



# Australia's Energy Advantages

 **Business Council  
of Australia**

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# Summary Report

## Key points

### **Australia's economy was shaped by access to low-cost energy**

- Australia is blessed with large amounts of natural energy resources which have shaped our economy.
- Our industries were built off the back of access to this abundant and low-cost energy. However, the Australian and global energy landscape is changing.

### **Energy costs are rising**

- The cost of developing our energy resources and delivering our electricity and gas is increasing.
- The rising price of energy is adding to costs for Australian business and weakening their competitiveness relative to international competitors.
- Globally, demand for energy will continue to grow, particularly in China and India, creating new market opportunities for Australian energy resources.
- But Australian resource projects face increasing competition from the United States, Canada, Brazil and East African nations.

### **Our comparative advantage in energy is weakening**

- If Australia does not act to improve our energy productivity, our comparative advantage in energy will continue to weaken.
- The Australian economy as a whole will be less competitive – putting at risk future opportunities for economic growth, jobs and wealth creation.

### **We need a balanced approach to energy policy**

- To overcome these challenges Australia needs an approach to energy policy that strikes a balance between promoting our economic growth, energy security and environmental sustainability.

- With the right approach Australia can:
  - » drive growth in our energy exports
  - » deliver reliable and cost-competitive energy to households and businesses
  - » while meeting best practice environmental standards and managing greenhouse gas emissions (GHG) in line with global efforts and at least cost.
- But this approach requires collaboration between the needs of the community, business and the environment.
- The Business Council has identified five priority areas of reform, which are to:
  1. Improve the competitiveness of our energy resource sector by lowering the cost of production.
  2. Ensure access to our natural gas resources and improve information and trading in our gas markets.
  3. Improve the efficient operation of our electricity markets by moving to prices that reflect the cost of delivery to consumers.
  4. Underpin Australia's liquid fuel security by continuing to support access to competitive and open domestic and international markets.
  5. Cost effectively manage our greenhouse gas emissions by driving investment in research and development (R&D) in technology, acting in tandem with the world and reducing emissions at least cost to the economy.
- Delivering on these areas of reform will help maximise the value of Australia's energy resources to the Australian people, but it will require bipartisanship and policy settings that stay the course.

# Priority energy reforms

<p><b>Improve the competitiveness of our energy resource sector</b></p>	<p><b>Develop timely natural gas resources and improve market efficiency</b></p>	<p><b>Improve electricity market efficiency</b></p>
<p>Streamline environmental and planning assessment processes</p>	<p>Remove inappropriate regulatory barriers to natural gas development</p>	<p>Negotiate bipartisan agreement to a revised Renewable Energy Target</p>
<p>Encourage exploration</p>	<p>Increase engagement of independent authorities with the community</p>	<p>Assess the sustainability of the electricity market</p>
<p>Ensure stable and competitive taxation arrangements</p>	<p>Expedite priority gas projects</p>	<p>Adopt economically efficient reliability and planning standards</p>
<p>Improve access to a skilled labour force</p>	<p>Improve transparency of information</p>	<p>Privatise energy assets</p>
<p>Improve greenfields agreements for major projects</p>	<p>Support industry-led development of pipeline trading and gas supply hubs</p>	<p>Introduce retail electricity pricing that signals demand peaks</p>
	<p>Attract investment in Australia's natural gas resources</p>	<p>Introduce network tariffs that reflect the cost of delivery</p>

Continue a markets-based approach to liquid fuels policy	Manage our greenhouse gas emissions cost effectively
Maintain the current national fuel quality standards	Better align energy and climate change policy
Examine transitioning all fuels towards excise neutrality	Consult on the design of the Emissions Reduction Fund and Safeguard Mechanism
Ensure efficient planning approvals for new fuel import infrastructure	Consult on post-2020 international commitment to reduce emissions
Promote resilient global liquid fuels markets	Improve or remove inefficient green energy policies
Continue to monitor and assess Australia's liquid fuels security	Support research and development in low-emission and renewable energy technology

## Approach to this report

The Business Council of Australia is a forum for the chief executives of Australia's largest companies to promote economic and social progress in the national interest.

This report has been developed as an input into the Australian Government's Energy White paper process.

It aims to provide a vision and set of key reforms for Australia's energy policy to maximise the economic benefits of Australia's energy for all Australians.

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## Energy is fundamental to Australia's future

Australia's energy resources are a key strength and source of economic wealth for the Australian economy.

The cost-competitive, plentiful and reliable supply of energy is fundamental to our way of life and the competitiveness of all businesses.

Australia's ongoing economic growth will largely depend on our ability to lift the productivity of our workforce, regulation, and our energy.

Energy is also a major and growing source of export revenue, increasingly vital to Australia's economic growth and prosperity. Australia is one of only three Organisation for Economic Co-operation and Development (OECD) countries that are net exporters of energy, with Australia currently accounting for five per cent of world energy exports.<sup>1</sup>

Our energy exports, including coal, uranium, liquefied natural gas (LNG) and oil, are valued at \$66 billion<sup>2</sup> and account for over 20 per cent of Australia's total exports.

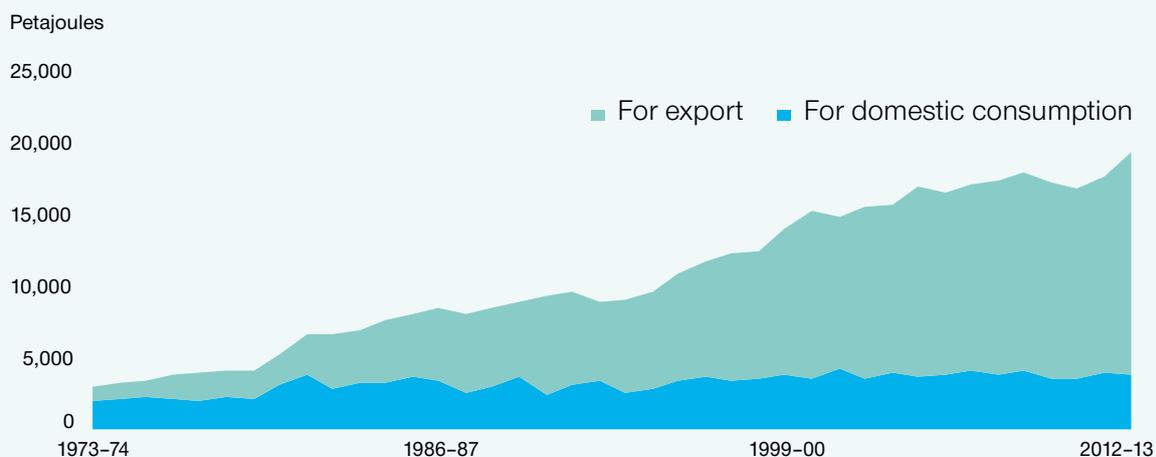
Our energy exports returned over \$14 billion to the Australian community through state royalties and federal taxation in 2012–13.<sup>3</sup>

The energy resource sector alone has over \$209 billion of investment committed over the next five years.<sup>4</sup>

Australia's energy resource industry, together with energy utilities, directly employs over 123,000 people<sup>5</sup> and creates thousands of jobs in many other industries across the economy.

Australia's energy resources sector has grown sixfold over the last 40 years, largely to meet demand to fuel economic development in Asia (see Figure 1). This has provided substantial economic and social benefits to Australians, including jobs, wealth, taxation revenue and returns to shareholders.

**Figure 1: Energy production in Australia**



Source: Bureau of Resource and Energy Economics (BREE), 2014 *Australian Energy Statistics*, Table J, July 2014.

## We must build on previous reforms

Many productivity improvements have come from past reforms to Australia's energy sector. Since the early 1990s governments have embarked on economic reforms, including the 1993 Hilmer review and 2002 Parer review. These reforms fostered competition in the electricity sector and brought together previously isolated regional energy markets into one integrated east coast market – the National Electricity Market (NEM).

In 2005 the Productivity Commission estimated the value of National Competition Policy reforms added around 2.5 per cent of gross domestic product (GDP) or \$20 billion to the Australian economy. The largest contributions came from productivity improvements in the telecommunications and electricity sectors.<sup>6</sup>

The result has opened our electricity, gas and liquid fuels sectors up to more competition, attracted more private investment and provided greater choice to Australian consumers.

But there are still some areas of reform in our energy markets that are incomplete, including privatisation of energy assets and deregulation of retail prices in some states. Much can also be done to remove inappropriate regulatory barriers that are restricting access to our energy resources and inhibiting these markets from effectively responding to changes in demand.

The risk is if Australia does not act, the increasing cost of developing our energy resources relative to international competitors and rising cost of our electricity and gas will weaken our comparative advantage in energy.

We must act now to overcome these challenges so we can continue to capture the economic and social benefits of our energy resources.

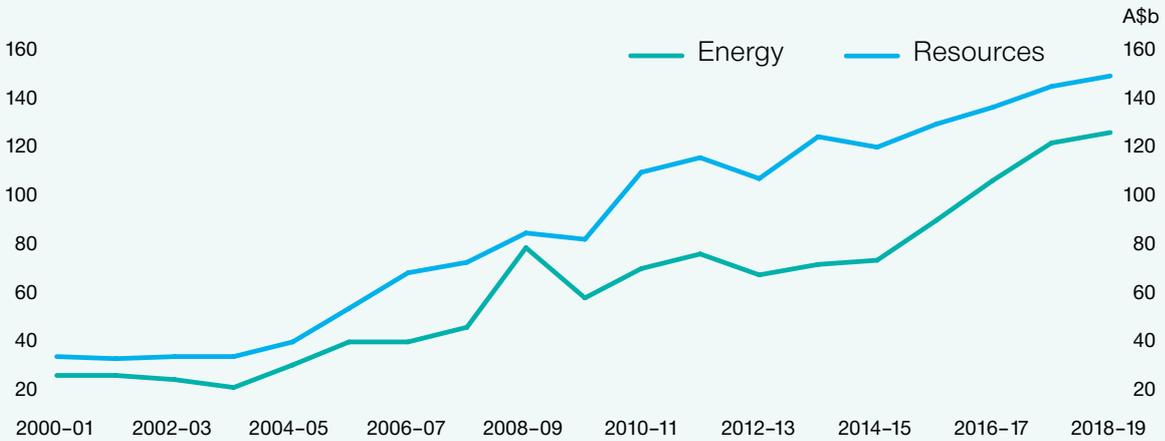
## There are enormous opportunities for Australian energy exports

Global demand for energy is expected to increase by a third by 2035. Emerging economies, led by China and India and to a lesser extent South East Asia, are expected to account for more than 90 per cent of this growth.<sup>7</sup>

As a reliable global supplier of energy located in Asia, this presents huge opportunities for Australia.

Already, as Figure 2 shows, Australia's energy export earnings are predicted to increase to \$126 billion in 2018–19 – a real increase of about 75 per cent from today.<sup>8</sup>

**Figure 2: Australia's resources and energy export earnings**



Source: BREE, *Resources and Energy Quarterly*, September 2014. Note: BREE estimates from 2014–15. Energy includes coal, uranium, oil and LNG. Resources includes minerals, metals and iron ore.

There remains a significant opportunity for additional investment in the development of Australia's energy resources with a further 83 projects worth \$140 billion in potential investment yet to be committed.<sup>9</sup>

As a net exporter of energy, Australia is closely linked to highly competitive international markets. On the east coast our domestic gas market will become more closely integrated with the rest of the world through LNG exports. In turn, our domestic liquid fuels market is transitioning to greater imports through well-established supply chains and reliable global markets.

LNG is Australia's fastest growing energy export and presents the next big opportunity for Australia to derive future export revenue. Australia is currently

the fourth biggest exporter of LNG and is likely to be the largest by 2018. If all LNG projects currently proposed are realised, they could:

- contribute an additional \$320 billion in GDP over the life of the projects
- create 150,000 new jobs
- contribute \$5 billion per annum in additional taxes and royalties.<sup>10</sup>

Australia does not directly export energy from renewable energy sources. But Australia has promising capabilities in the development of renewable energy technology that could in the future provide export opportunities, such as off-grid systems to remote regions around the world.

As Figure 3 shows, Australia is already a major supplier of coal, uranium, LNG, and (to a lesser extent) oil to world energy markets. With the right policy settings, Australia has the potential to convert potential investment to committed investment by 2018 and expand exports to meet growing global demand.

**Figure 3: Australian energy export growth and investment potential**

	2014	2018 (forecast)	2035 (forecast)
<b>Coal</b>			
<b>Export value</b>	\$39 billion	\$53 billion	World demand for coal is forecast to be 17% larger than today
<b>Global exporter ranking</b>	Number 2	Number 2	
<b>Investment</b>	\$12 billion committed	\$66 billion potential	
<b>Export volume</b>	375 million tonnes	434 million tonnes	
<b>Uranium</b>			
<b>Export value</b>	\$519 million	\$1.2 billion	World demand for nuclear energy is forecast to be 66% larger than today
<b>Global exporter ranking</b>	Number 3	Number 3	
<b>Investment</b>	No investment committed	\$3 billion potential	
<b>Export volume</b>	5,424 tonnes	8,900 tonnes	
<b>Liquefied natural gas</b>			
<b>Export value</b>	\$16 billion	\$57 billion	World demand for gas is forecast to be 50% larger than today
<b>Global exporter ranking</b>	Number 4	Number 1	
<b>Investment</b>	\$190 billion committed	\$60 billion potential	
<b>Export volume</b>	24 million tonnes	80 million tonnes	
<b>Oil</b>			
<b>Export value</b>	\$11.1 billion	\$10.5 billion	World demand for oil is forecast to be 13% larger than today
<b>Global exporter ranking</b>	Number 25	Number >25	
<b>Investment</b>	\$1 billion committed	No announced potential	
<b>Export volume</b>	255 thousand barrels per day	239 thousand barrels per day	

Source: BREE, *Resources and Energy Major Projects*, April 2014 and *Resources and Energy Quarterly*, September 2014; International Energy Agency, *World Energy Outlook 2013*, 2013.

## To realise these opportunities we must become more competitive

Our economic growth and energy security are dependent on the growing interconnectedness of global energy trade. But it also means that our economy is increasingly exposed to changing global market conditions, including:

- downturns in commodity prices
- a fluctuating Australian dollar, which can impact business competitiveness
- shifting supply and demand conditions
- increasing international export competition.

Australian energy resource projects are facing increasing competition from countries also with access to extensive energy resources, but with far fewer costs.

Australian resource projects are around 40 per cent more costly to deliver than in the United States<sup>11</sup> and the cost of delivering Australian LNG to Japan is up to 30 per cent higher than competing projects in Canada and Mozambique.<sup>12</sup>

If we cannot increase productivity and reduce costs, Australia will lose market share to competitor countries, taking with it the opportunity for jobs and wealth.

Our domestic electricity and gas markets are also experiencing significant changes. Access to competitively priced and reliable energy has been a key driver behind the competitiveness of our economy.

However, retail electricity prices have doubled in the last decade for residential and small business consumers and increased by 88 per cent for large businesses.<sup>13</sup> This is largely due to increases in network costs and poorly designed green energy policies.

Gas prices too have already increased by 36 per cent in real terms over the past five years<sup>14</sup> and are expected to continue to rise due to demand for LNG exports and rising production costs.

We need to ensure our energy market and regulatory settings are operating efficiently to minimise unnecessary price increases.

Australia has large amounts of renewable energy in the form of wind and solar, but these resources have been uncompetitive historically with our conventional resources. A variety of policies have been implemented to address this lack of competitiveness, often with unintended consequences, such as the Renewable Energy Target.

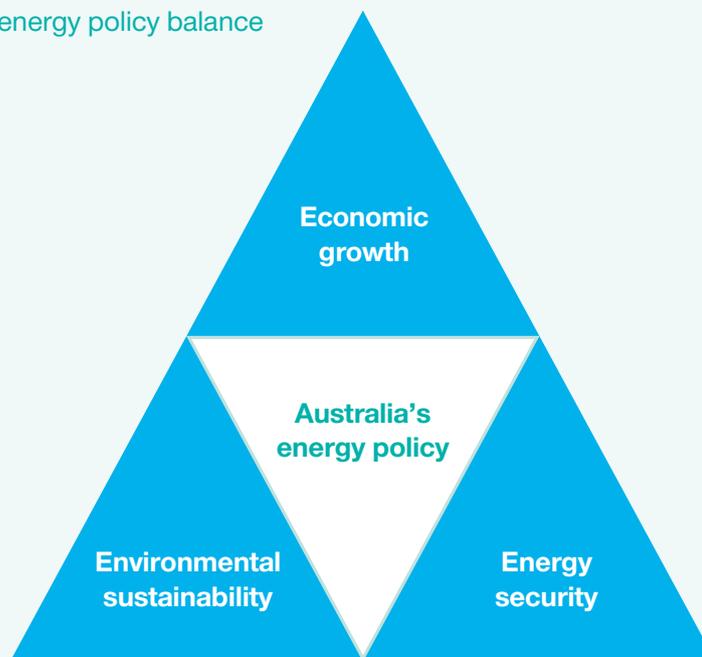
Investment in research and development of renewable, low-emission and energy efficiency technology and systems, however, could provide innovative solutions to reduce costs, and represent a significant business opportunity for Australia.

For Australia's energy sector to efficiently respond to the changing demands of the Australian and global economy, we need to address the following challenges:

- high production costs in the development of our energy resources
- lengthy and costly project planning approvals
- community concern regarding new projects or expansions
- inappropriate restrictions on new gas supply
- electricity prices that don't reflect the cost of delivery
- inefficiencies in our electricity networks
- the impact of poorly designed green energy policies.

# The purpose of energy policy

**Figure 4:** Australia's energy policy balance



Source: Business Council of Australia.

Australia's energy policy must achieve a balance between promoting economic growth, energy security and environmental sustainability. Energy policy that is developed with an eye to each of these objectives is more likely to build consensus and minimise the risk of future changes.

Our energy sector faces a number of tensions. These tensions have been exacerbated by policy missteps by all levels of government over a number of years, including:

- government intervention in markets, such as regulation that has constrained access to resources
- a lack of evidence-based policy rationale
- fragmented changes and a lack of focus on policies that can reduce GHG emissions at least cost.

Australia's energy policy must encourage well-functioning markets, supported by appropriate regulation and processes which allow for, and respond quickly to, changing global and domestic circumstances.

## Striking the right balance

To do this governments and industry need to work together to ensure policy settings find the optimal balance:

- to meet both domestic demand and seek to take advantage of global opportunities
- between developing our resources and providing the appropriate environmental and community protections
- between maintaining secure and reliable energy supply while managing transformation in the energy sector
- between managing our GHG emissions and the cost of energy.

Getting the right mix of policies based on sound policy principles is important. It provides business with a stable investment environment and allows our energy markets to efficiently respond to emerging pressures and deliver cost-competitive energy to consumers.

## A vision for our energy future

To maintain energy as a comparative advantage for our economy for many years to come we need a clear and comprehensive vision for Australia's energy future.

Accordingly, the Business Council has developed a framework that articulates a vision for Australia's energy future and outlines a set of policy principles to get us there.

### Vision

To provide a stable and predictable environment for investment and business activity, the Australian Government's national energy and climate change policy should deliver on the vision of:

- maximising Australia's comparative advantage in energy through efficient markets
- driving growth in our energy resource development and exports
- delivering reliable, efficient and competitively priced energy to households and businesses
- realising these growth opportunities while meeting best practice environmental standards and managing Australia's greenhouse gas emissions in line with global efforts and at least cost.

### Business Council of Australia Energy and Climate Change Policy Principles

As our energy system is governed across all levels of government, Australia's energy and climate change policy framework needs to be guided by these principles:

1. Energy is most efficiently delivered through well-functioning markets, supported by effective and efficient policy, regulation and processes.
2. The environmentally responsible development of energy resources should be supported by efficient and streamlined energy policies, regulation and processes.
3. Energy policies should:
  - » recognise that energy is critical to our economy and that security of supply should be delivered cost effectively
  - » be stable and predictable to give the market confidence that long-term investment decisions can be made and adequate returns earned
  - » provide a level playing field for the market to invest and operate within, and be technology and fuel neutral
  - » support market-driven outcomes and timely market responses to changes in demand.
4. Government regulation should be minimal, efficient and justified against objectives.
5. Government interventions should be a last resort, targeted at identified market failures, and designed and implemented with least market distortion.
6. The objectives and principles of energy policy should be recognised in related policy development, such as environmental and greenhouse gas emissions reduction policies.
7. Energy and greenhouse gas emission reduction policies should support Australia's future economic growth and not compromise Australia's global competitiveness.
8. Australia's greenhouse gas emissions reduction measures should be commensurate with global action, broadly based across the economy, and achieve emissions reductions at least cost.
9. Australia should renew its focus on research and development of technological advancements to support the lowering of emissions from all energy sources and on adaptation to manage the long-term impacts of climate change.

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## Key reform areas to lock in our energy comparative advantage

The Business Council has identified five key policy reform areas to grow our energy exports and meet our domestic energy needs. They are:

### 1. Improve the competitiveness of our energy resource sector

Rising cost pressures and stalling productivity are undermining Australia's capacity to deliver the current wave of major energy resource projects on time and on budget.

At the same time, Australian energy resource projects are facing increasing competition from a number of other countries including the United States, Canada, Brazil and East African nations.

Capital is mobile and diversified businesses operating across multiple geographies will invest in projects located in jurisdictions with supportive policy settings and that provide the satisfactory returns.

To ensure Australia has supportive policy settings to capture investment in our energy resource sector, Australian governments should:

- streamline and accelerate the planning, approvals and environmental assessment processes for major projects across Australian governments
- encourage exploration in our energy resources to ensure the incentive to conduct more costly and risky exploration continues
- ensure stable, sustainable and competitive tax and royalty arrangements
- improve access to a skilled labour force through training of the local workforce and skilled migration
- improve greenfields agreements for major projects.

### 2. Develop timely natural gas resources and improve market efficiency

The east coast gas market is undergoing significant structural adjustment with the tripling in size of the east coast gas market.

The east coast LNG industry will bring a net positive economic benefit to the Australian economy, but rising production costs and linking our gas price to international markets are increasing the price of gas.

There are no quick fixes to rising gas prices, but inappropriate barriers in New South Wales and Victoria are making the situation worse by not allowing access to new natural gas supplies to meet demand.

Increasing Australia's gas supply is the best way to ensure Australian businesses and households can access a reliable and competitively priced supply of gas.

The gas sector and independent third parties need to work with the community in an open and transparent manner to provide appropriate community and environmental safeguards and to realise the mutual benefits of Australia's natural gas resources.

To ensure sufficient gas to meet export and domestic demand, Australian governments should:

- remove inappropriate regulatory barriers to gas development, following open and transparent community consultation
- expedite priority gas projects by providing additional resources and/or expertise to the government administration of project approvals processes
- improve transparency of information to assist in managing supply uncertainty
- improve the efficiency of Australia's gas markets through the industry-led development of pipeline capacity trading and gas supply hubs.

Having considered this issue in depth, the Business Council does not consider domestic gas reservation an appropriate or effective policy response, because:

- a) the market intervention acts as a disincentive to investment to develop the gas needed to meet demand
- b) it would not address the problem of higher gas prices in coming years because they will continue to be largely influenced by the cost of production and the international price of gas. This is demonstrated in the Western Australian gas market, which has a reservation policy and also the highest gas prices in Australia.

### 3. Improve electricity market efficiency

Reform of Australia's electricity sector has been ongoing for 20 years. Yet there remain critical outstanding reforms that are holding back Australia's markets from being more competitive and efficient.

To lift productivity in the electricity sector, all states and territories should complete the process of privatisation and allow retail competition to deliver choice and real savings to consumers.

The doubling of electricity prices over the last decade points to inefficiencies in our network regulatory settings that could be further improved and the need to minimise the impact of poorly designed green energy schemes.

The Renewable Energy Target (RET) is one example that will continue to add to costs for consumers, and risks hitting the penalty price, unless bipartisan agreement can be reached to amend the scheme.

Technology is changing the way we use and generate electricity and is transforming our electricity market. The critical work of the Council of Australian Governments (COAG) Energy Council will be to ensure our market and regulatory settings are flexible enough to efficiently respond to this change.

To ensure the market can efficiently respond to emerging pressures, the Australian Government should:

- aim to negotiate a bipartisan agreement on a revised RET that reflects a 'true' 20 per cent of electricity demand, and not extend the 2020 target.

In addition, the COAG Energy Council should:

- commission independent analysis of the sustainability of Australia's electricity markets, including barriers to entry and exit and the adequacy of investment signals
- adopt economically efficient reliability and planning standards and make these a condition of the sale of any network assets
- introduce retail electricity pricing that signals demand peaks, such as time-of-use tariffs
- introduce network tariffs that reflect the cost of delivery
- privatise energy assets, and in the case of generation assets first ensure there is adequate competition
- investigate new ways to provide the evidence behind the benefits for energy market reforms, such as an update by the Productivity Commission assessing the benefits to GDP of reforms such as privatisation and benchmarking of network performance by the Australian Energy Regulator (AER).

### 4. Continue a markets-based approach to liquid fuels policy

Australia has access to reliable, mature and highly diversified international liquid fuels supply chains, and imports will continue to be an efficient way of meeting Australia's fuel needs. But our refining industry faces challenges, including competition from international mega-refineries.

With some of Australia's refineries earmarked for closure, ensuring Australia smoothly transitions to greater import terminal capacity will be important to provide access to a diverse and reliable supply of liquid fuels.

To reinforce the long-term stability and efficiency of our liquid fuels market, governments should seek to:

- maintain the current national fuel quality standards
- examine transitioning all fuels towards excise neutrality, based on the relative energy content of fuels, as part of the upcoming tax reform white paper
- progressively phase out government assistance to alternative and blended fuels
- ensure efficient planning approvals for timely investment in new import fuel infrastructure
- promote stable, well-functioning and resilient global liquid markets
- continue to monitor and assess Australia's liquid fuel security.

## 5. Manage our greenhouse gas emissions cost effectively

Energy is a major contributor to Australia's GHG emissions. Energy and climate change policies therefore need to go hand in hand to achieve efficient outcomes.

To do this, Australia's approach to reducing global GHG emissions must recognise the role energy plays in our economy and we must implement efficient policies that reduce emissions at least cost and address risks to Australia's international competitiveness.

We must take into account action by other countries, and the associated economic cost, when considering Australia's response to climate change.

The Business Council wants a lasting long-term and predictable approach to climate change policy. This will require bipartisanship.

There is bipartisanship on Australia's commitment to reduce GHG emissions by five per cent by 2020 on 2000 levels.

With the impending passage of its legislation, the immediate challenge for the government will be to build consensus around the establishment of its Emissions Reduction Fund and Safeguard Mechanism to drive the achievement of this target.

Australia should have a technology-neutral approach to investing in innovation in energy technologies. This will ensure that we capitalise on Australia's world-class research and development expertise in low-emission and renewable energy technologies and support innovations that could provide future export and employment opportunities.

Australia's approach to reducing GHG emissions should:

- better align energy and climate change policy by adopting an overarching objective and set of principles to guide policy development
- engage with business on the detailed design of policies to reduce GHG emissions such as the Emissions Reduction Fund and Safeguard Mechanism
- consult with business on Australia's proposed approach to the international deliberations on emissions reduction post-2020 and assess the relative economic cost of proposed action by Australia, relative to other countries
- allow for the purchase of international emission reductions to ensure a least-cost policy response
- improve or remove inefficient or duplicative green energy policies
- support research and development in low-emission and renewable energy technology.

## Recommendations

### Improve the competitiveness of our energy resource sector

#### 1. Streamline environmental and planning assessment processes

##### Commonwealth and state environmental approvals process

The Business Council recommends that Australia's governments better coordinate and streamline their approval functions for major projects by:

- a. accrediting state government assessment and approval processes to meet the required environmental standards
- b. implementing an assurance framework that meets environmental outcomes, while reducing unnecessary regulatory burdens
- c. allowing for only a single set of conditions, covering matters by state and Commonwealth, and a single environmental offset
- d. establishing a one-stop-shop for environmental approvals for offshore oil and gas developments in Commonwealth and coastal waters
- e. properly resourcing approval functions by personnel with appropriate commercial and regulatory skills.

##### State-based planning and major project approvals

The Business Council recommends improving state government planning and major project approvals processes by:

- a. identifying major industrial, energy, resource and infrastructure land uses in state strategic plans and establishing statutory mechanisms to require that strategic plans are reflected in regional and local land use schemes
- b. establishing a lead agency framework that can compel timely responses from referral agencies
- c. removing all concurrences for declared major projects and reducing referral requirements
- d. establishing a single assessment and approval framework for major energy resource, infrastructure and industrial projects, including:
  - i. automatic declaration of major project status based on capital value and industry characteristics
  - ii. standard, industry-specific terms of reference for impact assessments
  - iii. risk-based assessment guidelines that implement the Australia–NZ standard for risk assessment
  - iv. a six-week, statutory timeframe for decision once an assessment report has been received by the responsible agency
  - v. where necessary, standard, industry-based conditions on approval
  - vi. no merits review where the decision maker is the minister, and standing for judicial review limited to the project proponent and third parties who are directly affected by the proposed project.

<p><b>2. Encourage exploration</b></p>	<p>The Business Council recommends that the Australian Government:</p> <ul style="list-style-type: none"> <li>• retain the immediate deductibility of costs incurred in exploration activities to ensure that the incentive to conduct more costly and risky exploration continues</li> <li>• ensure that Geoscience Australia is adequately resourced to enable it to continue to provide pre-competitive geoscience data to business to underpin future energy resource investment</li> <li>• seek to develop reserves under retention lease arrangements, where they are commercial, through existing arrangements.</li> </ul>
<p><b>3. Ensure stable and competitive taxation arrangements</b></p>	<p>The Business Council recommends that the Australian Government:</p> <ul style="list-style-type: none"> <li>• ensure a stable and competitive taxation system to attract investment in energy resources. Taxation arrangements should therefore only be considered as part of comprehensive tax reform, as part of the Commonwealth Government’s tax white paper process</li> <li>• as part of this process, the Australian Government should recognise the principles that underpin the following tax arrangements and their importance to ongoing investment in the energy resource sector: <ul style="list-style-type: none"> <li>» fuel tax credits for diesel fuel, because input costs to business should not be taxed</li> <li>» accelerated depreciation to ensure where a business has made a substantial upfront investment, it has access to early positive cash flows to keep Australian businesses internationally competitive</li> <li>» immediate deductibility for exploration expenditure to encourage mining investment, recognising the huge potential flow-on benefits for the whole economy and to minimise the risk of investors transferring activities overseas.</li> </ul> </li> </ul>
<p><b>4. Improve access to a skilled labour force</b></p>	<p>The Business Council recommends that all governments and relevant agencies draw on workforce estimates to better target training and migration programs to alleviate skills shortages. This should include:</p> <ul style="list-style-type: none"> <li>• better information from industry and government about the opportunities available in the energy resource sector</li> <li>• ensuring flexibility in temporary migration schemes such as 457 visas through the Enterprise Migration Agreement (EMA) program and making available mechanisms to retain migrant employees when there are skills shortages</li> <li>• businesses also have a responsibility to help ensure an ongoing stream of skilled employees in the energy resource sector by maintaining a consistent apprenticeship intake.</li> </ul>

**5. Improve greenfields agreements for major projects**

The Business Council recommends that the Fair Work Act, with respect to greenfields agreements, should be amended as proposed in the current Bill before the parliament to:

- ensure the Fair Work Commission should interpret “prevailing pay and conditions” with reference to the Better Off Overall Test and the National Employment Standards
- allow more flexibility in the length of enterprise agreements, commensurate with the period of construction so as to provide the option of avoiding renegotiation halfway through construction and potentially jeopardising the economics of the project.

The Business Council’s preferred long-term solution to these issues is broader than the proposals in the current Bill. That is:

- employers should be able to make greenfields agreements prior to the commencement of employment on a new project. This would allow employees to accept jobs in the full knowledge of the terms and conditions on offer.

**Develop timely natural gas resources and improve market efficiency**

**6. Remove inappropriate regulatory barriers to natural gas development**

The Business Council recommends that:

- the COAG Energy Council make the development of Australia’s natural gas resources a national priority to meet demand, by:
  - » introducing public milestone reporting to assess state government progress towards implementing a regulatory regime that:
    - supports the responsible, safe and sustainable development of Australia’s natural gas resources
    - establishes a stable, efficient and evidence-based regulatory environment for gas development
    - removes a number of obstacles prohibiting additional supply capacity coming on stream
  - » adopting the National Harmonised Regulatory Framework for CSG and the Multiple Land Use Framework.
- Australian governments address the regulatory barriers to gas development including:
  - » removing duplication of regulation between Commonwealth and state governments, including the water trigger under the Environment Protection and Biodiversity Conservation Act 1999 (EPBC Act)
  - » implementing the one-stop-shop under the EPBC Act, as underway by the Australian Government
  - » streamlining and improving existing state approval processes, regulation and administration
  - » remove the moratoriums on exploration and fracking following community consultation and based on scientific evidence.

<p><b>7. Increase engagement of independent authorities with the community</b></p>	<p>The Business Council recommends that:</p> <ul style="list-style-type: none"> <li>• Australian governments should seek to further engage independent authorities such as gas and land use commissioners, the independent scientific committee and CSIRO in community consultation on the science and safeguards supporting CSG development</li> <li>• gas producers should actively engage with communities early, to understand their concerns, and explain the science and precautions taken to ensure the safe and environmentally responsible development of gas resources.</li> </ul>
<p><b>8. Expedite priority gas projects</b></p>	<p>The Business Council recommends that Australian governments expedite priority gas projects by:</p> <ul style="list-style-type: none"> <li>• providing additional resources and expertise to the government administration of project approvals processes and/or National Productivity Payments</li> <li>• seek to develop reserves under retention lease arrangements, where they are commercial, through existing arrangements.</li> </ul>
<p><b>9. Improve transparency of information</b></p>	<p>The Business Council recommends that:</p> <ul style="list-style-type: none"> <li>• the COAG Energy Council work with industry to determine how the current suite of gas market information may be improved and what further information may be needed to improve market transparency including: <ul style="list-style-type: none"> <li>» how information can be collected efficiently, and by which entities</li> <li>» how information should be presented</li> <li>» how frequently information should be reported</li> </ul> </li> <li>• the design of market information must also minimise the reporting burden on business, provide for cost recovery by business with reporting obligations and ensure the protection of commercially sensitive information.</li> </ul>
<p><b>10. Support industry-led development of pipeline trading and gas supply hubs</b></p>	<p>The Business Council recommends that the:</p> <ul style="list-style-type: none"> <li>• COAG Energy Council: <ul style="list-style-type: none"> <li>» advance gas market reform to promote diversity of supply competition, market transparency, flexibility and liquidity</li> <li>» improve the function of the east coast's facilitated markets to allow for the development of secondary products</li> <li>» support the development of industry-led pipeline capacity trading and the gas supply hubs</li> <li>» the Productivity Commission is the appropriate body to conduct a broad review 'examining barriers to more efficient gas markets' and a review by the Australian Competition and Consumer Commission (ACCC) is not warranted at this time.</li> </ul> </li> </ul>
<p><b>11. Attract investment in Australia's natural gas resources</b></p>	<p>The Business Council recommends that:</p> <ul style="list-style-type: none"> <li>• Australian governments ensure policy settings encourage investment in gas projects (see Recommendations 1 to 5 on 'Improving the competitiveness of our energy resource sector' for details).</li> </ul>

**Improve electricity market efficiency**

<p><b>12. Negotiate bipartisan agreement to a revised Renewable Energy Target</b></p>	<p>The Business Council recommends the Australian Government:</p> <ul style="list-style-type: none"> <li>• aim to negotiate a bipartisan agreement to a revised target that:             <ul style="list-style-type: none"> <li>» reflects a ‘true’ 20 per cent of electricity demand by 2020</li> <li>» prevents the risk of the scheme reaching the penalty price</li> <li>» excludes sectors for which the cost of the RET is a substantial threat to their competitiveness</li> <li>» sets out a pathway to discontinue the Small-scale Renewable Energy Scheme (SRES)</li> <li>» reduces the cost of the scheme to consumers</li> <li>» does not extend the 2020 target and concludes the scheme once all obligations are met in 2030.</li> </ul> </li> </ul>
<p><b>13. Assess the sustainability of the electricity market</b></p>	<p>The Business Council recommends that the COAG Energy Council:</p> <ul style="list-style-type: none"> <li>• commission independent analysis of the sustainability of Australia’s electricity markets including investigating any barriers to entry and exit, as well as the adequacy of investment signals.</li> </ul>
<p><b>14. Adopt economically efficient reliability and planning standards</b></p>	<p>The Business Council recommends that Australian governments:</p> <ul style="list-style-type: none"> <li>• agree to adopt a framework for setting distribution and transmission reliability and planning standards that accords with economic probability of risk as recommended by the Australian Energy Market Commission (AEMC)</li> <li>• the introduction of these standards should be a condition of the sale of any network infrastructure.</li> </ul>
<p><b>15. Privatising energy assets</b></p>	<p>The Business Council recommends:</p> <ul style="list-style-type: none"> <li>• state governments privatise their energy assets, where there is effective competition and price regulation in place to promote the efficient long-term operation of the asset</li> <li>• that the Australian Government investigate new ways to demonstrate the evidence behind the benefits for energy market reforms, such as a Productivity Commission assessment of the benefits to GDP of reforms such as privatisation and benchmarking of network performance by the Australian Energy Regulator.</li> </ul>
<p><b>16. Introduce retail electricity pricing that signals demand peaks</b></p>	<p>The Business Council recommends:</p> <ul style="list-style-type: none"> <li>• Australian governments allow electricity retailers to provide consumers with the option to move to better pricing signals that reflect peak times of the day (i.e. time-of-use tariffs)</li> <li>• this should be accompanied by a well-informed communications strategy to educate the public on the issue of peak demand and the options available to reduce their bills.</li> </ul>

<p><b>17. Introduce network tariffs that reflect the cost of delivery</b></p>	<p>The Business Council recommends that Australian governments:</p> <ul style="list-style-type: none"> <li>• support the work underway by the AEMC to develop more efficient network tariffs whereby the cost of network infrastructure is equitably recovered by the diversity of electricity consumers</li> <li>» support this reform through a communications strategy to explain the reasoning for the change to the general public.</li> </ul>
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**Continue a markets-based approach to liquid fuels policy**

<p><b>18. Maintain the current national fuel quality standards</b></p>	<p>The Business Council recommends that the Australian Government:</p> <ul style="list-style-type: none"> <li>• continue its markets-based approach to liquid fuels policy</li> <li>• maintain the current national fuel quality standards.</li> </ul>
<p><b>19. Examine transitioning all fuels towards excise neutrality</b></p>	<p>The Business Council recommends that the Australian Government:</p> <ul style="list-style-type: none"> <li>• progressively phase out government assistance to alternative and blended fuels</li> <li>• examine transitioning all fuels towards excise neutrality, based on the relative energy content of fuels as part of the upcoming tax white paper.</li> </ul>
<p><b>20. Ensure efficient planning approvals for new fuel import infrastructure</b></p>	<p>The Business Council recommends that:</p> <ul style="list-style-type: none"> <li>• governments ensure efficient planning approvals for timely investment in new fuel import infrastructure.</li> </ul>
<p><b>21. Promote resilient global liquid fuels markets</b></p>	<p>The Business Council recommends that the Australian Government:</p> <ul style="list-style-type: none"> <li>• continue to work with the IEA to ensure that Australia’s unique circumstances with respect to prospective developments in liquid fuels are taken into account when assessing our 90-day obligation.</li> </ul>
<p><b>22. Continue to monitor and assess Australia’s liquid fuels security</b></p>	<p>The Business Council recommends that the Australian Government:</p> <ul style="list-style-type: none"> <li>• continue to monitor Australia’s liquid fuels security through the continuation of the National Energy Security Assessment (NESA) every two years.</li> </ul>

**Manage our greenhouse gas emissions cost effectively**

<p><b>23. Better align energy and climate change policy</b></p>	<p>The Business Council recommends that the Australian Government:</p> <ul style="list-style-type: none"> <li>• establish a clear objective and principles to guide the development of an aligned energy and climate change policy agenda</li> <li>• ensure existing and future energy and climate change policies, such as the Renewable Energy Target, are consistent with this policy framework or amended accordingly. This should ensure policies are complementary to our energy markets.</li> </ul>
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<p><b>24. Consult on the design of the Emissions Reduction Fund and Safeguard Mechanism</b></p>	<p>The Business Council recommends that the Australian Government:</p> <ul style="list-style-type: none"> <li>• engage with stakeholders, particularly affected businesses, on the detailed design of the Emissions Reduction Fund and Safeguard Mechanism to help facilitate its successful implementation and achievement of our 2020 greenhouse gas emissions reduction commitment</li> <li>• allow for the purchase of international emissions reduction permits as a least-cost means of achieving Australia’s 2020 emissions reduction commitment.</li> </ul>
<p><b>25. Consult on post-2020 international commitment to reduce emissions</b></p>	<p>The Business Council recommends that the Australian Government:</p> <ul style="list-style-type: none"> <li>• engage with business as it considers Australia’s contribution to international deliberations with regard to reducing global greenhouse gas emissions post-2020</li> <li>• ensure there is an assessment of the economic cost of Australia’s post-2020 commitment relative to major emitters and developed countries</li> <li>• allow for the purchase of international emissions reduction permits as a least-cost means of Australia achieving any post-2020 emissions reduction commitment.</li> </ul>
<p><b>26. Improve or remove inefficient green energy policies</b></p>	<p>The Business Council recommends that the Australian, state and local governments:</p> <ul style="list-style-type: none"> <li>• conduct cost–benefit analyses of remaining green energy policies, such as state-based energy efficiency schemes, and improve or remove those where the costs outweigh the benefits or are duplicative.</li> </ul>
<p><b>27. Support research and development in low-emission and renewable energy technology</b></p>	<p>The Business Council recommends the Australian Government:</p> <ul style="list-style-type: none"> <li>• renew the focus on research and development of technological advancements to support the lowering of emissions from all energy sources and on adaptation to manage the long-term impacts of climate change. Investment in research and development represents a significant business opportunity for Australia, and should be pursued where appropriate</li> <li>• retain the Australian Renewable Energy Agency (ARENA), and:             <ul style="list-style-type: none"> <li>» expand its investment mandate to the development of emerging low-emission technology and systems, in addition to renewable energy technology, to allow for the development of a greater range of least-cost greenhouse gas abatement technologies</li> <li>» for continuity, retain ARENA’s board and its governance structure and continue its independent, commercially driven approach to support of emerging energy technologies</li> <li>» change ARENA’s funding to provide more certainty through an ongoing rolling fund of \$100 million per annum, with immediate savings to be returned to the government’s budget.</li> </ul> </li> </ul>

# Main Report

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## Structure of this report

The report begins with Australia's energy resource sector because this is the starting point of supply to Australia's energy markets.

Our energy markets rely on access to this energy. Without policies that support the environmentally responsible development of Australia's energy resources, our energy markets will not be able to effectively supply reliable and competitively priced energy to households and business.

The report then concludes with actions to manage Australia's greenhouse gas emissions cost effectively.

### **The report is structured into five parts:**

**Chapter 1** – Improve the competitiveness of our energy resource sector

**Chapter 2** – Develop timely natural gas resources and improve market efficiency

**Chapter 3** – Improve electricity market efficiency

**Chapter 4** – Continue a markets-based approach to our liquid fuels policy

**Chapter 5** – Manage our greenhouse gas emissions cost effectively

# 1. Improve the competitiveness of our energy resource sector

## Key points

- Australia is an energy-rich nation and a significant contributor to global energy security.
- Our energy resources contribute to our economic prosperity as a major export earner through the sale of commodities such as coal, LNG, oil and uranium.
- Energy resources are an important part of our everyday life. For example, we use coal for electricity generation, natural gas as a feedstock for plastics, uranium for medical technologies and liquid fuels for our transport.
- Indirectly, our energy resources contribute to Australia's economy through industries that support their development including: engineering, maintenance, construction, financial services, mining services and transport sectors.
- Global demand for energy is set to grow by more than a third over the next two decades, presenting a huge opportunity for Australia to expand its market share.
- However, our upstream energy resource sector faces a number of challenges, including:
  - » delays in environmental approvals
  - » a decline in exploration
  - » the threat of changing taxes
  - » limited access to experienced workers
  - » rigidity in greenfields agreements.
- These are putting our competitive advantage in energy at risk.
- The Business Council has identified five priority reform areas to unlock our energy resources:
  - » streamline and accelerate the planning, approvals and environmental assessment processes for major projects across Australian governments
  - » encourage exploration in our energy resources to ensure that the incentive to conduct more costly and risky exploration continues
  - » ensure stable, sustainable and competitive tax and royalty arrangements
  - » improve access to a skilled labour force through training of the local workforce and skilled migration
  - » improve greenfield agreements for major projects.

## Overview of our energy resource sector

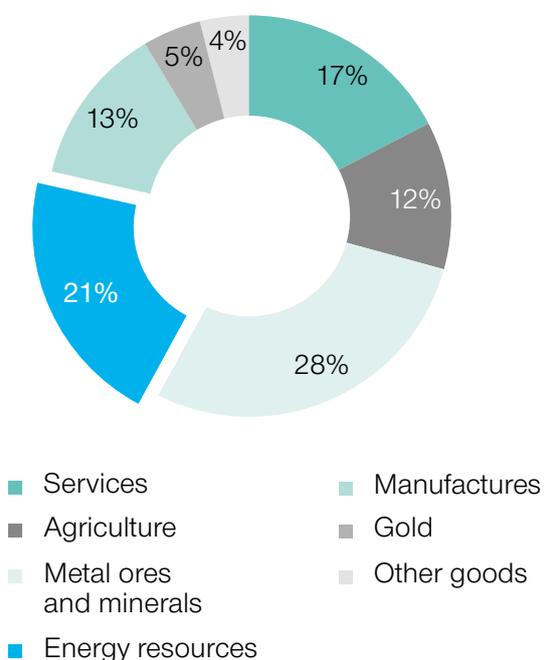
Australia has extensive known reserves of coal, natural gas, liquid fuel, renewable energy and uranium, and huge prospects for new resources to be found.

This diverse and prospective energy resource base, combined with low sovereign risk, transparent and trusted institutions, and a track record for seeing through the delivery of large resource projects, has historically allowed us to make the most of our export opportunities.

This has delivered far-reaching economic and social benefits for all Australians.

Earnings from Australia's energy exports make a significant contribution to our economy, accounting for one-fifth of our total exports. The industry directly employs around 80,000 people.<sup>15</sup>

**Figure 5: Exports of goods and services by sector, 2013**



Source: Australian Bureau of Statistics (ABS), *International Trade in Goods and Services*, cat. no. 5368.0, 2014.  
 Note: energy resources include metallurgical coal, thermal coal, uranium, petroleum, LNG. Agriculture denotes rural exports.

Australia's energy resource sector has experienced the benefits of the recent commodity boom. But we can no longer take for granted our status as a preferred destination for energy investment.

Since commodity prices peaked two years ago many resource companies are looking to rein in the cost of their operations and take a more cautious outlook on future investment.

Rising cost pressures and stalling productivity are undermining Australia's capacity to deliver the current pipeline of major energy projects on time and on budget. Additionally, Australian energy resource projects are facing increasing competition from a number of other countries including the United States, Canada, Brazil and East African nations.

Australian resource projects are around 40 per cent more costly to deliver than in the United States<sup>16</sup> and the costs of delivering LNG to Japan are up to 30 per cent higher than competing projects in Canada and Mozambique.<sup>17</sup>

To remain globally competitive and to maintain and secure the next wave of investment in our energy resource sector we need the right policy settings in place to reduce the cost of developing our resources.

### Global demand will continue to grow

Across the globe, demand for energy is set to grow by more than a third over the next two decades; half of this will be meeting demand out of China and India. While sources of renewable energy are expected to continue to grow rapidly, fossil fuels will continue to make up the bulk of global energy supply.

By 2035, fossil fuels are expected to account for 75 per cent<sup>18</sup> of total global primary energy supply – the same share of total primary energy supply as they hold today.

Australia's proximity and experience in doing business with Asia provides us with a comparative advantage to expand our exporting capacity to meet this growing demand.

## 1. Improve the competitiveness of our energy resource sector

### Australian energy resources

#### Coal

Coal is Australia's largest energy export and we have the fourth-largest share of proven coal reserves in the world.<sup>19</sup> Australia is the second-largest exporter of coal behind Indonesia.

The recent downturn in commodity prices, abundant global supply and higher operating costs have seen some Australian coal mines closed or mothballed. While investment in Australian coal will remain on hold until market conditions recover, Australia has around 76 projects worth an estimated \$78 billion in investment that have been publicly announced or committed to.<sup>20</sup>

The IEA forecasts that coal will continue to be the largest source of fuel for power generation globally, accounting for 25 per cent of total primary energy supply by 2035.<sup>21</sup>

#### Uranium

Australia has the world's largest known reserves of uranium, making up about 30 per cent of the world's resources.<sup>22</sup> We are the third-ranking producer of uranium, behind Kazakhstan and Canada.

Despite current subdued market conditions since the Fukushima incident in Japan in March 2011, growth in the number of operating nuclear power reactors is expected to increase global demand for uranium.

Around 70 new nuclear reactors are currently under construction globally, and are expected to increase world nuclear power production capacity by around 20 per cent over the next six years. With 30 reactors in China, the Chinese nuclear power industry is expected to triple over the next five years and presents a market opportunity for Australian uranium.

While the future demand for nuclear energy is less certain than other energy sources, the IEA forecasts it to grow by 66 per cent by 2035.<sup>23</sup>

#### Liquefied natural gas

Natural gas is Australia's third-largest energy resource after coal and uranium. Substantial investment in LNG export projects will see LNG become Australia's largest energy export by value before the end of the decade. Our LNG export capacity will increase to over 80 million tonnes<sup>24</sup> per annum and is likely to exceed Qatari exports by 2018.

The IEA forecasts gas to be the fastest-growing fossil fuel, increasing by 50 per cent to account for 24 per cent of total energy by 2035.<sup>25</sup> This is driven by demand from China, the Middle East and North America. Today, traditional markets of Japan and Korea collectively accounted for 52 per cent of global LNG imports.<sup>26</sup>

The LNG sector currently accounts for more than a third of current business investment in Australia<sup>27</sup> with committed projects valued at around \$190 billion and a further \$60 billion worth of LNG projects under consideration.<sup>28</sup> LNG is a massive growth sector for the Australian economy and presents a huge opportunity for Australia to derive future export revenue.

With the development of the Prelude Floating LNG (FLNG) project, Australia will be the only country to export LNG from three different technologies – conventional, CSG and FLNG.

Successfully deploying FLNG technology in Australia is an important long-term innovation for our gas industry. FLNG provides a means of developing offshore gas resources that were previously considered out of reach.

Shell's Prelude FLNG facility, located in the Browse Basin off Western Australia, represents a world first. It will improve Australia's balance of trade by more than \$18 billion. And the establishment of a centre for operational excellence in FLNG to be established in Perth will help boost Australia's expertise in this growing technology.

## Liquid fuels

Australia's oil production has been in decline since it peaked at the turn of the century and this trend is expected to continue unless new oil discoveries are found.

Prospects for new oil discoveries are reasonably prospective given that Australia is relatively unexplored when compared to the United States. However, potential new discoveries are expected to be at a higher cost compared to Australia's existing reserves. This is because they are likely to be in deepwater frontier basins (such as in the Great Australian Bight), which involve higher recoverable

costs, or may be from oil shale resources, which involve higher-cost processing.

Despite declining production, crude petroleum ranks as Australia's seventh-largest export and in 2013–14 exports of crude petroleum were worth around \$11 billion.<sup>29</sup> This accounts for less than one per cent of total world trade.

Total world oil consumption is expected to continue to increase, and the IEA forecasts that it will continue to be the most consumed energy resource making up 27 per cent of global consumption by 2035.<sup>30</sup>

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## Issues and recommendations

To unlock Australia's energy resources the Business Council has identified five priority issues for government and business to work together to resolve. This will improve the capacity of Australia to attract investment and deliver globally competitive energy resource projects to generate jobs and wealth for all Australians.

### 1. Streamline environmental and planning assessment processes

One of the key factors impacting on the cost of delivering Australia's energy resource projects is the inefficiency of state and federal government environmental and planning approvals processes. Many energy resource projects face delays and unnecessary costs due to duplicative processes and lengthy approval times.

#### Evidence

Many energy resource businesses have reported difficulties with the regulatory approvals process including:

- inefficient processes across governments, which are duplicative and have grown over time
- lengthy approval timeframes
- multiple laws that often overlap and are poorly executed and resourced
- a lack of regulatory certainty and transparency in decision making
- unduly complex and prescriptive conditions
- unclear roles and confused accountabilities
- a lack of expertise and commercial acumen within regulatory agencies.

Already the time needed for regulatory approvals for a thermal coal mine in Australia is estimated to take 1.3 years longer than in competitor countries, according to research commissioned by the Minerals Council of Australia (MCA).

The Productivity Commission found that the cost of delaying by one year an average-sized Australian oil and gas extraction project, valued at \$17 billion, could range from \$300 million to \$1.3 billion.<sup>31</sup>

The MCA estimates that the direct costs arising under the EPBC Act alone have been around \$820 million over the last decade, with little demonstrable improvement in environmental outcomes.<sup>32</sup>

#### Implication

Unnecessary costs and project delays associated with these inefficiencies create a significant disincentive for future energy resource investment in Australia. There is a risk that unless this is addressed, Australia will fall further behind our competitors, putting at risk future investment.

The Business Council supports the need for robust environmental standards while also providing for economic growth and industry development. Sensible reforms to current legislative and regulatory arrangements can reduce the regulatory burden while delivering equivalent or enhanced levels of environmental protection.

## 1. Improve the competitiveness of our energy resource sector

### Recommendations

#### Commonwealth and state environmental approvals process

The Business Council recommends that Australia's governments better coordinate and streamline their approval functions for major projects by:

- a. accrediting state government assessment and approval processes to meet the required environmental standards
- b. implementing an assurance framework that meets environmental outcomes, while reducing unnecessary regulatory burdens
- c. allowing for only a single set of conditions, covering matters by state and Commonwealth, and a single environmental offset
- d. establishing a one-stop-shop for environmental approvals for offshore oil and gas developments in Commonwealth and coastal waters
- e. properly resourcing approval functions by personnel with appropriate commercial and regulatory skills.

#### State-based planning and major project approvals

The Business Council recommends improving state government planning and major project approvals processes by:

- a. identifying major industrial, energy, resource and infrastructure land uses in state strategic plans and establishing statutory mechanisms to require that strategic plans are reflected in regional and local land use schemes
- b. establishing a lead agency framework that can compel timely responses from referral agencies
- c. removing all concurrences for declared major projects and reducing referral requirements

- d. establishing a single assessment and approval framework for major energy resource, infrastructure and industrial projects, including:
  - i. automatic declaration of major project status based on capital value and industry characteristics
  - ii. standard, industry-specific terms of reference for impact assessments
  - iii. risk-based assessment guidelines that implement the Australia–NZ standard for risk assessment
  - iv. a six-week, statutory timeframe for decision once an assessment report has been received by the responsible agency
  - v. where necessary, standard, industry-based conditions on approval
  - vi. no merits review where the decision maker is the minister, and standing for judicial review limited to the project proponent and third parties who are directly affected by the proposed project.

### 2. Encourage exploration

The future of the energy resource industry is dependent on the level of exploration as energy resources cannot be produced without first locating commercially viable resources. These resources cannot be discovered without undertaking exploration. Access to good-quality, pre-competitive geoscientific data has underpinned many of the major investments in our energy resources we see today.

While oil production is in decline in Australia and our crude oil exports will follow, the opportunity exists for Australia to invest in exploration and the discovery of new oil and liquid rich gas resources. Accordingly, the appropriate settings around exploration will become increasingly important if Australia is to potentially unlock another Bass Strait or the possibility of unconventional oil-rich shale.

## Evidence

Australia's share of global exploration expenditure has declined from just under 20 per cent in the early 1990s to 9 per cent in 2011.<sup>33</sup>

While expenditure on exploration is in decline, the cost of exploration in Australia has increased. The Productivity Commission's 2013 inquiry report into *Mineral and Energy Resource Exploration* found the competitiveness of resource exploration in Australia had been deteriorating, based on several measures:

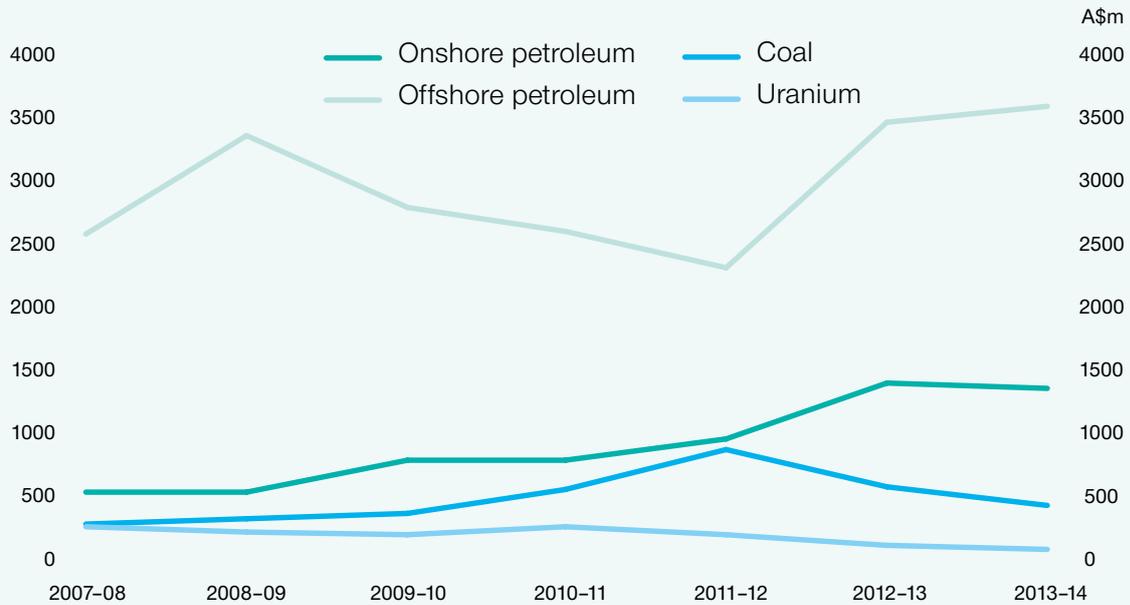
- The average cost per metre drilled has doubled in real terms since the late 1990s due to the need to drill to greater depths and to comply with an increased regulatory burden.

- The rate of discovery of significant new resources has declined despite increased exploration expenditure.

Oil and gas exploration is higher risk. It is also more costly than other forms of exploration because many wells need to be drilled with few leading to production. For example, in the period 1955 to 2011, a total of 4,248 conventional exploration wells were drilled in onshore and offshore areas across Australia with only 585 leading to production (a 14 per cent success rate).<sup>34</sup>

Offshore oil and gas exploration expenditure far exceeds other forms of exploration at \$3.6 billion in 2013–14, compared to \$1.3 billion for onshore oil and gas, \$0.4 billion for coal and \$44 million for uranium.<sup>35</sup>

**Figure 6: Annual energy exploration expenditure**



Source: BREE, *Resources and Energy Quarterly*, September 2014.

## 1. Improve the competitiveness of our energy resource sector

### Implication

Geoscience Australia is responsible for the provision of information to industry about Australia's energy resource base, which greatly enhances the prospectivity of Australia's exploration activities.

The \$150 million Energy Security Program introduced by the Howard government in 2006 included offshore and onshore activities. It released a wide range of high-quality data and reports to industry, which stimulated investment and reduced risk in exploration for energy resources.

The precompetitive data developed from that program was the origin of Queensland's \$200 billion CSG to LNG export industry. The program concluded in 2011 and without additional funding, future developments such as this may never be given an opportunity to seed.

To ensure that exploration in the energy resource sector continues despite the higher upfront exploration costs and risk, it is important that governments continue to consistently support the work of Geoscience Australia, regardless of market conditions. This could underpin future investment and the next generation of wealth opportunities for Australia.

Another way to encourage exploration is through retention leases. These allow an explorer to maintain an interest over an area of land or water where they have identified an energy deposit that is not yet commercially viable for resource extraction. Retention leases are issued for five years and can be renewed for further five-year periods, subject to meeting set criteria.

Retention leases were introduced in 1985 to encourage oil and gas explorers to work in deeper water and commercially challenging areas. These arrangements should be maintained to continue to provide an incentive for exploration investment and provide industry with the commercial incentive to develop the resource when market conditions are favourable.

### Recommendation

The Business Council recommends that the Australian Government:

- retain the immediate deductibility of costs incurred in exploration activities to ensure that the incentive to conduct more costly and risky exploration continues
- ensure that Geoscience Australia is adequately resourced to enable it to continue to provide pre-competitive geoscience data to business to underpin future energy resource investment
- seek to develop reserves under retention lease arrangements, where they are commercial, through existing arrangements.

### 3. Ensure stable and competitive taxation arrangements

Australian energy resource projects require a stable and competitive taxation regime to ensure that investment continues to flow to these projects.

Business must accept its obligations and be transparent when complying with its taxpaying responsibilities. Business is also a major contributor to the tax base, with corporate taxes expected to contribute around \$72 billion in 2014–15. As a proportion of GDP our corporate tax collections are the second only to Norway in the OECD.<sup>36</sup>

### Evidence

With respect to the energy resource sector there are a number of taxation measures that are reviewed almost every budget cycle. This is despite the sound policy reasons they were originally established to address. The Business Council calls on the government to avoid ad hoc changes to the taxation system that create uncertainty and a disincentive to invest.

The Fuel Tax Credit Scheme is one measure that is continually under threat of being revoked. Any changes would constitute poor policy, increase the cost of doing business and reduce competitiveness.

The Fuel Tax Credit Scheme allows businesses that use fuel to claim a tax credit.

The scheme was established to ensure that fuel tax is not paid by those who do not use public roads. As a tax on the consumption of fuel, it is intended to be levied on consumers and not on critical business inputs. Fuel tax credits are similar in this regard to input tax credits claimed by businesses under the goods and services tax (GST).

The Commonwealth Treasury also holds the view that the scheme is not a subsidy but “a mechanism to reduce or remove the incidence of excise or duty levied on the fuel used by business off-road or in heavy on-road vehicles”, as stated in its submission to the G20 Energy Experts Group in 2011.

Accelerated depreciation provides a shorter write-off period for assets in the oil and gas, agriculture and airline industries.

Accelerated depreciation assists businesses investing in capital-intensive projects with a substantial upfront investment, such as those in the energy resource sector, in generating early positive cash flows. This is important in determining the overall return on a project.

Accelerated depreciation measures recognise the risk, scale and long timeframes involved in many business investments. These measures are an important tool in ensuring that Australia remains internationally competitive – the main policy objective of their introduction. Changes to these measures would introduce complexity, uncertainty and disputes around appropriate depreciation rates and harm international competitiveness.

### Implication

With around 80 per cent of investment in the sector sourced from foreign investment, a stable taxation environment is crucial to ensuring overseas investors continue to see Australia as an attractive investment destination. The threat of ad hoc tax changes has a negative impact on Australia’s country risk, in turn placing investment, jobs and government revenues at risk.

Ad hoc changes to tax are no substitute for the process of comprehensive and holistic tax reform. The Australian Government’s tax white paper process should look at comprehensive tax reform for the dual purpose of revenue adequacy, while supporting incentives to work and invest in a global environment.

It must also maintain a strong level of equity, and be done in tandem with structural corrections to Australia’s fiscal position. Greater clarity of the roles and responsibilities between different levels of government will also be critical.

### Recommendation

The Business Council recommends that the Australian Government:

- ensure a stable and competitive taxation system to attract investment in energy resources. Taxation arrangements should therefore only be considered as part of comprehensive tax reform, as part of the Commonwealth Government’s tax white paper process
- as part of this process, the Australian Government should recognise the principles that underpin the following tax arrangements and their importance to ongoing investment in the energy resource sector:
  - » fuel tax credits for diesel fuel, because input costs to business should not be taxed
  - » accelerated depreciation to ensure where a business has made a substantial upfront investment, it has access to early positive cash flows to keep Australian businesses internationally competitive
  - » immediate deductibility for exploration expenditure to encourage mining investment, recognising the huge potential flow-on benefits for the whole economy and to minimise the risk of investors transferring activities overseas.

## 1. Improve the competitiveness of our energy resource sector

### 4. Improve access to a skilled labour force

Another key factor impacting on the delivery costs of Australia's energy resource projects is limitations on access to skilled workers.

The sheer number of capital projects underway in Australia has meant that many projects are competing for the same limited labour stock. This is increasing labour costs, but it is also forcing businesses to look to skilled migration to overcome peak construction periods – such as those that are underway in LNG construction.

#### Evidence

The extent and severity of skills shortages have eased in recent years as the energy resource sector transitions from construction to operation. However, a range of shortages are forecast in coming years for vital operations occupations.

The 2013 report by Australian Workforce and Productivity Agency, *Resource Sector Skills Needs: Skills for a Transitioning Resources Sector*, shows 25 occupations in short supply over 2014–18 including:

- drillers
- miners and shot firers
- mining engineers
- chemical, gas, petroleum and power generation plant operators.

In addition, trades such as welders, electricians and diesel mechanics are highly sought after. These cannot be sourced from other industries and will require a range of different supply responses from employers, industry and the tertiary education sector.<sup>37</sup>

In recent years, the cost of securing the services of these professionals and trades has increased significantly. Engineers in Western Australia have charge-out rates (total costs to the employer) of ranges from \$160 to \$220 per hour on major projects like Gorgon, Ichthys and Wheatstone LNG projects. These rates are around 30 to 50 per cent higher than the standard engineering rates in Houston for US Gulf Coast projects.<sup>38</sup>

One response to this shortage has been to look to imported labour; however, this comes at an even higher cost than hiring local employees.

Salary costs for foreign workers can reach much greater levels. An example made available to the Business Council shows that a lead engineer hired under a 457 visa for a mega resource project cost \$523,192 per year (total costs to the employer including overheads) compared to the equivalent local hire cost of \$349,312.

#### Implication

If Australia's energy and resource sector is to continue to expand we need to ensure there is a steady supply of skilled labour coming through the training system, and immigration settings that allow companies to meet the cyclical demands for labour generated by mega projects.

On the training side, the challenge for Australia is to ensure that the incentives are right to attract young people into the qualifications and trades that are needed most. Industry and governments need to work to ensure that the right signals are in place to encourage students to work in this growing sector.

However, the training system won't be able to meet all the needs of the energy resource sector. The cyclical nature of the sector's project construction creates peak demand periods for certain skills. The MCA identifies that for mining engineering, temporary migration visas outstripped university graduations by more than 2 to 1 between 2006 and 2010. In geosciences, the ratio was more than 4 to 1.

This demand for labour cannot be met by increased domestic training or retraining alone – attempts to develop a domestic workforce to handle an investment peak would be economically inefficient and socially irresponsible as it would result in poor skills utilisation and underemployment in times of more moderate demand.

Where local workers cannot be sourced or trained to provide the experienced, skilled and semi-skilled workforce that is in such high demand on projects, this will need to be met through flexible migration settings. These settings should allow the most highly skilled people in the world to come to Australia to lend their experience to delivering our investment opportunities.

## Recommendation

The Business Council recommends that all governments and relevant agencies draw on workforce estimates to better target training and migration programs to alleviate skills shortages. This should include:

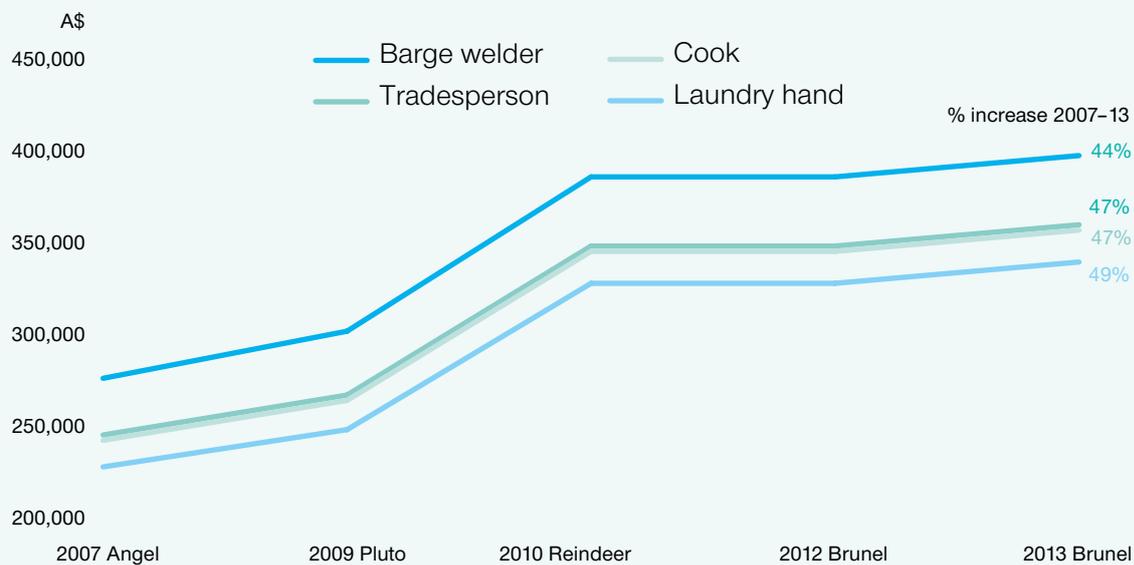
- better information from industry and government about the opportunities available in the energy resource sector
- ensuring flexibility in temporary migration schemes such as 457 visas through the Enterprise Migration Agreement (EMA) program and making available mechanisms to retain migrant employees when there are skills shortages
- businesses also have a responsibility to help ensure an ongoing stream of skilled employees in the energy resource sector by maintaining a consistent apprenticeship intake.

## 5. Improve greenfields agreements for major projects

The current regulatory framework governing enterprise bargaining is inflating labour costs and reducing productivity outcomes on major energy resource projects in Australia.

Project owners need to have confidence in the cost of labour over the full lifespan of construction of any given project. However, the effective monopoly position some employee-represented organisations have in setting the price of labour, as well as sometimes capricious requests for additional terms and conditions, ultimately impacts on long-term project sustainability.

**Figure 7: Offshore construction annual salary, including superannuation**



Source: Australian Petroleum Production and Exploration Association (APPEA), *Improving Labour Productivity: A Regulatory Reform Agenda*, 2014.

## 1. Improve the competitiveness of our energy resource sector

### Evidence

The savings from minimising delays associated with greenfields agreements can be significant.

The Department of Employment estimates that shortening delays by two months for a major energy project would save \$4.6 million in net present value.

Across the board if half of the average 10 projects that move from the 'Feasibility' to 'Committed' stage in the resources and energy sector avoided delays in greenfields negotiations by two months, this would save \$23 million a year spread across five projects.<sup>39</sup>

### Implication

The experience of a number of energy resource projects has seen employee-represented organisations use the benchmark set on a previous project with respect to greenfields agreements as the starting point for negotiations over the next agreement. This in effect places rigidity in the negotiations that sees the cost of labour increase after every project, as Figure 7 highlights.

There is significant risk that some bargaining practices and outcomes associated with greenfields agreements will threaten future investment in energy resource projects in Australia.<sup>40</sup> Greenfields bargaining practices mean that the commencement of projects can be delayed or possibly abandoned.

The construction period is critical for projects, with each delay adding to cost. If renegotiation occurs during the construction period, negotiations can on occasion put unreasonable demands on a business desperate to start work again and therefore add further to costs. This is made worse where productivity offsets are not agreed to that could balance out the pay and condition increases.

It also enables employee-represented organisations to seek to prevent project proponents from using contractors and other arrangements to manage workforce numbers and deployment through the different stages of a project in line with workforce demands.

Further delays could also occur if the Fair Work Commission were to advise or arbitrate on what wages and conditions (above a minimum) would be appropriate for potential greenfields projects.

Employers will often offer more than the minimum requirements to attract the workforce they need. However, this should be the function of the labour market rather than a determination by the Fair Work Commission.

In determining if the pay and conditions are consistent with the prevailing ones in the relevant industry, the Fair Work Commission should consider the Better Off Overall Test and National Employment Standards.

### Recommendation

The Business Council recommends that the Fair Work Act, with respect to greenfields agreements, should be amended as proposed in the current Bill before the parliament to:

- ensure the Fair Work Commission should interpret "prevailing pay and conditions" with reference to the Better Off Overall Test and the National Employment Standards
- allow more flexibility in the length of enterprise agreements, commensurate with the period of construction so as to provide the option of avoiding renegotiation halfway through construction and potentially jeopardising the economics of the project.

The Business Council's preferred long-term solution to these issues is broader than the proposals in the current Bill. That is:

- employers should be able to make greenfields agreements prior to the commencement of employment on a new project. This would allow employees to accept jobs in the full knowledge of the terms and conditions on offer.

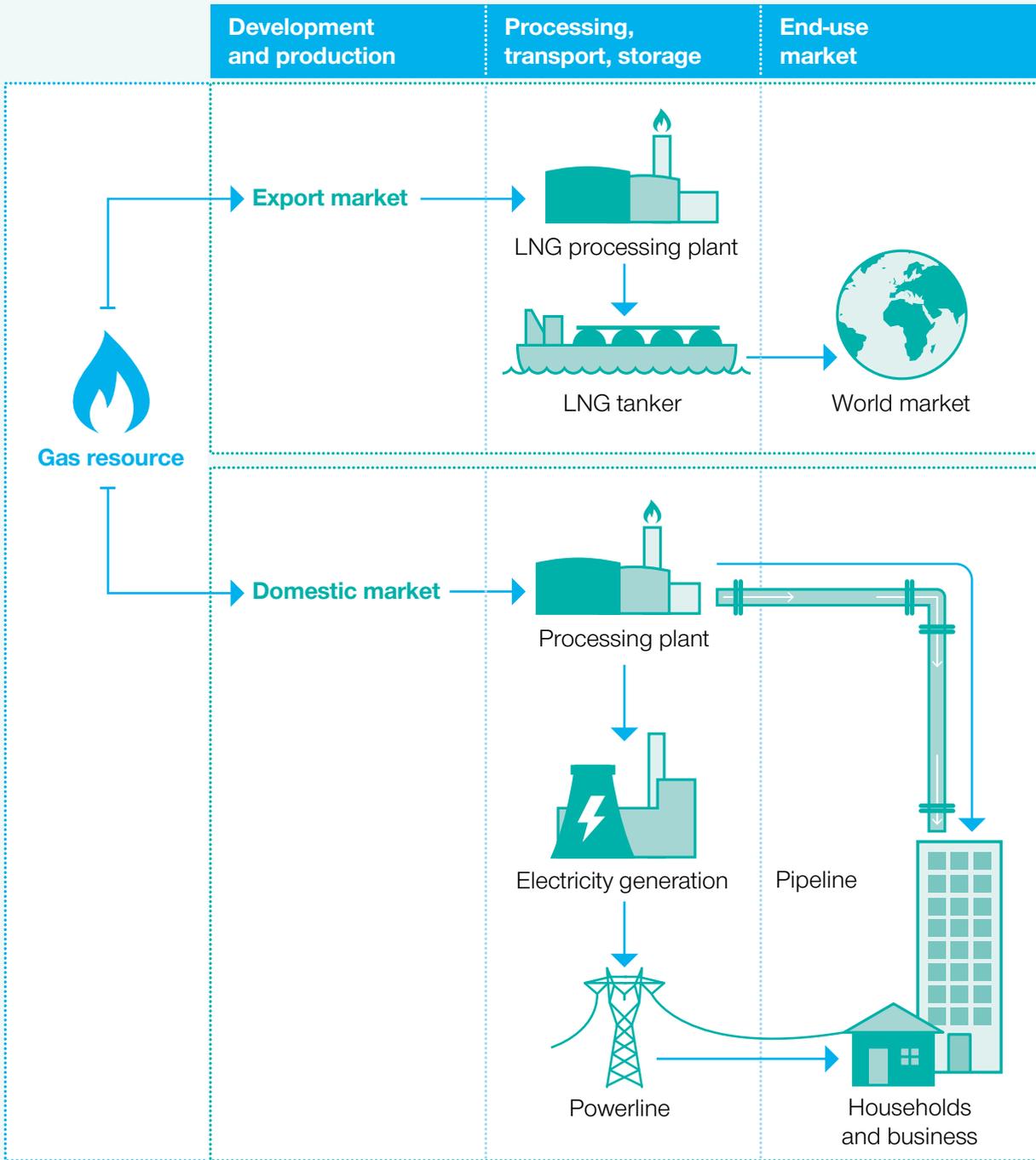
## 2. Develop timely natural gas resources and improve market efficiency

### Key points

- Natural gas is a vital and growing part of Australia's economy, through expanding LNG exports and as a source of energy and feedstock for businesses.
- Australia has abundant gas resources to meet domestic and export requirements, but we face serious challenges getting our gas out of the ground and to market.
- Our east coast gas market is undergoing significant structural change, as it triples in size with the advent of LNG exports off the coast of Gladstone, linking our isolated gas market to international markets.
- At the same time, higher production costs are also pushing up the price of gas. The west coast market too is facing access and price pressures.
- There are no quick fixes to rising gas prices, but inappropriate barriers in New South Wales and Victoria are making the situation worse by not allowing access to new natural gas supplies to meet demand.
- Community concern needs to be heard and appropriate steps taken to outline the safeguards to protect the community and the environment in the development of natural gas.
- Traditional supplies of natural gas from Bass Strait and the Cooper Basin are in decline and Australia needs to take steps now to unlock new reserves.
- Increasing Australia's gas supply is the best way to ensure that Australia can access a reliable and competitively priced supply of gas.
- However, domestic gas reservation is not an effective policy response because:
  - » it acts as a disincentive to investment to develop the gas needed to meet demand
  - » it would also do very little to address the problem of higher gas prices in the immediate future as prices will continue to be determined by international and domestic market forces and the underlying cost of production.
- Instead, the Australian and state governments should make developing Australia's natural gas resources a national priority, and:
  - » remove inappropriate regulatory barriers to natural gas development
  - » increase engagement of independent authorities with the community
  - » expedite priority gas projects
  - » improve transparency of gas market information to assist in managing supply uncertainty
  - » support the industry-led development of pipeline trading and gas supply hubs
  - » attract investment in Australia's natural gas resources.

2. Develop timely natural gas resources and improve market efficiency

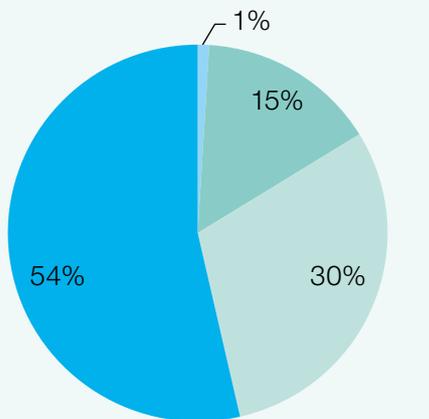
Figure 8: Australia's gas supply chain



Source: adapted from Geoscience Australia, *Australian Energy Resource Assessment*, 2014.

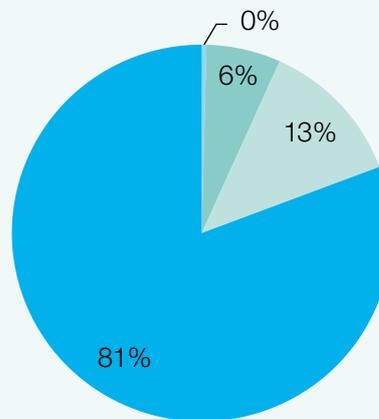
**Figure 9: Australia's gas markets**

2012



■ Northern market   ■ Western market  
■ Eastern market   ■ LNG exports

2018 (projected)



■ Northern market   ■ Eastern market  
■ Western market   ■ LNG exports

Source: BREE, *Eastern Australian Domestic Gas Market Study*, January 2014.

## Overview of Australia's gas markets

Australia's gas sector has three distinct and geographically isolated domestic gas markets – the eastern, western and northern markets – and as a result all gas production is either consumed within each market or exported as LNG.

Each market faces its own challenges, but the tripling in size of the east coast market as it begins to export LNG to Asia is the most pressing and therefore dominates the focus of this chapter.

The new LNG export industry in Queensland will see gas production on the east coast increase from around 700 petajoules (PJ) to around 2,300 PJ by 2016.<sup>41</sup> These exports will link the previously isolated east coast gas market to higher priced international markets, creating a new market dynamic.

Regulatory barriers to new gas supply development, higher production costs, the linking of our domestic market to international markets, community concern and technical uncertainty around project delivery are all contributing to uncertainty in Australia's gas markets.

Various analysts are projecting east coast wholesale gas prices to rise from 2014 towards LNG netback levels<sup>42</sup> to around \$6–\$12 a gigajoule.<sup>43</sup> This compares

to historical low long-term prices on the east coast at around \$2–\$3 a gigajoule.

Historical prices are no longer high enough to provide the incentive to develop new supplies of gas as new unconventional resources are more costly to develop than conventional gas reserves.

The rising price of gas will impact a number of gas-dependent businesses, particularly where fuel switching is not an option, such as fertiliser manufacture, which uses gas as a feedstock.

The linking of our previously isolated east coast market to international markets, rising production costs, and barriers to accessing new gas resources are all adding to the price of gas. Despite the rise in the price of gas, the LNG industry is expected to provide a net economic benefit to the Australian economy.<sup>44</sup> It is also a sector identified in the Business Council's *Building Australia's Comparative Advantages* report as a sector of comparative advantage for Australia that we could continue to grow our global market share in.<sup>45</sup>

The challenge is to ensure that gas producers can access new gas resources to meet domestic and

## 2. Develop timely natural gas resources and improve market efficiency

international demand at the lowest possible cost. In turn, we also need to ensure gas-dependent businesses operate in the lowest-cost business environment possible and do not face barriers to changing their business models or operations in response to these developments.

The primary response to tightening supply in the gas market should therefore be to increase the development of new gas supplies that can place downward pressure on domestic prices over time.

Australia has more than enough gas to meet domestic and export requirements. The challenge is getting this gas out of the ground and into the market in time to meet demand.

Production in the eastern market is growing with new developments, the upgrade of existing projects – such as the Kipper Tuna Turrum Project in Victoria – pipeline expansion and new storage. More supply and diversity of supply are needed.

However, no new unconventional gas resources will be developed in Victoria and New South Wales as long as the moratoriums on exploration and development on CSG continue. Better and earlier community engagement is needed by industry alongside the replacement of these bans with a robust regulatory regime that ensures best-practice environmental standards and land-use practices.

As traditional supplies of gas from Bass Strait and the Cooper Basin decline, steps need to be taken now to unlock new reserves and avoid adding further upward pressure to the price of gas.

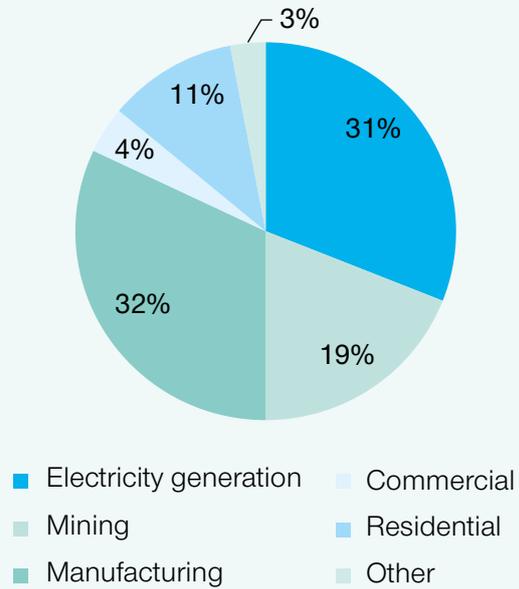
### Gas reservation is an ineffective policy to reduce gas prices

A domestic gas reservation policy in its most basic format sets a requirement that gas producers must reserve a proportion of gas for domestic consumers.

It is a distortion in a market that is aimed at reducing the price of gas.

However, if a reservation policy were introduced tomorrow, it would not decrease the price of gas. In order to reserve gas there needs to be gas to reserve. In the case of New South Wales, there is effectively no gas to reserve with 95 per cent<sup>46</sup> of its gas imported from other states. And the 5 per cent of gas that is currently produced in New South Wales is sold in New South Wales.

Figure 10: Gas consumption by sector, 2011–12



Source: BREE, *Gas Market Report*, 2013.

As for the two projects already in the pipeline in New South Wales in the Pilliga and Gloucester, this gas is already earmarked for the domestic market so reserving it would have no impact.

The problem with gas reservation is that it actually leads to delays in developing the gas needed to meet demand. That is because it adds to costs that act as a disincentive to developing new gas resources.

Further, a gas reservation policy does not control price. Increasing production costs and international market pressures will continue to influence the domestic prices in the presence of a reservation policy.

And any consideration about applying it to existing gas projects would mean breaching commercial contracts, raising issues of legal liability for government and putting at risk Australia's standing as a reliable supplier of energy and a safe place to invest.

Attempts to implement a gas reservation policy could also breach a range of Australia's international trade obligations and domestic agreements on competition policy.

Issues with a gas reservation policy can be witnessed in the Western Australian market. The current reservation policy in the west may have historically facilitated gas to market, but it has not lowered the price. In fact, Western Australia has the highest gas prices in Australia, and it has not solved timing and supply issues.

Accordingly, Western Australia's independent economic adviser, the Economic Regulation Authority, supports the removal of gas reservation and concluded that it:

- discourages investment in gas projects, reducing the availability of gas for future use
- perpetuates the existence of industries that may not have a comparative advantage in Western Australia at the expense of investment in other industries

- increases reliance on subsidised gas prices
- discourages efficiency and technological innovation.

There is a reason no other commodity is reserved in the Australian economy and that is because it ultimately leads to inefficiencies in the allocation of resources.

Accordingly, the IEA in a report examining the effect of gas reservation in some non-OECD countries throughout the Middle East and North Africa, concluded, "Subsidies exacerbate demand and inevitably lead to shortages a decade later".<sup>47</sup>

Lastly, the LNG industry has been identified as a source of economic growth for Australia and our energy policy settings should promote areas in which we hold a comparative advantage, not hold them back as a reservation policy would do.

## Issues and recommendations

The Business Council has developed a vision for Australia's gas markets and has identified key reform areas and recommendations to build a well-functioning and efficient market over time.

**Figure 11:** The vision for well-functioning Australian gas markets

Historical	Future
<p><b>Market characteristics</b></p> <ul style="list-style-type: none"> <li>• Bilateral contracts with long-dated contracts</li> <li>• Small market</li> <li>• Low levels of market transparency</li> <li>• Contract carriage model for pipelines</li> <li>• Point to point pipelines</li> <li>• Lack of market information</li> </ul>	<p><b>Well-functioning market characteristics</b></p> <ul style="list-style-type: none"> <li>• Supply competition diversity               <ul style="list-style-type: none"> <li>» Clear and effective governance arrangements including minimal market intervention (only in the event of market failure that is amenable to redress by such intervention)</li> </ul> </li> <li>• Depth and liquidity in the market               <ul style="list-style-type: none"> <li>» transparent market objectives</li> <li>» flexible trade options to promote price transparency, competitive trade (in physical gas and pipe capacity) and well-functioning forward markets and overall market liquidity</li> </ul> </li> <li>• Sufficient market information to inform market participants, operators, regulators and policymakers (about gas reserves/ production, pipeline capacity, gas market conditions and LNG exports)</li> <li>• No barriers to market entry and exit where market rules or regulations do not introduce material obligations to either</li> </ul>

## 2. Develop timely natural gas resources and improve market efficiency

### 6. Remove inappropriate regulatory barriers to natural gas development

Safe, environmentally responsible and timely development of Australia's gas resources requires a stable and efficient regulatory regime. Any regulatory regime should be risk based and informed by science.

Stability provides investors with the confidence they need to make long-term capital-intensive investment decisions in new gas developments. Without a stable investment environment, decisions to invest will not occur and new gas supplies will not come into the market.

A stable and effective regulatory regime should also provide the community (and indeed business) with confidence that activities have the appropriate safeguards to manage multi-land use and minimise the risk to the environment.

#### Evidence

The development of further CSG reserves in states outside of Queensland has faced several regulatory setbacks, increasing costs and leading to substantial write-downs in asset values.

The New South Wales Government has extended its ban on CSG licences until mid-2015. The Victorian Government has placed a moratorium on CSG extraction and fracking until July 2015 and then extended it to cover all onshore gas exploration.

Some of these regulatory changes, such as the moratoriums on fracking, have not been based on science, engineering, or a risk-based assessment framework and are undermining investment certainty.

Further uncertainty has been introduced by the duplicative assessment of water through the introduction of the Commonwealth's "water trigger" in the EPBC Act for CSG activity.

#### Implication

Consumers expect a reliable and competitively priced supply of gas and in turn producers of gas need to earn a reasonable return on their investments. Governments and the gas industry need to work together to ensure Australia's regulatory regime and markets are actively working to enable both interests to be met.

The Business Council supports best-practice regulation that provides appropriate safeguards to protect the community and the environment. An example of this is the establishment of Queensland's Gasfields Commission, which has been a positive step towards building community trust in the industry.

Also, South Australia has developed a *Roadmap for Unconventional Gas*, which sets the course for the environmentally sustainable development of its unconventional gas and encourages safe exploration and production under the state's regulatory framework. These high standards of practice should be replicated in other states.

However, in other states, continual regulatory change is creating investment uncertainty. This has added time and cost to projects, and in some cases has stifled investment. For example, in New South Wales, Metgasco's Casino Project was suspended following announcements on state environmental planning policy; their project commencement remains uncertain.

The risk is investors may soon abandon projects altogether due to the uncertainty and increased costs of ad hoc restrictions. This will prolong tight market conditions and add further pressures to the price of gas.

To provide the environment for investment in natural gas to occur, a scientifically based, stable and efficient regulatory regime is required.

Better and earlier community engagement is needed by industry, alongside the replacement of these bans with a robust regulatory regime that ensures best-practice environmental standards and land-use practices.

There are some recent and welcome reforms underway in this regard, including reforms to establish a 'one-stop shop' for environmental approvals under the EPBC Act 1999, and the streamlining of offshore petroleum activities in Commonwealth waters under both the Act and the Offshore Petroleum and Greenhouse Gas Storage Act 2006.

The Business Council supports these measures and encourages governments to continue these positive steps with respect to their own regulatory practices. But the essential step now is to lift state bans on CSG, following transparent and informed community consultation.

## Recommendation

The Business Council recommends that:

- the COAG Energy Council make the development of Australia's natural gas resources a national priority to meet demand, by:
  - » introducing public milestone reporting to assess state government progress towards implementing a regulatory regime that:
    - supports the responsible, safe and sustainable development of Australia's natural gas resources
    - establishes a stable, efficient and evidence-based regulatory environment for gas development
    - removes a number of obstacles prohibiting additional supply capacity coming on stream
  - » adopting the National Harmonised Regulatory Framework for CSG and the Multiple Land Use Framework.
- Australian governments address the regulatory barriers to gas development including:
  - » removing duplication of regulation between Commonwealth and state governments, including the water trigger under the Environment Protection and Biodiversity Conservation Act 1999 (EPBC Act)
  - » implementing the one-stop-shop under the EPBC Act, as underway by the Australian Government
  - » streamlining and improving existing state approval processes, regulation and administration
  - » remove the moratoriums on exploration and fracking following community consultation and based on scientific evidence.

## 7. Increase engagement of independent authorities with the community

There is significant concern from some sections of the community about the risks associated with gas developments. Some of these concerns may be based on misinformation.

### Evidence

Like other activities in our economy, gas development comes with some risks. These risks are generally well known and can be managed through engineering, technologies, and best practice. Many of these solutions have been successfully employed in the natural gas industry for several decades.

This is acknowledged by a recent report from the New South Wales Chief Scientist and Engineer, which found that many of the technical challenges and risks posed by the CSG industry can in general be managed and the New South Wales Government should promptly consider recommendations to unlock its own gas resources.<sup>48</sup>

Australia has been producing gas safely from the Cooper Basin since the 1960s and CSG for the past 18 years. Gas companies invest in these practices for the safety of their workers, the integrity of their operations, and for the protection of the environment. It is in their interest to do so.

These practices, combined with effective and scientifically based regulatory arrangements, need to be better explained to build community confidence in the safe and environmentally responsible development of our gas resources.

Gas producers too have a responsibility to work with landholders and communities to understand their concerns, and explain how risks are managed early in the process.

### Implication

Industry and government need to work with the community in an open and transparent manner to realise the mutual benefits of Australia's natural gas resources.

Industry should engage with local communities early, on concerns related to the gas industry and the provision of independent scientific information by Australia's leading scientific agencies.

Good communication and transparent information sharing with communities in the early stages of gas development will be key to providing the community with the information they need to make their own assessments.

State and federal governments collectively are encouraged to facilitate gas projects that meet approved environmental standards as these standards are designed by experts in the field to appropriately manage the risk of natural gas development.

## 2. Develop timely natural gas resources and improve market efficiency

### Recommendation

The Business Council recommends that:

- Australian governments should seek to further engage independent authorities such as gas and land use commissioners, the independent scientific committee and CSIRO in community consultation on the science and safeguards supporting CSG development
- gas producers should actively engage with communities early, to understand their concerns, and explain the science and precautions taken to ensure the safe and environmentally responsible development of gas resources.

### 8. Expedite priority gas projects

There is urgent need to bring more gas to market to mitigate energy security risks. The economic benefits and the strong track record of sustainable gas development in Australia should provide state governments with the reassurance needed to facilitate the development of gas resources in their jurisdiction.

### Evidence

The Australian Government could further assist state governments by providing expertise and resources to help facilitate and expedite gas project approvals processes and/or by linking this project facilitation to National Productivity Payments, given the nationally significant importance of gas security. This can be done while continuing to ensure the highest levels of environmental standards are maintained.

This initiative would involve a process of identifying and facilitating gas projects, and related infrastructure (including supply development, pipeline expansion), that could assist in bringing greater gas supply to market by accelerating best-practice approvals for those projects that are identified as vital to supply security.

The proposal for National Productivity Payments is outlined in more detail in the Business Council's submission to the Competition Policy Review in July 2014.

Another avenue to expedite supply is by encouraging the development of reserves under existing retention lease arrangements where commercially feasible.

Retention leases allow an explorer to maintain an interest over an area of land or water where they have identified an energy deposit that is not yet commercially viable for resource extraction. The leases are issued for five years and can be renewed for further five-year periods, subject to meeting set criteria.

Regulators test the commercial viability of the project during the lease to identify what a reasonable company could be expected to carry out in order to commercialise the project.

It is important that the existing arrangements are maintained to provide an incentive for exploration investment and provide industry with the commercial incentive to develop the resource when market conditions are favourable.

However, in some instances, retention leases may also provide companies with a mechanism to delay the exploitation of gas. Where these circumstances are clearly identified, and as a matter of good public policy, governments should encourage the development of reserves under retention lease arrangements where they are commercial.

### Recommendation

The Business Council recommends that Australian governments expedite priority gas projects by:

- providing additional resources and expertise to the government administration of project approvals processes and/or National Productivity Payments
- seek to develop reserves under retention lease arrangements, where they are commercial, through existing arrangements.

### 9. Improve transparency of information

Access to accurate and timely market information on the gas supply–demand and price outlook is a key characteristic of a well-functioning and efficient market.

This information enables market participants, planners and policymakers to develop a relatively informed view of forward market conditions. It also plays an important role in signalling new supply opportunities, informing risk-management strategies and negotiations, as well as stimulating timely investment.

### Evidence

There are existing mechanisms designed to provide market transparency, including:

- Australian Energy Market Operator and Independent Market Operator's Gas Statement of Opportunities publications, which present long-term demand and supply outlooks

- the Gas Market Bulletin Boards and Short-Term Trading Markets (STTMs), which provide historical and short-term information on processing and pipeline capacity, pipeline flow and gas spot market prices
- Geoscience Australia's information on our gas reserves and resources
- BREE – *Gas Market Report, Resources and Energy Quarterly, Energy Statistics* and various other publications
- AER's *State of the Energy Market* report.

The Business Council supports these information sources, particularly their use in informing the market and policymakers. However, this information may not be sufficiently timely nor targeted to inform investment decisions, and there remains some uncertainty around the timing and volume of gas supply into the market. Factors contributing to this uncertainty include:

- the natural variability in well productivity
- an uncertain onshore regulatory environment
- opposition to new development from some communities
- uncertainty around available uncontracted gas
- the timing of supply decisions
- the extent that LNG trains are short on gas in the ramp-up to full production and the extent that the shortfall is sourced from the domestic market
- whether there are prospects for further LNG expansion.

### Implication

The answers to these questions do not in themselves cause a problem, and can be managed by bringing on new supply, expansions and storage. However, the uncertainty risks suboptimal (under or poorly timed) investment, and builds additional risk into contracts.

Supply uncertainty is a particular concern for large industrial gas users which are planning their long-term investments. While there has been a recent increase in short-term contracts and new buyers taking positions in upstream supply developments, supply uncertainty is making it difficult for buyers to manage price and supply risk.

Recognising the reporting burden on businesses and the commercial nature of aspects of gas market information, greater market information and flexible trade options could help gas users manage supply and price risk.

The Business Council recognises the need for accurate, timely and accessible information to inform planning, investment and commercial decisions. Market advancements through gas supply hubs and pipeline capacity trading will help provide transparency of information and these reforms are supported by the Business Council.

### Recommendation

The Business Council recommends that:

- the COAG Energy Council work with industry to determine how the current suite of gas market information may be improved and what further information may be needed to improve market transparency including:
  - » how information can be collected efficiently, and by which entities
  - » how information should be presented
  - » how frequently information should be reported
- the design of market information must also minimise the reporting burden on business, provide for cost recovery by business with reporting obligations and ensure the protection of commercially sensitive information.

### 10. Support industry-led development of pipeline trading and gas supply hubs

Markets are central to meeting current and future gas supply requirements.

Transparency is necessary to signal supply needs and underpin the efficient delivery of gas to customers as well as the requirement for future investment. To deliver investment, we need to ensure our gas markets are competitive and efficient with:

- supply competition diversity
- sufficient trade flexibility
- greater market transparency
- increased market liquidity
- sufficient participant access to underutilised pipeline capacity.

## 2. Develop timely natural gas resources and improve market efficiency

### Evidence

Bilateral contracts have been useful to underwrite the development of new gas resources and infrastructure and to manage risk. In a changing market these types of contracts may contribute to information uncertainty and limit forward market and risk-management product development.

To support bilateral contracts there are two mandatory wholesale gas trading markets on the east coast – the Declared Wholesale Gas Market (DWGM) in Victoria and the STTM in Sydney, Adelaide and Brisbane.

These facilitated markets play an important role in the market but act as a balancing tool only. However, these markets provide no forward gas price, do not reflect underlying supply and demand conditions, have an absence of forward products, with minimum volume traded, and imposition of financial risk.

In March 2014, the voluntary Wallumbilla Gas Supply Hub commenced operation. The hub aims to provide industry with better transparency and flexibility in upstream gas supply. However, the level of participation and liquidity at the hub will directly relate to the ability of users to access pipeline capacity and infrastructure.

### Implication

The *Eastern Australian Domestic Gas Market Study* and the *Victorian Gas Market Taskforce Report* both considered the need for a review of the competitive conditions of the wholesale gas market. The Productivity Commission is currently examining barriers to more efficient gas markets, which should look at these issues.

Governments could also seek to streamline and improve the function of the current facilitated gas markets. The absence of standardisation across the east coast market framework is a key issue. There are currently a number of fragmented and poorly designed markets, which mitigates against the development of a viable forward market in gas, noting that in a relatively small marketplace, gaining liquidity will always be a challenge.

If the gas market is to have longer-term pricing information, it requires well-designed consistent arrangements that will support secondary products that can be traded and settled off a representative and robust spot index. Without either of these, transparency will be limited to a number of short-term markets.

### Recommendation

The Business Council recommends that the:

- COAG Energy Council:
  - » advance gas market reform to promote diversity of supply competition, market transparency, flexibility and liquidity
  - » improve the function of the east coast's facilitated markets to allow for the development of secondary products
  - » support the development of industry-led pipeline capacity trading and the gas supply hubs
  - » the Productivity Commission is the appropriate body to conduct a broad review 'examining barriers to more efficient gas markets' and a review by the Australian Competition and Consumer Commission (ACCC) is not warranted at this time.

## 11. Attract investment in Australia's natural gas resources

Globally, competition in gas is intensifying, not only for global market share, but also for investment. Decisions to invest in Australia's gas projects will typically depend on the cost of developing our resources and perceived risks. These decisions are also often made within the context of a portfolio of other attractive investments within a variety of different countries.

### Evidence

As highlighted in the Business Council's 2012 report *Pipeline or Pipe Dream? Securing Australia's Investment Future*, Australia is becoming a high-cost place to invest. Our low labour productivity compared to other nations has reduced the competitiveness of our project delivery.

Rising cost pressures and stalling productivity are undermining Australia's capacity to deliver the current wave of major oil and gas projects to budget and schedule, and this also increases our risk profile.<sup>49</sup>

McKinsey & Company estimated Australian LNG projects at 20 to 30 per cent higher cost than our competitors in North America and West Africa.<sup>50</sup>

We must improve our competitiveness if we are to secure future investment in our natural gas.

Failing to establish and maintain an attractive investment environment risks losing investment in gas projects. Without this investment, we lose the opportunity for jobs, export income and taxation revenue.

The contribution that LNG projects alone make to our economy is significant. McKinsey & Company's analysis shows that existing and committed LNG projects alone will:

- contribute \$520 billion to the economy over 2015 to 2025
- add 2.6 per cent to GDP
- support 180,000 jobs
- increase the tax revenue by \$11 billion.

If planned and speculative projects (representing some \$180 billion in investment) are realised, they could contribute an additional:

- \$320 billion to the economy
- 1.5 per cent of GDP
- 150,000 new jobs
- increase the annual tax revenue by \$5 billion.<sup>51</sup>

### Implication

In New South Wales and Victoria there are significant barriers restricting new gas projects, from banning exploration licences to moratoriums on onshore development. These regulatory barriers and duplicative federal regulations regarding water resources for select industries are preventing gas from being developed to meet demand.

Analysis undertaken for the New South Wales Independent Pricing and Regulatory Tribunal (IPART) suggests that there is “no new Queensland CSG available to supply the NSW gas market for an extended period of time, at least until after the end of this decade at best” and “during [2014–16] there is unlikely to be large quantities of new Cooper gas available for the NSW market”.<sup>52</sup>

Governments cannot impose regulations on gas developments that restrict the market from being able to deliver gas, and avoid responsibility for adding to the pressures of a rising gas price and the risks of unmet demand during peak periods. These cost pressures will be borne by industry and the wider community.

As raised in the *Eastern Australian Domestic Gas Market Study*:

Governments should focus on removing unnecessary impediments to developing new gas resources particularly during a period of tightness in gas supply and providing a certain and predictable regulatory and investment environment.<sup>53</sup>

Securing the next wave of investment in LNG will be a challenge. While global demand is increasing, so too is global supply competition. The challenge for Australia is to be more competitive than alternate investment destinations.

International gas markets such as those in the US may benefit from greater well productivity, scale, infrastructure and oil-rich gas – and these factors cannot necessarily be overcome. However, there are productivity improvements that can be achieved in Australia.

Industry can improve productivity through project efficiencies and collaboration. There is great potential for brownfield projects and FLNG projects, which involve lower costs and can be pursued by industry.

The biggest drivers to improving productivity are reducing the time needed to develop gas projects, and reducing the costs of doing so. These in turn, are driven by the efficiency of the regulatory environment, efficiency of the supply chain (including equipment and services), and the cost and productivity of labour in Australia.

### Recommendation

The Business Council recommends that:

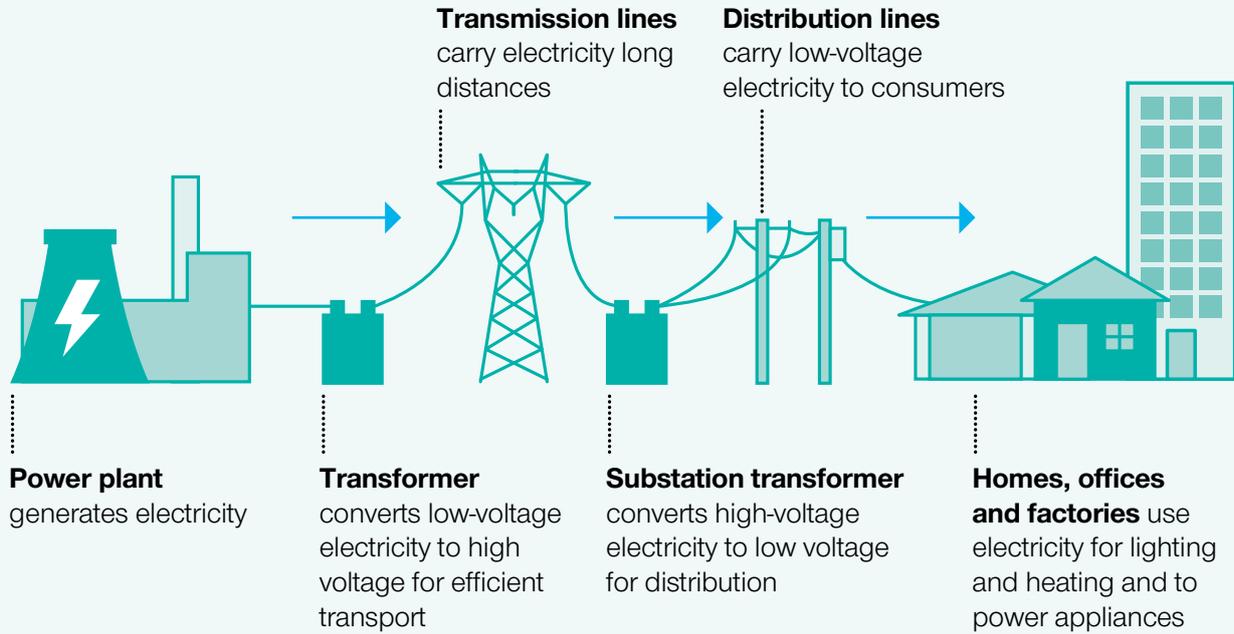
- Australian governments ensure policy settings encourage investment in gas projects (see Recommendations 1 to 5 on ‘Improving the competitiveness of our energy resource sector’ for details).

# 3. Improve electricity market efficiency

## Key points

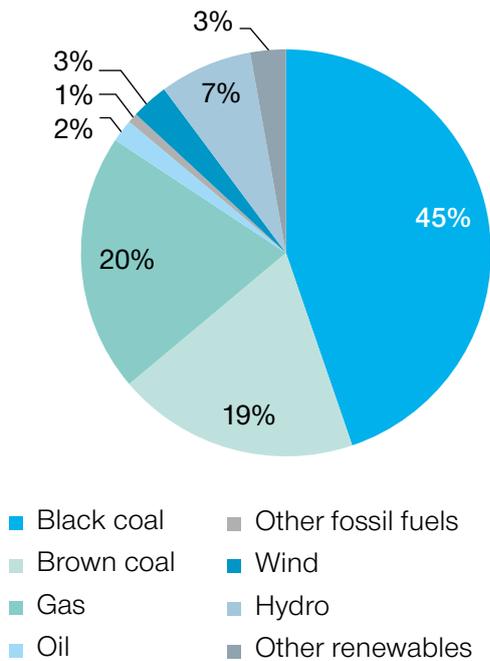
- Reform of Australia's electricity markets began 20 years ago. This has allowed our electricity markets to deliver competitive and reliable electricity supply to Australian homes and businesses.
- Welcome steps are underway in New South Wales and Queensland to introduce retail price monitoring and privatise energy assets.
- This reform will bring lasting benefits to consumers and provide a revenue stream for investment in productivity-boosting infrastructure for these states.
- While other states such as Victoria and South Australia are well advanced in reforming their electricity sector, Tasmania and Western Australia risk missing out on these benefits.
- In addition to the ongoing energy market reform agenda there are many challenges confronting our electricity sector, such as:
  - » the decline in electricity demand, raising questions about the sustainability of our electricity market given its design was premised on growing demand
  - » the significant increase in electricity prices in recent years emphasises the need to ensure that our network regulatory settings are efficient and the cumulative impact of a multitude of green energy schemes is minimised
  - » technological developments such as the uptake of solar panels and smart meters mean we need to ensure that our electricity markets and regulatory settings are keeping pace to return the benefits to consumers
- To ensure the market can efficiently respond to emerging pressures while delivering competitively priced electricity to consumers, the Australian Government should:
  - » aim to negotiate a bipartisan agreement on a revised RET that reflects a 'true' 20 per cent of electricity demand, and not extend the 2020 target.
- In addition, the COAG Energy Council should:
  - » commission independent analysis of the sustainability of Australia's electricity markets, including barriers to entry and exit as well as the adequacy of investment signals
  - » investigate new ways to build the case for reform and encourage remaining states to privatise their energy assets
  - » adopt economically efficient reliability and planning standards as part of any network asset sale
  - » support the business-led introduction of retail electricity pricing options that signal peak demand, such as time-of-use tariffs
  - » effectively communicate the change in network tariffs to reflect the cost of delivery to the community.

**Figure 12: Australia's electricity markets at a glance**



Source: adapted from information at the Energy Efficiency Exchange, [www.eex.gov.au](http://www.eex.gov.au).

**Figure 13: Australia's electricity generation mix**



Source: BREE, 2014 Australian Energy Statistics, Table O, 2014.

## Overview of our electricity markets

Australia's electricity markets and infrastructure serve a critical role in Australia's economy – powering our homes and businesses, as well as parts of our transport system. Our electricity market's overarching objective is to deliver reliable, competitively priced electricity in the long-term interest of consumers.

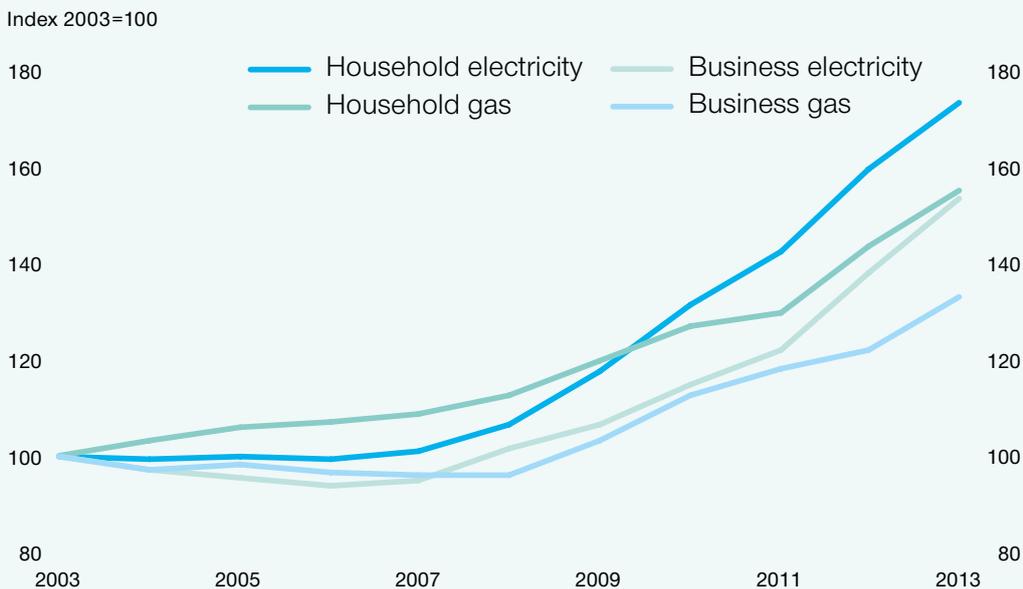
Australia has two major electricity markets: the NEM in eastern Australia and the South West Interconnected System (SWIS) in Western Australia. There are also a number of 'non-market' and 'off-grid' electricity systems such as the North West Interconnected System, and the Northern Territory's electricity industry.

This chapter focuses on electricity markets from the perspective of Australia's largest electricity market, the NEM, but in many cases issues are transferrable to all of Australia's electricity markets.

The issues confronting Australia's electricity market can be categorised into three areas:

### 3. Improve electricity market efficiency

**Figure 14: Real electricity and gas price increases, 2003 to 2013**



Source: ABS, *Consumer Price Index*, cat. no. 6401.0, September 2014; and *Producer Price Indexes*, cat. no. 6427.0, June 2014.

- the need to minimise upwards pressure on the price of electricity
- the need to continue to maximise the benefits of ongoing energy market reform
- the need to adapt to a changing market dynamic in terms of declining electricity demand and new technologies.

#### Minimise upwards pressure on the price of electricity

Over the last decade electricity prices on average across the NEM have more than doubled for residential and small business consumers and increased by 88 per cent for large business users.<sup>54</sup>

The major driver behind these cost increases, particularly for residential and small business consumers, is network costs.

Reforms have been carried out through the then Standing Council on Energy and Resources (SCER, now the COAG Energy Council) to seek to ensure the network regulatory regime operates efficiently.

With new network rules in place, the onus is now on the AER to exercise its powers under the revised National Electricity Rules and closely scrutinise network expenditure. The Business Council will monitor the outcomes of the next regulatory resets to assess if these reforms have been effective.

Various green energy policies including the carbon tax, the RET and state feed-in tariffs (FITs) have also contributed to the upward pressure on prices. In the case of some large businesses the cumulative impact of these policies accounted for up to 40 per cent of their total electricity bill.<sup>55</sup>

While the carbon tax has been repealed and state FITs brought into line with the market price of electricity, the RET in its current form still remains as a costly mechanism to reduce GHG emissions. Cumulatively these schemes add up. It is important when developing future policy that governments ensure climate change policies complement the efficient operation of Australia's energy markets to ensure minimal cost imposts on consumers.

#### Benefits of ongoing energy market reform

When it comes to energy market reform, Victoria and South Australia have led the way. Announcements this year by New South Wales and Queensland to introduce retail price monitoring and privatise their energy assets will see a huge step forward towards more competitive and efficient electricity supply in these states. However, Western Australia and Tasmania are lagging behind.

The evidence behind the benefits of energy market reform is demonstrated by the benefits provided to Victorian electricity consumers. Victoria has been

the leading state to introduce reforms to its electricity sector, which has made it one of the most competitive electricity markets in the world. In the 15 years since privatisation Victoria's electricity consumers have enjoyed the lowest price rises of any state within the NEM.<sup>56</sup>

All states are encouraged to embrace the benefits of energy market reform through privatisation and increased competition.

Reform is ongoing, but one reform that needs to be given a higher priority by the COAG Energy Council is taking a more economic approach to reliability standards. This has significant consequences for the level of investment required in networks and ultimately the cost of electricity. The introduction of more economically efficient reliability standards should be made a condition of any sale of future network assets.

### **Adapt to changing market conditions**

A fundamental and unexpected change in Australia's electricity markets has been the continual decline in electricity demand since 2009. This is raising questions about the sustainability of our electricity market given its design was premised on growing demand. There is now a need to assess if the market can continue to deliver efficient outcomes to consumers over the longer term. In the face of falling demand and any continuation of the RET, the assessment should investigate if there are barriers to entry and exit for generation, as well as the adequacy of investment signals.

Technology is also changing the way we use and generate electricity. Technological developments such as the uptake of solar panels and smart meters mean we need to ensure our electricity markets and regulatory settings are keeping pace with change. This means looking to reforms around how we price electricity at different times of the day to minimise peak demand, and ensuring electricity prices reflect the cost of delivery.

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## Issues and recommendations

The Business Council considers that along with completing outstanding energy market reform, the issues discussed below need to be resolved. This will allow for the full potential of productivity improvements from the energy sector to be realised in all states and territories and the pressure of competition to deliver choice and real savings to consumers.

### **12. Negotiate bipartisan agreement to a revised Renewable Energy Target**

The RET was designed based on a number of expectations, including that:

- demand for electricity was expected to continue to grow
- some renewable energy technologies were not expected to be cost competitive with retail electricity prices
- the scheme was expected to operate alongside a carbon pricing mechanism.

Given that these three premises no longer hold, the RET should be amended.

All sides of politics are encouraged to reach an agreement on revisions to the design of the RET that would see the target reduced to avoid unnecessary cost increases to consumers.

The risk is if the RET is not changed, the suppressed wholesale and renewable energy certificate<sup>57</sup> market will stall investment in wind energy and risk the scheme hitting the penalty price which would see electricity consumers paying \$93<sup>58</sup> per renewable energy certificate, with no additional investment in renewable energy.

Unless a compromise deal can be reached on the RET, investment in wind is unlikely to occur, creating the risk of higher electricity prices for consumers.

### 3. Improve electricity market efficiency

#### Evidence

The RET is a poor tool to reduce Australia's emissions. According to the governments modelling by ACIL Allen, the cost of reducing emissions under the RET is estimated to be between \$35 and \$68 per tonne.<sup>59</sup> The RET is relatively expensive compared to the recently repealed carbon tax of \$24.15 per tonne of carbon dioxide (CO<sub>2</sub>), and is significantly more expensive than international permits that currently trade for less than \$1 per tonne.

The RET also places a very significant cost burden on the energy-intensive sectors of our economy. The RET is estimated to cost up to 10 per cent of a typical electricity bill for a large business without access to assistance, and three per cent of a typical household electricity bill.<sup>60</sup> These costs can be significant for segments of the economy:

- For a large Australian metals manufacturer the cost of the RET is in excess of \$5 million (Net Moderately Intensive Partial Exemption Certificates) since the introduction of the SRES in 2011.
- However, for a large aluminium smelter that qualifies for the headline 90 per cent highly emissions-intensive exemption, the net cost of the RET is around \$20 million per annum.
- For a typical New South Wales household, IPART put the cost of the RET at \$107 per annum.<sup>61</sup>

Further, the RET distorts Australia's electricity markets by not allowing all forms of energy technology to compete on a level playing field. This leads to higher cost-generation outcomes than would otherwise be the case, creating higher electricity prices for consumers over the longer term.

Lastly, the RET provides an unnecessary subsidy to rooftop solar panels, which are now at grid parity,<sup>62</sup> meaning electricity produced by rooftop solar panels is commercially competitive with retail electricity prices in its own right. The RET therefore is no longer required to incentivise the uptake of rooftop solar panels.

#### Implication

With the decline in demand for electricity, the RET, which was designed for a growing market, is now expected to overshoot its 20 per cent target and represent at least 28 per cent of demand by 2020.<sup>63</sup> This is occurring because the RET is mandating additional generation capacity in an already oversupplied market.

The best outcome would be for bipartisan agreement for a reduced RET that brings the target into line with actual demand. The inflexibility of the current target means there is a design fault in the RET that needs to be addressed to ensure the penalty price is not reached.

This situation could arise if the current suppressed market conditions in the electricity and renewable energy certificate (REC) market persist. These conditions mean current prices are too low to pull through large-scale renewable energy (predominately wind) investments in the coming years, unless there are revisions to the RET.

These conditions combined with the substantial amount of wind energy required to meet the existing target will be a challenging task. Some 8,000 megawatts (MW) will be required between now and 2020; this compares to 3,800 MW of wind energy the RET (in various forms) has pulled through over the past 13 years.

To deliver wind on this scale and this quickly, would require more condensed community consultation on proposed wind farms than has historically occurred and would likely lead to added cost pressures as projects compete for limited resources.

These risks combined present a grim investment environment for wind, and without new wind investment, the price of renewable energy certificates will eventually rise and could reach the penalty price. If the certificate price hits the penalty price, electricity consumers would be paying an effective \$93 per REC, with no additional investment in renewable energy.

The risks of keeping the RET unchanged are clear. It is a high-cost mechanism to achieve Australia's central climate change objective of reducing emissions at least cost. The scheme should therefore be recalibrated without extension.

## Recommendation

The Business Council recommends the Australian Government:

- aim to negotiate a bipartisan agreement to a revised target that:
  - » reflects a 'true' 20 per cent of electricity demand by 2020
  - » prevents the risk of the scheme reaching the penalty price
  - » excludes sectors for which the cost of the RET is a substantial threat to their competitiveness
  - » sets out a pathway to discontinue the Small-scale Renewable Energy Scheme (SRES)
  - » reduces the cost of the scheme to consumers
  - » does not extend the 2020 target and concludes the scheme once all obligations are met in 2030.

## 13. Assess the sustainability of the electricity market

The combination of falling demand and the RET-mandated supply is changing the way the wholesale electricity market operates. It has the effect of shrinking the contestable market – the portion of the market where wholesale electricity prices are set by competitive market forces – and is therefore reducing the return to incumbent baseload generators.

While these conditions would normally see those market participants exit the market, there are material financial and commercial barriers to exit for electricity generators.

## Evidence

Decommissioning a plant and site rehabilitation costs have not been fully quantified and can be commercially sensitive, but could well be in the order of hundreds of millions of dollars per site. There is an added disincentive of first-mover disadvantage. The generator that first withdraws from the market incurs significant costs in doing so while improving the market conditions for its competitors through the uplift in the wholesale price of electricity.

## Implication

These barriers to exit may instead see generators reducing costs with a view to recovering returns on investment. This cost reduction could come in the form of reduced investment in non-essential activities and plant maintenance. This could put at risk the reliability of supply, particularly during periods of peak demand. There is a risk that if diminishing investment in non-essential plant maintenance continues, generation capacity may not be reliable when it is most needed.<sup>64</sup>

Regardless of changes to the RET and unless a large generation facility exits the market, Australia's wholesale markets will remain oversupplied as demand for electricity is expected to further decline in the next three years (outside of Queensland) before flattening out.<sup>65</sup>

Without generation capacity exiting the market, spot prices will remain suppressed, which is not sustainable over the longer term. No business can operate at a loss forever. This situation could lead to the disorderly exit of some generators, and risk reliability without some ordered exit strategy.

## Recommendation

The Business Council recommends that the COAG Energy Council:

- commission independent analysis of the sustainability of Australia's electricity markets including investigating any barriers to entry and exit, as well as the adequacy of investment signals.

## 14. Adopt economically efficient reliability and planning standards

State-based reliability standards dictate the extent of investment in networks needed to meet peak demand and meet the needs of a growing population. The higher the reliability standard, in principle, the greater the cost to consumers.

Each state in Australia has its own approach to setting reliability standards. New South Wales and Queensland have the highest investment requirements to meet their standards in the country. However, experience does not suggest their electricity supply is any more reliable than other states which take an approach that considers the economic costs involved.

### 3. Improve electricity market efficiency

#### Evidence

Moving to a more economically efficient reliability framework for the transmission network could generate large efficiency gains in the order of \$2.2 billion to \$3.8 billion over 30 years.<sup>66</sup>

Reform in this area has been in the pipeline for years, yet a consistent framework has not been agreed through the COAG Energy Council. The most recent attempt to push this reform along was the request by SCER in 2013 for the AEMC to undertake a review to develop national frameworks and methodologies for electricity transmission and distribution reliability across the NEM.

#### Implication

In late 2013, the AEMC released its reliability frameworks for distribution and separately a framework for transmission. The key features of the frameworks were to provide greater economic rigour, transparency and independence in setting reliability targets. This involves explicitly assessing the expected costs of investments against the value that customers place on reliability and the probability of interruptions.

As a key reform to minimising future network expenditure to minimise electricity costs to consumers, reform to reliability and planning standards should be a condition of sale of any network assets. The New South Wales and Queensland Governments have both announced plans to sell their electricity network assets to the private sector. Moving to more efficient reliability standards at the point of sale is appropriate to provide a potential buyer with greater certainty regarding the nature of the regulatory regime applied to the asset.

#### Recommendation

The Business Council recommends that Australian governments:

- agree to adopt a framework for setting distribution and transmission reliability and planning standards that accords with economic probability of risk as recommended by the Australian Energy Market Commission (AEMC)
- the introduction of these standards should be a condition of the sale of any network infrastructure.

### 15. Privatising energy assets

The regulatory settings that govern electricity networks play a major part in determining the network costs consumers face. However, the management of these assets is also critically important to their overall cost structure.

#### Evidence

Figure 15 illustrates the AER's revenue allowances for electricity networks in previous regulatory periods. It shows that, typically, where network assets are government owned they have increased their electricity network revenue significantly more than privately owned and operated networks from the previous determination period.

This is evidenced in New South Wales and Queensland whose publically owned networks had the biggest increase in network revenue. It should be noted that the differences between private and publicly owned networks are likely to be due to a range of factors not only ownership, including regional reliability standards, capacity overhang and the planning approach (probabilistic or deterministic).

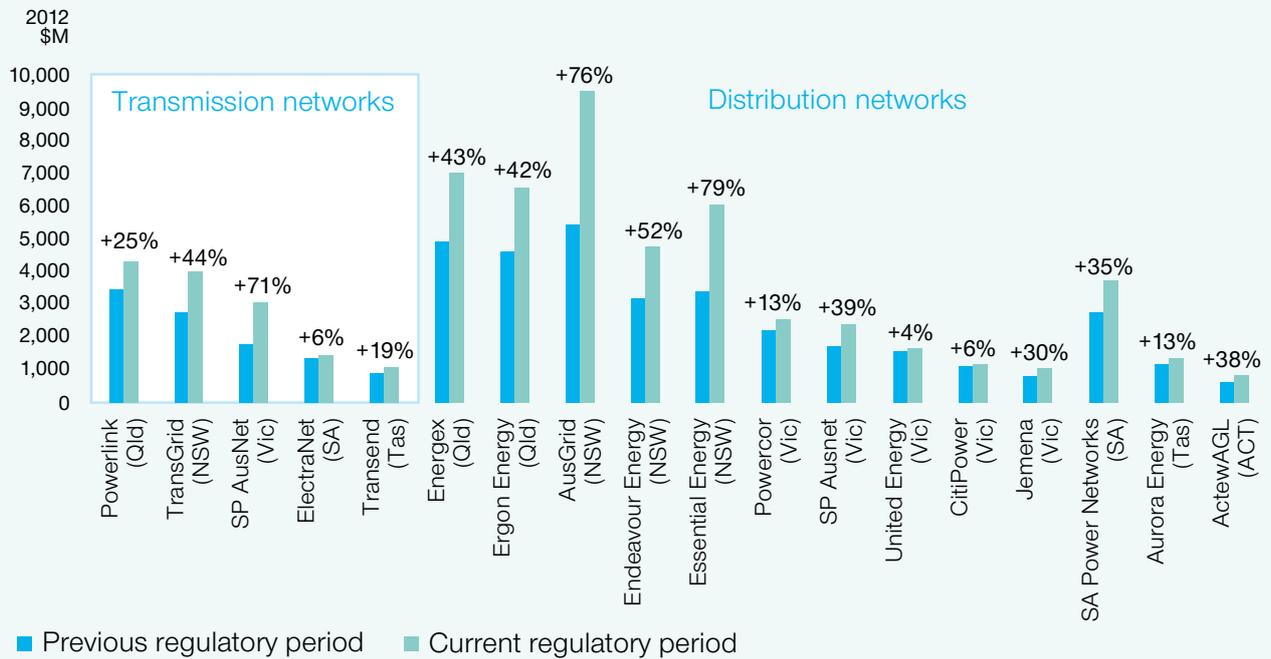
#### Implication

State governments place multiple constraints on state-owned corporations that are incompatible with their central purpose of maximising returns to their shareholders.

As part of its assessment of electricity networks, the Productivity Commission found that:

... state-owned network businesses have conflicting objectives, which reduce their efficiency and undermine the effectiveness of incentive regulation. Their privately-owned counterparts are better at efficiently meeting the long-term interests of their customers. State-owned network businesses should be privatised.<sup>67</sup>

**Figure 15: Electricity network revenue**



Source: Australian Energy Regulator, *State of the Energy Market 2013*, 2013.

The Business Council agrees with and supports the privatisation of all government-owned network assets. This will:

- improve the efficiency of how assets are managed for the benefit of electricity consumers
- improve the fiscal position of state governments
- provide an income stream to invest in major infrastructure projects.

The case for privatisation may be well understood by those closer to these issues but for many in the community the jury may still be out on the benefits of privatisation. A fresh look at the evidence of the benefits of private versus public assets should be undertaken to support state governments introducing these often controversial reforms.

Accordingly, the Business Council supports the Productivity Commission or equivalent body investigating new ways to provide the evidence behind the benefits for energy market reforms, such as an assessment of the benefits to GDP of reforms such as privatisation. AER benchmarking of network assets should also assist to highlight the disparity in efficiency between state-owned and private assets.

This would help identify the actual efficiency gains that can be made to the benefit of electricity consumers.

### Recommendation

The Business Council recommends:

- state governments privatise their energy assets, where there is effective competition and price regulation in place to promote the efficient long-term operation of the asset
- that the Australian Government investigate new ways to demonstrate the evidence behind the benefits for energy market reforms, such as a Productivity Commission assessment of the benefits to GDP of reforms such as privatisation and benchmarking of network performance by the Australian Energy Regulator.

### 3. Improve electricity market efficiency

#### 16. Introduce retail electricity pricing that signals demand peaks

It is peak demand that drives investment in electricity network infrastructure. The higher the peak levels of demand, the more additional network (and generation) capacity that is needed across the system. Because this spare capacity is infrequently used, it costs more to deliver per unit than electricity consumed during average demand periods.

Even if overall demand for electricity is declining, heatwave events remind us that peak demand can still reach record levels. This highlights the importance of putting in place the necessary price signals and market settings to enable a range of measures to manage these peak events.

Central to this must be time-of-use pricing or peak-pricing. That is, retail pricing that reflects the actual costs of supply at any time (in particular high demand periods) and allows the consumer to respond to higher prices in a way that manages those costs.

It is very similar to peak and off-peak pricing that is in place in telecommunications and public transport services. Without it, there is no financial incentive to change behaviour and to create and deploy measures to shave peak demand. Options such as time-of-use pricing need to be supported by smart meters.

#### Evidence

The Productivity Commission has found that 25 per cent of network costs in New South Wales are due to the investment needed to meet peak demand for just 40 hours of the year.<sup>68</sup> These 40 hours occur on the hottest days of the year due to the use of air conditioners, except in Tasmania where heating requirements in the winter lead to Tasmania's highest electricity use.

#### Implication

The key purpose for implementing flexible pricing options is to better reflect the actual costs of supplying and transporting energy to consumers. This enables consumers to better manage and minimise these costs over time. This in turn will ensure energy expenditure is as low as efficiently possible for all consumers in the long run.

Victoria is the only state to have mandated the rollout of smart meters and to be offering opt-in time-of-use pricing to consumers. The recent announcement in New South Wales to allow the business-led rollout of smart meters on a voluntary basis for existing dwellings is welcome.

Other states may be hesitant to go down the path of Victoria particularly due to the community angst following the mandated smart meter rollout. A well-informed education campaign on the benefits of smart meters and time-of-use pricing, such as how they can help reduce people's electricity bills, is essential to any future rollout.

#### Recommendation

The Business Council recommends:

- Australian governments allow electricity retailers to provide consumers with the option to move to better pricing signals that reflect peak times of the day (i.e. time-of-use tariffs)
- this should be accompanied by a well-informed communications strategy to educate the public on the issue of peak demand and the options available to reduce their bills.

## 17. Introduce network tariffs that reflect the cost of delivery

Technologies such as solar panels and air conditioning are changing the way the network is traditionally used. As network tariffs haven't moved with these changes, consumers are not paying their commensurate share of the costs from the benefits they receive from the network.

The AEMC is currently responding to two rule change requests on this issue to investigate the principles that underpin the way in which network tariffs are set and costs are recovered from consumers.

### Evidence

State government FITs, the RET, alongside declining unit costs have stimulated the rapid uptake of solar panels that are cross-subsidised by all energy users through the network costs they pay. This occurs because of how the cost of the network is recouped from electricity consumers.

With fewer kilowatts travelling down the network because homes are using the electricity generated from the solar panels on their roof, the overall fixed cost of maintaining the network asset is recouped from a smaller base. This makes the per unit cost (a kilowatt) higher for consumers without solar.

This means that currently consumers who do not have solar panels (often renters and those who cannot afford the high upfront capital cost) effectively cross-subsidise those who do – this is simply inequitable.

### Implication

Further reforms are needed to ensure a move to more efficient network tariffs that equitably recover network costs from the diversity of electricity consumers.

This would ensure network tariffs are more cost reflective by ensuring they reflect the capacity of the network used, rather than the volume.

### Recommendation

The Business Council recommends that Australian governments:

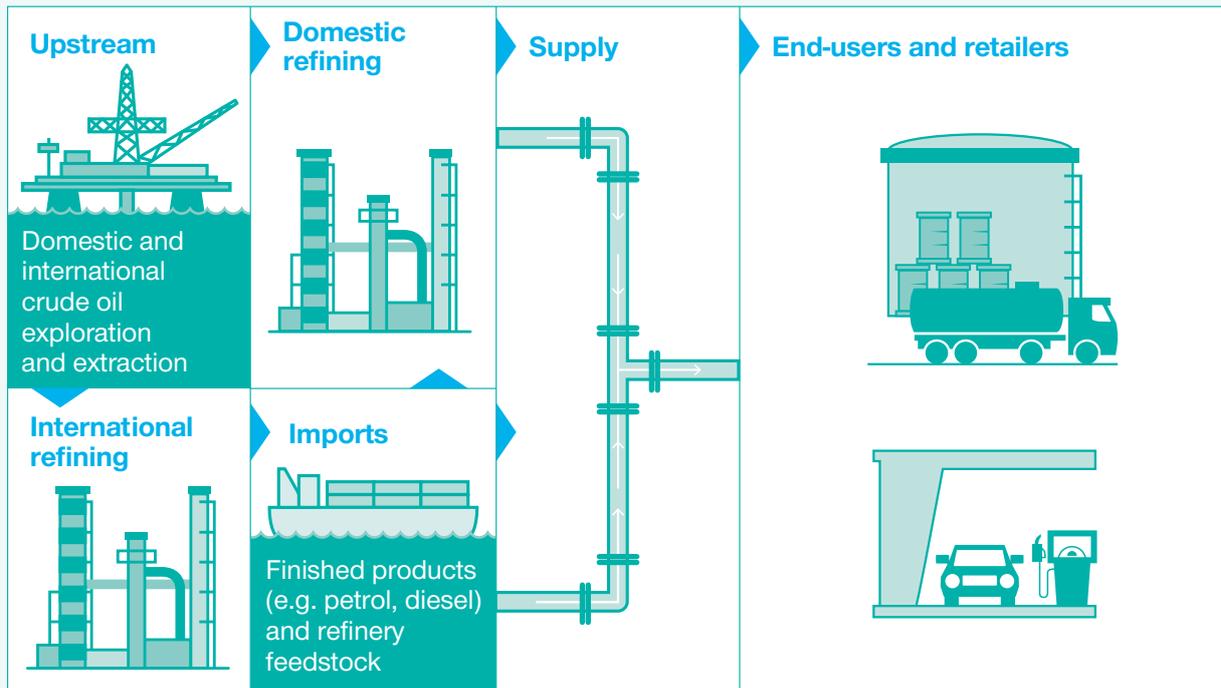
- support the work underway by the AEMC to develop more efficient network tariffs whereby the cost of network infrastructure is equitably recovered by the diversity of electricity consumers
- » support this reform through a communications strategy to explain the reasoning for the change to the general public.

# 4. Continue a markets-based approach to our liquid fuels policy

## Key points

- Australia's liquid fuels market is well functioning.
- Several government and independent reviews have consistently found that our market is delivering adequate, reliable and competitively priced fuel to Australian consumers and businesses.
- The Business Council expects the market will continue to meet Australia's fuel needs.
- But Australia's refining industry faces considerable challenges, including intense global competition from larger, more efficient mega-refineries, and surplus capacity in foreign markets.
- These factors have challenged the viability of Australia's refineries.
- The Business Council has identified key priority reform areas to improve the competitiveness and overall efficiency of Australia's liquid fuel industry. These include:
  - » maintaining the current national fuel quality standards
  - » examining transitioning all fuels towards excise neutrality, based on the relative energy content of fuels, as part of the upcoming tax reform white paper
  - » progressively phasing out government assistance to alternative and blended fuels
  - » ensuring efficient planning approvals for timely investment in new fuel import infrastructure
  - » promoting stable, well-functioning and resilient global liquid fuels markets
  - » continuing to monitor and assess Australia's liquid fuels security.

**Figure 16:** Australia's liquid fuels supply chain



Source: adapted from Australian Institute of Petroleum, *Maintaining Supply Security and Reliability for Liquid Fuels in Australia*, 2013.

## Overview of Australia's liquid fuels market

Australia is a small fuels market relative to a number of other countries. Yet our market offers a diversity of energy sources to meet the needs of our economy including:

- supplying our transport system
- fuelling business operations (such as mining, agriculture and industrial activities)
- powering electricity generation in remote locations.

Demand for fuel has steadily increased by about two per cent a year over the past decade, and is expected to continue to grow in line with population growth and economic activity.

Australia's fuel mix is made up of diesel, petroleum, jet fuel and liquefied petroleum gas, with biodiesel

and ethanol also making a small contribution to Australia's fuel supplies.

Australia's liquid fuels market comprises local production, exports and imports. The largest petroleum-producing basins are the Carnarvon Basin in the north-west of Australia, and the Gippsland Basin in south-eastern Australia.

Australia has other oil reserves that could be unlocked if they are economically viable, and with the support of a stable and attractive investment policy framework that encourages exploration and development in Australian energy resources.

Around three quarters of the crude oil produced in Australia is exported to Asian refineries due to its

## 4. Continue a markets-based approach to our liquid fuels policy

physical characteristics (which make it more suitable to higher-value products elsewhere) – this is mainly sourced from the Carnarvon Basin. The maturing Gippsland fields supply our domestic refineries, although production from these fields is in decline.

Australia has five major refineries. They are operated by BP (Bulwer Island Brisbane, Kwinana WA), ExxonMobil (Altona, Melbourne), Shell (Geelong) and Caltex (Lytton, Brisbane).

These refineries import the majority (around 80 per cent) of oil and refinery feedstock from international markets, predominantly from Asia, the Middle East and Africa. However, announcements have been made to close the Bulwer Island refinery in mid-2015, and the Kurnell refinery in Sydney was successfully converted into an import terminal in October 2014.

The use of imports to meet Australia's liquid fuels needs is not new; the market has balanced Australia's production of fuel with imports for many years now, and it has consistently delivered adequate and reliable supplies of liquid fuels.

Australia's liquid fuels market is subject to regular ACCC monitoring, which has consistently found the Australian market to be highly competitive. Fuel prices are also highly competitive, and the market has operated at import price parity since 1977, with Australia's fuel prices based on international benchmark prices.

Australia has access to reliable, mature and highly diversified international liquid fuels supply chains, and imports will continue to be an efficient way of meeting Australia's fuel needs.

### **Changes in Australia's refining sector are in line with international trends**

Global rationalisation of the liquid fuels industry is occurring due to the significant growth and expansion of refining capacity in Asia, which now outstrips demand. Europe and the US are also rationalising their liquid fuels markets, with eight European refineries closing since 2009.

The mega-refineries in Asia have lower operating costs, are more fuel efficient, have more sophisticated processing facilities and can produce large quantities of high-quality products from cheaper oil and feedstocks.

### **Australia's energy security depends on the growing interconnectedness of global energy trade**

Our proximity to Asia provides opportunities to take advantage of Asia's surplus refining capacity and to strengthen supply chains in the region.

For our liquid fuels market to continue to be competitive we need to ensure that Australia has the right regulatory environment.

Australia's energy security depends on access to well-functioning markets for liquid fuels and supply chains with a high degree of resilience.

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## Issues and recommendations

The Business Council expects that our liquid fuels market will continue to meet Australia's fuel needs; however, Australia's refining industry faces considerable challenges, including intense global competition from larger, more efficient mega-refineries, and surplus capacity in foreign regional markets.

These factors have challenged the viability of Australia's refineries, which are now seeking to manage pressures through efficiency gains and by reducing costs.

The Business Council considers that addressing the issues discussed below will help improve the competitiveness, and the overall efficiency, of Australia's liquid fuels industry.

## 18. Maintain the current national fuel quality standards

Australia's liquid fuels industry operates in a highly competitive global market. Australia's refineries were built over 50 years ago. Significant industry investment has gone into extensively upgrading and modifying them, but they still remain relatively small compared to the newly built mega-refineries in our regional market.

In addition to strong competition, there is surplus capacity in our regional market, which is depressing refiner margins.

Surplus capacity, low profitability of Australian refiners, and the need for routine large investments in plant and equipment are challenging the viability of our refineries. Some refiners have ceased – and some have announced that they will cease – operating as a refinery and convert to a fuel import terminal.

Remaining refiners are managing competitive challenges by improving the efficiency of their operations and through cost containment.

### Evidence

Asia's mega-refineries benefit from significant competitive advantages in terms of economies of scale, latest technology and costs.

Output for each of Australia's oil refineries (prior to recent closures) ranged from 75,000 to 138,000 barrels per day (bpd).

Modern plants produce at least 200,000 bpd, and the world's largest refinery, in India, produces over 1.2 million bpd – roughly 50 per cent more than Australia's total production.<sup>69</sup>

The mega-refineries also have lower capital, labour and input costs, and operate within a relatively less stringent regulatory framework compared to our refineries. All of these factors give international mega-refineries a strong competitive advantage over Australian refineries.

Australian refineries will also be captured under the 'Safeguard Mechanism' of the Australian Government's GHG emission policy. It is vital that the competitiveness of emissions-intensive trade-exposed industries (including our refineries) is not diminished. The Business Council encourages the government to engage closely with the industry in the design of the Safeguard Mechanism and in ensuring that emissions baselines are appropriately set.

### Implication

Australian governments can help the sector manage these competitive pressures by ensuring that existing regulation is efficient and that any new regulation does not further diminish the competitiveness of Australian refineries.

The Business Council supports successive governments' longstanding market-based approach to liquid fuels policy. This approach should continue.

The Business Council further supports the government's commitment to minimise regulatory red and green tape, and we welcome efforts to streamline reporting and harmonise regulation across jurisdictions.

National fuel quality standards are aimed at reducing GHG emissions and improving both air quality and fuel efficiency. To date there has been substantial investment undertaken by refineries to meet these standards. If these standards were to be increased, there is a risk that substantial further investment would be required to upgrade the plants to meet the increased specifications that may threaten their economic viability.

The Business Council supports the current national fuel quality standards and does not see any justification for significant adjustment to the standards in the absence of a full cost-benefit analysis.

In terms of policies to reduce GHG emissions from the sector, refineries will have the opportunity to participate in the Emissions Reduction Fund and bid for funding for projects such as improved boiler efficiency or replacements units. These projects could serve the dual purpose of helping to reduce GHG emissions and improving the efficiency of refining operations.

### Recommendation

The Business Council recommends that the Australian Government:

- continue its markets-based approach to liquid fuels policy
- maintain the current national fuel quality standards.

## 4. Continue a markets-based approach to our liquid fuels policy

### 19. Examine transitioning all fuels towards excise neutrality

The supply and consumption of liquid fuels in the Australian economy should be facilitated by market-based policies that promote competition and are technology and fuel neutral.

A range of government measures, however, seek to distort the market by mandating or promoting one fuel source over another. This includes measures such as increasing the uptake of alternative fuels through excise arrangements, production subsidies, mandatory targets and grants.

#### Evidence

Australia's fuel excise arrangements could be delivered by moving to a taxation regime that applies excises to all fuels based on their energy content.

The current tax treatment of transport fuels is based on a volume-based production tax (excise) rather than accounting for the fact that fuels are not equal in performance, as each delivers a different level of energy output.

For example, LPG produces approximately 77 per cent of the energy of petrol when combusted compared to ethanol, which produces approximately 68 per cent.<sup>70</sup> In effect, one litre of petrol will deliver a greater energy output (in the case of transport more kilometres travelled) than one litre of LPG or one litre of ethanol.

#### Implication

Government policy should create a level playing field for a variety of fuels to be supplied to the Australian market where fuels can compete on their merits to meet consumer preferences.

The advantage of moving towards energy-content fuel excise is that it would be as neutral as possible – minimising the influence of taxation on the choice between fuels.

The Business Council supports the market-led development of alternative and blended fuels. Government assistance to these fuels should be transitional and be progressively phased out to encourage fuels to be commercial and competitive in their own right.

Accordingly, the Australian Government should examine transitioning all fuels towards excise neutrality, based on the relative energy content of fuels, as part of the upcoming tax review.

#### Recommendation

The Business Council recommends that the Australian Government:

- progressively phase out government assistance to alternative and blended fuels
- examine transitioning all fuels towards excise neutrality, based on the relative energy content of fuels as part of the upcoming tax white paper.

### 20. Ensure efficient planning approvals for new fuel import infrastructure

Demand for liquid fuels has steadily increased over the past decade, and is expected to continue to grow in line with population growth and economic activity. Demand growth, coupled with declining oil production and refinery capacity, means that Australia needs to increase fuel imports to meet its fuel needs. To achieve this, new import infrastructure will be needed.

#### Evidence

Since 2003 Australia has been transitioning to greater imports of liquid fuels. This has been a relatively smooth process given our access to established and reliable global markets and highly diversified fuel sources.

Australia imports the majority (around 80 per cent) of oil and refinery feedstock from international markets.<sup>71</sup> Singapore supplies around 42 per cent of Australia's oil products with the remainder coming from refineries in Japan and South Korea. Most crude oil imports are from Malaysia, the United Arab Emirates and Indonesia (48 per cent altogether) and another 20 per cent of crude oil is from West Africa.<sup>72</sup>

In turn, Australia exports its crude oil production off the North West Shelf in Western Australia as it is too light or too heavy to be effectively used in domestic refineries. The bulk of this is exported to Asia.

Australia's northern and north-western regions rely on oil product imports due to the lack of sufficient regional refining capacity. The east coast imports crude oil for its refineries and domestic markets.

### Implication

It is expected that Australia's liquid fuels market will continue to make an orderly transition to increased imports. However, it will also require governments to exercise efficient planning, approval and regulatory processes to ensure timely and adequate investment in import infrastructure, including ports, terminals, storage and related distributional infrastructure.

For example, Mitsubishi Corporation announced in July 2014 that it would be launching a diesel fuel business (import, sales and distribution) in Australia and establishing a diesel import terminal at Port Bonython in South Australia. Commercial operation is expected by around the second quarter of 2016 and it is important that efficient planning approvals allow this to occur.

Additionally, governments and industry will need to work together to remove supply bottlenecks.

### Recommendation

The Business Council recommends that:

- governments ensure efficient planning approvals for timely investment in new fuel import infrastructure.

## 21. Promote resilient global liquid fuels markets

The government and industry also have an important role in engaging in multilateral forums to promote open, competitive, stable and resilient international markets.

This dialogue should be in the context of the commercial realities of today's global and regional fuel markets, and focus on the track record of these markets to deliver long-term stability.

The Business Council acknowledges Australia's participation in the IEA 1974 International Energy Program, which includes an obligation to hold oil stocks equivalent to 90 days of the previous year's average daily net imports. These stockholdings are designed to be released to market as part of a coordinated collective response to any future major disruptions in oil supply.

### Evidence

The Business Council is concerned that the methodology for calculating the 90-day obligation was designed in Europe 40 years ago, and may not reflect current market conditions or structures.

Australia's liquid fuels market is quite different to Europe's market, and much has changed in global and regional markets since 1974. For example, as part of normal market operations, Australia holds about a quarter of its stock on ships heading for Australia. However, none of these stockholdings is recognised in the IEA agreement, despite some non-fuel hydrocarbons being recognised.

The Business Council encourages the government to work with the IEA to ensure that the IEA program and measures are reflective of the current market circumstances and prospective liquid fuels developments.

As Australia's oil production declines, and our imports increase, our 90-day obligation (which is based on net imports) becomes more costly to achieve. The Australian Government recently estimated the costs of stock and storage infrastructure at \$6.8 billion.<sup>73</sup>

## 4. Continue a markets-based approach to our liquid fuels policy

This would be funded by government (taxpayers) or via mandatory industry stockholdings, with the costs passed on to consumers of liquid fuels.

The Business Council does not consider the government has presented a compelling case that Australia's energy security would be significantly enhanced through mandatory stockholdings, without imposing significant cost to consumers or taxpayers.

Such a costly policy would need to demonstrate that the benefits outweigh any identified risks, and the extent to which energy security would be improved.

Any policy of this nature should also be considered against the ability of other measures to reach the same outcome.

### Implication

The Business Council supports the development of our liquid fuel reserves, as it promotes our energy resource development and would also have the benefit of decreasing our net imports, thus reducing stockholding requirements.

The potential for new oil discoveries is reasonably prospective given that Australia is relatively unexplored when compared to the US. Possible new oil discoveries in Australia are likely to be in deepwater frontier basins (such as in the Great Australian Bight) or may be from oil shale resources.

The timelines for the development of these reserves is uncertain but should be taken into account when assessing our IEA 90-day obligation.

### Recommendation

The Business Council recommends that the Australian Government:

- continue to work with the IEA to ensure that Australia's unique circumstances with respect to prospective developments in liquid fuels are taken into account when assessing our 90-day obligation.

## 22. Continue to monitor and assess Australia's liquid fuels security

Australia's liquid fuels security should be continually monitored.

Accordingly, the Australian Government undertakes comprehensive analysis of Australia's liquid fuels security, including the:

- NESA
- *Liquid Fuel Vulnerability Assessment*
- *Competitive Pressures on Domestic Refining Strait of Hormuz*
- *Australia's Maritime Petroleum Supply Chain*

Collectively, these reports contribute to the overall understanding of Australia's energy security position.

### Evidence

In addition to these reports, the most recent assessment of Australia's liquid fuel security, the 2013 House of Representatives bipartisan report into Australia's oil refining industry, found that Australia enjoys a high level of liquid fuels security because of our access to well-functioning, diverse and resilient supply chains.

### Implication

The Australian liquid fuels market is well functioning and efficient. This is identified by government assessments including the NESA (and related) reviews,<sup>74</sup> the ACCC monitoring reports,<sup>75</sup> and the 2013 parliamentary inquiry into Australia's oil refining industry, which all confirm that Australia's liquid fuels market is delivering adequate, reliable and competitively priced fuel to Australian consumers and businesses.

It is important that periodical assessments of Australia's liquid fuels security continue to occur.

### Recommendation

The Business Council recommends that the Australian Government:

- continue to monitor Australia's liquid fuels security through the continuation of the National Energy Security Assessment (NESA) every two years.

# 5. Manage our greenhouse gas emissions cost effectively

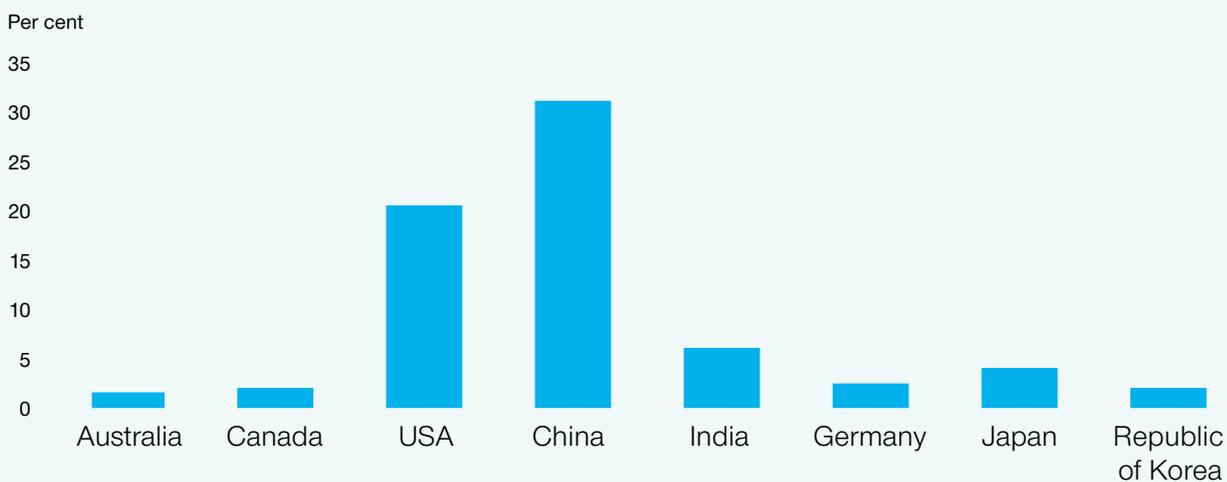
## Key points

- Australia has a bipartisan commitment to reduce Australia's greenhouse gas emissions by five per cent on 2000 levels by 2020.
- But the lack of bipartisan support on the mechanism to meet this target is not serving the community, business or the environment well.
- This has led to fragmented and poorly designed green energy policies, ranging from state-based energy efficiency schemes to the RET, which are not the least-cost way to reduce emissions and which add to the cost of electricity.
- Ineffective schemes that cost more than they deliver in benefits should be improved or removed, clearing the way for effective policy.
- The challenge for Australia is to garner community consensus and bipartisan support around a common set of energy and climate change policy principles designed to:
  - » reduce our GHG emissions commensurate with global efforts, at least cost
  - » while not adversely impacting our economic competitiveness.
- The government's proposed Emissions Reduction Fund and Safeguard Mechanism could provide a way to meet these goals, if it includes access to international permits, which will lower costs and provide a lever to assist if there are difficulties in achieving the 5 per cent target.
- Australia should also make the most of its world-class research and development expertise in low-emission and renewable energy technologies by continuing to support innovations that could provide future export and employment opportunities.
- Beyond 2020, Australia must continue to play our part in reducing global emissions, and any post-2020 international commitment by Australia must be at least economic cost to maintain our international competitiveness.
- The Business Council has identified six key areas to reduce GHG emissions at least cost to ensure Australia remains internationally competitive:
  - » integrating our energy and GHG emissions policies through common principles
  - » engaging with business on the detailed design of the Emissions Reduction Fund and Safeguard Mechanism
  - » allowing for the purchase of credible and verifiable international emission reduction permits
  - » engaging with business as the government develops its approach to post-2020 international deliberations on GHG emissions reductions
  - » improving or removing inefficient or duplicative green energy policies
  - » supporting research and development of low-emission and renewable energy technology through amendments to ARENA.

## 5. Manage our greenhouse gas emissions cost effectively

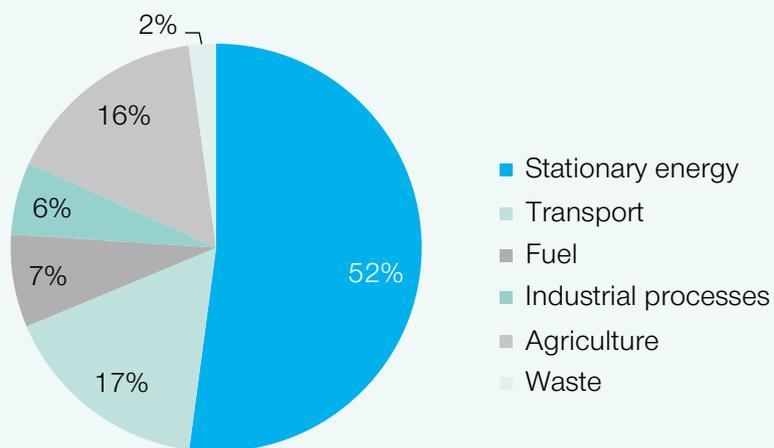
### Greenhouse gas emissions at a glance

**Figure 16a:** Select countries' share of greenhouse gas emissions, 2012



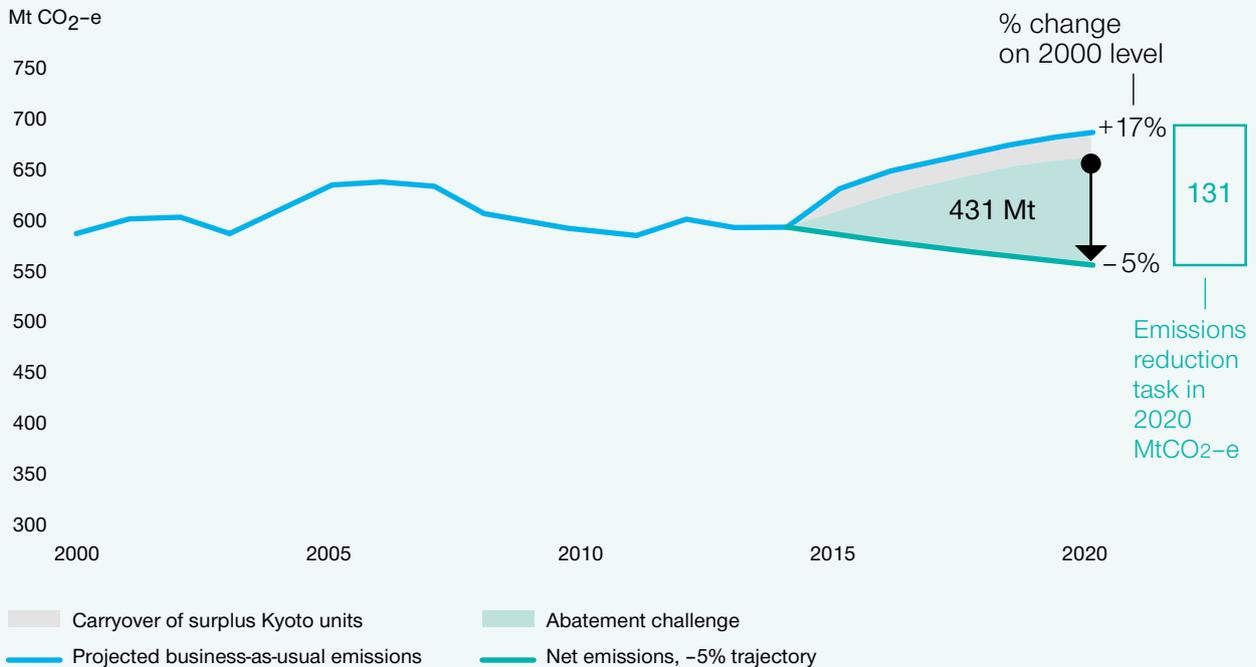
Source: Greenhouse Gas Inventory Reports and National Communications for UNFCCC, various countries.

**Figure 16b:** Australia's greenhouse gas emissions by sector, 2012



Source: Department of the Environment, *National Inventory Report 2012, 2014*.

**Figure 16c: Australia's emissions profile**



Source: Australian Government, Department of the Environment, *Australia's Abatement Task*, fact sheet, 2013.

## Overview of Australia's greenhouse gas emissions

Energy has historically been a key source of comparative advantage for Australia and will continue to be vital for our future economic growth. Australia's approach to reducing GHG emissions must therefore recognise the unique role energy plays in our economy.

Decisions regarding climate change mitigation policy have significant implications for the energy sector. By integrating energy and climate change policies into an overarching policy framework, the dual objective of increasing our economic prosperity while contributing to a reduction in global GHG emissions can be achieved.

That framework should support international trade of energy exports and provide for the reliable and competitively priced supply of energy, while meeting our environmental objectives in a way that does not place Australia at a competitive disadvantage to the rest of the world.

There are some who believe that closing Australian businesses that export fossil fuels will benefit global climate change. But energy is a commodity that is widely traded globally. If energy exports from Australia were to cease tomorrow, they would quickly be replaced by trade from another country whose exports could be of a lower quality, be higher emitting and from a country with lower environmental and safety standards than Australia.

Any response to climate change therefore must be a global one with Australia acting in tandem with other major GHG emitters, including our competitors.

Australia has committed to reduce our emissions by 5 per cent on 2000 levels by 2020. While this target has bipartisan agreement, there is not bipartisan agreement on the policies to achieve this, or on our commitment post-2020.

The biggest challenge to Australia effectively reducing emissions is this lack of bipartisan support, which has been essential to progressing other major reforms in the Australian economy.

## 5. Manage our greenhouse gas emissions cost effectively

Australian trade policy, which for the most part has had bipartisan support, has provided lasting benefits to the Australian economy. Since the 1980s Australia has championed trade liberalisation, and strong bipartisan support has allowed successive Australian governments to overshadow populist calls for a move back to protectionism.

The same is needed on Australia's response to climate change. The challenge is to try and build bipartisanship around the principles to underpin Australia's approach to emissions reduction, both to achieve the 2020 target and future commitments at least cost in a way that does not place Australia at a competitive disadvantage.

The next 12 months will see the evolution of a new international agreement to progress GHG emissions reduction for the period post-2020. A global response is needed and Australia has a role to play. That role should be commensurate with concrete and verifiable action by other countries so as not to put Australia at an economic disadvantage to competitor countries.

As Australia prepares for the post-2020 international climate change negotiations, it will be important that the Australian Government makes commitments and identifies policies that align with Australia's economic structure and national interest while supporting global action to reduce GHG emissions.

As part of this, Australia should assess the economic costs of any proposed actions to reduce emissions relative to other countries before finalising its commitment.

Technology development will continue to be essential to finding cost-effective options to reduce emissions. There is an important role for governments in supporting R&D in low-emissions technology, where the risks are too great for the private sector to invest on its own.

But this support should allow for the competitive tendering of funds and the consideration of all forms of low-emissions technologies and processes, not just renewable energy. This would give equal opportunity to all cost-effective emission reduction technologies.

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## Issues and recommendations

The Business Council considers that climate change is a global challenge which requires a global response to manage the risks and adverse impacts. Australia should be a responsible participant as part of any global response to mitigating the risks of climate change.

In this context, the Business Council has outlined below ways to best manage our GHG emissions.

### 23. Better align energy and climate change policy

In Australia, any consideration of climate change policy cannot be done in isolation of energy policy. This is because stationary energy<sup>76</sup> accounts for about half of Australia's GHG emissions.

Australia's energy markets are some of the most efficient in the world, and emission reduction policies need to operate effectively alongside these markets to ensure our energy markets can continue to deliver beneficial outcomes to consumers, in terms of price, reliability and the environment.

The Australian Government's Energy White Paper presents the opportunity to integrate climate change and energy policies by setting out a shared policy objective and set of principles to guide policy development and to amend existing policies accordingly.

The principles the Business Council used to guide the development of this report are in the Summary Report.

## Evidence

There are a number of green energy policies that were developed to promote renewable energy that had unintended consequences and ultimately cut across the ability of our electricity markets to deliver cost-effective electricity to consumers.

For example, FITs were effective in spurring the uptake of rooftop solar panels, but these costs are recovered through higher electricity prices for all consumers.

In the case of Queensland, the state government has now made a decision to bring FITs down to a level more reflective of the wholesale electricity price observed in the market, but Queensland consumers will continue to pay for the overly generous scheme for years to come.

The Queensland Competition Authority expects the scheme to cost around \$3.4 billion by 2028, adding around \$67 to the average customer's annual electricity bill in 2013–14 and up to \$276 in 2015–16.<sup>77</sup>

Not only are these policies expensive for consumers, they are not cost-effective in reducing Australia's emissions.

A report by the Productivity Commission on carbon emission policies in key economies found that:

In Australia in 2010, the combined effect of the Renewable Energy Target and state and territory FITs was estimated to have provided a subsidy equivalent to solar PV of A\$149–194 million.

Abatement from solar PV through these policies was estimated to be 0.2–0.3 Mt CO<sub>2</sub>, which implies implicit abatement subsidies for solar PV of A\$432–1043/t CO<sub>2</sub> – some of the highest identified in this study.<sup>78</sup>

## Implication

An integrated approach to energy and climate change policy based on market-based principles would enable Australia to meet its environmental objectives more efficiently. It would allow issues between cost, reliability and emissions reduction to be balanced out holistically at the policy development stage.

This could ensure the boom/bust approach to green energy policies is avoided and increase the likelihood of policies being around for the long term.

Sustainable longer-term policy is good for business as it provides greater certainty and is good for the environment because it provides a lasting means to reduce emissions.

The starting point to deliver this is to develop a set of policy principles that are applicable to both energy and climate change policy. This could provide a pathway to direct Australia through what has otherwise been a misaligned and stop-start approach to emission reduction policy, which ultimately leads to higher costs for consumers.

## Recommendation

The Business Council recommends that the Australian Government:

- establish a clear objective and principles to guide the development of an aligned energy and climate change policy agenda
- ensure existing and future energy and climate change policies, such as the Renewable Energy Target, are consistent with this policy framework or amended accordingly. This should ensure policies are complementary to our energy markets.

## 24. Consult on the design of the Emissions Reduction Fund and Safeguard Mechanism

The government's \$2.55 billion Emissions Reduction Fund (ERF) aims to reduce Australia's emissions by purchasing GHG emissions reductions from enterprises through a competitive bidding process.

The ERF could stimulate innovative ways to reduce GHG emissions across all sectors of the Australian economy; however, the extent and cost of abatement from the ERF will not be known until the program begins.

There is a risk that if the cost of abatement bidded into the ERF is too high, it may not represent value for money. There is also the risk that if abatement is insufficient, then the government may need to find additional ways to reduce GHG emissions. This risk can be managed by allowing the purchase of international credits to achieve our emissions reduction target.

## 5. Manage our greenhouse gas emissions cost effectively

It is important that the current consultations ensure the design of baselines and the Safeguard Mechanism allow for increased industry activity and economic growth while preventing excessive growth in GHG emissions.

### Evidence

International credits can be sourced from the United Nations Clean Development Mechanism (CDM) carbon market, which was set up by the United Nations Framework Convention on Climate Change (UNFCCC). This is the same body that facilitates the negotiation of international GHG emissions, and under which Australia committed to its five per cent GHG reduction target.

The CDM carbon market was established so that developed countries could purchase international credits to achieve their GHG targets. These credits are currently trading for less than one dollar.

The use of international credits presents a lower-cost means to help achieve our GHG emissions reduction target, and has the same benefit of reducing global emissions.

A tonne of GHG emissions reduced through the CDM has the same effect on global GHG emissions as a tonne of GHG emissions reduced in Australia. There is no compelling reason why Australians should pay more than the rest of the world to achieve its GHG emissions reductions.

The second part of the Direct Action Plan is a Safeguard Mechanism that sets a baseline GHG emissions for the top emitters in Australia, and a (yet-to-be-determined) compliance measure to deter entities from exceeding their GHG emission baselines.

If the Safeguard Mechanism and its baselines are not designed in conjunction with business, it could risk penalising businesses unintentionally and threatening their competitiveness.

### Implication

The Business Council will work constructively with the Australian Government in its development of the ERF and the Safeguard Mechanism.

The GHG emissions profile of established industries and facilities within an industry will vary for a range of technological, process, geological and historical reasons. Care will need to be taken in setting baselines, as a singular baseline approach will not meet all circumstances.

There is also a degree of variability of GHG emissions due to factors like changes in production, seasonal demand or changes in outputs and maintenance. This variation of GHG emissions will need to be factored in to any determination of baselines.

In setting baselines for new industries or facilities and for substantial expansion of facilities it cannot be assumed there is a standard accepted best practice level of emissions, so a case-by-case consideration may be required.

Setting baselines is a complex task and it will require time and genuine engagement with business to get it right. Consultation with business on these matters will be important so as to ensure investment is not lost to other countries.

### Recommendation

The Business Council recommends that the Australian Government:

- engage with stakeholders, particularly affected businesses, on the detailed design of the Emissions Reduction Fund and Safeguard Mechanism to help facilitate its successful implementation and achievement of our 2020 greenhouse gas emissions reduction commitment
- allow for the purchase of international emissions reduction permits as a least-cost means of achieving Australia's 2020 emissions reduction commitment.

## 25. Consult on the post-2020 international commitment to reduce emissions

Australia must continue to play our part in reducing global emissions over the longer term and it must be at least economic cost.

In the interest of a predictable long-term framework for GHG emissions reductions, and the need to inform future energy investment decisions, the Business Council encourages the government to set out clear guidance and criteria for GHG emissions reductions beyond 2020.

The government should determine Australia's commitment, recognising the structure of the Australian economy and with regard for the national interest. This includes recognition of both the costs in responding to the risks of climate change and the risk of not responding.

Any commitment by Australia should be commensurate with concrete and verifiable action by other countries so as not to put Australia at an economic disadvantage to competitor countries.

Australia should also assess the economic costs of its actions relative to the economic costs of actions of other countries, before finalising our commitment.

### Evidence

Some have argued that Australia's 2020 commitment to reduce GHG emissions by 5 per cent is a low target. It is worth noting, however, that the change from business-as-usual (BAU) levels of emissions required to meet this commitment is a 17 per cent reduction in GHG emissions.

Further, Australia's target represents one of the highest in terms of the percentage reduction in emissions intensity. That is the reduction in emissions per unit of economic output between 2005 and 2020. Australia's 5 per cent commitment represents a 45 per cent emissions intensity reduction compared to the European Union with a 30 per cent reduction, Norway 53 per cent, US 36 per cent, UK 39 per cent and Germany 40 per cent.<sup>79</sup>

Despite the complexities, comparing the economic effort in achieving various emissions reduction targets is important to ensure Australia is not put at an economic disadvantage.

In June 2010 Harvard University undertook analysis that compared 2020 commitments made by countries at the United Nations Climate Change meeting in Copenhagen in 2009. The modelling assumed Australia took only domestic action to reach the 5 per cent target and found Australia had the highest GDP losses of any country, with China ranked sixth and the USA ranked eighth.<sup>80</sup>

### Implication

To not put at risk the competitiveness of the Australian economy, our future GHG emissions reduction commitment should be commensurate with global action.

With the growth in emissions in countries such as China, India and Brazil it will be important that the next global agreement includes commitments from all major emitters.

It can be expected, given the direction of the current international negotiations, that the next global agreement will be built on pledges from individual countries which will be in the national as well as global interest.

Given this likely approach, Australia needs to take into account the relative economic costs and industry sector impacts of the pledges of different countries and compare these with Australia's efforts to ensure there is comparable effort.

A strong and competitive economy will be necessary if Australia is to have the capacity to transition to a lower-emissions economy and manage the impacts.

### Recommendation

The Business Council recommends that the Australian Government:

- engage with business as it considers Australia's contribution to international deliberations with regard to reducing global greenhouse gas emissions post-2020
- ensure there is an assessment of the economic cost of Australia's post-2020 commitment relative to major emitters and developed countries
- allow for the purchase of international emissions reduction permits as a least-cost means of Australia achieving any post-2020 emissions reduction commitment.

## 5. Manage our greenhouse gas emissions cost effectively

### 26. Improve or remove inefficient green energy policies

The Business Council welcomes and supports governments' recent efforts to rationalise duplicative and inefficient green energy measures. Such duplication creates inefficiencies and higher compliance costs for businesses and households.

#### Evidence

There has been a proliferation of green energy policies over the last decade both at the federal and state levels and the cumulative impact of these policies is very significant for business customers.

The repeal of the carbon tax will lessen the impact of these policies, but the RET, FITs and state-based energy efficiency schemes still account on average for around 14 to 19 per cent of the electricity bill for a large business.<sup>81</sup> For a residential consumer these costs make up closer to an average of five per cent of their electricity bill.<sup>82</sup>

An example of rationalising schemes that was found to be adding more cost than benefits is the Victorian Energy Efficiency Target (VEET) scheme. The scheme was aimed at helping consumers minimise their energy costs by providing discounts on energy efficiency services and products, but it did this by increasing the cost of electricity to consumers.

A recent review of the scheme found that:

... continuing the program would come at a significant cost to many Victorians, particularly disadvantaging those on lower incomes. This is because they would have to continue to pay for the scheme through their energy bills and would only be able to access its benefits through purchasing more expensive products.<sup>83</sup>

#### Implication

Increases in electricity prices add to the cost base of many of Australia's electricity-intensive industries, such as steel manufacturing and aluminium smelting. Australia's historically low electricity prices mean there are many sectors that have built up around one of Australia's previous points of comparative advantage.

Higher electricity prices, however, are eroding the competitive edge once held by these businesses and the RET is a significant contributor to increases in electricity prices for these businesses.

The Business Council encourages the Australian Government to continue to rationalise and streamline measures, and work with its state, territory and local government counterparts to undertake cost-benefit analysis of remaining green energy policies and remove those that are found to be overly costly or that duplicate other schemes.

#### Recommendation

The Business Council recommends that the Australian, state and local governments:

- conduct cost-benefit analyses of remaining green energy policies, such as state-based energy efficiency schemes, and improve or remove those where the costs outweigh the benefits or are duplicative.

### 27. Support research and development in low-emission and renewable energy technology

The government's overarching energy and climate change policy should be open to targeted support for all forms of emerging low-emission technologies that offer opportunities for least-cost GHG abatement, not just support for renewable energy.

#### Evidence

There is a role for government, in partnership with the private sector, in low-emissions research and development where the risks may be too great for the private sector to take on, on its own.

In continuing to offer government support, Australia will be better placed to avoid suboptimal investment in technological innovation and minimise the risk of missing out on capturing the benefits of our ingenuity.

Adopting a technology-neutral approach in support of emerging technologies at the R&D stage will provide the opportunity for a greater mix of technologies to advance, so that Australia has a better chance of developing commercially successful energy technologies.

A range of emerging technologies should be eligible for support if they meet the appropriate due diligence requirements and can demonstrate a clear pathway to commercial viability. Technologies that could be supported include:

- renewable energy
- storage technologies
- low-emission technologies
- energy-efficient industrial processes and technology.

Australia alone cannot do everything when it comes to innovation.

Australia, like most countries, is largely a technology-taker.

Australia should seek to invest in areas where our research and development is world leading, for example in fields such as storage and solar technology and hybrid systems.

Australia should be strategic about the investments we make in clean energy technology and invest in Australian innovations that play to our strengths in the global supply chain. In doing so, we can maximise the value of these investments to the Australian taxpayer.

### Implication

Australia should seek to capitalise on our world-leading expertise in research, development and deployment of low-emission and renewable energy technologies and systems. We should seek to build our existing knowledge infrastructure to continue to generate new ideas, and to distribute these ideas widely so that they can be put to practical application.

This could be facilitated through the undertaking of public-private partnerships.

The Australian Renewable Energy Agency (ARENA) is the right organisation to do this, and it should be retained. Putting an end to the momentum Australia is gaining as an innovator of renewable energy technologies and systems, particularly in remote off-grid technologies, risks losing the potential for export and deployment of these technologies in developing or isolated regions around the globe.

ARENA has a proven track record in undertaking effective due diligence in the projects it selects to invest in, and in the ongoing monitoring and management of the contracts it enters into. This is critically important to ensure the prudent expenditure of taxpayer funds. Given ARENA's effectiveness in this regard, the case for dismantling the organisation is not clear.

The Business Council supports the government's imperative to get the budget back into surplus, but not at the expense of closing an institution that has commercial expertise, that is not readily available in a government department and which has been operating effectively, with so much potential ahead.

A reduction in ARENA funding to a more sustainable level is appropriate; however, ending its funding altogether would continue the stop/start approach to policy in an emerging technology sector that requires policy certainty to invest.

### Recommendation

The Business Council recommends the Australian Government:

- renew the focus on research and development of technological advancements to support the lowering of emissions from all energy sources and on adaptation to manage the long-term impacts of climate change. Investment in research and development represents a significant business opportunity for Australia, and should be pursued where appropriate
- retain the Australian Renewable Energy Agency (ARENA), and:
  - » expand its investment mandate to the development of emerging low-emission technology and systems, in addition to renewable energy technology, to allow for the development of a greater range of least-cost greenhouse gas abatement technologies
  - » for continuity, retain ARENA's board and its governance structure and continue its independent, commercially driven approach to support emerging energy technologies
  - » change ARENA's funding to provide more certainty through an ongoing rolling fund of \$100 million per annum, with immediate savings to be returned to the government's budget.

# Glossary

<b>ABS</b>	Australian Bureau of Statistics	<b>IPART</b>	Independent Pricing and Regulatory Tribunal
<b>ACCC</b>	Australian Competition and Consumer Commission	<b>LNG</b>	Liquefied natural gas
<b>AEMC</b>	Australian Energy Market Commission	<b>MCA</b>	Minerals Council of Australia
<b>AER</b>	Australian Energy Regulator	<b>MtCO<sub>2</sub></b>	Metric tonnes of carbon dioxide
<b>APPEA</b>	Australian Petroleum Production and Exploration Association	<b>MtCO<sub>2</sub>-e</b>	Metric tonnes of carbon dioxide equivalent
<b>ARENA</b>	Australian Renewable Energy Agency	<b>Mt</b>	Metric tonne
<b>BAU</b>	Business-as-usual	<b>MW</b>	Megawatt
<b>Bpd</b>	Barrels per day	<b>NEM</b>	National Electricity Market
<b>BREE</b>	Bureau of Resource and Energy Economics	<b>NESA</b>	National Energy Security Assessment
<b>CDM</b>	Clean development mechanism	<b>OECD</b>	Organisation for Economic Co-operation and Development
<b>COAG</b>	Council of Australian Governments	<b>PJ</b>	Petajoules
<b>CO<sub>2</sub></b>	Carbon dioxide	<b>PV</b>	Photovoltaic
<b>CSG</b>	Coal seam gas	<b>R&amp;D</b>	Research and development
<b>DWGM</b>	Declared Wholesale Gas Market	<b>REC</b>	renewable energy certificate
<b>EMA</b>	Enterprise Migration Agreement	<b>RET</b>	Renewable Energy Target
<b>EPBC Act</b>	Environment Protection and Biodiversity Conservation Act	<b>SCER</b>	Standing Council on Energy and Resources
<b>ERF</b>	Emissions Reduction Fund	<b>SRES</b>	Small-scale Renewable Energy Scheme
<b>FIT</b>	Feed-in tariff	<b>STTM</b>	Short-Term Trading Market
<b>FLNG</b>	Floating liquefied natural gas	<b>SWIS</b>	South West Interconnected System
<b>GDP</b>	Gross domestic product	<b>UNFCCC</b>	United Nations Framework Convention on Climate Change
<b>GHG</b>	Greenhouse gas	<b>VEET</b>	Victorian Energy Efficiency Target
<b>GST</b>	Goods and services tax		
<b>IEA</b>	International Energy Agency		

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