Network Services*, A Report for the Australian Energy Market Commission, 21 July 2014, p. iii & 42.

restructured tariffs. For example, it has been estimated that nearly 80 per cent of low income customers are paying more under flat rates than they would under critical peak pricing, as shown in the figure below.

Figure 1: Distribution of dynamic pricing bill impacts – residential and low income customers on critical peak pricing rate

Source: *Brattle Group, Architecting the Future of Dynamic Pricing, 2014, p. 13.*

In addition, domestic gas prices are expected to rise as a consequence of the development of an export LNG industry in Australia, so as to reflect currently higher global gas prices. This will mostly affect those customers that use gas for heating and hot water, and will likely change the relative mix of domestic energy use as between gas and electricity. Those customers that do not currently use gas will not be affected by gas price rises.

Changes in the structure of electricity network tariffs, combined with rising domestic gas prices will impact on customers differently, and by implication will likely lead to some customers that are currently not vulnerable, becoming vulnerable and similarly some customers that are currently vulnerable, no longer being considered vulnerable. This means that how we think about supporting vulnerable customers may need to change, so as to reflect how network tariffs and rising gas prices impacts on whether a customer might become vulnerable.

In addition, there is likely to become a new category of vulnerable customers, ie, those customers who become vulnerable because of their energy usage behaviour. For example, some vulnerable customers have relatively large energy use which is mostly essential and so is unable to be avoided (eg, a single income household with a number of at-home children).[6] Customers of this nature will likely pay more under some tariff structures (eg, capacity charging) having limited opportunity to lower peak usage and, importantly, these customers may not be considered particularly vulnerable under the current structure of distribution tariffs.

In addition, customers may not be adequately aware of the interaction between their particular energy usage and the tariffs they face (and hence how they can save on their energy bills). These customers can be classified as being vulnerable as a result of not currently knowing how best to respond to price signals.

[6] AGL Energy, *The Energy Market Death Spiral - Rethinking Customer Hardship*, June 2012, Brisbane, p. 27

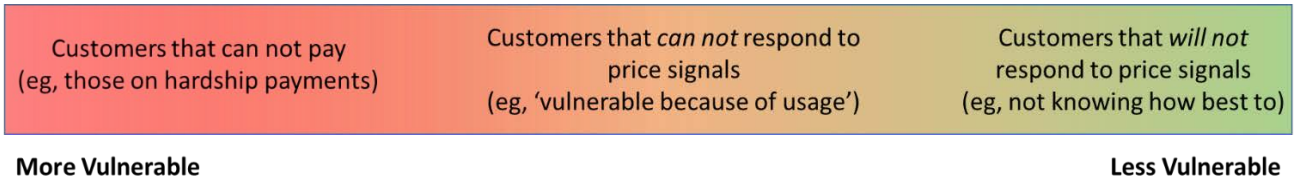
2.3 Vulnerability is a continuum

In summary, the concept of vulnerability is related to the financial circumstances of a particular customer. Whether a customer is considered to be vulnerable to changes in energy costs is influenced by:

- the pattern of electricity use, and in particular a customer's contribution to network peak demand;
- the scope that a customer has to respond to price signals, and lower demand so as to reduce and changes in electricity bills; and
- the extent to which a customer is reliant on gas as a source of energy.

Figure 2 illustrates the concept of a continuum of vulnerability for energy customers.

Figure 2: The concept of a continuum of vulnerability



It follows that critical to any review of the current schemes in place to support vulnerable customers is the need to define 'vulnerable' customers and to better understand the diversity of these customers.

3. Current Support Available to Vulnerable Customers

Energy concessions for vulnerable customers are currently provided and funded by state and territory governments and administered by energy retailers as an automatic deduction from energy bills.

There are significant differences in type of assistance and amount of assistance offered across current jurisdictional schemes, which means that customers with similar characteristics receive different levels of support depending on the jurisdiction.

Lump-sum schemes do not treat all vulnerable customers equally, ie, they offer a larger proportionate discount for vulnerable customers with relatively low usage. While this potentially sends strong incentives to vulnerable customers with relatively high usage to reduce consumption, these customers also often have limited scope to reduce their consumption.

While eligibility for energy concessions is fairly uniform, the associated financial assistance could be more targeted. For example, not all energy concession card holders are necessarily vulnerable and family size is not explicitly taken into account in the amount recipients are eligible for.

There are measures that support vulnerable customers that are customer funded, ie, paid for by all electricity customers.

The starting point for this paper has been to investigate the current policies and programmes that support vulnerable customers, to provide an information base against which we could consider whether the current support framework is adequate to respond to changes affecting the energy sector.

This section briefly describes current energy concessions, and other forms of support currently available for vulnerable customers.

3.1 Government funded energy concessions

Vulnerable customers that satisfy eligibility criteria have access to some form of formal concession arrangement in each jurisdiction. There exist a number of similarities and differences between the types of support currently offered to vulnerable customers across jurisdictions in terms of the type of assistance available, eligibility requirements, and the amount of support paid. Table 1 below summarises the key similarities and differences across each jurisdiction.

Table 1: Similarities and differences in current energy concessions

Type of assistance	Typically, those eligible for Commonwealth concession cards are eligible for direct financial assistance (ie, a bill rebate), with additional levels of financial support available for those who need heating and cooling for medical reasons, or those on life support. Exceptions include: • Victoria generally has the widest range of energy concessions available, including a transfer fee waiver and an off-peak concession. • South Australia does not offer specific 'life support' energy concessions but does provide a rebate for users of dialysis machines. • Victoria and Tasmania are the only states to offer concessions for energy bills driven by weather conditions.
Eligibility	Fairly uniform across jurisdictions, whereby Commonwealth concession cards (ie, the Pensioner Concession card, the Health Care Card, and the Department of Veteran Affairs Gold card), grant the holder eligibility for the majority of support available in the NEM. Exceptions include: • In Queensland, holders of the non-means tested Seniors Card qualify for energy concessions. Despite this, Queensland has some of the stricter eligibility requirements in Australia due to its reliance on the Commonwealth Pensioner Card for eligibility, as opposed to the more widely distributed Health Care Card. Resultantly, Queensland customers under 60 experiencing hardship may miss out on support. • Eligibility for the New South Wales Family Energy Rebate does not depend upon Commonwealth concession cards. Rather, families must be receiving either Family Tax Benefit Part A or Family Tax Benefit Part B in order to be eligible. • Some concessions have additional criteria, such as requirements for medical certificates to gain access to medical heating and cooling concessions
Amount of support paid	Victoria is the only jurisdiction to offer regular energy concessions on the basis of a percentage of the total energy bill rather than a fixed dollar amount. Overall, there is significant variation across the jurisdictional schemes depending on the concession holder, the technology the scheme is targeting, the season etc.

Additionally, Aurora Energy in Tasmania offers a 'pay as you go' service whereby customers can elect to have a prepayment meter installed and pay for their electricity as and when they use it, as opposed to being billed in arrears. Prepayment customers face time of use rates, and customers with an eligible concession card receive lower rates for each time of use period. While prepayment-type meters present vulnerable customers with a helpful means of managing energy costs, we understand that many of these meters do not alert Aurora when a customer has been disconnected due to an inability to load credit (and so customers may be disconnected for prolonged periods). We also understand that while these meters charge for usage on a time of use basis, many customers are not aware of how this works and when higher prices apply and so the extent to which price signals are properly sent through this mechanism, is likely to be low.

3.2 Government funded direct hardship assistance payments

There exist a number of schemes that provide emergency payments to energy consumers to provide temporary assistance when they are experiencing particular financial stress. The administration of these hardship payments varies by jurisdiction and assistance is either provided directly by the relevant jurisdictional government or provided in conjunction with retailers and charities. For example, the Energy Accounts Payment Assistance (EAPA) in New South Wales operates through a voucher system, with each

voucher being worth $50.[7] EAPA vouchers can be used for electricity and gas and are issued by a participating community welfare organisation such as St Vincent de Paul, Salvation Army, Anglicare and many others.

These hardship assistance payments have greater variance across jurisdictions than regular support schemes, with the extent of support being determined on a case-by-case basis, as assessed by the relevant agency. In the Australian Capital Territory (ACT) and Tasmania, governments do not offer direct emergency hardship payments, although retailers in these jurisdictions do operate hardship programs which involve bill smoothing and payment plans.

In the ACT, the ACT Civil and Administrative Tribunal operates a program that presents customers experiencing hardship with an external avenue through which they may apply to be put onto a retailer's payment plan or into a hardship program, with the assistance of the Tribunal. While this does not result in direct payments to customers, the Tribunal does have the power to direct a retailer to discharge part or all of an outstanding energy bill, including any interest or fees incurred, in exceptional hardship circumstances.[8]

3.3 Customer funded assistance

In addition to government provided support, there also exists a number of customer funded approaches to supporting vulnerable customers, ie, where all customers contribute to the financial support of vulnerable customers. These are outlined below.

3.3.1 Electricity and gas retailer hardship programs

In addition to state and Commonwealth governments' energy concessions and hardship assistance payments outlined above, retailers have their own hardship programs. These programs typically offer eligible vulnerable customers options to meet their financial obligations, eg, bill smoothing and payment plans.[9]

Historically, state and territory governments have been responsible for the regulation of retail energy markets in each of their jurisdictions. However, from 1 July 2012, the AER began assuming these functions under the National Energy Customer Framework (NECF) – a package of regulations which has been developed by the Commonwealth and state governments.[10]

Under the NECF, each authorised retailer must develop, maintain and implement a customer hardship policy for their residential customers. The purpose of a retailer's customer hardship policy is prescribed in the Retail Law—to identify customers experiencing payment difficulties due to hardship and to assist those customers to better manage their energy bills on an ongoing basis. The NECF requirements set out the conditions in which a customer may be disconnected for non-payment, and also require retailers to waive late payment fees for customers in hardship.

From discussions undertaken with stakeholders as part of this assignment, we understand that these hardship programs create impediments to vulnerable customers being able to switch between retailers in order to be on a more desirable tariff in order to lower their energy. For example, it is not currently easy for a vulnerable customer to switch from one retailer's hardship program to another's – the process involves having to default on a few billing cycle payments, as a general requirement of being on a retailer hardship program is a track record of not being able to afford energy bills.

[7] NSW Trade & Investment website, available at: http://www.resourcesandenergy.nsw.gov.au/energy-consumers/financial-assistance/stay-connected-through-financial-crisis

[8] ACT Assistance website, available at: http://www.assistance.act.gov.au/adult/legal_advice/act_civil_and_administrative_tribunal

[9] In addition, we note that in New South Wales, distributors are also required to develop a hardship policy that provides customers with flexible payment options for the payment of the cost of providing bushfire hazard reduction services. See: NSW Electricity Supply Amendment (Bush Fire Hazard Reduction) Bill 2014, clause 53I.

[10] The NECF has commenced in the ACT, Tasmania, South Australia and New South Wales and is scheduled to commence in Queensland on 1 July 2015. In Victoria, the NECF is set to commence as soon as practicable and until doing so, the state government will remain responsible for regulating retail energy markets.

3.3.2 Community Service Obligations and postage stamp pricing

In Queensland and South Australia, government policy requires an explicit cross subsidy between rural and urban customers. Specifically:

- the Queensland Government subsidises the electricity bills of customers in regional and rural areas by making payments to Ergon Energy for the additional costs involved in supplying electricity outside South East Queensland.[11] These payments are known as Community Service Obligations (CSO) and are made in recognition of a relatively high cost of supplying these customers; and
- similarly, SA Power Networks are required to price on a postage stamp basis for all customers below a 160 MWh/annum threshold. The effect of this is that metropolitan South Australian customers are cross-subsidising the relatively high cost remote and rural South Australian customers.

These policies are not a typical form of energy bill support and do not target vulnerable customers directly. Rather, they instead subsidise electricity supply to all customers located in regional and rural areas.

3.4 Energy efficiency and no interest loan schemes

Most states and territories offer some form of energy efficiency program targeted at low income households. These programs are offered through various means such as no interest appliance loans (NILS), in home efficiency audits, or fixed rebates for appliances. Although the schemes are often offered to low income households, most energy efficiency schemes are not specifically targeted to low income households and do not have strict criteria for applicants. Many government programs are designed to inform and change usage habits rather than offer financial incentives to invest in efficient technology. Schemes common across a number of states and territories include:

- free or discounted energy efficiency devices (eg, standby power controllers);
- rebates for the removal of inefficient second refrigerators;
- no interest loans for energy efficient appliances;
- rebates for energy efficient appliances; and
- in house audits (with house specific advice or benefits given).

Jurisdictional wide schemes that specifically target low income households on a case by case basis include South Australia's Residential Energy Efficiency Scheme and the Australian Capital Territory's Outreach Energy and Water Efficiency Program. These programs differ from schemes offered in other states by assessing the household needs of low income families on a case by case basis, offering advice and practical energy saving tools specific to the need of the low income household (eg. insulation or standby power controllers).

Although NILS are offered in every state and territory, Victoria, Tasmania and New South Wales are the only states which offer benefits for energy efficient appliance loans specifically. NILS are usually not operated by the government but are supported by government departments.

- Victoria's NILS does not specifically award loans for efficient appliances but does offer a $100 rebate for recipients of no interest loans who purchase an energy efficient product.
- Tasmania offers a similar service but instead offers a 30 per cent subsidy for loans used to install energy efficiency measures.
- New South Wales does not offer financial benefits for energy efficient product loans but does allow for no interest loans to be made to purchase energy efficient appliances or devices unlike other states.

[11] Department of Energy and Water Supply website, available at: http://www.dews.qld.gov.au/energy-water-home/electricity/rebates

All three state's programs have some form of eligibility criteria (usually a DVA gold card, pension card or Healthcare card) to insure the loan scheme and rebates are targeted at low income households.

3.5 Retail market competition

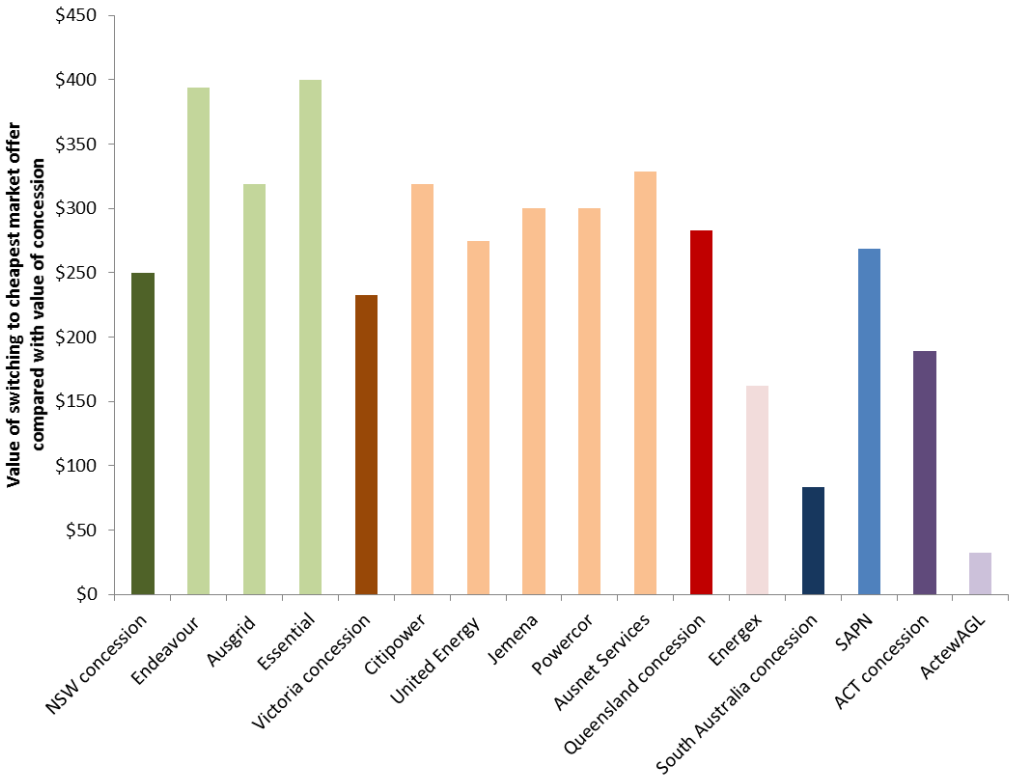
It is possible that in jurisdictions subject to retail competition, there are opportunities for vulnerable customers to take advantage of competitive market offers. For example:

- many vulnerable customers could make additional savings on their energy bills by switching from the standard regulated tariffs to more competitive offers; and
- if customers are actively engaged, they will seek out the right 'shape' or tariff design for their consumption. Through the competitive process we would expect retailers to offer a suite of tariff product offerings that allows consumers to choose a balance that suits their consumption.

The fact that customers may be able to save money by switching from a standing offer to a market offer that best suits their needs was acknowledged by the AER in its Annual Report on the Performance of the Retail Energy Market for 2013-14.[12]

In many cases, the potential value of switching may in fact be greater than the value of the government funded concessions. This is illustrated in the figure below.

Figure 3: Potential value of switching to cheapest electricity market offer, compared with local value of concession



Source: Indicative ENA analysis based on information on low income customers (with and without concessions) contained in: AER, Annual Report on the Performance of the Retail Energy Market for 2013-14, Energy Affordability chapter.

[12] AER, *Annual Report on the Performance of the Retail Energy Market for 2013-14*, p. 46.

However, many customers (both vulnerable and non-vulnerable) currently find it difficult to identify what deal is the best for them. For example, in 2014 Ernst & Young found that 20 per cent of all electricity customers considering switching retailer do not make the change because it is perceived as being too difficult.[13]

From our discussions with stakeholders we are aware of at least one practical impediment to many vulnerable customers switching retailers. Specifically, there was a concern that retail competition only benefits customers with financial capacity to have direct credit. It is generally regarded as difficult for a vulnerable customer to switch from one retailer's hardship program to another's – the process would involve having to default on a few billing cycle payments, as a general requirement of being on a retailer hardship program is a track record of not being able to afford energy bills. Therefore, many vulnerable customers may not act to realise energy cost savings, even if equipped with the information to make more informed decisions regarding matching their tariff structure to their use.

One opportunity to improve customers' ability to shop around is customers having access to their load profile information. While networks possess information regarding customer energy usage in instances where smart meters are installed, they do not necessarily know what current tariff policy customers are on and/or the different retail tariff offering available in the market. Further, vulnerable customers may not have the same access to the internet as other customers and so may not easily be able to take advantage of internet-based tariff/bill comparator websites (whether they are government provided or network business provided) that help facilitate customers compare retail offers and enable shopping around. We therefore expect that network businesses would need to work closely with retailers (who have that 'front-end' relationship with vulnerable customers) so as to ensure that vulnerable customers are receiving the best possible retail electricity tariff.

Further, the role that network businesses can play in this capacity is limited to jurisdictions where smart meters are installed. Without smart meters, network businesses to do not possess the detailed information that can provide customer's information about their energy usage that can prompt and inform customers as to where benefits might lie in switching between retail contracts. This is discussed more in section 6.2 below.

Overall, while for some vulnerable customers taking advantage of the competitive forces of retail markets may address affordability concerns, there are other vulnerable customers where additional support (ie, a dedicated concession) is warranted. However, even for these customers, engaging in the market to seek out savings via matching their individual consumption patterns with tariff offers is recommended. Any 'out of market' support should essentially form a 'backstop' to savings that can be made organically through the retail market.

[13] Ernst & Young, *Voice of the customer is getting louder*, Customer Experience Series ™ — Utilities (Wave 3), p. 2.

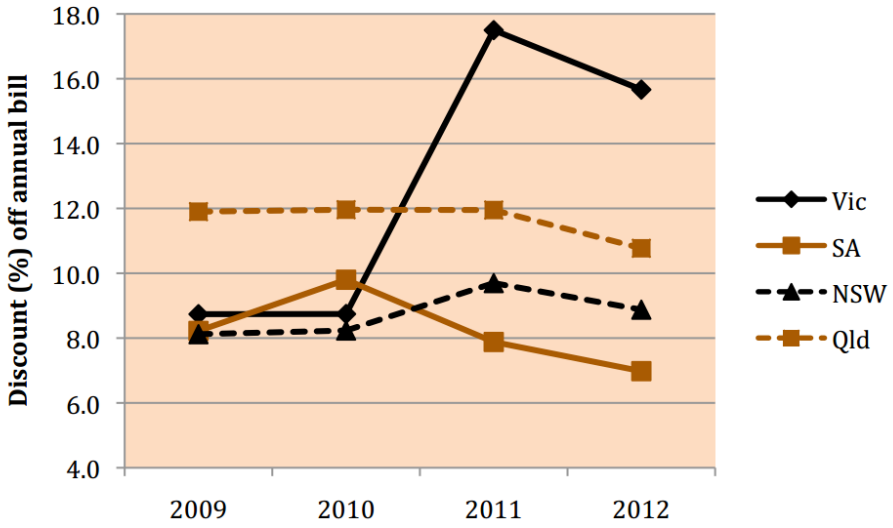
4. What Do Other Stakeholders Say about Current Support Arrangements?

Changing electricity and gas market circumstances has led to a greater focus on concepts of energy affordability and whether current support arrangements are adequate. In this section we summarise the key findings of a number of stakeholders' studies that have investigated arrangements for vulnerable customers and made a number of policy recommendations for improvement.

4.1 St Vincent De Paul Society

The St Vincent De Paul Society has been closely monitoring the relationship between rising tariffs and the associated value of concession arrangements.[14] The figure below demonstrates how these relationships have been changing and highlights the significant differences in the effective level of concessions across jurisdictions.

Figure 4: Effective value of concessions for medium usage household



Source: St Vincent De Paul Society 2013

In light of concession arrangements being significantly different between jurisdictions, they recommend national standardisation of concession regime principles to align benefits across jurisdictions.

In addition, they identify a number of gaps and anomalies in the current concession regimes, including:

- concession card holders in South Australia that receive low rebates relative to their high energy bills. South Australian households with dual fuel use also receive proportionately smaller benefits relative to households which only use electrical energy;
- gas users in New South Wales have no rebates on gas bills;
- New South Wales concession arrangements do not account for different household bills across each network within the state (the relative value of the concession is significantly lower in rural New South Wales compared to greater Sydney); and

[14] St Vincent De Paul Society & Alviss Consulting, *Relative Value of Energy Concessions 2009 - 2012*, 21 March 2013

- Queensland households with healthcare cards do not receive rebates as in other states. Concession arrangements in Queensland focus on pensioners and seniors, which does not include vulnerable family demographics.

The St. Vincent De Paul Society Observations from the Vinnies' Tariff-Tracking Project[15] recommends measures that would better educate customers in light of changing network prices. St. Vincent de Paul recommend that the Energy Retail Association of Australia (ERAA) develop a code for consistent language for explaining contract components, standardise bill presentation and take steps to increase bill transparency and reduce confusion.

Finally, they argue that with tariff structure reforms, there is a need to review concession arrangements in New South Wales and South Australia in light of retail market deregulations. They suggest that with a broader range of tariff structures being used in deregulated markets, there is a need to shift to percentage based rebates as are currently applied in Victoria.

4.2 Australian Energy Regulator

The Australian Energy Regulator (AER) monitors the effectiveness of vulnerable customer support mechanisms in South Australia, Tasmania and the Australian Capital Territory and explores energy affordability for benchmark low income customers across all NEM jurisdictions.[16]

Table 2 and 3 summarise the key metrics that the AER reports.

Table 2: AER observations of disconnected concession customers

	Customers receiving electricity concessions	Customers receiving gas concessions	Electricity concession customers disconnected	Gas concession customers disconnected	Electricity concession customers reconnected within seven days (as portion of all concession customers)	Gas concession customers reconnected within seven days (as portion of all concession customers)
South Australia	28.87%	8.05%	0.17%	0.18%	0.08%	0.07%
Tasmania	38.49%	-	0.63%	-	0.24%	-
ACT	16.54%	0.50%	0.11%	0.18%	0.02%	0.00%

The AER's observations of concession customer disconnections show that less than 1 per cent of concession customers will be disconnected across all comparator states. The AER does not draw any conclusions from the low number of disconnections or how it compares to disconnections of non-concession customers. The AER do however note that Tasmania has a relatively higher rate of concession customer disconnections than other states.

[15] St Vincent De Paul Society & Alviss Consulting, *St Vincent De Paul Society – The National Electricity Market – Wrong Way Go Back? Observations from the Vinnie's Tariff-Tracking Project,* September 2014

[16] AER, *Annual Report on the Performance of the Retail Energy Market 2012 - 2013*, February 2014

Table 3: AER energy affordability study low income results

State	Household income and concession	Annual electricity bill	Electricity bill as proportion of annual income	Annual gas bill	Gas bill as proportion of annual income
Queensland	Low income with concession	$1,070	3.32%	$812	2.52%
	Low income without concession	$1,300	4.03%	$877	2.72%
New South Wales	Low income with concession	$1,397	4.27%	$827	2.53%
	Low income without concession	$1,647	5.04%	$827	2.53%
Victoria	Low income with concession	$1,273	3.91%	$1,117	3.43%
	Low income without concession	$1,506	4.62%	$1,218	3.74%
South Australia	Low income with concession	$1,733	5.89%	$827	2.81%
	Low income without concession	$1,816	6.17%	$910	3.09%
Tasmania	Low income with concession	$2,160	7.85%	-	-
	Low income without concession	$2,610	9.49%	-	-
Australian Capital Territory	Low income with concession	$1,423	2.87%	$683	1.38%
	Low income without concession	$1,597	3.23%	$857	1.73%

The AER's energy affordability study showed that the average low income household with a concession arrangement will receive an electricity bill 2.9 to 7.8 per cent of disposable income and a gas bill of 1.4 to 3.4 per cent of disposable income. Tasmania represented the highest cost of electricity with low income concession holders paying $2,160 per annum on average and Victoria showed the highest gas bills with average low income concession bills totalling to $1,117 per annum.

4.3 Energy Supply Association of Australia

The Energy Supply Association of Australia engaged Deloitte to investigate concession arrangements, rebates and hardship assistance policies across all Australian jurisdictions.[17] In so doing, Deloitte also identified gaps in current regimes and potential changes to concession schemes to improve coverage and to improve its implementation.

Deloitte finds four main gaps in the coverage of current concession schemes, specifically:

1. Families which qualify for Family Tax Benefit A but not a healthcare card are not eligible for an energy concession;
2. Single renters with low income which exceeds $25,000 do not qualify for energy concessions;
3. Regional customers with low income and no connection to energy networks do not qualify for energy concessions; and
4. New home buyers with low income excluding housing costs, with pre-overhead income that exceeds thresholds for energy concessions.

Deloitte makes four main recommendations for concession arrangements at a national level, namely the need to:

1. Implement concessions based on the percentage of the bill, as currently applied in Victoria;
2. Widen the concession criteria to include households that receive Family Tax Benefit A;
3. Provide a greater focus on energy efficiency concessions to achieve greater long term benefits; and
4. Provide better education for vulnerable customers on new tariff pricing structures and how to manage energy bills in light of these changed structures.

4.4 National Energy Affordability Roundtable

The National Energy Affordability Roundtable of 2013[18] gathered various state and territory ombudsmen, the Energy Retailers Association of Australia and the Australian Council of Social Service to provide suggestions to the Standing Council on Energy and Resources on improvements to current arrangements for ensuring affordability of energy.

The key recommendations of the round table included:

- the creation of a national framework for concession regimes, including what is to be considered the acceptable rate of concessions. The framework would be based on percentage-of-bill based concessions;
- a review of emergency relief programs to standardise jurisdictional inconsistencies;
- the development of mechanisms which allow customers to carry concession entitlements across energy retailers when switching;
- further government initiatives which help low income households access energy efficient appliances; and
- various initiatives to better inform customers about their bills, usage and options.

4.5 Australian Energy Market Commission

The Australian Energy Market Commission (AEMC) made a number of recommendations to improve the scope for consumers to manage energy bills, as part of its 2012 Power of Choice report.[19] These recommendations seek to enable and protect customers during a transition to new tariff schemes, by

[17] Energy Supply Association of Australia & Deloitte, *Improving energy concessions and hardship payments policies*, Final Report, 25 February 2013.

[18] Energy and Water Ombudsman New South Wales, *National Energy Affordability Roundtable - National Energy Affordability Roundtable Report to the Standing Council on Energy and Resources (SCER),* May 2013

[19] AEMC, *Power of choice review - giving consumers options in the way they use electricity*, Final Report, 30 November 2012, Sydney

focusing on the provision of education about how to manage energy use, and by providing flexibility in tariff structure options.

The specific recommendations on education include:

- providing customers with access to their own energy usage data;
- providing education on energy efficiency
- measures to support retail switching; and
- obligations to improve consultation between distribution network service providers and customers.

The AEMC also indicates that concession arrangements should also adapt to reflect an anticipated broader range and structure of pricing arrangements, which is similar to recommendations made by the St Vincent De Paul Society. The AEMC further suggests that governments should focus on energy efficiency programs to provide targeted assistance to customers which may have limited capabilities to change consumption habits.

4.6 AGL Energy

AGL Energy has examined electricity market trends and demographic data to determine those customer demographics that are likely to be most vulnerable to changing energy market conditions.[20]

They highlight a gap in current concession arrangements, which do not offer benefits to the 'family formation cohort'. This is defined as a household with a head of the family aged between 30 and 49, with children and a substantial mortgage or rent payments. AGL's analysis shows a trend of increased incidence of hardship within the family formation cohort as compared to other groups such as retirees, under current market circumstances.

Given the identified hardship demographics, AGL recommends broadening the criteria for concessions to include the family formation cohort, possibly allowing concessions for households receiving Family Tax Benefit A.

AGL also recommends changing concession arrangements to take into account the size of the household. They suggest a concession arrangement as used in Victoria with percentage based rebates or an arrangement where an inclining fixed rebate is paid depending on the number of children in the household.

4.7 Summary

In summary, there is a broad consensus amongst stakeholders that current concession and support arrangements for vulnerable customers are inadequate given changing circumstances in the energy sector, which includes both electricity and gas.

Specifically:

- there are significant differences in concession arrangements between jurisdictions, which means that customers with similar characteristics receive vastly different support;
- support arrangements have not kept up with changes in tariffs, and in particular current or anticipated changes in tariff structures; and
- there are a number of gaps in support arrangements, which means that some customers that might be considered vulnerable are not eligible for support.

[20] AGL Energy, *The Energy Market Death Spiral - Rethinking Customer Hardship*, June 2012, Brisbane

5. National Framework to Support Vulnerable Customers

There is a need for a coordinated national framework that draws on the particular roles and areas of expertise of each party currently involved with the support of vulnerable customers. This need is enhanced by proposed reforms to distribution tariff structures and the expected increase in gas prices.

A national framework should harmonise government funded support, customer funded assistance and market developments and clearly define the goals of each party involved in the support of vulnerable customers.

There should be clearly defined objectives for a national framework, which focus on equality, fairness and the promotion of economic efficiency. The objectives of the national framework should be consulted on with stakeholders prior to finalisation.

Any intervention should not impede (or minimise the effect on) price signals sent to customers.

Our review of existing policies and programs to support vulnerable customers highlights the disparity of approaches between jurisdictions (as noted in section 3 above). Developing a nationally coordinated framework for supporting vulnerable customers is a common theme in the studies undertaken to date in this area.

We believe that there is a strong case for the development of a national vulnerable customer framework that sets out the roles and responsibilities of each stakeholder in the electricity market, given their particular expertise and experience, and sets out principles to guide specific support arrangements. Such a framework would provide confidence that vulnerable customers are treated equally, irrespective of which jurisdiction they reside.

We note that there is currently a national framework covering retailer hardship (ie, the NECF) whereby each authorised retailer must develop, maintain and implement a customer hardship policy for their residential customers. We would expect this to be integrated in a holistic national framework for supporting vulnerable customers, ie, in conjunction with energy concessions, tariff design, programs targeting energy literacy/efficiency etc.

Overall, a national vulnerable customer framework should:

- provide a common set of principles for supporting vulnerable customers, based on the objectives of promoting equality and fairness of support, while promoting efficient use of electricity; and
- minimise the extent of overlap between stakeholders in the current approaches to providing support for vulnerable customers, ie, each party would have clearly defined roles.

Examples of the types of principles that we believe are important for a national framework include that support for vulnerable customers should:

- be provided by the party with the most appropriate skills and experience, within a framework where roles and responsibilities of all parties are clearly defined and well understood;
- ensure that customers with similar characteristics (eg, usage profile) receive similar support, regardless of the jurisdiction within which they reside;
- be based on clear eligibility criteria, including a new eligibility criteria for low income households that are unable to respond to price signals and so become vulnerable;
- maintain incentives for efficient use of the electricity network, commensurate with the costs imposed on the network;
- take into account the limited understanding of energy tariffs available for vulnerable customers; and
- facilitate vulnerable customers accessing the benefits of retail market competition through retail switching and the provision of information on tariff structures that lower bills given their particular circumstances; and
- remove impediments to retail switching by customers on retail hardship programs.

These principles are based on good economic practice, our review of the current schemes as well as our discussions with a number of stakeholders.

6. Options for Reform

Network businesses can play an important role in working with other energy sector stakeholders to support vulnerable customers.

Increasing the involvement of networks in assisting vulnerable customers should play to the strengths of the network business and their potential unique contribution to make a difference in this space.

In our opinion, options for improving the assistance to vulnerable customers include:

- governments harmonising the value of financial assistance across jurisdictions, addressing gaps in assistance and replacing lump sum concession payments with payments based on a percentage of the energy bill;
- networks considering options for providing greater access to information for all customers (vulnerable and non-vulnerable alike) that will enable them to make more informed choices and choose the most appropriate retail tariff for their circumstances;
- governments addressing the needs of customers with long term vulnerability or clusters of vulnerable customers through providing assistance for household or community investments (eg, insulation, technology to manage their use, energy efficiency) in place of paying financial assistance; and
- networks considering the case for and against social tariffs, as an option to assist vulnerable customers, and their potential usefulness in enabling the transition to more cost reflective network pricing

6.1 Percentage-based energy concessions

The two most common ways of structuring concessions provided to vulnerable customers are:

- lump sum transfers; and
- payments based on a percentage of a customer's energy bill.

Vulnerable customers in the United Kingdom are assisted through lump-sum transfers, some of which are available only to those on government benefit schemes, and others which are available to all energy consumers. The form of assistance provided in the United Kingdom is therefore very similarly structured to the current concessions in Australia (with the exception of Victoria).

In the United States, concessions payments are more commonly provided as percentage-based discounts on rates or rebates. For example:

- low-income customers in California that are enrolled in the CARE program receive a 30-35 per cent discount on their electric and natural gas bills (ie, as opposed to on their energy rates directly);[21]
- low income families in California whose household income slightly exceeds the specified 'low-income energy program allowances' and household size exceeds three or more persons qualify to receive FERA discounts, which bills some of their electricity usage at a lower rate;[22]

[21] California Public Utilities Commission website, available at: http://www.cpuc.ca.gov/PUC/energy/Low+Income/care.htm

[22] California Public Utilities Commission website, available at: http://www.cpuc.ca.gov/PUC/energy/Low+Income/fera.htm

- in Texas, the LITE-UP Texas program allows eligible customers (low income and elderly Texans) to save a certain per cent off the regular price of electricity and is a set amount in cents per kilowatt-hours off whatever price the customer pays;[23] and
- payments under the Federal Low Income Home Energy Assistance Program (LIHEAP) program are typically made directly to local utility companies and the payment amount is determined according to the size and type of a customer's home, as well as type of fuel used.[24]

We consider that percentage-based concessions are more effective in supporting vulnerable energy customers and provide a more equitable level of support to all vulnerable customers. For example, for vulnerable customers with relatively low energy requirements, a lump sum transfer is likely to represent a large proportional discount off their total energy bill whereas, the same lump sum transfer to a relatively large energy using vulnerable customer would not represent the same large proportional discount off their total energy bill. Lump sum transfers are therefore more likely to create a distortion in benefits that percentage-based concessions are not.

In addition, in circumstances where energy prices are rising rapidly (ie, as is tipped to happen to domestic natural gas in Australia), percentage-based concessions offer more dynamic support than lump-sum concessions, which are typically indexed to the rate of change in the consumer price index.

A further benefit of percentage based concessions is that they reflect the continuum of vulnerability, whereas lump sum payments on the other hand, reflect an, incorrect, binary concept of vulnerability. This correct understanding of vulnerability is reflected in the support offered to many vulnerable customers in the United States – not only via these schemes being percentage orientated but by the eligibility criteria increasing with household size. For example:

- customers are generally eligible for the CARE program if their total household income is no more than $31,460 for a household of one or two people. For each additional occupant in the house, the income threshold increases by$8,120;[25]
- customers are generally eligible for the FERA program if total household income is no more than $49,475 for a household of three people. For each additional occupant in the house, the income threshold increases by$10,150;[26] and
- eligibility for LIHEAP often depends on income levels, and customers considered in poverty are generally eligible (eg, New Jersey households must have gross income at or below 200% of the federal poverty level for 2015). The annual income threshold increases with the household size.[27]

We note that transitioning to percentage based concessions could make some vulnerable customers worse off (eg, those customers currently receiving a lump sum transfer with relatively low energy requirements). However, in the detailed design of concessions, policymakers could include caps and floors in concession amounts to ameliorate these problems or mandate a gradual phasing in of price rises to vulnerable customers.

6.2 Empowering customers with information

Amongst the many stakeholders that we spoke to in the development of this paper there was a firm and widely held opinion that supporting vulnerable customers was the responsibility of all stakeholders (ie, businesses across the supply chain, governments and non-governmental support organisations). Each stakeholder has different strengths, and the best outcome for vulnerable customers is likely to be achieved from each stakeholder working in a coordinated manner to address vulnerable customers' needs.

[23] Centrica website, available at: http://www.centrica.co.uk/files/reports/2006cr/index.asp?pageid=123

[24] Montana Bridge to Benefits website, available at: http://mt.bridgetobenefits.org/Low_Income_Energy_Assistance_Program.html

[25] California Public Utilities Commission website, available at: http://www.cpuc.ca.gov/PUC/energy/Low+Income/care.htm

[26] California Public Utilities Commission website, available at: http://www.cpuc.ca.gov/PUC/energy/Low+Income/fera.htm

[27] New Jersey Department of Community Affairs website, available at: http://www.state.nj.us/dca/divisions/dhcr/offices/heausfincomefact.html & Montana Bridge to Benefits website, available at: http://mt.bridgetobenefits.org/Low_Income_Energy_Assistance_Program.html

For example, Figure 5 provides a schematic representation of the current relationships and roles and responsibilities of each stakeholder in the support of vulnerable electricity customers, where green arrows represent informational flows and blue arrows represent financial flows.

Figure 5: Current Roles and Responsibilities of Stakeholders in Supporting Vulnerable Customers

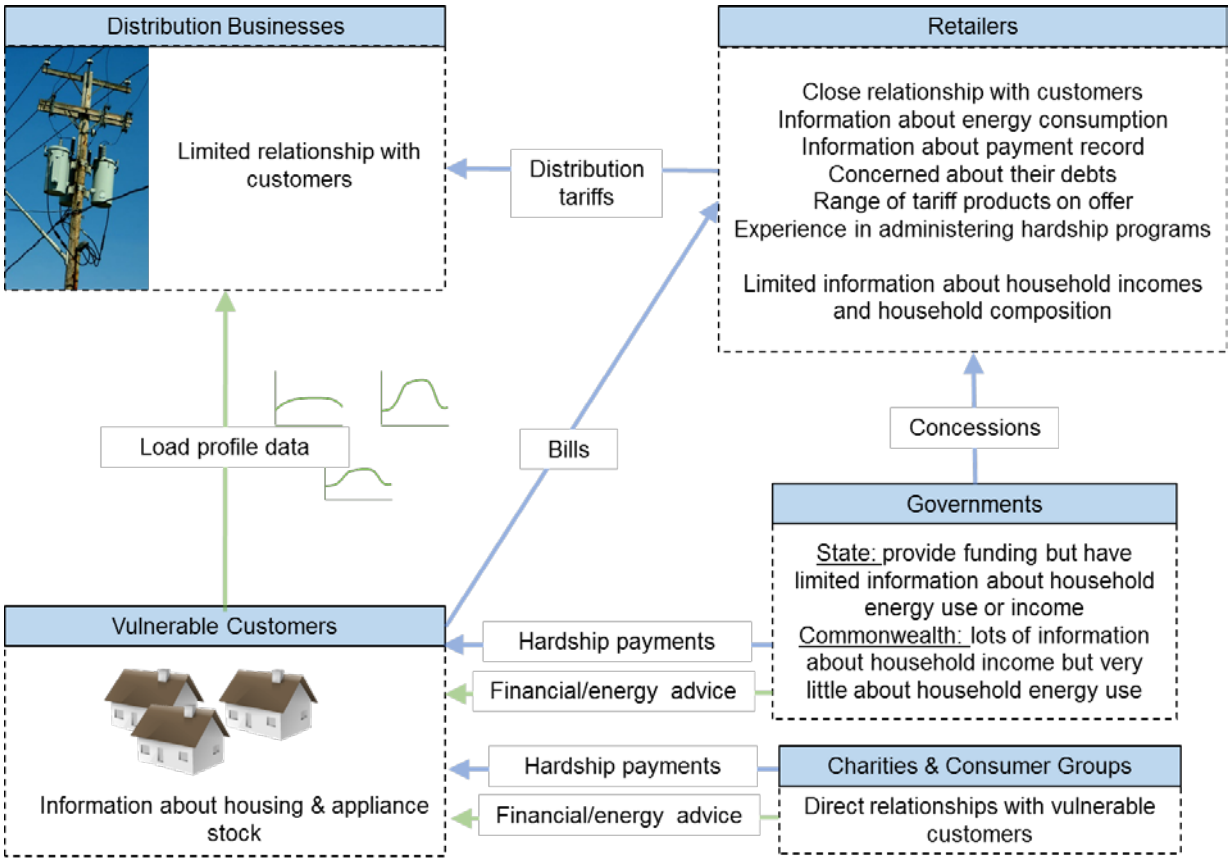


Figure 5 illustrates the different information that is available to the various entities that currently make it difficult to effectively identify a vulnerable household that is experiencing affordability problems. Consequently, the right mix of emergency assistance, ongoing income support and energy efficiency measures may not be reaching the right customers.

In discussions we held, there was a concern that customers often ignore their debt and do not communicate their hardship situation with retailers and end up being disconnected. Overall, there was support for more assistance to help customers help themselves. In addition, these discussions confirmed that for many vulnerable customers, navigating the 'energy market' is a very complex task or time-consuming. Resultantly, there are important gaps between what policy makers expect of customers and what customers are able to do to manage their bills currently.

We believe that networks businesses can best contribute to the support of vulnerable customers and helping to bridge these gaps by drawing upon their key areas of competence. Specifically:

- the primary role of distribution network businesses is to provide end-use customers with a safe, reliable and competitive supply of electricity and gas;
- electricity and gas distribution network businesses are well recognised in the community as supporting customers during periods of network failure (eg addressing outages etc) and are recognised as an impartial party in the supply chain; and
- in electricity networks where smart meters are installed networks have information on customer information that could be used to assist vulnerable customers manage their bills. Where smart meters are installed, there are a number of ways that electricity customers could be provided with information on

their usage patterns, eg, through retailers, through access to network data (portals, technology, in home displays) etc.

Energy network businesses are therefore well placed to improve the ability of vulnerable customers to actively participate in energy markets by increasing community understanding of how energy markets work, and what customers can do to get the most out of these markets (ie, lower their bills). Over time, as networks develop a direct relationship with customers around network services this could include providing them with more information and tools. An example of this service is currently being provided through Jemena's online portal, where customers can view how much electricity they are using and when they are using it. The Jemena online portal also allows customers to compare tariffs from different retailers to find the best plan for them.[28]

However, by networks taking on a more proactive role in supporting vulnerable customers, there would likely remain a need for:

- government financial support of vulnerable customers;
- retailers to administer hardship and other direct financial concession schemes; and
- non-government organisations to provide direct support for vulnerable customers (including emergency financial support).

6.3 Targeted energy usage programs

Many vulnerable customers are subject to a high 'inherited load' that adds to their vulnerability and often decreases their ability to change their behaviour in response to price signals. For example:

- some vulnerable customers are locked in to higher than efficient energy use because of the fact that they are tenants (in either public or private housing); and
- vulnerable customers also do not often have access to the capital to invest in new appliances/insulation nor the incentive to do so if they do not have satisfactory security of tenure (ie, they are renting).

The information that energy network businesses possess on customer energy usage behaviour could assist in identifying (and thus help reduce) the 'inherited load' for vulnerable customers. This is particularly important if electricity distribution tariffs are restructured to be capacity-based tariffs as many of these vulnerable customers may be significantly worse off under these arrangements due to inefficient appliances.

A number of countries are focusing on improving the energy efficiency of vulnerable households through home improvements and appliance upgrades, as shown in the box below.

[28] Jemena website, available at: https://electricityoutlook.jemena.com.au/

Box 2: International Examples of Programmes to Improve the Energy Efficiency of Vulnerable Customers

ENERGYWISE is a scheme run by New Zealand's Energy Efficiency and Conservation Authority aimed at informing customers and promoting efficient consumption through a range of subsidies and consumer information tools. ENERGYWISE offers free in-ceiling and underfloor insulation for certain low income households in particular regions through the Warm Up New Zealand: Healthy Homes projects. To qualify, the house owner or tenant must hold a Community Services Card and at least one person occupying the house must be younger than 17 or older than 65.[29]

ENERGYWISE has also partnered with local councils and various banks to offer insulation programs for households which do not qualify for the Warm Up New Zealand projects. With these programs, the costs of insulating a house may be deferred and included in either mortgage payment or council rate payments.[30] Other household energy projects in the ENERGYWISE scheme focus on informing consumers about energy efficient products, building standards, and usage.

The Welsh government's Nest scheme is a targeted home energy efficiency program which targets low income households with energy inefficient homes. Nest scheme benefits vary depending on what would benefit the household. These benefits may include:[31]

- new central heating;
- insulation;
- hot water cylinder insulation;
- draught proofing for doors and windows; and
- renewable energy technologies.

All homes that apply to the Nest scheme are given an energy efficiency ranking of A to G. Homes which fall into the F or G ranking qualify for the Nest scheme. The ranking is based on various factors such as the lack of central heating, lack of insulation, single glazed windows and no energy efficient light bulbs.[32]

In California, the Energy Savings Assistance Program provides free weatherization services to low-income households who meet the CARE income guidelines (outlined above). Services provided include attic insulation, energy efficient refrigerators, energy efficient furnaces, weather-stripping, caulking, low-flow showerheads, water heater blankets, and door and building envelope repairs which reduce air infiltration.[33]

Targeted energy usage programs can be structured in a number of ways, eg:

- directly improving the energy efficiency of housing stock and/or appliances (ie, retrofitting); or
- assisting vulnerable customers upgrade their own appliances/insulation (ie, subsidising).

Such programs have the potential to decrease the future concession burden on governments by reducing the load of vulnerable customers, particularly where a percentage-based concession is in place.

While energy concessions represent a stream of payments with the objective of providing financial assistance directly to vulnerable customers in paying their energy bills, it is important to realise that these funds have an inherent 'opportunity cost' associated with them, ie, the cost associated with not being able to do something else with these funds.

An alternative use of concession funds could be to provide financial assistance to vulnerable customers in reducing their energy usage directly, and thus their bills. For example, concession funds could instead be capitalised and used to either subsidise (or fully pay) for technology to assist vulnerable customers manage their energy use, and hence lower their energy bills.

A key benefit of this approach is that it reduces the energy usage of vulnerable customers going forward and so the associated debt problems with not being able to pay bills. An important consideration that would need

[29] ENERGYWISE website, available at: http://www.energywise.govt.nz/funding-and-programmes/insulation-programme

[30] ENERGYWISE website, available at: http://www.energywise.govt.nz/funding-and-programmes/insulation-programme

[31] NEST website, available at: http://www.nestwales.org.uk/

[32] NEST website, available at: http://www.nestwales.org.uk/

[33] California Public Utilities Commission website, available at: http://www.cpuc.ca.gov/PUC/energy/Low+Income/liee.htm

to be given to such a policy is whether the present value of the stream of concession payments is comparable (or greater) than the costs associated with either subsidising or completely paying for the installation of technology aimed at assisting customers manage their energy use. If so, it indicates that such a policy might represent better value for money than the current concession schemes. Vulnerable customers could potentially be offered the option to either remain on their current concession (ie, have their energy bill reduced directly), or to instead have such technology installed on their premises (ie, to lower their energy bills indirectly via managing their energy use).

A similar scheme was piloted in California between 2010 and 2012 when the California Department of Community Services and Development (CSD) ran a competitive bid process to install rooftop solar systems on low-income homes. The scheme was funded by the by the CSD a portion of its annual federally-funded Low Income Home Energy Assistance Program allocation (ie, instead of using of these funds to subsidise the energy bills of low income customers directly). The pilot scheme concluded at the end of 2012 and 1,482 low-income households received fully installed solar systems – almost triple the original goal set in 2010.[34]

California currently provides fully subsidised 1 kW systems to very low-income households, and highly subsidised systems to other low-income households under the Single Family Affordable Solar Housing (SASH) program.[35] To qualify for the SASH Program, applicants must meet the following minimum requirements:

- must be a customer and in the service territory of certain utilities (PG&E, SCE, or SDG&E);
- the residence must be occupied by the homeowner/applicant;
- the household's total income must be 80% of the Area Median Income (AMI) or less based on the most recent available income tax return; and
- the residence must be California Public Utilities Code (P.U.) 2852-compliant.

A fully subsidised 1 kW system is available to households that meet the legal definition of "very low-income" defined as 50 per cent or below the area median income. Eligibility for a highly subsidised solar system is determined by the applicant's Federal income tax liability and eligibility for the CARE program.[36]

Policies similar to those put in place in California (ie, involving subsidising solar PV systems) are unlikely to be effective in lowering the energy bills of vulnerable customers in Australia, in light of the recent AEMC rule change to encourage a stronger link between cost drivers and prices. In particular, the value to a customer of electricity generated from their solar PV system is likely to markedly decrease following the rule change, given the misalignment between when solar PV systems can be expected to generate and when network prices are at their peak.

6.4 Network social tariffs

A social tariff is a tariff arrangement which contains terms, conditions, and charges that are designed to assist or benefit a defined group or groups of disadvantaged users or persons (ie, it has a social purpose). What this typically means for vulnerable customers is that they receive discounted energy prices.

We note that the recent AEMC rule change regarding distribution network tariffs includes pricing principles that address the potential impacts on consumers of the transition to new network price structures. Specifically, one principle requires distribution businesses to consider the impact on consumers of changes in network prices given that consumers are more likely to be able to respond to price signals if those signals are consistent and apply for a reasonable period of time.[37] Social tariffs may therefore be consistent with this principle and could help provide vulnerable customers with the time they require to respond to price signals.

[34] California Department of Community Services and Development website, available at: http://www.csd.ca.gov/Services/HelpPayingUtilityBills/SolarForAllCalifornia.aspx

[35] California Public Utilities Commission website, available at: http://www.cpuc.ca.gov/PUC/energy/Solar/sash.htm

[36] Go Solar California website, available at: http://www.gosolarcalifornia.ca.gov/affordable/sash.php

[37] AEMC, *National Electricity Amendment (Distribution Network Pricing Arrangements) Rule 2014*, Rule Determination, 27 November 2014, p. iii.

Social tariffs have been used to assist vulnerable customers in paying their energy bill internationally. Examples of this are provided in the box below.

Box 3: International Examples of the Application of Social Tariffs

Social tariffs were introduced in the United Kingdom as a means to lower the energy bills of vulnerable customers by providing special price plans from individual energy suppliers. Ofgem required that the social tariffs must at least match the cheapest deals available as well as provide extra free services to certain customers. However, these social tariffs began being phased out in 2011, when the Warm Home Discount was introduced.

In Texas, the LITE-UP Texas program allows eligible customers (low income and elderly Texans) to save a certain per cent off the regular price of electricity and is a set amount in cents per kilowatt-hours off whatever price the customer pays, so the discount makes bills even lower if the customer shops around for a lower rate. A discount of approximately 82 per cent applied during September 2013 and May, June, July, and August 2014 and it is tipped that lower discounts will apply for the summers of 2015 and 2016 when the scheme is ultimately discontinued.[38] The LITE-UP Texas program has been funded by the Systems Benefit Fund which levied a US $0.65 fee on electricity bills to provide financial support to low-income households.[39]

In California, low-income customers that are enrolled in the California Alternate Rates for Energy (CARE) program receive a 30-35 per cent discount on their electric and natural gas bills (ie, as opposed to on their energy rates directly). In addition, the Family Electric Rate Assistance (FERA) program provides a discount on electricity costs once energy usage reaches certain levels for qualified households with three or more persons.

In addition, the argument for a social tariff is often given in making the case is made for inclining block tariffs. It is often argued that the first block is below average costs to protect the well-being of the vulnerable customers and that the last block is above average costs to promote energy efficiency. In British Columbia, when inclining block tariffs were introduced it was decided to impose the entire tariff increase on the second tier and to leave prices in the first tier unchanged. The presumption was that the first tier represented usage that was necessary to ensure a suitable lifestyle.[40]

It was the view of a number of parties we spoke with that a social tariff may help prevent many vulnerable customers from incurring high debt and having to go on to retailer hardship programs. This extends to concessions whereby the imposition of a social tariff would likely lighten the load on concessions.

There exists a boundary/definitional issue of who is in fact 'vulnerable'. For a social tariff system to work effectively it has to be clearly defined who is eligible for receiving a social tariff. We understand from our discussions undertaken as part of this paper that many vulnerable customers go on and off a retailer's hardship schemes fairly frequently as their individual financial circumstances change. Therefore, if eligibility for a social tariff is linked to being on a hardship program, policy makers should be aware of the administrative costs associated with the likely changing eligibility status of many customers.

Where vulnerable customers have different energy usage patterns to other customers, then charging them a different tariff may in fact be efficient overall, ie, an 'economic tariff'. For example, tenants of public housing may be suitable prospects for receiving different tariffs to other residential consumers if they use energy in a different manner to other residential customers (ie, when they use energy and how much they use).

We note that where vulnerable customers have high demand elasticities, there is an argument under Ramsey pricing for charging lower prices to vulnerable customers. This approach is not dissimilar to the current structure of tariffs where commercial and industrial consumers face a higher tariff than residential customers, given their low assumed price elasticities. However, we note that many vulnerable customers in fact have very low elasticities, where consumption is already at a level close to what is considered essential for home cooking, lighting, heating/cooling etc.

[38] The Texas Office of Public Utility Counsel website, available at: http://www.opuc.texas.gov/CA_liteup_texas_program_ending.html

[39] Centrica website, available at: http://www.centrica.co.uk/files/reports/2006cr/index.asp?pageid=123

[40] The Brattle Group, *Structure of Electricity Distribution Network Tariffs: Recovery of Residual Costs*, Report Prepared for the Australian Energy Market Commission, August 2014, p. 10.

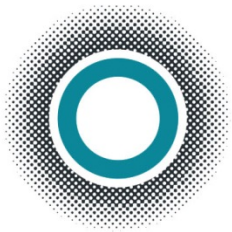
We note that while social tariffs have been used internationally to provide financial support to vulnerable customers, there are a number of arguments against the imposition of these tariffs. For example, it is often considered that under standard economic efficiency theory, tariff design should be separated from redistribution policies. Keeping these two concepts separate means that tariffs customers face reflect the costs inherent in consumption and are thus provided with the incentive to consume efficiently (ie, the price signalling property of cost-reflective tariffs is preserved).

Tariffs themselves are also considered a fairly broad instrument to provide assistance to vulnerable customers and may not accurately address the problem. For example, social tariffs may be designed to assist vulnerable customers with low consumption but may inadvertently provide discounts to many customers who are not vulnerable, and miss many who are. Instead of providing support via a social tariff mechanism, those identified as being vulnerable can be assisted through 'out of market' means, ie, concessions, hardship programs etc.

In addition, once a customer identifies themselves as a 'vulnerable' customer through a social tariff, retailers are less likely to compete for them given their commercial unattractiveness. Rod Sims, in his previous role as Chairman of IPART, noted this in concluding that the objective of a social tariff is better achieved by leaving vulnerable customers on the same tariffs as other customers, and providing them with government rebates and other assistance to reduce the end price they pay for electricity.[41]

More generally, there is the broader question of whether electricity and gas distribution network businesses imposing social tariffs would be consistent with the National Electricity Objective and the National Gas Objective, particularly to the extent that they might not promote efficient use of network infrastructure.

[41] Sims. R., Speech at the 2011 Competition and Consumers Conference – PIAC, 24 June 2011. Available at: http://www.ipart.nsw.gov.au/Home/Industries/Electricity/Reviews_All/Retail_Pricing/Changes_in_regulated_electricity_retail_prices_from_1_July_2011/27_Jun_2011_-_Competition_and_Consumers_Conference_Speech_presentation/Speech_-_Competition_and_Consumers_Conference_-_PIAC_-_24_June_2011_-_Rod_Sims



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