energy networks association

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ENA UPDATE

THE INTERESTS OF CONSUMERS

CEO UPDATE

As 2014 draws to a close, the interests of Australia's electricity and gas distribution consumers are front of mind for the energy networks sector.

There are early indications of a hot summer ahead, and as Australians head to the beach or the hammock, we put our faith in the women and men ensuring these essential services, managing bushfire risks, responding to storms, outages and significant weather events.

Energy is often described as a "low engagement product" for consumers who are "time poor". Understandably, they may not give much thought to the value of the service, the infrastructure and systems required to provide it or what the real factors are that will put upward or downward pressure on their future bills.

In recent months, the ENA has sought to add some much-needed evidence to inform the public debate about genuine energy reform in the long-term interests of consumers.

» An analysis on the Value of the Grid by Oakley Greenwood released by the ENA in November shines a light on the 'hidden' services the Grid provides to energy users including the quantifiable benefits of back up supply, balancing and power quality services which we may not think about when we "hit the switch". The research finds that to provide a nearly equivalent service, a stand alone power system would cost 5 to 6 times the cost of grid supply.

» Our report a Level Playing Field for Gas released in August detailed CORE Energy analysis which found that, contrary to popular opinion, retail gas bills have the potential to be lower, not higher, in 20 years time. The catch is it would require governments to correct distortionary policies which support solar appliances for emissions abatement on a differential basis to gas-appliances.

» When releasing the industry Position Paper, *Towards a National Approach to Electricity Network Tariff Reform* in December, ENA provided significant economic analysis of the long-term outcomes for consumers by Energeia, This provides clear evidence that the 'costs of doing nothing' are high when it comes to tariff reform, if we are to avoid a future of significant inequity in customer electricity bills where the average bill increase could be 5 times higher than necessary.

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ENA ANNUAL DINNER 2014 CHAIRMANS ADDRESS

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"It ain't so much the things we don't know that get us into trouble. It's the things we know that just ain't so."

Artemus Ward

Australia's energy policy debate needs all the robust analysis it can get, given the recent propensity for populist solutions to be offered up as "free kicks" for consumers. The dimmest of these proposals has been a call for retrospective write-downs of regulatory asset values without recognising the trade-offs for other cost drivers, like the cost of finance.

The ENA's Executive Director, Economic Regulation Garth Crawford produced empirical analysis showing that even under wide range of write down scenarios, consumer electricity bills would go up, not down. This conservative analysis did not even reflect the sovereign risk impacts of regulatory write-downs, which would be immense in an industry which has relied on the commitments of regulators and policy makers to secure low-cost finance for a capital intensive industry.

These measures by the ENA to support informed debate reflect the continuing priority our individual gas and electricity companies place on evidence-based policy and meaningful engagement with consumers. We welcome significant research projects completed by the Australian Energy Market Commission on network tariff reform and the Federal Government's Smart Grid Smart City project during 2014.

As we see the first full determinations under the revised regulatory regime in 2015, consumers can expect downward pressure on network charges, due to continued efficiency measures by businesses, lower finance costs and new regulatory tools to smooth out volatility in debt costs. Electricity and gas businesses are increasingly consulting customers on their spending proposals, and involving them in the choices which they make in relation to costs and service outcomes, including reliability of supply.

Clearly, price is a critical concern and there is a significant, appropriate focus among the network businesses, regulators and customers on achieving efficient cost savings and putting downward pressure on network charges.

Consumers in Australia have indicated through independent research on the value of customer reliability, and other quantitative and qualitative research that they place significant value on performance in relation to safety, reliability, amenity, environmental performance and power quality, to name a few non-price factors. The ENA looks forward to regulatory outcomes under the new regime which reflect the long-term interests of consumers.

Thank you to all our ENA members, their staff and our partners in the community sector, regulatory bodies, energy industry and government for their significant collaboration with us during 2014.

At a time of immense change and legitimate debate about the future of the energy industry, we appreciate your goodwill throughout the year and wish you all the best for a safe, happy holiday season.

Best wishes for safe, peaceful holiday

John Bradley
Chief Executive Officer

INDUSTRY NEWS

BATTERY TECHNOLOGY ON ELECTRICITY NETWORK AN AUSTRALIAN FIRST

In an Australian first, Ergon Energy expects to be installing new battery-based technology called Grid Utility Support Systems (GUSS) to help power sections of its electricity network by mid-2015. Ergon Energy has announced that S&C Electric Company is the winning tender to provide 20 of the ground-breaking GUSS units.

GUSS works by charging batteries overnight when electricity use is at its lowest and discharging them during the day if required when energy use peaks.

Designed, developed and proven by Ergon from an initial concept in 2006, the GUSS units are an advanced, cost effective technology solution that will improve the quality and reliability of electricity supply to rural customers on constrained single wire high voltage distribution voltage lines, known as SWER (Single Wire Earth Return).

"Traditional augmentation solutions to constrained SWER lines where demand on that line is exceeding its capabilities can cost in excess of $2 million" Ergon Chief Executive Ian McLeod said.

"GUSS units are not only a quicker solution than traditional network augmentation, but the money we can save will ultimately put downward pressure on electricity prices."

"This is a first for Ergon and Australia," said Ergon Chief Executive Ian McLeod.

"This technology has been proven and made ready for real-world deployment without subsidies to Ergon which is also unique for this kind of technology.

"Using a battery-based system in place of traditional network augmentation will not only deliver better value for Ergon and customers, it will help drive similar technology and integration on the electricity network," Mr McLeod explained.

In a further bonus for other new technologies, GUSS units will also help Ergon's network interact with customer solar PV installations more effectively and help avoid costly issues sometimes created by exported power from rooftop solar.

"Combining and sharing stored power across multiple customer premises around sections of electricity network is a solution to peak demand issues – a conundrum under examination in the electricity industry.

"If stored energy could be fed back into the network to help relieve peak demand on our network, this could mean less investment needed on infrastructure and hence less cost needed to be passed on to customers, "Mr McLeod said.

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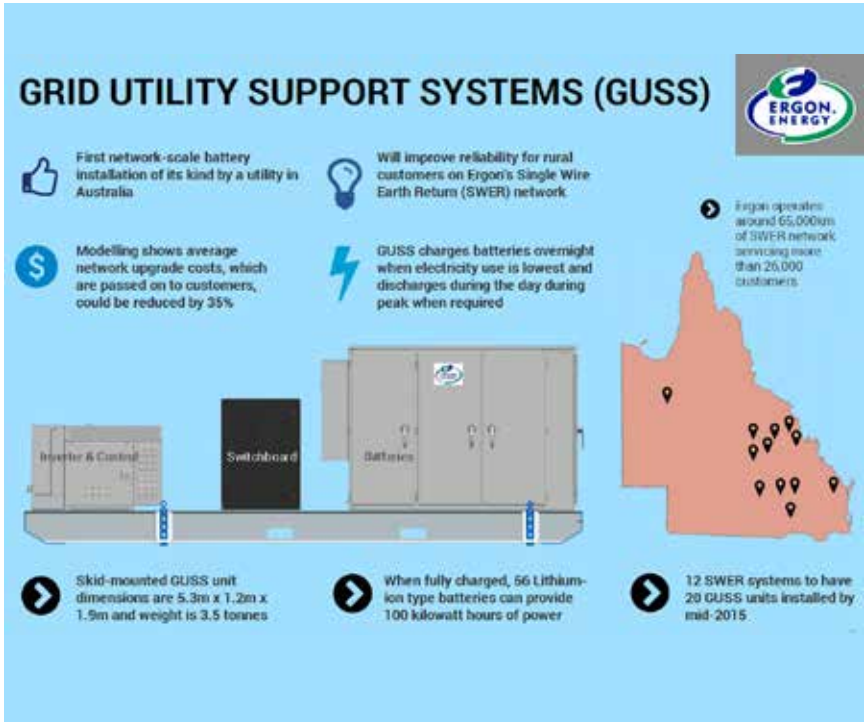

CLEANER, GREENER ELECTRICITY FOR REMOTE NT

Cleaner, greener electricity for over 30 remote Indigenous communities is one step closer with the launch of the Northern Territory's Solar Energy Transformation Program or Solar SETuP.

Building on Power and Water's 20 years' plus experience with sustainable energy, Solar SETuP is the world's largest roll-out of solar energy technology to isolated grids in a regulated environment.

Solar SETuP will integrate a total of 10MW of solar systems into existing diesel power stations in more than 30 remote Indigenous communities over four years and deliver a 15 per cent saving in diesel fuel: that's 94 million litres of diesel savings over the 25 year life of the project. This equates to $4 million annually in the cost of supplying diesel fuel across vast distances in often difficult conditions.

The solar systems selected for the program are tried and tested technology ensuring they are robust and reliable for operation in the harsh Northern Territory environment.

A 1MW solar system will be installed at Nauiyu (Daly River) and will use advanced technologies, such as cloud forecasting, with the aim of achieving up to 50 per cent diesel fuel energy savings. The experience gained at Nauiyu will guide future projects aimed at further expanding the solar systems delivered under the program.

Solar SETuP is funded by the Northern Territory Government and the Federal Government's Australian Renewable Energy Agency (ARENA) and managed by the Power and Water Corporation.

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CITIPOWER AND POWERCOR FAULT NOTIFICATION SYSTEM WINS PRESTIGIOUS BUSINESS AWARD

A world-first CitiPower and Powercor project that identifies unplanned outages in advance of customers calling in the fault has won the Innovation category award at the prestigious Australian Business Awards 2014.

The Meter Outage Notification (MON) system, which has been described as a "game changer" for the way industry manages faults and outage identification and restoration, utilises smart meter technology to notify the business of outages.

The system, which identifies voltage variations in a customer's system and sends a "last gasp" signal back to the business when the power is about to be lost, is beneficial in that it assists in reducing the time customers are without power and saves the business money through greater efficiency.

MON came into service in May 2013 and has saved the business about $7 million in the year since.

MON project manager, Luke Skinner, said the ABA100 Innovation category award was tremendous recognition of the work done by his project team.

"CitiPower and Powercor have a long history of innovation and endeavour and this award is welcome recognition of our efforts," Mr Skinner said.

"Since the establishment of the Innovation strategy at CitiPower and Powercor we have implemented hundreds of innovations that will create added value for our customers and their communities.

"The world-first MON project benefits both our business and our customers by being able to detect the exact time of the outage, pinpoint its exact location, identify the exact time of restoration and reduce the need for field crews to undertake outage investigations."

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AUSNET SERVICES' TECHNOLOGIES 'AWARD WINNING'

AusNet Services has won two Victoria Engineering Excellence Awards for technologies developed in-house to improve the safe and reliable supply of electricity to its customers.

Winning highly commended recognition in the 'Product design and smart systems' category, these technologies protect customers from electric shocks and automatically restores power supply after faults within a minute.

AusNet Services Managing Director, Nino Ficca, said that these technologies embody the company's commitment to improving customer services through network modernisation.

"Both of these in-house developed technologies are industry leading in Australia, if not internationally, and are already protecting our customers from dangerous electric shocks and improving their electricity reliability," he said.

Low voltage electricity network monitoring: AusNet Services has developed an analytical-based application using smart meter network data (e.g., property voltage levels) to detect unsafe neutral connections from street powerlines into properties and predict future failures that can cause dangerous electric shocks to customers.

"Since 2013, our technology has identified and allowed the removal of nearly 1000 safety hazards that could have resulted in electric shocks to customers," Mr Ficca said.

Distribution Feeder Automation (DFA): In 2006, AusNet Services developed a centralised autonomous 'real-time' fault location, isolation and rerouting scheme that restores supply within 60 seconds to customer of a nearby fault.

"Previously, when a fault occurred, such as a tree falling over a powerline, the electricity supply would be disrupted along a large part of the powerline, affecting many customers," Mr Ficca said.

"Now, the DFA technology instantly pinpoints the fault on the powerline and automatically operates remote-controlled switches to safely re-route the electricity supply around the fault to restore power to the majority of customers.

"The process is completed usually under a minute, radically reducing the unnecessary time customers were without power while crews physically patrolled the powerline to find and fix the fault," he said,

During a storm event, the DFA technology automatically restored electricity supply to 11,500 customers in less than a minute, effectively halving the number of customers that were without power until powerline damage from fallen trees was repaired.

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POWER USE TRENDS ... WHAT'S CHANGING?

Thousands of home owners across Queensland are set to participate in the State's largest annual research project of household energy use.

The sixth Queensland Household Energy Survey has more than 3500 home owners and renters being asked a range of key questions regarding current and planned energy use.

The survey aims to identify trends in household energy use patterns and energy-saving attitudes and awareness across the State.

Survey results will not only provide an invaluable snapshot of current and potential future energy use, but will also assist with effective electricity network planning and the targeting of energy management programs to help in delivering the right balance between reliability of electricity supply and cost to consumers.

To be conducted by research firm Colmar Brunton on behalf of Queensland's energy companies Ergon Energy, Powerlink Queensland and Energex, the household energy survey follows similar research conducted over the past five years.

Key questions being addressed in the survey include customer installation and use of air-conditioners; the surge in large screen, higher energy-intensive televisions; growth in solar power; differences between private ownership and renters; and energy use patterns across regions around the State.

Earlier surveys have revealed that comfort, leisure and entertainment choices were the key driving forces behind the way Queenslanders consume electricity.

Previous surveys have revealed a number of trends including the desire by residents to reduce their overall energy use and adopt energy efficiency measures and equipment, yet at the same time showed a surge in the number of higher energy-intensive appliances (especially air-conditioners).

To take part in this year's survey

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WESTERN POWER REDUCES OPERATING COSTS FOR SECOND CONSECUTIVE YEAR

Western Power today released its annual results achieving a reduction of $27.4 million in operating expenditure in the 2013-14 financial year – a second consecutive period of year-on-year cost savings.

Chief Executive Officer Paul Italiano said the savings, which excluded reorganisation costs, were a significant accomplishment given the business also delivered a record $1.4 billion annual works program in full this year.

"Our commitment to providing safe, reliable and affordable connections to electricity for our customers was strongly reflected in our performance in 2013-14," Mr Italiano said.

"Last financial year we achieved a reduction of $25.5 million in operating costs, and this year we have built on that success by driving efficiencies across the business with the result being a further $27.4 million reduction.

"This reduction in operating expenditure outperforms the target set by the Economic Regulatory Authority (ERA) which included a 2 per cent cost efficiency target, and demonstrates that Western Power is becoming an efficient and innovative customer-focused business."

This year saw a 40 per cent increase in the number of wood poles reinforced and a 36 per cent increase in wood pole replacements. This translates to 67,641 wood poles being reinforced and a further 23,711 poles replaced by Western Power crews across the network.

Mr Italiano said that improving operating costs performance is central to Western Power's goal of providing its customers with affordable connections to electricity.

"We have connected nearly 30,000 new customers to the network this year, which is a five year high, and our award winning Perth-based customer service centre managed over 900,000 calls during this period," he said.

"Our crews and support teams safely maintain electricity supply in challenging weather and working conditions throughout the year.

"During a time of significant transformation of the business, Western Power has remained focused on driving efficiencies and delivering on our record $1.4bn works program for the benefit of our customers and the development of our State."

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SOLAR SOLUTION DELIVERED TO PILBARA BUSINESS CUSTOMERS

One of the first of its kind for regional Western Australia, Horizon Power has recently connected a South Hedland business to their 37 kW, 108 roof-mounted solar panels, complete with a battery storage system, also known as generation management.

South Hedland Liquor Supplies, located on Hunt Street in South Hedland, underwent and passed solar installation and storage system commissioning tests on Thursday 10 July to ensure the generation management component met Horizon Power's technical requirements.

Horizon Power's Senior Systems Technology Engineer Dave Edwards said many customers want to connect renewable energy to Horizon Power's electricity systems; however one of the challenges is the impact of their intermittent nature on the security and reliability of power supply for other Horizon Power customers.

"Horizon Power developed technical requirements for renewable energy installations, including those which are generation managed, where the electricity output can be controlled to help maintain the reliability of power supply to all our customers," said Mr Edwards.

"The recent availability and increased affordability of generation-managed renewable energy installations means that customers now have more choice about the size of the system they can install and could allow more renewable energy to be installed across Horizon Power's network," he said.

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SA POWERNETWORKS: NETWORK INVESTMENT PLAN 2015-2020 — BUILDING FOR THE FUTURE

SA Power Networks has lodged its electricity distribution network plans for 2015-2020 with the Australian Energy Regulator, ensuring major benefits to the SA economy and customers with minimum impact on electricity prices.

The detailed proposal outlines plans for ensuring the electricity distribution network is able to reliably and safely meet the changing energy needs of South Australian households and businesses.

"We are keeping the lid on our prices for customers in 2015-2020," said Stakeholder Relations Manager, Paul Roberts.

"Distribution charges represent about a third of the bill, and over the five years from 2015 customers will see our charges rise below the rate of CPI, averaging less than 1% per cent per annum on the total bill (about $14 per annum for the average residential customer).

Mr Roberts said SA Power Networks had undertaken an unprecedented level of community consultation and research in developing the proposal. This included understanding the issues of most concern to customers and their willingness to pay for some targeted new initiatives or different approaches in some areas, including safety and vegetation management.

About $250 million of the capital investment program directly relates to customer-initiated investment in improved vegetation management approaches and bushfire and road safety.

"We have clearly heard the concern from some sections of the community regarding prices. Our customers have also told us they want us to maintain safety, reliability and quality of supply and they support targeted new investment," Mr Roberts said.

"While State-wide energy demand has fallen, we still need to continue to invest to meet localised demand growth and also ensure we maintain community and network safety."

Mr Roberts said SA Power Networks was also preparing for the future to ensure the network could accommodate changing customer behaviour, with customers continuing to take up new energy options such as rooftop solar, possibly combined with battery storage.

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ENERGEX: FINDING THE RIGHT BALANCE BETWEEN SERVICE QUALITY AND PRICE

Maintaining high standards of service and delivering real cost of living reductions is the cornerstone of Energex's five-year funding proposal submitted to the Australian Energy Regulator today.

Energex Chief Executive Officer Terry Effeney said a key focus of the company's 2015-20 Regulatory Proposal was to deliver price relief while achieving better utilisation of the existing network and maintaining current service levels, especially in regards to safety and reliability of power supplies.

"On the price front, delivering stability has been the over-arching goal. If approved by the energy regulator, network prices, which are a large component of a customers' power bill, will rise below the forecast rate of inflation," he said.

"And if the Queensland Government's plan to permanently remove the cost of the Solar Bonus Scheme from retail electricity is put in place, our overall revenue requirements will fall by around 15 per cent which will be passed through to customers as real power price reductions."

Mr Effeney said feedback from thousands of residential and business customers had provided strong community input into the proposal.

Over the past 18 months Energex has worked actively to inform and consult with customers on the key issues expected to impact on the Energex business over the next five years.

Mr Effeney said the aim was to strike the right balance between the quality of services customers receive and the price paid for the operation of the South East Queensland electricity network.

"This has included comprehensive research and consultation with more than 6700 residential and business customers, representative groups, local councils and electricity retailers."

Energex's Revenue Proposal will now be assessed by the Australian Energy Regulator, which will hold public hearings seeking community feedback before a final decision is announced in mid-2015.

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CORPORATE CHANGES

SP AUSNET CHANGES NAME TO AUSNET SERVICES

SP AusNet has changed its name to AusNet Services, following the termination of an agreement with former majority security holder, Singapore Power.

AusNet Services' Managing Director, Nino Ficca, said: "The name AusNet Services emphasises our strong position as a major Australian energy infrastructure company with a distinct future focus to service our customers better, Mr Ficca said.

AusNet Services is Victoria's largest energy networks business, owning and operating approximately $11 billion of electricity and gas distribution assets, including Victoria's electricity transmission network.

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AUSTRALIAN GAS NETWORKS LIMITED

Australian Gas Networks Limited is the new name for Australia's leading natural gas distribution company, previously known as Envestra Limited.

The name change to Australian Gas Networks Limited follows the recent move to full ownership of Envestra by the Cheung Kong Consortium, and the subsequent delisting of Envestra from the Australian Securities Exchange on 17 October 2014.

"The new name clearly defines the nature of our business and the national footprint over which we operate as the nation's leading distributor of natural gas," the Managing Director of Australian Gas Networks, Mr Ian Little, said.

"It reflects our commitment to serving the people of Australia, and highlights our culture of putting the communities we serve at the heart of everything we do".

"Australian Gas Networks will continue to focus on providing the high level of service our 1.2 million consumers around the country have come to expect in the past, as we move forward with the new business identity," added Mr Little.

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ELECTRANET WELCOMES NEW CHIEF EXECUTIVE

ElectraNet, South Australia's specialist in electricity transmission has welcomed a new Chief Executive - Steve Masters.

Steve comes to ElectraNet with over 20 years of resources industry experience, including a solid background in Australian energy markets. He has previously held senior and executive roles with key Australian companies, leading commercial, marketing, corporate development and investor relations functions.

ElectraNet Chairman, Gordon Jardine, said 'We are confident that Steve will provide ElectraNet with the skills, experience, energy and enthusiasm to meet the challenges of the changing landscape for electricity supply in the years ahead.'

Steve takes over from Ian Stirling, who has retired after 15 years at ElectraNet, including 12 years as Chief Executive Officer.

ENA ANNUAL DINNER

ADDRESS BY ENA CHAIRMAN PAUL ADAMS, ENA ANNUAL DINNER, AUSTRALIAN WAR MEMORIAL, 19 NOVEMBER 2014

I would like to join John welcoming all our guests tonight for joining us in this remarkable venue.

It is a pleasure to be able to welcome those from amongst the ENA membership to reflect on the enormous amount of work that has been undertaken over the last twelve months. It is also important to share that with our partners. We deliver energy to more than 15 million customers - all of you who help us keep the lights on and the blue flame glowing. Thank you. As I recognise all of you here for the contribution you make to energy services in Australia, I would also like to acknowledge one leader of our sector for special mention.

Tonight will be Ian Stirling's last ENA Annual Dinner as the CEO of ElectraNet, and as he steps down later in the year, I would like to take this opportunity to pay tribute to Ian's contribution to our industry over a lifetime. Ian has been part of the electricity industry since 1983, having served in senior positions within throughout the electricity supply chain - including in generation, transmission and distribution. Appointed as CEO of ElectraNet in August 2002, he has been stewarded that organisation in a State which has seen one of the greatest transformations in its energy supply mix. Ian has been a true industry leader through his Chairmanship of the Energy Supply Association of Australia. He has made our industry stronger. He has played a key role in his State's economic development. Please join me in congratulating Ian on his achievement.

There is quite rightly a lot of talk these days about "transformation" in the energy industry. We know that we are in the business of transformation. For well over fifty years access to the Grid or the gas pipeline has changed the way we live our lives, providing comfort and convenience.

From lighting, refrigeration and a range of appliances that changed daily life, to supporting a new range of technology and automation that powers a modern lifestyle, there is one constant - access to safe and reliable energy The modern grid is more than poles, wires and pipes. All participants in the energy industry – from the consumer to the Chairman of the Board - from the metering supplier to the AEMC - are participants in the re-engineering of energy supply and service delivery. Most significantly, that re-engineering is being negotiated, not pre-determined. It is occurring in participatory decisions like those made by 1.3 million Australian prosumers and counting - with more solar panels to come.

Australian networks are integrating rooftop solar panels at world leading rates

of penetration – induced by subsidies which, frankly, are now anachronistic and harmful to general consumers. At the same time, there are other technologies travelling quickly down the cost curve – including the battery storage, electric vehicles and energy management systems, which could either provide significant improvements or significant risks to the economic outcomes for Australian consumers and the safety, reliability and quality of our supply. Behind them on the horizon is the potential for fuel cells and micro-wind turbines.

These are important, and welcome, advances in technology that can strengthen the grid and our sector has been actively supporting the deployment of these breakthrough technologies.

Only last month, Ergon Energy announced its Grid Utility support system, which will commence employing storage in sections of its SWER electricity network by mid-2015. This technology will not only deliver better value for Ergon and its customers, it has been adopted will be deployed without subsidies as a rational commercial response. We have seen other initiatives based on utility scale storage by Ausgrid, Horizon Power and AusNet Services to name a few.

In this dynamic marketplace, it will be vital that we have the right signals in network tariffs to reward consumers for efficient energy choices. So it will be just as vital that our consumer engagement to support a real dialogue with the customer based on value.

The electricity grid **does** provide significant value to consumers today and in the long-term. If you relied only on some websites, you might think *en masse* grid defection will happen soon – say, about 3.30 pm this Friday afternoon. As Mark Twain famously said – The reports of my death are greatly exaggerated.

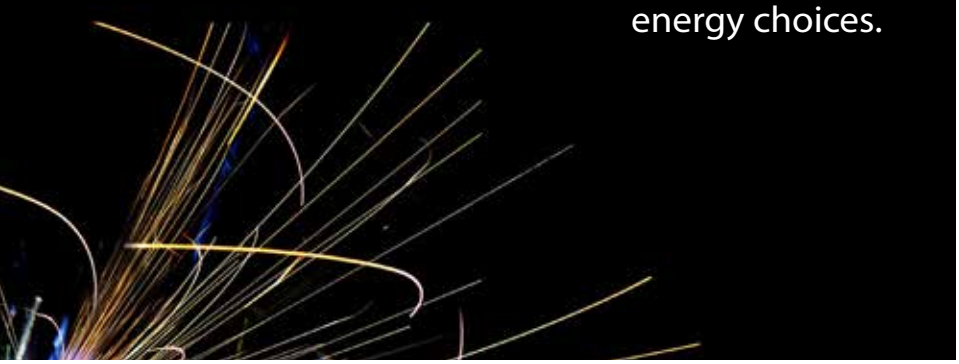
It's worth us taking a closer look at the true Value of the Grid. Tonight ENA has released an important piece of analysis conducted by Oakley Greenwood.

While recent advances in solar and storage technology mean customers could choose to leave the grid entirely, the independent analysis by Oakley Greenwood shows it is unlikely to deliver better financial outcomes or better services.

The study quantifies the often "hidden" services that customers receive from the Grid, and how much it would cost a customer to supply themselves. If your family or your business is after an equivalently safe, reliable and hassle free service as today, this research shows that, to provide a nearly equivalent service, a stand alone power system would cost $600 to $850 per month or 5 to 6 times the cost of grid supply.

A Do-It-Yourself solution is unlikely to be the best outcome -over the course of a year, the connected customer is up to $8,700 better off than they would be with a stand alone power system providing a nearly equivalent service. A disconnected customer would also lose grid benefits like the ability to sell surplus energy or participate in new markets which may emerge using distributed energy resources – such as demand response markets or balancing services.

In this dynamic marketplace, it will be **vital that we have the right signals** in network tariffs to reward consumers for efficient energy choices.



The Grid will be the gateway for better, more efficient energy services – so quitting the Grid is like having a home computer but disconnecting it from the internet. You still have one – but you are not connected to the community and the services that connection provides yourself and the broader community.

As you know, the overwhelming majority of the rooftop PV systems installed to date are on homes that continue to be connected to the grid. There is a quantifiable benefit to the network as a result of solar installations and Oakley Greenwood analysis suggests that a solar customer connected to the network in an aligned manner helps to lower the cost of network services, estimated at approximately $10 per month.

The reverse is true though – grid services provide demonstrable benefits to solar households, about 7 times greater. This includes the value of the back up service to the customer (of $61 per month) by providing reliable power at night or when it is cloudy. It also includes market access which allows consumers to sell their power into the grid (valued at $8 per month). In addition the grid provides a range of services that are often hidden, but which consumers benefit from.

Startup power services, supporting appliances like air-conditioners that temporarily increase demand by 4 to 5 times when they start up.

Balancing services, instantaneously adapting to the customers changing demand throughout the day which can be difficult for solar PV systems alone.

And power quality services that protect the safe operation of home appliances.

It is clear that in the future energy users will have more choices about the source of their energy supply.

They may take their energy from the grid, or a combination of onsite sources and the grid.

And they may consider leaving the grid entirely.

However those choices must be based on transparent information and a practical assessment of the costs. (Not only to them but to their broader community).

Recognising the value of the grid, there are two issues critical to the operation of the modern electricity grid that I want to touch upon tonight- Pricing Reform and Consumer Engagement.

It is clear that the network cost pressures on electricity prices are declining across the county.

However, most electricity customers pay network charges based on the volume of energy they use regardless of what time of day it's used or how much it costs to supply.

We still have tariffs for small energy users that are unsustainable and unfair – locking in cross subsidies between consumers.

These cross subsidies are hidden in the current system.

There now exists the opportunity to introduce a fairer system of pricing, which helps to lower the long-term cost of electricity supply.

Progress on the pricing reform agenda must be a matter of high priority at the next COAG Energy Council meeting in December.

ENA has encouraged the COAG Energy Council to support a more integrated approach to network tariff reform and the economic deployment of enabling technology like smart meters.

Related to this is the second point I want to reflect on.

In order for tariff reform to work, the conversation between energy networks and the customers they serve will be critical.

Energy network businesses are actively integrating new technology and business models into their operations, while drawing on their existing expertise and capabilities to deliver an increasingly resilient grid for customers.

However none of this is possible without recalibrating the relationship between networks and consumers.

It is clear that the preferences of consumers will shape the development of future networks, by requiring network businesses to rethink their approach to price, reliability, technology and energy sources.

Customers are engaged in decisions on energy use like never before, as they shop around to lower their bill, respond to price signals and increasingly become producers of energy in their own right.

Not every consumer will want the same level of information or choices. However Network businesses have an important role to play in supporting consumers, and to ensure they have the information they need and that their voice is heard.

We are all invested in better outcomes for consumers, and this is – and always has been - at the core of energy network approaches to engagement.

I am very confident that with the technical, commercial and policy capability that is connected to and led by the people in this room, the Networks will transform and continue to deliver safe, reliable and affordable energy to all our consumer needs.

I close by saying thank you again to all our partners for joining us tonight.

Download "The Value of a Grid Connection to a Distributed Generation Customer", Oakley Greenwood, November 2014

CLICK HERE

PETER HARCUS AWARDED ENA INDUSTRY CONTRIBUTION AWARD

THE ENA Annual Dinner provided the opportunity to acknowledge the outstanding contribution of an individual to the energy networks sector, and to the ENA, through the Energy Networks Association's Industry Contribution Award.

This award is presented each year to an individual who has made an exceptional contribution as a member of an ENA committee, and whose activities have been to the benefit of the energy networks sector.

Vice-Chairman of the ENA, Peter McIntyre announced at the dinner that the recipient of the ENA's Industry Contribution Award for 2014 was Peter Harcus, of Jemena Gas Networks.
Peter Harcus is recognised in the industry for his passion about gas as a clean, highly valued energy choice for consumers. He is equally commercially astute about the challenges Australia's gas industry faces in the transition to an internationalised wholesale gas market.

Peter has been a major contributor the ENA and the Gas Committee since its formation 10 years ago. Peter served as the inaugural chair of the Gas Committee when it was a subset of the Asset Management Committee and provided important leadership during that period.

He continued as a member of the Committee when it was established as separate Board Sub-Committee, and has been a key contributor to the work of the Gas committee, working closely with its Chair, Andrew Staniford.

Peter also plays leadership role in the industry in his role at Jemena as General Manager, Gas Assets Management and represents the industry with contributions to external bodies such as Standards Australia and Technical Regulator Forums.

Peter Harcus has made a significant and sustained contribution to both the gas network sector in Australia and to the ENA as a whole.

THE VALUE OF THE GRID

MORE SERVICES THAN YOU MIGHT THINK ...

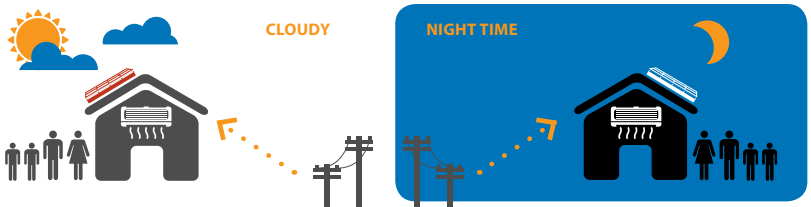
In the future, energy users will have more choices about the source of their energy supply. They may take their energy from the grid, or a combination of onsite sources and the grid. Some may consider leaving the grid entirely.

The grid provides a range of services that are often hidden, but which consumers benefit from.

YOUR GRID - WORTH A CLOSER LOOK.

Back up services...

To provide reliable power at night or when it is cloudy.



...and market access...

Enabling consumers to sell their power into the grid.

Plus...

Startup power services supporting appliances like air-conditioners which increase energy load by up to 4 to 5 times when they start.

Balancing services that instantaneously adapt to the customers' changing demand throughout the day – which can be difficult for a rooftop PV that isn't connected to the grid.

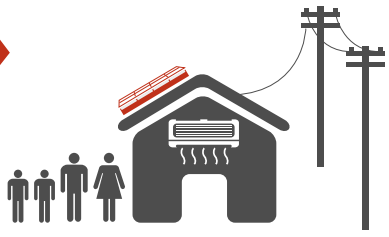
Power quality services that protect the safe operation of home appliances.

VALUE OF THE GRID TO SOLAR HOUSEHOLDS...

The grid delivers value for solar households

Grid services to solar customers are valued at $69 per month in benefits, including $61 in backup energy which would be otherwise unserved and $8 in export sales to the Grid. **VALUE OF $69** per month

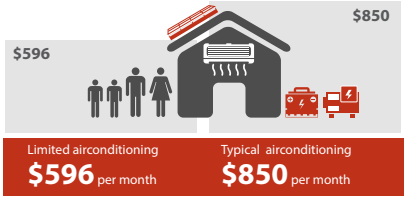
A solar customer helps to lower the cost of network services, estimated at approximately $10 per month. **VALUE OF $10** per month



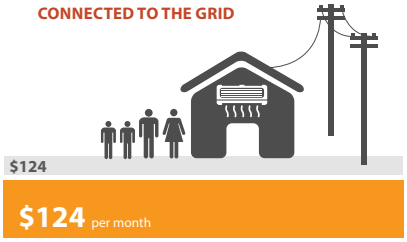
...at a lower cost than DIY

A Grid service continues to provide significant value compared to a stand alone system. For one-fifth of the cost of a stand alone system the Grid supports a full range of customer appliances, allows customers to export excess energy and participate in new markets. To provide an equivalent service, a stand alone system can cost approximately $56,500 for a home with limited air-conditioning use or $72,500 for a home with typical air-conditioning use.

STAND ALONE SYSTEM



CONNECTED TO THE GRID



Note: Based on Oakley Greenwood report, Value of a Grid Connection to Distributed Generation Customers, analysing a NSW residential customer

ENA ADVOCACY

EVOLVING THE REGULATORY SYSTEM TO DELIVER THE FUTURE GRID

The capacity of the existing regulatory framework to encourage innovation and new approaches to energy supply and service delivery for energy consumers is explored in an ENA discussion paper, *Evolving a Future Ready Regulatory Framework.* The paper considers potential ways for the existing regulatory system to evolve further to strengthen benefits for consumers, without compromising the essential integrity and stability of regulatory regime.

Some of the key themes included in the ENA discussion paper include:

» Australia requires a managed approach to assessing the introduction of competition and changes in regulation which is not provided for in the current Regulatory Framework for energy networks;

» The future regulatory environment is likely to require pathways to more light-handed regulation, rather than an increasing intensification of regulation and the costs of regulation where network services are increasingly subject to the potential for 'bypass' due to changes in technology and diverse consumer energy choices.

» While the potential for alternative services and competition will promote innovation, the paper cautions against policy makers and regulators assuming that innovation in energy network services will only be achieved through the introduction of new markets or contestability. The report notes the need for a considered approach to evaluating impacts on the loss of economies of scale and scope; the customer benefits of smart grids and overseas regulatory approaches.

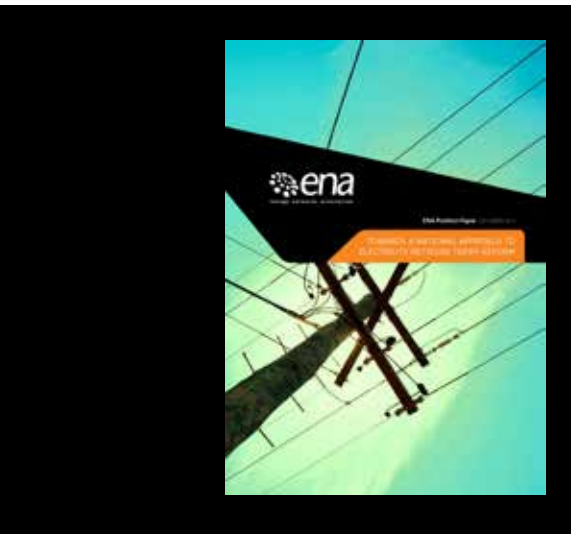
» There is a need for light-handed approaches to regulation which allow customer-oriented innovation which may not be obvious to a regulator. The Paper cites the example of innovation in 'hub and spoke' operational models which occurred in the air services following the removal of intrusive regulation.

» The Discussion Paper notes the potential to consider incentive frameworks in regulation such as 'fast-tracking' regulatory processes where proposals are demonstrably developed in close consultation with consumers. Such options would build on recent changes by networks to the engagement of consumers in their regulatory proposal development; and

Any review of the regulatory framework should recognise areas of existing flexibility which are likely to be utilised as energy markets evolve. It also underscores the need for measured, evidence-based regulatory policy development given one of the key strengths of the current regulatory framework has been its capacity to support efficient financing in a capital intensive industry. By way of example, a modest 10 per cent increase to the risk premium on the debt and equity component of the required cost of capital would require an increase of over $300 million per year to electricity network charges to Australian households. This highlights that minimising regulatory risk and inconsistency, and thereby the cost of capital required by investors, should remain a fundamental consideration for policy and rule-makers.

Download the Evolving a Future Ready Regulatory Framework

CLICK HERE



A NEW STANDARD IN FAIRER, MORE AFFORDABLE POWER

Australian households could save an average of up to $250 per year in electricity bills and avoid unfair cross subsidies of up to $650 per year under a proposed new standard for network tariff reform.

Australia's electricity transmission and distribution network providers have proposed a national approach to fast-track the benefits of electricity tariffs which reward consumers for contributing to lower network costs in its position paper, *Towards a National Approach to Electricity Network Tariff Reform.*

Supporting the position paper, independent analysis addressing the benefits of fairer electricity prices in Australia shows electricity customers could pay up to $250 less per year in the future if fairer network tariffs are put in place now.

The evidence suggests that without action today's outdated tariffs will lead to network price increases which are 5 times higher than necessary and result in unfair cross subsidies to some customers of up to $655 per year.

The findings supports recent analysis by the Australian Energy Market Commission which found that network tariffs currently don't reflect network cost drivers and allow air-conditioning customers to impose costs of up to $700 per year on other users.

This analysis shows today's network tariffs will encourage an explosion in unfair cross subsidies, leading to a world of 'haves' and 'have nots' in 2034. Customers who have taken up solar and other technologies would pay electricity bills that are $1270 (about 40%) lower than those who have not. About half that 'discount' would be paid for by other customers through unfair cross subsidies.

The review of pricing options found network tariffs based on customer peak demand would achieve the lowest network charges and cross-subsidies for residential customers.

Despite recent changes to network pricing rules by the Australian Energy Market Commission, a range of barriers to fairer tariffs needed to be addressed urgently. Australia's electricity networks want to work with their customers to implement fairer tariffs in a carefully planned way that suits local network circumstances.

The first step is the removal of outdated regulatory restrictions that prevent the efficient network cost being charged to a retailer, such as default flat rate tariffs. The second step is to develop an industry standard for implementing network tariff reform, including collaboration with electricity retailers, working with consumer advocates on

Cheaper - more efficient use of the electricity network means that electricity networks will spend less on the Grid of the future.

In the future you could save up to $250 per year on the network charges on your electricity bill compared to your bill under our current network tariff structures.

Fairer - because you won't be paying for the choices your neighbour makes about their use of appliances and technology and how much electricity they use when the Grid is at its busiest.

Current tariff structures could mean you pay around $655 per year by 2034 for the technology and electricity demand choices of other customers.

More information and more choice - to give you greater control over your bill.

A combination of smarter meters and fairer electricity network tariffs can reward you for using less electricity at peak times on the Grid.

measures to support vulnerable customers and establishing some Foundation Principles.

Consumers now have more choices in their energy and technology use and networks are asking for customer support for fair, technology neutral tariff structures. Network businesses have a clear obligation to protect the interests of all their customers by providing fair, efficient tariffs, where customers can choose how they use energy without imposing costs on others.

Australia's world leading rates of rooftop solar installation are both an opportunity and a threat to fair prices for customers, with up to a further 7 million customers projected to install solar panels by 2034. Solar panels require advanced meters that measure the time of energy use, so there would be no additional investment needed to provide a fair network tariff.

However, if we leave network tariffs as they are, then Australia faces cross subsidies of up to $655 per year, massive over-investment in distributed energy resources and higher community costs of up to $17.7 billion.

ENA has proposed 3 foundation principles for consultation with customers and other stakeholders, to fast-track the benefits of network tariff reform.

1. A national policy to install "smart ready" meters for new connections or replacement of meters, which can be converted to smart meters when economic to do so.
2. The ability for networks to assign customers making new connections or upgrading their existing connection to a cost-reflective network tariff.
3. The ability for networks to assign customers using over 40 MWh per year (ie. approx. $10,000 per year) of electricity, or a capacity threshold, to a cost-reflective network tariff. Networks would specify the thresholds in their regulatory proposal and the tariff structure statement that is required to take effect from 2017 under the new rules.

With the AEMC's recent change to network pricing rules, it's now time to remove the remaining barriers to fairer network prices in Australia.

We have learnt the lesson from Victoria which prescribed retail tariffs and retail assignment of network tariffs and fewer than 5,000 customers have taken up flexible tariffs in the year since their introduction.

Research shows that not only are most customers better off but vulnerable consumers are more likely than average to be better.

Download the ENA Position Paper *Towards a national approach to electricity network tariff reform*

CLICK HERE

Download the Energeia Analysis *Network pricing and enabling metering analysis*

CLICK HERE

CONTESTABILITY IN METERING AND RELATED SERVICES

Key to the AEMC's implementation of its *Power of Choice* agenda has been the issues relating to contestability in metering and related services. In order to position the networks for input into the AEMC processes relating to access and communication standards and the initial stages of the rule change on metering contestability ENA developed a comprehensive policy position relating to metering and related services. From the commencement of the AEMC rule change process on competition in metering and related services ENA has been fully engaged on metering issues.

AEMC has undertaken a series of workshops relating to the expansion of competition metering and related services with engagement by a broad range of stakeholders including networks, retailers, meter vendors, prospective Metering Coordinators, customer and government jurisdictional representatives to work through key aspects of their proposed approach.

Workshops have considered key elements of the determination including

- the metering Coordinator role,
- Network regulatory arrangements,
- Relationships between parties,
- Minimum core model arrangements Consumer-Metering Coordinator relationship
- Arrangements for Victoria;
- Governance of the minimum functionality specification;
- Jurisdictional arrangements;
- Requirements for implementation

At the same time, AEMO operated a reference group seeking advice on smart metering minimum functionality specification and a shared market protocol to enable communications and data exchange between parties, and the AER has been considering their approach to metering within review of draft determination processes (including consideration of issues such as exit fees).

ENA remains committed to ensuring that a viable and sensible outcome is developed from the range of interconnected processes currently underway, including the related activities by AEMC, AEMO and AER.

In particular, ENA seeks to ensure that efficient and cost effective delivery of network services are enabled within the contestable metering framework, so that the full range of benefits from smart metering services can be made available to customers.

ENA representatives have held follow up meetings with AEMC and AEMO staff to work through practical examples of issues of concern to networks. The key issues for networks businesses include:

- Demonstration of networks services available from smart metering infrastructure through briefings on AMI operations in Victoria
- Safety issues, including jurisdictional requirements
- Network security and reliability implications from the proposed contestable framework
- Implications of load management changes
- Regulatory framework of access to network services through other parties
- Meter deployment by networks.

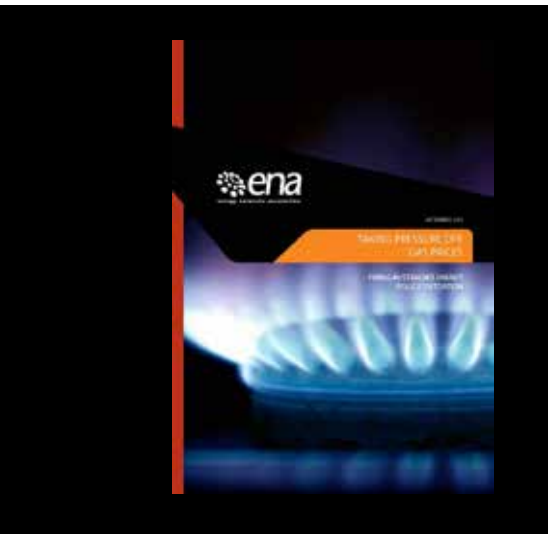
AEMC has reviewed the schedule for finalisation and implementation of the metering rule change and related processes arising from the Power of Choice review. They sought comment from stakeholders on their proposed revision, which included delaying the draft determination from its scheduled date of 18 December 2014 to 26 March 2015. This will also delay the final determination, previously scheduled for April 2015, to 2 July 2015.

ENA has commented upon the AEMC's proposed revised implementation schedule, noting that due to the complexity and criticality of the metering changes, the schedule should be further revised to ensure adequate time both for AEMC and stakeholders to develop and review both the policy changes and the major drafting revisions to implement the policy positions.

In addition, the implementation timeframe needs to take into account the inter-dependent nature of changes to policy, procedures, business processes and IT system changes. Companies are at different stages in system capacity to incorporate interval and smart meter data and the implementation timetables will need to be realistic in order to ensure no adverse impacts upon customers in their billing cycles.

Download the ENA Submission to the Australian Energy Market Commission Implementation plan for competition in metering and related services

CLICK HERE



TAKING THE PRESSURE OF GAS PRICES

Many of Australia's 4.5 million household gas users and 120,000 business gas users may be surprised to learn that one of the key factors determining whether their bills increase or fall in future will be Government policy on solar technology.

The ENA's fact sheet, '*Taking the Pressure of Gas Prices: Fixing Australia's energy policy distortion*' and the Core Energy Groups Gas Network Study highlights the market distortions created by the Small-scale Renewable Energy Scheme (SRES).

Current solar policies like the Small-Scale Renewable Energy Scheme (SRES) distort demand in gas and other markets because they provide subsidies of up to 30% for solar hot water systems based on their greenhouse gas abatement but don't recognize abatement achieved by gas hot water systems.

The key findings of the Core analysis include:

» Despite eastern Australian wholesale prices doubling, residential and commercial gas consumers could pay lower retail gas bills in 2034 if the distorting subsidies to Solar technology we re removed. Retail gas bills for residential and commercial customers in 2034 would be about $50 per year (or 5.4%) lower than current levels, with 7% more gas consumed;

» The continuation of current solar policy settings like the SRES will mean 170,000 fewer gas consumers in 2034 than will occur if a fuel-neutral policy was adopted;

» If Governments were to extend solar subsidy programs (such as through the previously proposed Million Solar Roofs program), it could exacerbate wholesale price impacts to result in retail gas bills which are about $80 per year (or 8.24%) higher than current levels in 2034;

» Expanded solar subsidies would see Residential and Commercial gas demand which is about 17% lower over the next 20 years and the connection of 130,000 fewer gas customers;

» These subsidies have the potential to create a reduction in annual gas network sector revenues of greater than $1 billion and retail sales revenues of over $2 billion; and

» The reduction in demand due to solar subsidies could remove annual direct and indirect capital investment of up to $200 million and lead to a potential loss of economic value of $1.5 billion.

It is ENA's view that SRES is no longer required to support market entry of small scale renewable technologies, as with over 2 million installations of Photovoltaic and solar water systems, these technologies are well established. SRES supports displacement technologies that provide lower abatement outcomes than more efficient instantaneous gas water heaters which have lower installation and operating costs yet receive no incentives.

An instantaneous gas hot water system can achieve an 83% reduction in greenhouse gas emissions when compared against a standard electric resistance water heater. This is approximately the same abatement outcome as a solar water heater (85%) and provides greater abatement than electrically boosted heat pump water heaters (75%).

ENA supports the abolition of the Small-scale Renewable Energy Scheme. If the SRES is not abolished, it should at least be made technologically neutral. This could be achieved through the removal of those displacement technologies from the scheme which have been selectively included (such as solar hot water systems or heat pumps).

If such a change was made to the scheme, this would still permit these displacement technologies to compete for subsidies in the technology neutral Emissions Reduction Fund (ERF). However if displacement technologies are not excluded from the Scheme, a fuel neutral approach can still be achieved by the inclusion in SRES of those displacement technologies which are currently excluded (for example gas hot water systems).

Download the ENA Factsheet: Taking the Pressure off Gas Prices: Fixing Australia's energy policy distortion

CLICK HERE

Download the Core Energy Group Report: ENA | Gas Network Sector Study

CLICK HERE

NETWORK VALUE WRITE DOWNS A RISK FOR CONSUMERS

New research indicates electricity consumers would face higher - not lower – network charges under proposals to write down the regulatory value of network assets.

"*Written-Down Value? – Assessing Proposals for Electricity Network Asset Write Downs*" by Executive Director, Economic Regulation Garth Crawford, is the first economic analysis assessing recent calls to expose network owners to large retrospective regulatory asset write-downs.

The analysis shows that, rather than saving money, consumers could pay over $320 million more per year if network investors faced new risks of write-downs.

Calls for asset write-downs may seem appealing but this analysis shows it would increase networks financing costs substantially offsetting any other savings for consumers. The analysis of multiple scenarios found even extremely large asset write downs would not achieve price reductions for consumers, who would pay higher bills in all scenarios. Asset write downs could drive the cost of financing to levels not seen since the GFC. This cost increase would outweigh any savings to consumers intended from a lower asset base and lower depreciation charges.

Over the past two decades, regulators and policy makers have sought to provide certainty for investors and a low risk

environment because it lowers costs to consumers. If this low-risk environment is lost, Australia could ruin its hard-won reputation with investors for regulatory predictability without delivering lower electricity bill outcomes for customers.

The analysis is conservative and does not factor in the potential for investors requiring a sovereign risk premium if the current regulatory regime is retrospectively abandoned.

The research paper conservatively estimates that electricity network charges could increase by up to 7% based on current network investments. The cost of future network investment could represent an additional cost of up to $1.8 billion over the next decade.

Other key outcomes of the analysis are;

» write-downs would reverse existing downward pressures

on the cost of capital and network prices;

» by increasing prices to customers, write-downs would be likely to increase, not lower, any risk of a utility death-spiral';

» a relatively small increase of 0.5% in financing costs is enough to completely offset any benefits of lower asset values after a write-down.

Australia's regulatory framework already provides strong incentives for network businesses to apply the best possible forecasting and avoid over investment. If network businesses are overspending against capital expenditure forecasts they already face the risk of write-downs, independent reviews have previously found no evidence of deliberate over-forecasting."

While there is likely to be a need for the regulatory system to evolve over time to embrace new technologies and challenges, it is important for both policy makers and stakeholders to assess evidence of the consequences of making of making poor choices.

This work shows that consumers have a direct interest in maintaining investor confidence in an independent regulatory regime which supports efficient investment in significant infrastructure.

Download the *Written-Down Value? – Assessing Proposals for Electricity Network Asset Write Downs*

CLICK HERE

FIGURE 1: IMPACTS OF ASSET WRITE-DOWNS ON REVENUE REQUIREMENTS OF ELECTRICITY NETWORKS

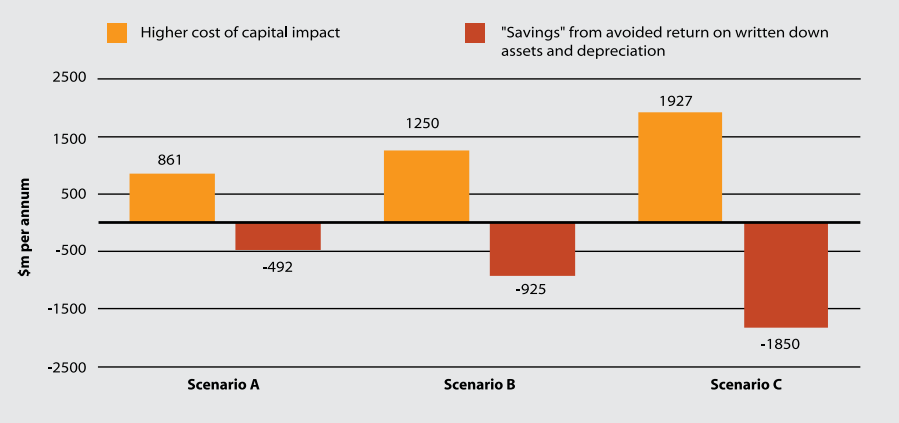
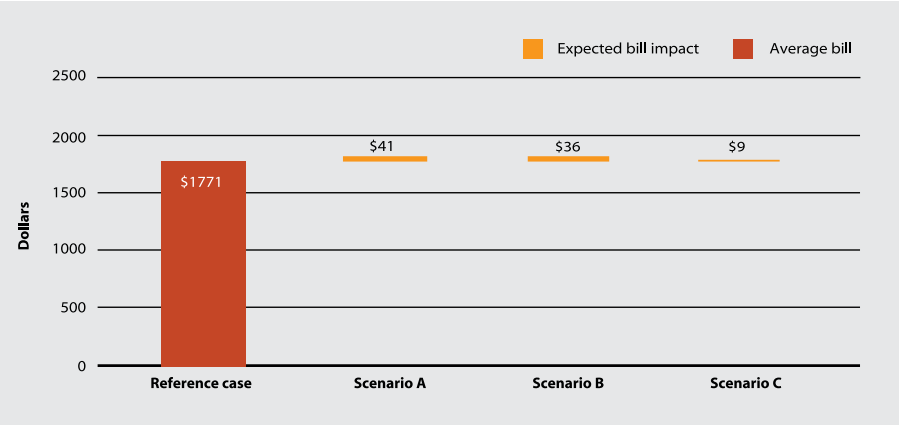


FIGURE 2: ESTIMATED FIRST YEAR ELECTRICITY BILL IMPACTS – MEDIAN AUSTRALIAN HOUSEHOLD



Australia's regulatory framework **already provides strong incentives** for network businesses to apply the best possible forecasting and avoid over investment.

ENA CLIMATE RISK AND RESILIENCE INDUSTRY GUIDANCE MANUAL

The ENA *Climate Risk and Resilience Industry Guidance Manual* has been finalised and released to assist energy network businesses and external stakeholders alike to assess the risks of a changing climate and develop adaptation plans that addresses the 'high' risks that were identified.

One of the biggest challenges facing infrastructure owners and operators world wide is managing the impacts of climate change on assets to ensure safe and reliable service to customers. The Australian energy network sector is particularly exposed to climate change impacts including extreme weather events such as storms, heatwaves and bushfires as well as significant changes in the weather.

Given the long life of energy network assets, investment decisions made today must incorporate risk assessments from a whole range of factors including future climate change. The way that energy networks are operated and maintained will also need to be reviewed to maximise their resilience to climate change.

As a next step in addressing climate risk, ENA, through its Asset Management Committee, has developed an industry methodology and tools to support members in managing climate risk and resilience across core network business activities and to ensure consistency in factoring climate change risk in future network investment decisions.

One of the biggest challenges facing infrastructure owners and operators world wide is **managing the impacts of climate change** on assets to ensure safe and reliable service to customers.

This robust framework is intended to provide confidence to network users, stakeholders and regulatory institutions that a prudent approach is adopted to manage the risks of climate change to network infrastructure and services and can assist in ensuring climate impacts are accounted for in future investment decisions. The manual also leverages and updates past work on climate risk across the industry for utilisation as reasonable and credible scenarios that could potentially be used to support applications to regulators.

This Manual is the culmination of over 18 months of consultation and collaboration with a diverse group of scientists, industry members and government. The approach is intended to be fit-for-purpose and non-prescriptive to allow a tailored approach to individual business circumstances. It should guide businesses in a consistent manner in undertaking a climate risk assessment which then informs their existing processes and future decision-making.

The *"Climate Risk and resilience; Industry Guidance Manual"* is not intended to replace individual organisations policies or internal guidelines for disaster risk management and climate change adaptation; rather, it seeks to foster complementary practices and coordination between network businesses and relevant stakeholders working towards a common goal of strengthening climate resilience across the sector.

For more information on the "ENA Climate Risk and Resilience Industry Guidance Manual" please contact Stuart Johnston at ENA at sjohnston@ena.asn.au

ENA AND ARENA COLLABORATE ON RENEWABLES STOCKTAKE

A new collaboration between the Australian Renewable Energy Agency (ARENA) and the Energy Networks Association (ENA) has commenced to provide a one-stop-shop of up-to-date renewable energy grid integration projects and findings.

The new "Stocktake database: Integrating Renewables into the Grid" addresses an existing information gap in regard to past and current projects across Australia. The 2014 stocktake database contains 176 renewable energy grid integration projects, including 116 from across Australia, worth more than 4 billion dollars in asset investment. The database also includes 60 key international projects whose findings could be transferable to Australia from around the world.

The database contains relevant studies, trials and demonstration projects that can be used as the basis for further work awhile getting the most out of existing information and investment. It will assist in ensuring future funding decisions about renewable energy grid integration projects are better informed and facilitate communication and collaboration across the electricity sector, including: network businesses; renewable energy companies; policy makers; regulators and researchers, which is one of the major challenges facing the energy sector.

The agreement between ARENA and the ENA will see the ENA host the Stocktake database on its website in addition to delivering the first two updates of ARENA's initial stocktake and associated report, with oversight from a cross-industry steering committee.

The updates of the database will ensure there is an up-to-date resource of publically available information for the whole sector to draw upon.

The impact of the rapid increase in distributed renewable energy is upending the traditional supply system and driving an increasing need to revisit the energy network, which was originally designed for one-way delivery. The ENA however believes that there are real and tangible benefits and opportunities to be gained from integrating renewables into the network, which can be demonstrated through our member network businesses who have already facilitated the installation of more than 1.2 million roof top solar panels across Australia.

The ENA and ARENA recognise the valuable role this stocktake will play in helping the sector to make the transition from traditional electricity supply systems to the networks of the future that could potentially provide a diverse range of electricity services future customers (small and large), by providing a consolidated base for information-sharing and collaboration. As such, both the ENA and ARENA intend for the stocktake to be a continuing resource that the sector can draw on in the future.

The initial stocktake and accompanying report is available

CLICK HERE

For more information on the existing "Stocktake database: Integrating Renewables into the Grid" or if you would like to provide information on new projects for inclusion in the database, please contact Stuart Johnston at ENA at sjohnston@ena.asn.au

ENA REGULATION SEMINAR

ENA held its annual Regulation Seminar with the theme "Regulating in a Changing Environment" at the Novotel Brisbane on Wednesday 6 August. Attended by over 180 delegates from Australia, New Zealand and the Philippines, the seminar has become a key highlight of the ENA events calendar.

Focused on the challenges of regulating in an environment where technology is rapidly changing on the, the seminar is design to lead regulatory thinking amongst the Energy Networks sector. The seminar was chaired by Hugh Gleeson (Chairman, ENA Regulatory Affairs Committee), with speakers including Andrew Reeves (Chair, AER), Tim Nelson (Head of Economic Policy and Sustainability, AGL Energy), Rick Francis (Managing Director, Spark Infrastructure), Paul Paterson (Tribunal Member, IPART), Mark Coughlin (Power & Utilities Leader, PwC) and Mr Sun Jianxing (Head of Office, State Grid Corporation of China).

Energy Networks Association

P +61 2 6272 1555 E info@ena.asn.au
Level 1, 110 Giles Street, Kingston ACT

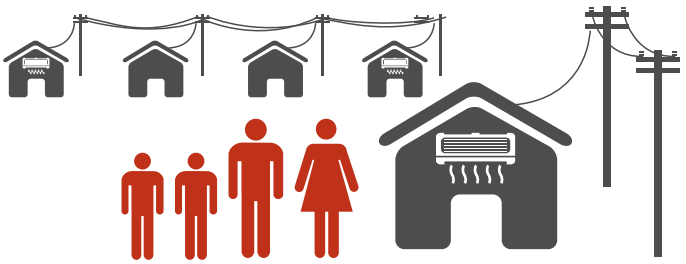
YOUR ELECTRICITY GRID

The Electricity Grid has been called the 'world's largest machine' – an integrated, dynamic system.

With Australian households using more appliances in their daily lives for communication, comfort and convenience the electricity grid plays an essential part in our lives.

10,561,578 customers*

Your Grid provides energy to virtually every household and business in Australia through transmission and distribution networks. Reliable, cost-effective power supply is a vital input to Australian business, industry and communities, supporting economic growth and employment.

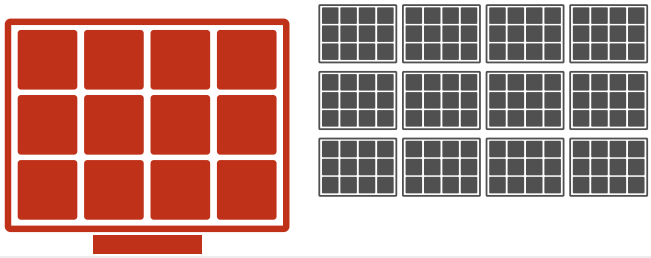


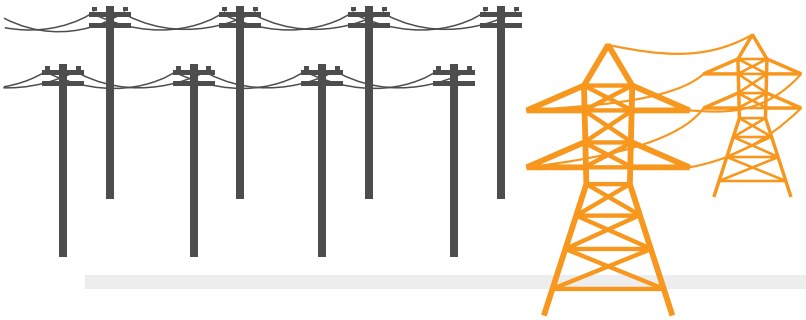
34,374 workers

Your Grid employees provide essential frontline and supporting services to customers 24x7, 365 days a year. They often work in extreme conditions during rapid emergency responses to major events, such as fires and storms to minimise customer interruptions.

1,320,423 connected Solar Panels

Your Grid is rapidly connecting new technologies, while protecting safe, reliable and affordable supply to other customers. Australia leads the world in the uptake of grid-connected solar panels, 'reversing' energy flows in some locations. Most solar customers rely on the Grid to sell excess energy and for backup supply.



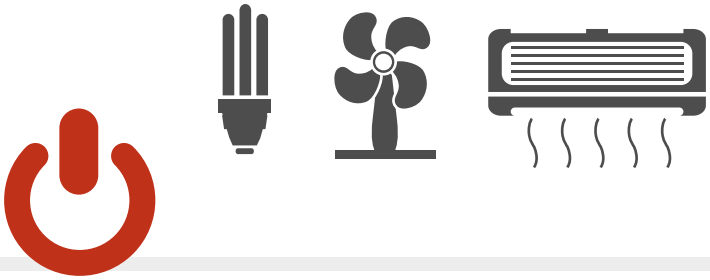


917,676 kms of lines

Your Grid includes over $84 billion in electricity assets providing the backbone of our economy and community. Long term investments are made based on consumer engagement to meet dynamic market needs, incorporate new technologies and support demand response.

99.95% reliability

Your Grid provides an exceptionally reliable service adapting in real time to millions of changing demand and supply signals. Customers benefit from the reliability, continuous supply, 'start-up' power support, power balancing and power quality provided by the grid.



*Numbers sourced from the ABS, Australian Energy Regulator, Clean Energy Regulator and Energy Supply Association of Australia