



ENA

**TARIFF REFORM: DEVELOPING EQUITABLE ENERGY PRICING
CEDA NSW**

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ENA's national perspective

1. **Electricity tariff reform** is essential to recover the efficient costs of the network and signal future costs of expansion. Efficient tariffs increase:
 - **downward pressure on network costs;**
 - **resilience** to step-changes in technology and use;
 - **fairness** between customers irrespective of network use & technology choice.

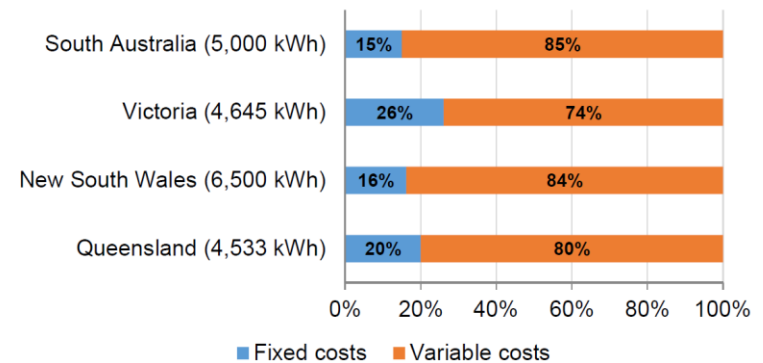
2. **Regulatory framework** should allow networks the flexibility to design tariffs in consultation with customers, stakeholders and with the oversight of the regulator.



Traditional Tariffs - a Burning Platform

- > Most network customers pay tariffs unrelated to cost.
- > Network Cost structure is c. 80% fixed but cost recovery c. 80% variable.
- > Increasingly peaky av. load profile & diverse network use...
 - Household Formation & Energy Efficiency
 - Air-conditioning and appliance trends
 - World-leading % of 'Prosumers'
 - Potential growth in Storage, EVs and new energy services
- > Widely recognised cross-subsidies between customers - unintended and unsustainable
 - eg. \$683 pa for A/C use at peak;
 - \$117 pa for north-facing solar PV; and
 - \$29 pa for west-facing solar PV. (NERA)

Figure 2.10 Fixed and variable components as a share of the representative consumer bill



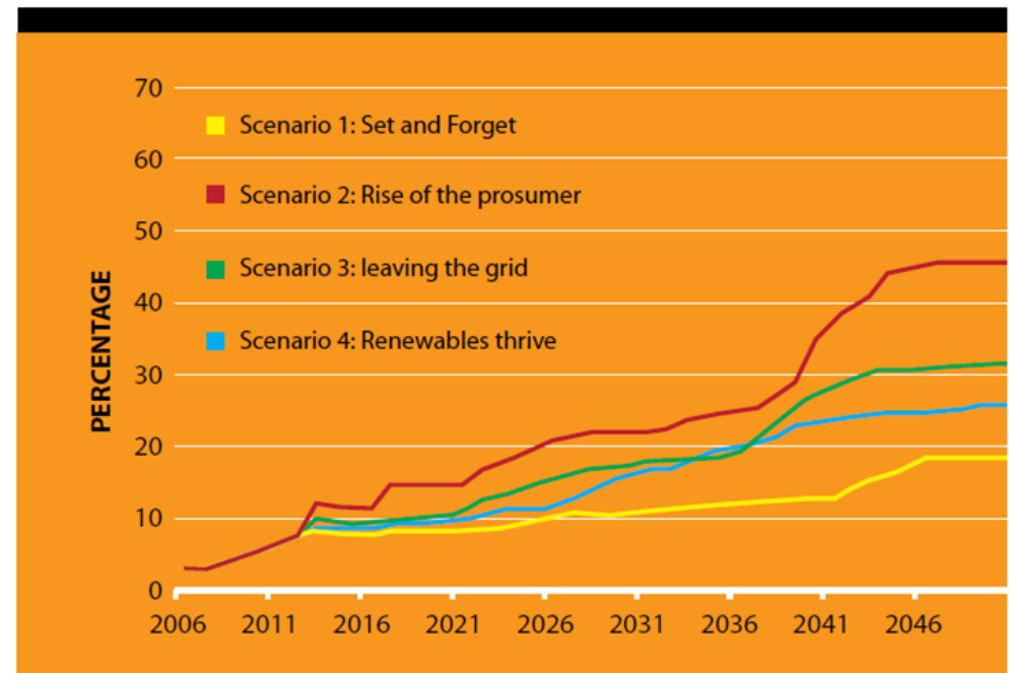
AEMC 2014 Residential Electricity Price Trends Report

Potentially diverse futures for Network Use...

CSIRO Scenario Analysis:

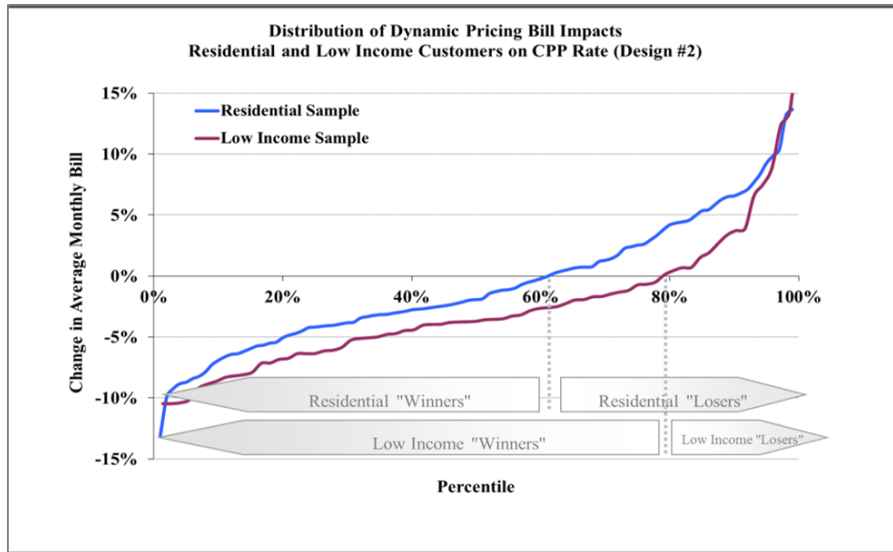
- > No 'Right' Answers but – **DER is likely to be a 'Partial Substitute'**
- > Exposure to highly **volumetric tariffs**
- > Exposure to '**tipping points**' through step changes in use and technology

FIGURE 1: PROJECTED SHARE OF ELECTRICITY DELIVERED FROM ONSITE GENERATION

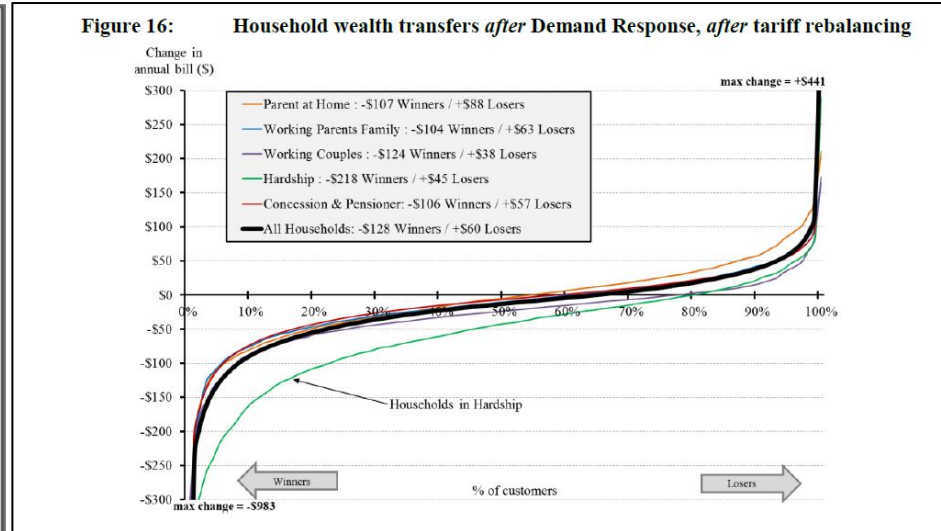


Data sourced from 'Change and Choice' Figure 16, p. 34

Most customers benefit - Vulnerable customers moreso



Source : Brattle Group, *Architecting the future of dynamic pricing*, ACCC Regulatory Conference, August 2014



Source :

Simshauser and Downer (2014) "On the inequity of flat-rate electricity tariffs" AGL Applied Economic and Policy Research

Long-term risk to Consumers if we stand still...

Analysis of Inclining Block Tariffs:

- > **Have Nots:** By 2034, 1/3 of Residential customers remain without DER, paying up to \$1270 more pa.
- > **Haves:** Half the difference in average bill pays for a cross subsidy to the 2/3 of Residential customers with DER.
- > **Lost Opportunity:** Almost 7 million additional solar and storage installations – which usually means a smart meter.
- > **'Opt In' frameworks** for tariff reform unlikely to deliver the transition needed.

Figure 6: Residential customer bill comparison (base case)

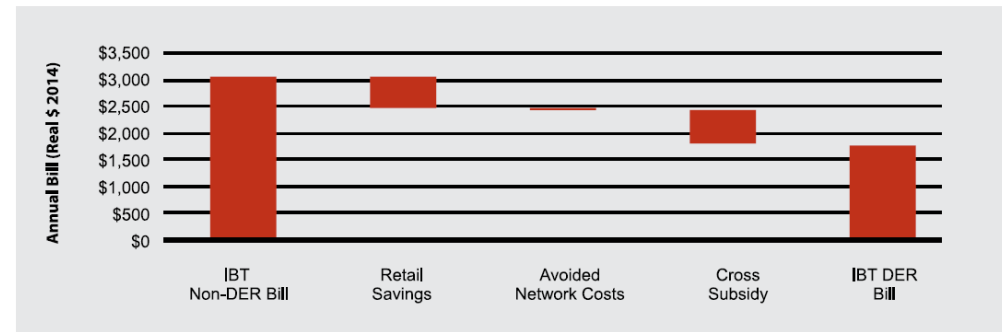


Figure 7: Business customer bill comparison (base case)



Best Performing Tariffs provide clear benefits to customers

Efficiency

- > Incentivise efficient DER investment, saving customers **\$17.7 BN** by 2034

Fairness

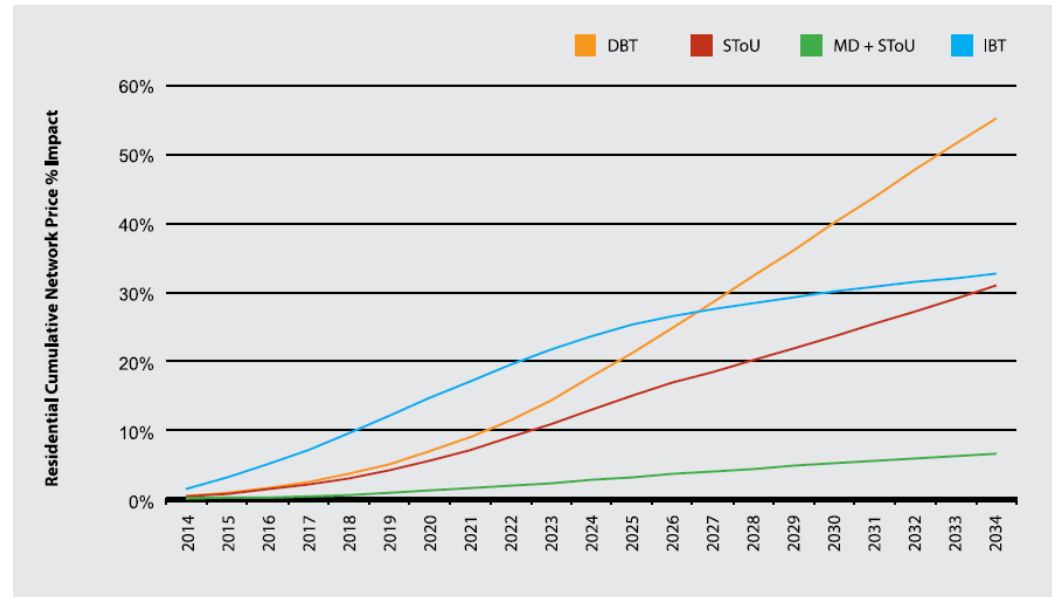
- > Avoid unfair cross subsidies to early adopters increasing from \$120 pa today to **\$655 per year**.

Lower Bills

- > Achieve **\$250 pa. saving in av. residential electricity bills** by 2034.

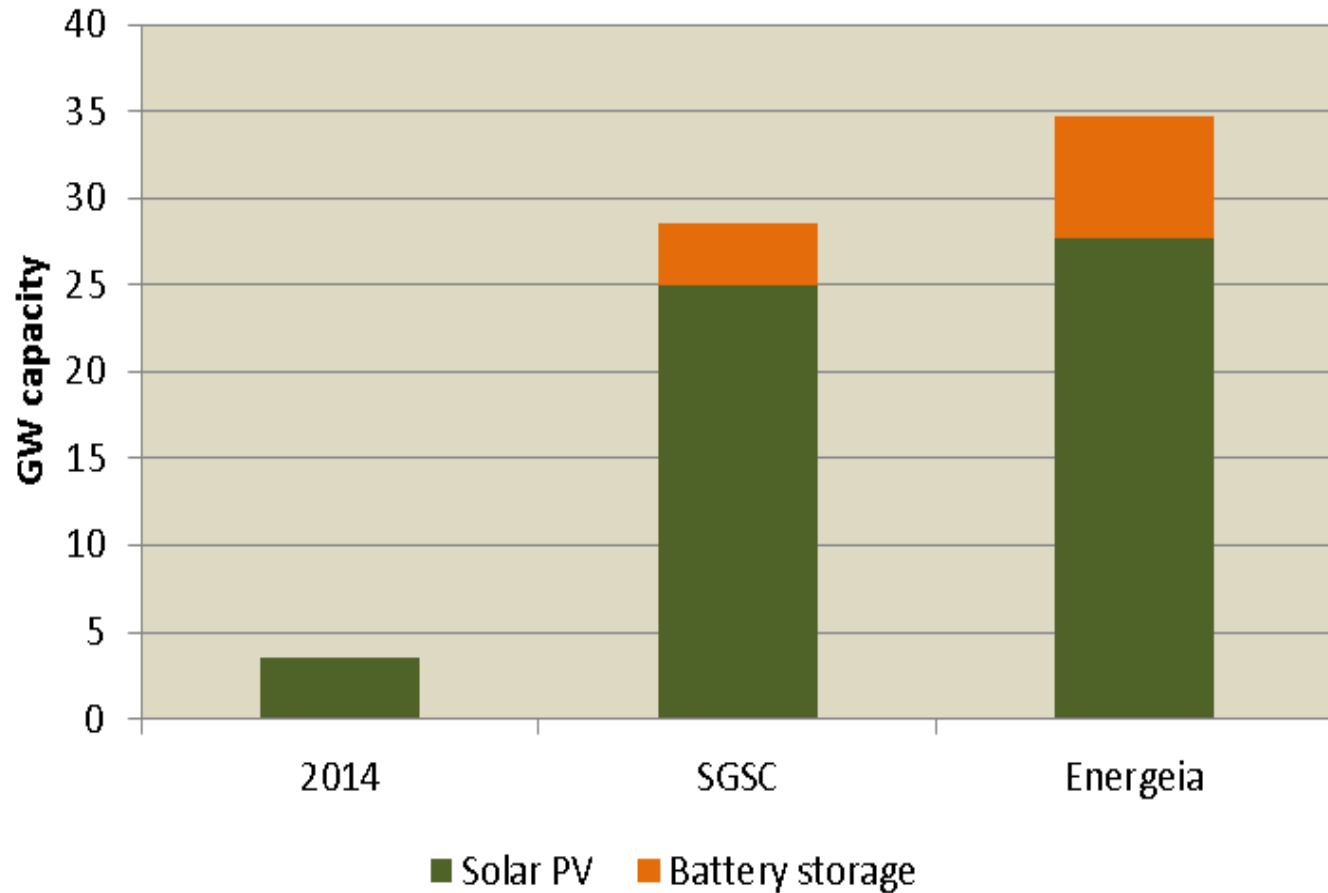
No Price Shocks

- > Avoid network price increases which are 5 times higher than necessary.



ENA: *Towards a National Approach to Electricity Network Tariff Reform*

Growth in renewable energy capacity with tariff reform



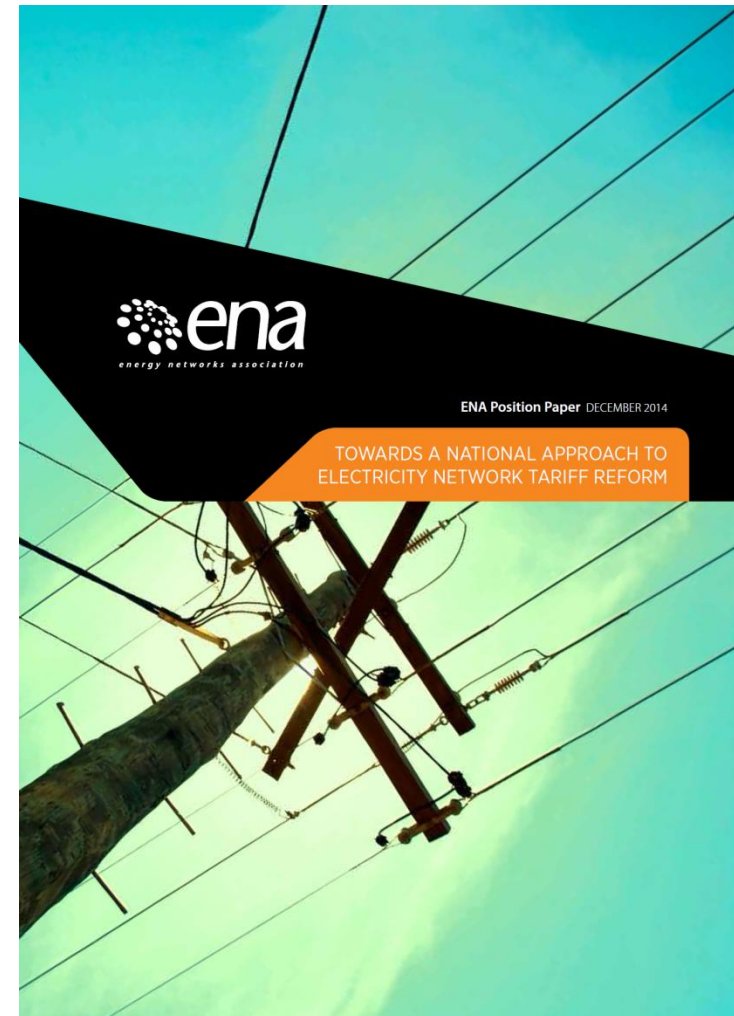
Progress cost-reflectivity in the absence of smart meters

- > In current metering context and growth environment, progress can still be made where accumulation meters are in place:
 - **Network tariff changes which improve fixed cost recovery** such as rebalancing fixed and variable charges; or declining block tariffs.
 - **Tariffs which reflect differences in the cost to serve** the segment (eg. load profile).

- > NSPs need the ability to consider such tariff reform options in consultation with their customers.
 - Tariff design likely to involve inherent trade-offs determining long-term outcomes for customers.
 - For instance, scenarios assessed by Energeia found Declining Block Tariffs produce lower av. bill outcomes for residential customers for first 10 years; then vulnerable to technology costs.
 - Choice may reflect assessment of forecasts in demand and consumption growth, technology costs and customer preferences.

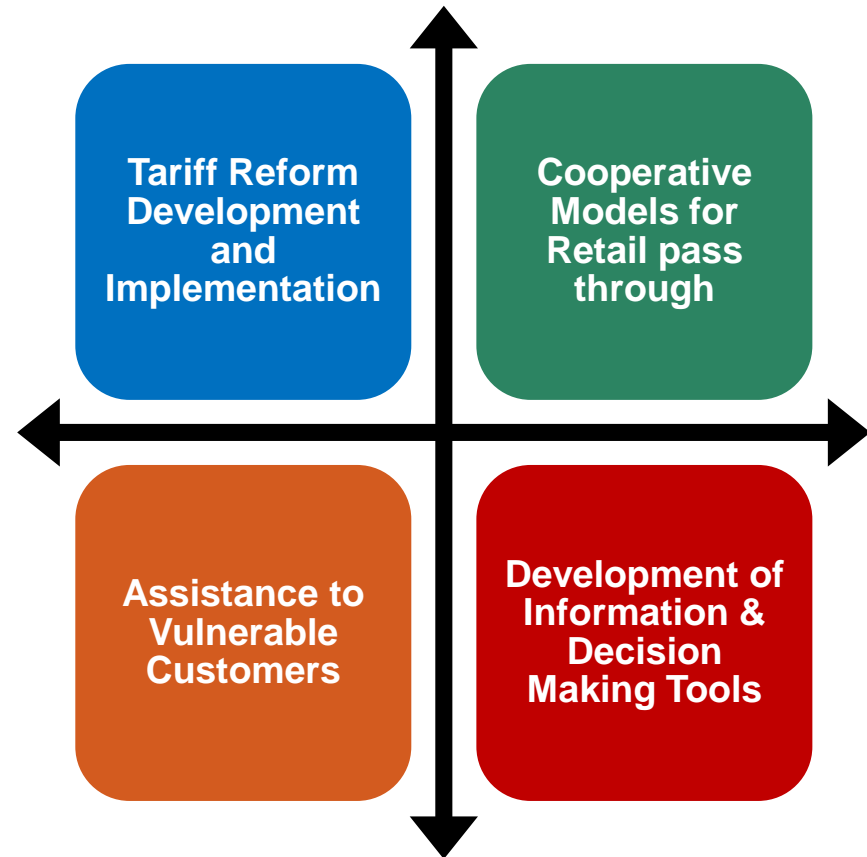
ENA supports a National Approach to Key Issues

- > A **consistent, enduring policy and regulatory environment** without 'ad hoc' jurisdictional intervention;
- > A **balanced approach to the economic deployment of smart meters** as part of contestability reforms;
- > **Better information and decision making tools** for customers;
- > **Review of options to support vulnerable customers** including concessions schemes;
- > **Retail Price Deregulation** to encourage innovation.



An industry guideline for Network Tariff Reform...

- > During 2015, electricity networks will work with stakeholders to identify good practice in key aspects of tariff reform, through case study and consultation.
- > Consultation underway on **Options to Support Vulnerable Customers**
 - Support for a National Review of Government Assistance
 - Network Tariff Design Options
 - Supporting Tools and Measures



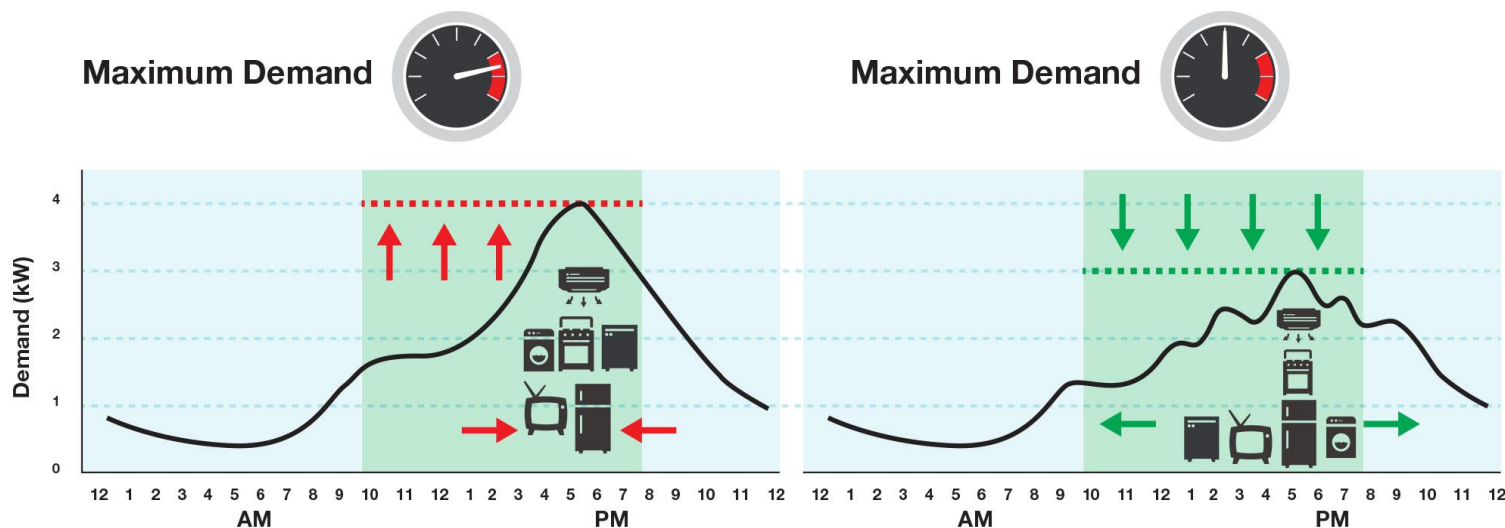
Tariff signals that can be received and responded to...

- > Networks will engage customers in tariff design, implementation and transition through **TSS consultation**
- > **ENA members working with Retailers to address barriers to 'pass through'** – and simplify language and communication.

WAYS OF CHARGING ELECTRICITY USE

<p>Inclining block</p> <p>DIFFERENT RATES ARE CHARGED FOR ELECTRICITY USE. THE FIRST PART OF ELECTRICITY USE IS CHEAPER THAN ALL USAGE AFTER IT.</p> <p><small>This rate is not eligible for households in NSW</small></p>	<p>Declining block</p> <p>THE FIRST PART OF ELECTRICITY USE IS MORE EXPENSIVE THAN ALL USAGE AFTER IT.</p>	<p>Flat tariff</p> <p>ALL ELECTRICITY USE IS CHARGED AT THE ONE PRICE. MANY HOMES IN REGIONAL NSW ARE ON THIS TARIFF.</p>
<p>Time-based pricing</p> <p>THE RATE FOR ELECTRICITY USE CHANGES AT DIFFERENT TIMES OF THE DAY. IT IS USUALLY CHEAPER IN OFF PEAK PERIODS AND MORE EXPENSIVE IN PEAK TIMES.</p>	<p>Capacity or demand charge</p> <p>A CHARGE BASED ON THE MAXIMUM AMOUNT OF ELECTRICITY USED DURING A PERIOD OF TIME.</p> <p><small>Capacity charges for large businesses and other users. The charges do not apply to households.</small></p>	<p>Load control</p> <p>A CHARGER COST IS CHARGED TO ALLOW NETWORKS TO TURN OFF APPLIANCES IN YOUR HOME AT CERTAIN TIMES, LIKE OFF PEAK HOT WATER.</p>

Ausgrid Infographic – *Your Power Your Say*



CSIRO Insights from Behavioural Economics...

Loss aversion & future discounting

~Losses weigh heavier
~Future is discounted

- Problem of *immediate (and certain) costs vs. future (uncertain) benefits*
- Incur transaction/learning costs to change plans, *high fixed costs up front*
- Losses may need to be *offset* by much greater gains (far lower non-peak prices)

Risk aversion

~Preference for certainty

- Reduced bill is *not assured*; risk of higher bill in the future
- Need risk-free trials; calculators/advisories; bill insurance/*guarantees*
- Offer *pre-paid* monthly options; cut-off if over-capacity/over-usage
- Offer *reward-only* options, e.g., guaranteed rebates for desired behaviour (without risking penalties for undesired behaviour)

Status quo bias

~Inertia; stick to defaults

- Most behaviour is highly inertial: people generally stick to the *status quo*
- As info/options increase, people tend to *avoid decision-making* altogether
- *Opt-out* (vs. opt-in) program: better for customer uptake (*but* worse for usage)
- Offer opt-out programs with simple, attractive, automated, *default* option
- Try to get customers to '*pre-commit*' / form 'implementation plan'

Cognitive overload

~Decisions deteriorate as info/options increase

- Need highly *structured and predictable* pricing and timing
- *Automate* demand management vs. relying on consumer
- Offer simple *feedback* on usage, e.g., energy orbs vs. in-home displays, apps
- Offer simple *reminders*, e.g., fridge magnets

Message framing

~Attentive to community norms & interests

- Depict desired behaviour (e.g., shifting demand out of peak) as *common*
- Depict desired behaviour as *approved* by others
- Emphasise *community interest* in energy security/supply
- Note: material incentives can '*crowd out*' altruistic/'public good' motivations

A National Approach to Policy & Regulation

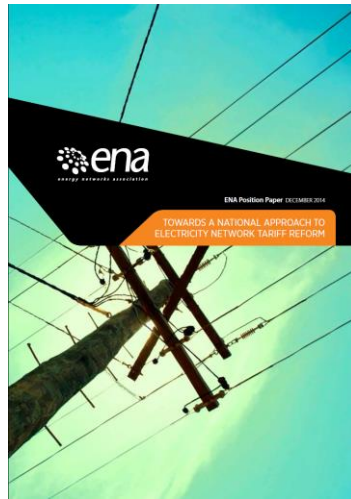
- > Welcome recent progress made to support fairer, more efficient tariffs:
 - COAG Energy Council support;
 - AEMC rule change provides benefits in transparency and engagement

- > Complex reform will require consistent, enduring policy direction
 - Regulatory assessment of TSS should reinforce network accountability for tariffs developed in consultation with customers.

 - AEMC should reject rule change proposals which directly undermine the new Rules just made.

 - Jurisdictional restrictions on network tariff design should lapse recognising provisions of the new national rule.

More Information...



ENA INFORMATION RATES

SUPPORTING VULNERABLE ENERGY CUSTOMERS

OPTIONS TO IMPROVE SUPPORT FOR VULNERABLE CUSTOMERS

SUPPORTING VULNERABLE CUSTOMERS - KEY OPTIONS

The fundamental goal of supporting vulnerable energy customers is to ensure they have access to the electricity services they need to live safely and comfortably.

1. **Improving the value of government assistance**
 - **Income assistance** - ensuring that vulnerable customers are not disadvantaged by changes to the way that income assistance is calculated.
 - **Energy assistance** - ensuring that vulnerable customers are not disadvantaged by changes to the way that energy assistance is calculated.
2. **Providing assistance to reduce electricity consumption**
 - **Energy audits** - providing assistance to vulnerable customers to help them identify areas where they can reduce their electricity consumption.
 - **Energy efficiency** - providing assistance to vulnerable customers to help them invest in energy efficiency measures.
 - **Energy efficiency programs** - providing assistance to vulnerable customers to help them participate in energy efficiency programs.
 - **Energy efficiency incentives** - providing assistance to vulnerable customers to help them access energy efficiency incentives.
 - **Energy efficiency training** - providing assistance to vulnerable customers to help them access energy efficiency training.
 - **Energy efficiency information** - providing assistance to vulnerable customers to help them access energy efficiency information.

As highlighted by the National Energy Efficiency Foundation (NEEF), energy efficiency is a key to a sustainable and resilient approach. While some challenges are to be overcome, there are many opportunities to improve the value of government assistance to vulnerable customers.

ENSA commissioned the Australian Energy Foundation (AEF) to support a number of these options and to provide a number of recommendations to improve support for vulnerable customers.

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The ENA engagement with stakeholders supporting vulnerable customers is a key element of the Australian Energy Foundation's work to improve support for vulnerable customers.

Further information can be found in the ENA Position Paper, 'Towards a National Approach to Electricity Network Tariff Reform', available from www.ena.asn.au.

ENA INFORMATION RATES

YOUR ELECTRICITY GRID

10,561,578 customers

The electricity grid has been called the world's largest machine - and it's right. It's a complex system of power lines, substations, transformers, and other equipment that work together to deliver electricity to every home and business in Australia.

34,374 workers

Over 34,000 people work for the electricity industry, ensuring that the lights stay on and the power flows smoothly.

1,320,423 connected Solar Panels

Over 1.3 million solar panels are now connected to the electricity grid, providing clean, renewable energy to homes and businesses.

917,676 kms of lines

Over 900,000 kilometers of power lines stretch across Australia, connecting every corner of the country.

99.95% reliability

The electricity grid is one of the most reliable in the world, with a record of 99.95% reliability.