energy efficiency COUNCIL

# Save Energy, Cut Bills, Improve Reliability

## 2017-18 policy priorities for an energy efficient Australia

# 10 Critical Actions

## Transform energy markets

1. **Unlock the power of demand response**
by creating markets that value the benefits of demand response for capacity, frequency control and reduced network expenditure.

2. **Improve electricity network regulations**
by encouraging increased investment in demand management and improved oversight of networks' interactions with consumers and energy service providers.

3. **Implement fair and efficient electricity tariff structures**
by working with consumers and industry to design best practice tariffs that deliver the right balance of investment in generation, network infrastructure and demand reduction.

4. **Strengthen and extend energy efficiency certificate schemes**
by harmonising and extending schemes across all jurisdictions.

5. **Improve governance**
by setting up an independent *National Energy Efficiency and Productivity Agency.*

## Protect consumers

6. **Reduce manufacturers' gas and electricity bills**
by supporting companies to adopt new technologies and alternate fuels to improve their overall productivity.

7. **Transform offices**
by investing at least $10 million a year through COAG to engage building owners and help them provide more efficient, healthy and productive workplaces.

8. **Inform and protect home buyers and renters**
by developing a national scheme to disclose the energy efficiency of new and existing homes and setting minimum standards for rented homes.

9. **Reduce governments' energy bills**
by adopting programs like the NSW Government Resource Efficiency Policy, which drive investment in upgrades to schools, hospitals and infrastructure.

10. **Improve standards for appliances, buildings and vehicles**
by streamlining standard-setting processes and introducing vehicle standards.



# Keeping the lights on and manufacturing open

Australia's energy sector is in a profound period of change. Our electricity sector is being transformed through the closure of ageing coal-fired generators, increasing levels of renewable energy and many other factors. In combination with our outdated electricity market rules, these changes are increasing the price and reducing the reliability of electricity.

The *Independent Review into the Future Security of the National Electricity Market (NEM)*, otherwise known as the 'Finkel Review', recommended managing how and when we use electricity to make our energy systems more reliable and affordable.[1] Making homes and businesses more energy efficient will reduce energy bills and the amount of energy our system needs. Actively reducing demand during peak periods (called 'demand response') will help to keep the lights on and reduce expenditure on power generation and networks. Demand response works – New South Wales avoided a brownout in February 2017 because energy retailers, the Australian Energy Market Operator (AEMO) and the NSW Government actively managed demand.

At the same time, Eastern Australian gas prices have risen rapidly, which is a profound threat to the future of manufacturing sectors like food, beverage and building products. Government must reform gas markets to reduce domestic gas price volatility, but even with reforms the wholesale gas price is unlikely to drop back below $10 per Gigajoule.

Helping manufacturers to reduce their gas bills will be essential to keep them competitive and viable. Many manufacturers can reduce their gas use by 30 per cent or more, by improving their energy productivity and sometimes switching to other fuels. However, many businesses are capital constrained and lack the full suite of skills necessary to improve their gas efficiency.

The Australian Government has set a target to improve Australia's energy productivity (GDP per unit of primary energy) by 40 per cent, but we won't meet this target unless we introduce strong programs to address the barriers to energy efficiency.

Major economies including China, Japan and Europe are taking strong action to improve their energy efficiency, and Australia's efficiency has fallen behind many of our competitors.[2] We need to urgently introduce key policies to catch up with our global peers and keep energy affordable, and Australia innovative and competitive.

[1] *Finkel A. et al 2017, Independent Review into the Future Security of the National Electricity Market, Commonwealth of Australia p138.*
[2] *OECD 2014, OECD Factbook 2014: Economic Environmental and Social Statistics.*

**We need to urgently improve our energy efficiency to make electricity secure and affordable and deal with rising gas prices.**

## Smarter energy use will deliver...

### Secure and affordable electricity

Energy management is essential to keep electricity reliable and affordable. Energy efficiency reduces the volume of energy consumed, reducing energy bills and providing virtual 'baseload' generation. Smarter energy management also reduces demand during peak periods, acting like both energy storage and peaking power generation, helping to ensure security of supply while lowering the cost of electricity.

### Protection from volatile gas prices

Domestic gas prices have more than doubled in the past five years, threatening the competitiveness and viability of manufacturers. Energy efficiency and, in some cases, fuel-switching, will be crucial to protect Australia's manufacturing sector.

### Productivity and economic growth

Improving energy efficiency by just one per cent a year will grow Australia's economy by $26 billion by 2030.[3] Smart energy use drives economic growth by improving staff productivity and resource efficiency, while lowering energy costs. For example, improving the efficiency of offices delivers an increase in staff productivity that is worth much more than the energy savings.[4]

### Jobs, investment and innovation

The global market for smart energy products and services is more than $290 billion per annum and growing rapidly.[5] If Australia captured just one per cent of the global market it would deliver $2.9 billion in income every year and create thousands of jobs. California now has more than 321,000 people employed in energy efficiency, with employment growing six per cent per annum in recent years.[6]

### Cutting edge technologies

Consumers around the world are gaining access to new technologies like electric cars, smart appliances, advanced lighting and energy management. Without key reforms Australian consumers will pay more for, or even miss out on important innovations.

### Consumer protection and health

Minimum standards and ratings for homes and appliances protect consumers and ensure that they get what they paid for. When builders and manufacturers cut corners it can increase household energy bills, reduce comfort and even impact their health. Building efficiency can impact winter mortality rates, and over 2,600 deaths each year in Australia are associated with cold weather.[7,8]

### Major emission reductions

Energy efficiency is the fastest, cheapest way to cut greenhouse gas emissions. Energy efficiency can easily deliver half of Australia's target to reduce emissions by 26-28 per cent by 2030 and save money. Energy management is also essential to help support higher penetrations of renewables in the energy market.

[3] *Climate Institute 2013 Boosting Australia's Energy Productivity.*
[4] *ACIL Allan 2015, Commercial Building Disclosure Program Review.*
[5] *International Energy Agency 2016, Energy Efficiency Market Report 2016.*
[6] *Advanced Energy Economy Institute 2016, Advanced Energy Jobs in California.*
[7] *International Energy Agency 2014, Capturing the Multiple Benefits of Energy Efficiency.*
[8] *Gasparrini A. et al 2015 'Mortality risk attributable to high and low ambient temperature: a multicountry observational study', The Lancet, Vol 386, No. 1991, p367-375.*

# Fixing **electricity markets**

*"...a long-term, **bipartisan approach** is essential."*

## Australia's electricity markets are transforming

**Australia's electricity markets are not delivering energy services as reliably and affordably as they should be. There are many drivers for this, but a key reason is that our electricity markets haven't been delivering the most cost-effective balance of investment in energy management and supply. These problems have become much worse in recent years due to:**

- Old generators reaching the end of their useful life and closing, which reduces both supply and competition. Replacing or refurbishing these generators will be expensive and increase energy prices.
- Increased levels of intermittent renewable energy, which increases the need for energy management, storage and fast-response generators.
- Overinvestment in electricity networks (poles and wires).
- The lack of a long-term, bipartisan approach to energy and carbon, which reduces the confidence that suppliers and consumers need to makes sensible investments.

Australia's governments have recognised that our energy markets are failing to deliver secure, affordable energy. They jointly set up the 'Finkel Review' to recommend reforms to our energy markets.

The Finkel Review recommended a broad set of reforms to the way that we supply and use energy, to ensure that the NEM is as secure, affordable and sustainable as possible. However, there are immediate actions that could be taken now that would deliver immediate benefits and support the longer-term changes that we need.

# Balancing investment in supply and demand

The cheapest way to meet Australia's energy needs is to balance investment in energy supply with smarter energy use.

Our challenge can be compared to keeping an off-grid house cool in summer. If a home owner doesn't invest in an efficient air conditioner, they will need to spend much more money on solar panels or a generator. Similarly, if we don't invest in energy efficiency and managing demand during peak periods, we will need to spend much, much more on generation, storage and networks.

Australia's electricity markets aren't delivering the right balance of investments, and this contributed to energy bills jumping by more than 70 per cent in many parts of the country between 2008 and 2013. Electricity markets are not 'natural' markets—they are based around monopoly networks that manage the poles and wires. This means that the question is not whether governments regulate energy markets, but how they regulate them.

Governments gave network companies monopoly powers to make decisions on behalf of consumers to invest in supply-side infrastructure. This infrastructure allows generators to sell energy cheaply to aggregated consumers. However, very little effort was made to encourage networks to invest in reducing demand when it was cheaper than expanding the network, which meant that network prices increased in real terms by 120 per cent in NSW and 140 per cent in Queensland between 1997 and 2013.[9] International research by UBS found that, between 2007 and 2013, network costs rose faster in Australia than any other country examined.[10]

Policy makers also failed to set up a competitive market to aggregate energy management services and deliver balanced investment. In other words, we established electricity systems that enable consumers to access supply with virtually no effort and very little upfront cost. However, if consumers want to manage their energy use they must take the initiative to find experts and pay upfront capital costs themselves. This distorts investment between energy supply and smart energy use.

While these distortions happen around the world, most countries have made serious efforts to correct them. However, much less action has been taken in Australia, contributing to rapidly rising energy bills, higher per capita greenhouse gas emissions than many other countries, and buildings and manufacturers that are much less efficient than they could be.

The case for action on energy efficiency is strong and urgent. The Finkel Review concluded that managing demand is a huge opportunity to improve the security and affordability of the NEM, and missing this opportunity "...risks over-investment in new large-scale generators and network assets, leading to higher costs".[11] We cannot afford to miss the vital opportunity offered by smarter energy use.

## Driving cost-effective energy efficiency

Energy efficiency means getting more out of each unit of energy. For example, modern LED bulbs can use 90 per cent less electricity to produce the same light as an old incandescent bulb.

The cheapest form of 'baseload' energy supply is energy efficiency, and it is already Australia's biggest 'virtual power plant'. For example, minimum standards and efficiency labels for fridges alone save (or 'produce') around 900 Megawatts of electricity, every day of the year, while saving consumers more than $1 billion a year.

While we need to invest in new generation and storage, we must invest in energy efficiency when it is cheaper than building more supply. This will deliver lower bills to households and businesses and reduce the amount that we need to spend in transitioning our energy system.

The Finkel Review's Recommendation 6.10 states "Governments should accelerate the roll out of energy efficiency measures..."[12]

## The output of two Hazelwood power stations

Research from ClimateWorks Australia found that voluntary demand response measures could reduce commercial electricity demand in the industrial sector on Australia's east coast by as much as 42% during peak periods.

That would reduce overall peak demand by over 10%, or 3.8 gigawatts; the output of two Hazelwood power stations.

Unlocking this potential would improve Australia's energy security, and avoid building costly infrastructure needed during peak periods that only take place on a handful of days a year.

*ClimateWorks Australia 2014, Industrial demand side response potential.*

## Unlocking the power of demand response

Demand response means adjusting when we use energy in order to lower costs and improve security. The Finkel Review states: "[Incentivising] consumers to reduce their demand at peak times is often cheaper, and faster to implement, than building new generation and networks to meet the peak. Even small amounts of demand response can avoid costly, involuntary load shedding."[13]

The technology now exists for sophisticated and substantial demand response, enabled by aggregators that combine many different sites together into 'portfolios' that provide flexible, secure and stable demand response. For example, remote controls and automated systems enable system operators to reduce energy use across hundreds of sites in ways that don't affect their businesses (e.g. cycling refrigeration compressors on and off).

Demand response can provide emergency capacity, like it did in NSW in February 2017, and increase competition during peak periods that lowers the cost of energy. Demand response can also provide Frequency Control Ancillary Services (FCAS) to increase the stability of electricity systems, and reduce the need for expenditure on networks. This means unlocking the power of demand response would increase both the affordability and the security of electricity.

[9] *EY 2014, Electricity network services: Long-term trends in prices and costs.*
[10] *UBS 2014, Global Power Utilities - Rising power tariffs create a risk of regulatory intervention.*
[11] *Finkel A. et al 2017, Independent Review into the Future Security of the National Electricity Market, Commonwealth of Australia p307.*
[12] *Ibid p156*
[13] *Ibid p146*

*"…**manufacturers** need **urgent transitional support** to adjust to **higher gas prices.**"*

# Fixing **Australia's gas crisis**

## Gas prices in Australia have risen dramatically

**Until recently, Eastern Australia enjoyed relatively low gas prices. We had large gas resources that exceeded local consumers' demand for gas, and this kept prices low. Because gas was cheap, many manufacturers and households installed low-cost gas-fired equipment that was relatively inefficient.**

Gas prices are rising dramatically. New liquefied natural gas (LNG) terminals were built to export gas overseas, which tripled demand for gas in Eastern Australia. Many experts predicted that this would result in domestic gas prices rising close to international gas prices. However, the rapid increase in gas demand has not been met with the expected increase in gas production. LNG exporters are typically contractually bound to export large volumes of gas, which means that demand for gas now exceeds supply. This has led to shortages and pushed gas prices much higher.

The complexity and lack of transparency of the gas market means that it can be hard to determine prices. However, it appears that gas prices have at least doubled, from under $4 per Gigajoule (GJ) to well over $8 per GJ. The Energy Efficiency Council is aware of energy users being offered short and medium-term contracts at much higher prices.

The Australian Industry Group has estimated that the combination of current electricity and gas price increases will cost energy users $10 – $12 billion per year.[14] Households will pay up to an extra $3.6 billion a year, and business up to $8.7 billion a year. More energy intensive manufacturers will be particularly hard hit and this will affect their competitiveness, and in some cases, their viability.

[14] *Australian Industry Group 2017, Energy Shock: No Gas, No Power No Future?*

## Action to stabilise gas prices is essential

**It's important to deal with the current problems in the gas market in order to stabilise gas prices and give energy users the confidence they need to invest and keep their operations open.**

The COAG Energy Council has a program of work to improve the transparency and efficiency of gas markets, businesses are considering investments in new gas supply and gas import terminals and the Australian Government has proposed a Domestic Gas Security Mechanism to ensure supply for domestic use. However, even with extensive action on gas supply it is unlikely that gas prices will fall below $8-$10 per GJ again.[15]

## All energy users need support to adjust

**In the coming years energy users are likely to face gas prices that are more than double their historic level.**

This means that it's essential for consumers to adjust, either by using gas more efficiently or switching to other fuels.
Homes and offices can often significantly reduce their gas use by installing more efficient boilers and switching to electric appliances. In fact, many homes are likely to disconnect from gas altogether, relying on reverse-cycle air conditioners for heating, heat-pumps for hot water and induction hobs for cooking. Governments should encourage and support these changes, particularly for vulnerable homes. However rising gas prices create much greater challenges for manufacturers.

## Smarter gas use will help keep manufacturers open

**Many manufacturers will be will hit hard by rising gas prices, and may even close, unless they dramatically reduce their dependence on gas.**

Luckily, many sites have major opportunities to reduce their gas consumption by at least 30 per cent through energy productivity and fuel-switching.

Australia's low historical gas and electricity prices mean that many sites have substantial opportunities to improve their gas efficiency by adopting technologies and optimisation processes that are common in markets with more expensive energy, such as Europe.

However, Australian manufacturers face significant barriers to adjusting their gas use. These include constraints in access to capital, particularly where they are concerned about their ongoing viability, and a lack of knowledge, experience and time. Historically low energy prices meant that generally only the largest and most energy intensive businesses built deep capacity in energy management.

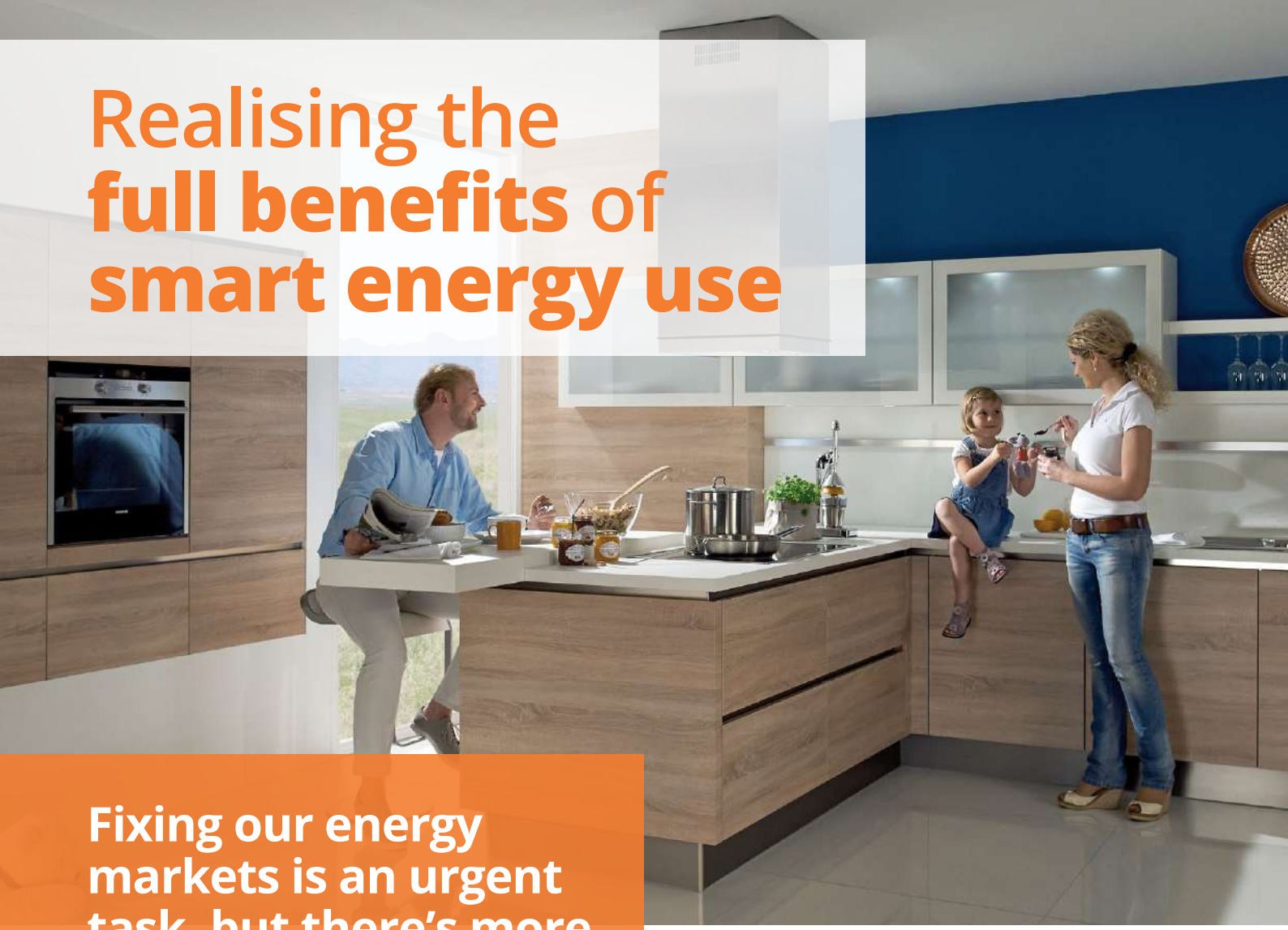
This means that it's urgent for governments to provide transitional support to help manufacturers adjust to higher gas prices. Turning around an economy-wide capacity constraint in a short period will be a major challenge, which means that serious, concerted effort between business and government is necessary.

As manufacturers are also facing rapid changes in electricity prices, governments should provide combined support for gas and electricity productivity. The program should also focus on encouraging projects that improve 'multi-factor' productivity, as effective energy productivity projects typically help to improve staff and resource efficiency.

The Energy Efficiency Council recommends that governments establish a national 'Gas and Energy Productivity' program to work with industry and industry bodies to identify best practice and build knowledge and capacity among manufacturers and the experts that support them. The program should provide grants for sub-metering, developing business cases for site upgrades and capital investment. Given the huge scale of adjustment, governments should allocate at least $500 million to this task. In addition, governments should ensure that energy users have access to capital for energy efficiency and fuel switching projects through the Clean Energy Finance Corporation and its partners.

[15] *Ibid.*

# Realising the **full benefits** of **smart energy use**



## Fixing our energy markets is an urgent task, but there's more to be done to unlock the full benefits of energy efficiency.

**The level of energy efficiency in Australia is not only affected by energy markets, but also markets for products such as fridges and services, such as building design. Distortions in any of these markets reduce energy efficiency. For example:**

- Landlords own buildings, but tenants pay electricity bills. This makes it challenging to upgrade the efficiency of rented homes and offices.
- When consumers can't compare the efficiency of buildings and appliances, they can't select more efficient options and this reduces the incentive to build better products.
- Most businesses and households lack the key skills to build a business case, find trusted experts and improve their efficiency.
- Electricity tariffs that don't reflect the real long-term costs of supply (e.g. high fixed charges) reduce the incentive for energy efficiency.

## Better health, productivity and jobs

**Fixing our markets for electricity and gas is essential and urgent. However, to unlock the full benefits of energy efficiency we need to take more widespread action.**

Ensuring that new and existing buildings are energy efficient will cut energy bills and improve Australians' health, wellbeing and productivity. Ensuring that our appliances, equipment and vehicles are up to scratch will save households money and boost businesses competitiveness.

Action on energy efficiency is also essential to tap into one of the fastest growing global markets. The global market for energy efficiency services and products is worth more than $290 billion and growing rapidly. If Australia is to seize this opportunity, our governments will need to develop an export strategy that includes research and development, commercialisation, and training and accreditation.

As part of our international outreach, Australia should foster a regional Asia-Pacific market for energy efficiency services and products through actions such as harmonising certifications and metrics, and promoting the 'NABERS Energy' rating tools to other countries. This would create a larger, more stable and competitive market and make it easier for Australian companies to export to the region.

# Strong action is required

**While Australian governments have recognised the importance of improving our energy efficiency for many years, key reforms still haven't occurred.**

Several national strategies for energy efficiency have been developed, however many proposed actions haven't been implemented, and Australia's rate of energy efficiency improvement has continued to fall behind other developed economies.

In December 2015, governments in Australia signed up to COAG's new 'National Energy Productivity Plan' (NEPP). However, the NEPP will be ineffective unless governments show strong leadership, invest in programs and introduce sensible regulations to correct energy market distortions.

Decisive action is needed to ensure that Australia meets its goal to improve energy productivity in Australia by at least 40 per cent between 2015 and 2030.

Government action should be targeted and well-designed in order to unlock the power of the market. While there has been widespread support for action on energy efficiency, there has been a mistaken view in some quarters that energy efficiency policies are 'interventions' that distort existing markets, rather than corrections of well-known market distortions.

The Australian Government's Commercial Building Disclosure (CBD) program is a good example of a program that targets a clear problem; tenants can't select more efficient offices if they can't compare the efficiency of offices. The CBD program corrects this by requiring building owners to display energy efficiency ratings when offices are sold or leased. This has delivered at least $72 million in energy and carbon savings, and $168 million in improved office staff productivity.

Sometimes stronger regulations are necessary. For example, builders and residential landlords have little incentive to ensure that homes are efficient. Minimum standards for construction have been in place in Australia for many years, although they are not well enforced and weak by international standards. However, we still don't have good minimum standards in place for rented homes, despite many rental properties being unacceptably poor quality.

Where governments can't directly address problems, they will need to take alternative approaches. For example, while we ultimately need to fix supply-side biases in our energy market, it's essential to have energy efficiency funds and energy efficiency certificate schemes in place now, because many market distortions will take years to correct.

Finally, a long-term, bipartisan approach is essential to provide homes and businesses with investment certainty and enable the development of sophisticated markets. Australia must do much more on energy efficiency to ensure that our homes are comfortable, our workplaces are productive, our economy is competitive and our energy market transforms in a way that benefits the community.

## Australian Energy Efficiency Policy Handbook


The Energy Efficiency Council has launched a comprehensive *'Australian Energy Efficiency Policy Handbook'*, which sets out the policies that will be required between now and 2030 to meet the Australian Government's energy productivity target.

The *Handbook* is an evidence-based policy guide, and will be updated on a regular basis with new data and input from experts and the community. In some areas, the *Handbook* identified policies that require further research and trialing before they are scaled up, and which policies are ready to go now.

This document draws on the *Handbook* and recommends 10 Critical Actions that can and should be undertaken immediately.

Download the *Handbook* at **www.eec.org.au/handbook**

# 10 Critical Actions

## Reform energy markets

### 1 Unlock the power of demand response

Australia's electricity system is becoming more expensive and unreliable. Smarter use of energy is critical to improve the reliability and affordability of electricity. Energy efficiency can provide cheap baseload capacity and 'demand response' (altering demand to benefit the grid), can make energy more reliable and affordable. However, our electricity markets don't effectively encourage energy efficiency and demand response.

It's critical to reform our electricity markets to encourage better energy management. The Energy Efficiency Council welcomes the proposal from AEMO and the Australian Renewable Energy Agency to buy demand response for emergency capacity. As stated by the Finkel Review (Recommendations 2.1, 2.2 and 6.7), we must build on this by setting up markets that allow energy users to sell demand-response for emergency capacity, frequency response and low-cost capacity during periods of peak demand.

### 2 Improve electricity network regulations

The role of the electricity grid is to connect multiple energy users and generators in a way that provides both diverse energy supply and loads. This improves the security and reliability of supply while reducing peaks and supply costs. Theoretically, network service providers (NSPs) should invest just enough to provide reliable connection and they should invest in managing demand when it is cheaper than augmenting the grid. However, poor incentives and regulations mean that many NSPs have invested heavily in supply and made very little investment in demand management, resulting in network charges more than doubling in some regions.

The Finkel Review states that governments should review incentives for NSPs to support investment in non-network solutions (Recommendation 6.8). To complement this, the COAG Energy Council should strengthen the Demand Management Incentive Scheme, set NSPs minimum targets to invest in demand management, and appoint an entity to oversee reviews of the level of demand-side investment by NSPs and oversee NSPs' interactions with consumers and energy-service providers.

### 3 Implement fair and efficient electricity tariff structures

Getting the right mix of investments in generation, networks and demand reduction is critical to the long-term affordability of energy. The mix of investments is strongly influenced by how NSPs charge consumers and generators for using power, connecting to the network or exporting power.

However, there is limited guidance about what tariffs should look like, and many NSPs are increasing their fixed charges to make their income more predictable. This is unfair for consumers and will ultimately lead to inefficient investment and much higher energy bills. Governments should establish a national process to bring consumers, NSPs and energy experts together to develop 'model tariff structures' to help NSPs create tariffs that are fair to energy consumers and encourage economically efficient investment.

### 4 Strengthen and extend energy efficiency certificate schemes

Governments in NSW, Victoria, South Australia and the ACT have introduced obligations for retailers to fund energy efficiency activities. These schemes partially correct supply-side biases in our energy system and their benefits substantially outweigh their costs. Governments should extend these schemes across Queensland, Tasmania, Western Australia and the Northern Territory and ensure that they support large energy users. The schemes should also be harmonised, including setting up a single national body to develop methodologies and register new products.

### 5 Improve governance

The National Electricity Market (NEM)'s governance structures are not designed to facilitate the rapid reforms that are necessary to respond effectively to ongoing transformation in energy technologies and markets. The COAG Energy Council should undertake substantial governance reform, including establishing a Demand Response Taskforce to drive urgent reforms and a well-funded *National Energy Efficiency and Productivity Agency* to oversee and co-ordinate implementation of the National Energy Productivity Plan.

# Protect consumers

## 6 Urgent support for manufacturers

Rising gas and electricity prices are impacting the competitiveness and viability of manufacturing. While it is important to stabilise gas and electricity prices, manufacturers will still face a future with higher energy prices. This makes it critical to help manufacturers adjust through improved energy management and switching to lower-cost fuels.

Governments should establish a $500 million 'Gas and Energy Productivity' program to help manufacturers implement major site upgrades that help boost not only energy productivity, but also resource efficiency and multi-factor productivity. The program should identify best practice, build capacity, link energy users to experts and provide grants and access to capital.

## 7 Transform offices

Better-performing, energy efficient offices don't just have lower energy bills — they also improve staff comfort, reduce sick-leave and improve overall staff productivity by one to five per cent. Over its first four years, the Commercial Building Disclosure program drove upgrades to just a small proportion of Australia's building stock, but delivered more than $240 million in benefits, including staff productivity gains. Workers, tenants and building owners all benefit from office upgrades.

The policies needed to transform this sector are better understood than those required for other types of commercial buildings, which means decisive action can drive immediate results. Governments should jointly invest $10 million a year through COAG in a 'Ten-year Action Plan' to drive upgrades to our whole office sector and deliver billions of dollars in benefits. The Action Plan should initially focus on engagement programs for office building owners and transitional incentives or levies to encourage building upgrades. These programs should be complemented by the introduction of minimum energy efficiency standards for leased offices by 2020 to ensure that all offices are of acceptable quality.

## 8 Inform and protect home buyers and renters

Giving households information about the quality of new and existing buildings would allow them to consider running costs and comfort when they are buying or renting properties. Building ratings would deliver consumer protection and create an incentive for builders, landlords and vendors to improve the efficiency of their buildings. Governments should aim to launch a national residential energy efficiency disclosure scheme in 2018-19. In addition, governments should protect renters by introducing basic minimum standards for rental homes.

## 9 Reduce governments' energy bills

Australian governments collectively spend more than $2.5 billion on energy every year. Improving the efficiency of schools, hospitals, defence facilities, streetlights, vehicle fleets and other infrastructure will boost their quality while delivering up to $1 billion in annual energy savings. Government action on energy efficiency is also critical to show leadership, create jobs and develop a vibrant industry with export potential.

Effective programs to improve the efficiency of government operations require both loans to agencies to fund facility upgrades and mandates on agencies to identify energy savings. Federal, state and territory governments should introduce programs modelled on the NSW Government Resource Efficiency Policy (GREP).

## 10 Improve standards for appliances, buildings and vehicles

Australia and our major trading partners have minimum standards for buildings and appliances to protect consumers. Australia's appliance program alone saves the average consumer more than $300 per year. However, governments need to streamline the process for updating appliance standards, improve compliance for building standards and introduce fuel efficiency standards for vehicles.

More detail on these policies can be found in the full *Australian Energy Efficiency Policy Handbook.*
Visit **www.eec.org.au/handbook**


**To read our comprehensive plan for driving efficiency across the economy, download the Australian Energy Efficiency Policy Handbook at www.eec.org.au/handbook**

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