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...ELECTRICITY PRICES

WHY ARE ELECTRICITY BILLS RISING?

Historically, Australia has had stable and competitive electricity prices by developed world standards.

However, over the past four years the cost of electricity for households has risen on average by around 70 per cent nationally.¹

This is largely because Australia's electricity networks - the power poles and wires that deliver electricity to homes and businesses - were built 40 to 50 years ago and need replacing. This is an expensive task.

At the same time we all have more appliances, from air conditioners to laptops and flat screen TVs, putting more demand on the electricity system.

Consumers have the right to expect a highly reliable supply of electricity - however making electricity available whenever it is needed comes at a

price.

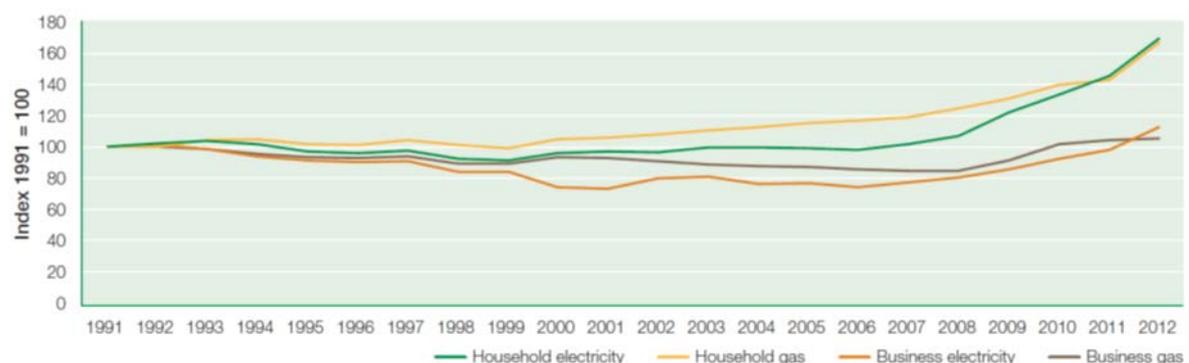
Maintaining or improving reliability is increasingly challenging and expensive, given the ageing nature of networks and new demand pressures.

Some state governments, including those in New South Wales and Queensland, have increased the standards they require networks to operate to in recent years. While this improves the reliability of supply it has also added to the costs, which must be considered by regulators.

While the Australian Government does not set electricity prices, it understands the impact of rising electricity bills on households and businesses.

That is why it is working with the states and territories to deliver reform aimed at reducing energy price pressures for consumers, while ensuring supply remains reliable.

Electricity and gas retail price index (real) – Australian capital cities²



¹ ABS (various years). Consumer Price Index for electricity (cat. no. 6401.0)

² ABS (various years). Consumer Price Index and Producer Price Index data for electricity (cat. no. 6401.0 and 6427.0)

HOW DOES AN ELECTRICITY BILL ADD UP?

Electricity bills reflect a number of factors - primarily the cost of generating electricity and delivering it to customers.

In all states and territories, except Victoria and South Australia, household electricity prices are set by independent regulators³ that make judgements about how much it costs to provide a reliable supply of electricity.

This rate is known as a 'standing offer' tariff. However, consumers commonly have the option to shop around and seek a lower price from their retailer via a market contract.

In competitive markets⁴, consumers have a greater choice of retailers and more options about what sort of electricity contract they enter into - this means they are more likely to be able to find a deal to suit their needs.

Typically, an average Australian household electricity bill in 2012-13 consists of:⁵

- **Network charges** - the largest cost component, accounting for about 51 per cent of the bill, this represents the cost of building and maintaining electricity networks, i.e. the poles and wires that deliver electricity to your home or business.
- **Wholesale costs** - the costs associated with generating electricity and trading it in a wholesale market - around 20 per cent of the total bill.
- **Carbon price** - cost passed on by fossil-fuel generators for their carbon emissions - around 9 per cent of the household bill.
- **Retail and energy scheme costs** - the 'shop front' for a consumer's electricity supply and costs from schemes for energy efficiency and renewables - together about 20 per cent of the bill.



³ The WA and NT Governments directly regulate retail electricity prices while the Queensland Government has the ability to vary the regulator's pricing decisions.

⁴ Such as in Victoria and South Australia where retail electricity prices are deregulated.

⁵ National average figures provided by the Commonwealth Treasury (figures include GST).

WHAT'S DRIVING PRICE INCREASES?

NETWORK COSTS

Networks are the biggest factor driving up the cost of electricity.

Australia's geographic size and dispersed population means we have one of the world's largest integrated electricity networks.

As a result, network charges make up a much bigger proportion of electricity bills compared with other countries.

For example, Australia has around the same amount of network infrastructure as the United Kingdom, but with only a third of the population to share the costs.

Network charges are set by a regulator as networks are natural monopolies - unlike generation there is no market to competitively set prices.

In the National Electricity Market (NEM)⁶, the Australian Energy Regulator (AER) sets network businesses' revenues and prices based on their assets, investment needs and operating environments.

The aim is to ensure prudent and efficient network investment for a reliable energy supply with minimal costs to consumers.

With most of Australia's electricity networks built throughout the 1960s and 70s, major investment is now needed to replace and upgrade them as they reach the end of their service life.

The cost is then passed on to consumers via increased electricity prices.

The investment needed in the NEM is forecast to exceed \$7 billion for transmission and \$36 billion for distribution over the current regulatory periods. This is a rise in investment from the previous periods of around 27 per cent in transmission and 60 per cent in distribution (in real terms).⁷

The contribution of network investment drivers is highlighted by the AER's current determinations for NSW distributors.

It shows that of the \$14 billion of approved capital expenditure:

- growth in energy demand represents around 42 per cent;
- asset replacement accounts for around 31 per cent;
- reliability and quality of service enhancements are about 9 per cent; and
- costs associated with safety, statutory obligations, climate change, environmental, and other system and non-system assets such as IT and business support makes up 18 per cent.

⁶ The NEM is a fully interconnected electricity market throughout New South Wales, Victoria, Queensland, South Australia, Tasmania and the ACT.

⁷ AER (2012). State of the Energy Market 2012. www.aer.gov.au/node/18959

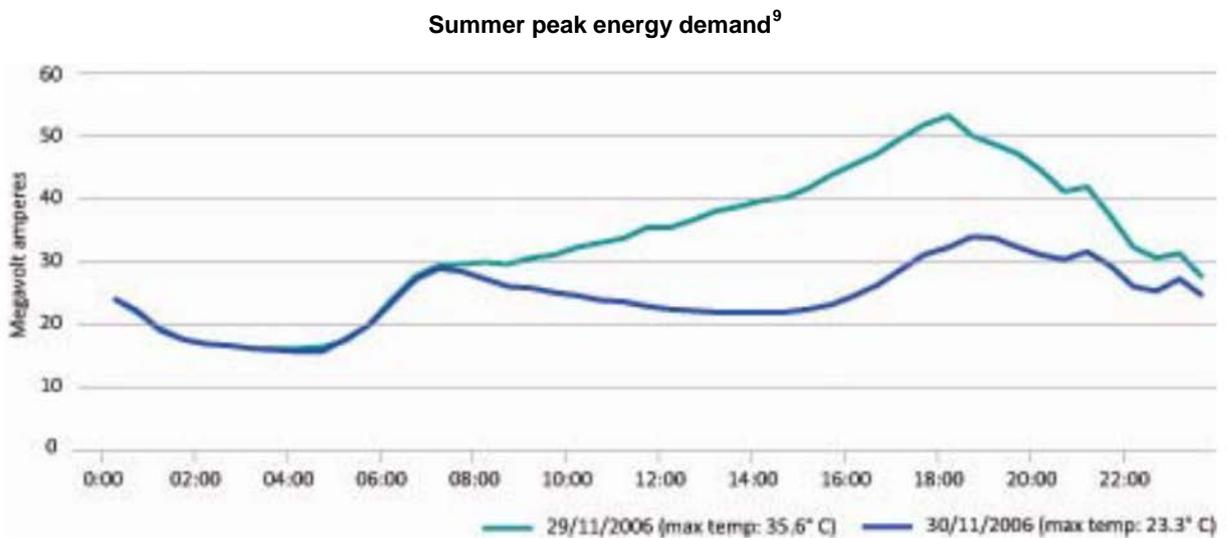
INCREASING PEAK ENERGY DEMAND

The need to replace ageing assets is compounded by the need for networks to cope with rising peak demand.

Australia's economic growth and increasing use of appliances like air conditioners have put new pressures on networks, particularly at peak times – typically for a few hours in the afternoon on the hottest days of the year.

Network companies must build their infrastructure to meet energy demand at its forecast peak – which is much higher than the average (see below).

This means that around \$11 billion worth of infrastructure across the NEM is only being used for 100 hours each year.⁸



OTHER FACTORS IMPACTING ELECTRICITY BILLS

Carbon price

Australia's carbon price commenced on 1 July 2012 and is designed to reduce greenhouse gases in the most environmentally effective and economically efficient way.

The carbon price is factored into fossil-fuelled generators' bids for wholesale electricity – this flows through to electricity bills.

Recognising cost of living pressures, the Australian Government is providing assistance to those most in need, particularly pensioners and low and middle income households, to help manage increases in living costs from the carbon price.

⁸ Ausgrid (2011) Supply and demand: our five year network plan, 2011-12 update

⁹ Energex (2010). Network management plan - Part A 2009-10 to 2013-14.

Households receive, on average, \$10.10 per week in assistance to help cover the increased costs, including the rise in electricity costs of, on average, around \$3.30 per week.

The Government's Budget in May 2013 revised down the carbon price projection in 2015-16 from \$29 to around \$12 per tonne - this will mean a lower impact on electricity prices.

Information on the Clean Energy Future assistance package is available from the Clean Energy Future website at www.cleanenergyfuture.gov.au or by phoning 1800 057 590.

Renewable Energy Target (RET)

Under the RET scheme, energy retailers must ensure that a proportion of their electricity supply is from renewable sources - like solar or wind - which, at the moment, are generally more expensive compared with traditional generation sources, thereby adding to costs.

The Australian Energy Market Commission (AEMC) estimates that on average, the RET comprises around 3 per cent of household electricity prices in 2012-13.¹⁰

Feed-in tariff schemes

Most states and territories have introduced feed-in tariffs (FITs) to encourage householders to install solar panels or other small scale renewable energy systems. The costs associated with FITs are passed on to all customers through electricity prices.

There has been strong demand for these schemes in most states. For example, higher than expected demand for rooftop solar panels in NSW led to a decision by the NSW Government in 2010 to reduce the FITs payment to limit the cost of the scheme to consumers.

State energy efficiency and demand management schemes

Some states and territories have also implemented schemes which affect retail electricity prices to varying degrees according to their scope, scale and objective.

Mostly, these schemes encourage energy efficiency, demand management and carbon abatement by requiring retailers or distributors to undertake specific activities.

They include initiatives such as the Energy Savings Scheme in NSW and South Australia's Residential Energy Efficiency Scheme.

The AEMC estimates that these schemes make up around 3 per cent of household electricity prices on average nationally in 2012-13 and are not expected to significantly impact prices in most jurisdictions.¹¹

¹⁰ AEMC (2013). Final Report: Possible Future Retail Electricity Price Movements: 1 July 2012 to 30 June 2015.

¹¹ AEMC (2013). Final Report: Possible Future Retail Electricity Price Movements: 1 July 2012 to 30 June 2015.

WHAT ARE GOVERNMENTS DOING TO KEEP COSTS UNDER CONTROL?

The Australian Government is working closely with the states and territories to find and deliver the best solutions to ease electricity price pressures. On 7 December 2012, the Council of Australian Governments (COAG) agreed to a comprehensive energy market reform package developed by the Standing Council on Energy and Resources (SCER) to take this forward.

A key component is to enhance regulations to make sure network expenditure is efficient and avoids undue price pressures for consumers.

The package promotes empowering consumers to better understand and manage their energy use and costs.

It also contains measures to enhance competition and consumer engagement in the energy market.

Further detail on these and other important measures is available at www.scer.gov.au and www.coag.gov.au/node/481.

WHAT ARE THE NEXT STEPS?

The AEMC's latest reporting on electricity prices shows prices could ease over the next few years.

The report says that the national annual average increase in household electricity prices is currently around 14 per cent and is expected to decrease to around 3 per cent for the two financial years to 30 June 2015.¹²

The AEMC expects that network charges will remain the main driver of electricity price rises expected over the next few years, albeit to a lesser extent, with wholesale, retail and environmental costs staying relatively flat.

Further benefits for consumers are expected as the Australian Government continues to drive energy market reforms with the states to achieve objectives on efficient pricing, reliability and clean energy.

Ensuring efficiencies in electricity networks is a key aspect of this reform process. This will make sure the regulations deliver appropriate and efficient network investment and supply reliability at least cost to consumers.

Enhancing the ability of consumers to better understand and manage their energy use is central to addressing issues around rising peak demand and the associated investment and pricing pressures. Greater Demand Side Participation (DSP), including through innovative metering technologies and pricing structures, will be critical in this regard. Empowering consumers through improved price signalling, greater competition and choice in retail energy markets, along with robust protection for vulnerable consumers, will also be fundamental.

The Australian Government will also continue to push for improved corporate governance of energy businesses to make sure they are more customer-oriented - particularly in the case of government-owned network businesses.

The Australian Government will continue to work with the states and territories, the energy sector, and the broader community to progress ongoing reform and efficiencies in the energy sector and its markets.

¹² AEMC (2013). Final Report: Possible Future Retail Electricity Price Movements: 1 July 2012 to 30 June 2015.

WHAT CAN I DO TO REDUCE MY ELECTRICITY BILL?

In most jurisdictions, households have the ability to shop around for an energy market contract that sets the price, terms and conditions most suitable to their needs. An energy price comparator website has been developed by the AER to assist consumers in better understanding and managing their energy use and costs. It is gradually being rolled out across jurisdictions to help consumers make more informed choices on their energy supply - see www.energymadeeasy.gov.au.

There are also a range of resources to help people who are interested in saving money by saving energy in their home or their business.

LivingGreener.gov.au brings together the essential things you need to know about household energy efficiency and sustainability - and helps you take action. There are lots of simple things you can start doing right now, like sealing draughts around windows and doors, that will save hundreds of dollars each year.

LivingGreener.gov.au features:

- hundreds of ways to **save energy** and **water, reduce waste** and **travel smarter** with something to suit every lifestyle and budget.
- up-to-date information on government sustainability **rebates and assistance** all in one handy location.
- fast facts to get the essentials with lots of links to more in depth information when you need it.
- easy-to-understand, practical ideas with no jargon and all technical terms explained.
- **tailored guides** for renters, home-based businesses, expecting parents, technology users, workplaces and more.
- *5 bright ideas for saving energy and money at home* **factsheet in 33 languages**.

Explore a huge range of practical options for saving resources and money around the home: from choosing and installing a hot water system, creating a water smart garden, recycling your laptop or TV, to buying a more efficient car.

Another online initiative is the www.energyrating.gov.au website, which details energy efficiency and star ratings for a range of electrical appliances via an energy label. It also lists residential, commercial and industrial products which have been registered for minimum energy performance standards.

Particularly useful is the tool where consumers can compare brands and models of various products including televisions, air conditioners, clothes dryers, fridges and washing machines to gauge their running costs.

For small business, energy transformation tips are available on the [Clean Energy Future](#) website.

These tips are designed to give you practical, effective advice which will work in most small business environments.

Most of these tips are about changing behaviour and will cost consumers nothing to implement. Where there are costs involved, consumers should consider whether purchases make financial sense.