

ENERGY GREEN PAPER SUBMISSION

4 NOVEMBER 2014



Principal Recommendations In Response to the Energy Green Paper

Preamble

In February 2014, the Energy Policy Institute of Australia put forward 26 recommendations to the Department of Industry in response to the Department's November 2013 Issues Paper.

At the Energy State of the Nation forum in March 2014, participants prioritised these recommendations, which have all been factored into this submission.

On 23 September 2014, the Minister for Industry, the Hon Ian Macfarlane, issued an Energy Green Paper (EGP), outlining and inviting comments on 19 'energy policy goals' to inform the preparation of an Energy White Paper (EWP). As the Minister noted in the Foreword, 'Our energy diversity is one of Australia's natural strengths and one of our most potent competitive advantages.'

• The economic context for Australian energy policy: improving Australia's competitiveness

On 14 October 2014, following the issue of the EGP, the Prime Minister, the Hon Tony Abbott, and the Minister for Industry issued the Industry Innovation and Competitiveness Agenda, which we refer to throughout this submission as 'the Competitiveness Agenda.'¹

They described the Competitiveness Agenda as 'a central part of the government's Economic Action Strategy to build a strong, prosperous economy for a safe, secure Australia.' They emphasised that 'strengthening Australia's competitiveness is the key to future prosperity.'

They also announced that the government would establish five initial Industry Growth Centres to foster the better use by industry of sector-wide research, including a growth centre on oil, gas and energy resources.

The Competitiveness Agenda is also intended to support Australia's G20 growth strategy.

On 21 October 2014, as a precursor to the G20 Summit in Brisbane, the Prime Minister expressed the view that 'stronger growth is the key to every economic problem' and that 'the G20 nations [should] dismantle barriers to free trade and to investment in infrastructure – both critical to economic growth.' He emphasised that 'lower tax, less red tape and freer trade are the best and most successful means to higher economic growth and more jobs.²

Greenhouse gas emissions policy

On 31 October 2014, the Senate passed legislation to put in place the government's Emissions Reduction Fund, which has now become the centrepiece of its plan to reduce

¹ *Industry Innovation and Competitiveness Agenda,* Department of the Prime Minister and Cabinet, Australian Government, October 2014.

² The Hon Tony Abbott, 'G20 must lead way in driving reform, restoring growth,' The Australian 21 October 2014.



emissions without a carbon tax.

The \$2.55 billion fund is intended to help Australia meet its emissions reduction target of five per cent below 2000 levels by 2020.

Competitive auctions will be held by the Clean Energy Regulator and the government will enter into contracts to buy emissions reductions from successful bidders at lowest cost. Payment for abatement will only be made when emissions reductions are actually delivered.

• Support for the government's broad approach to energy policy

The Institute supports the government's broad approach to energy policy formulation as articulated in the EGP:

'There is no 'silver bullet' to achieve the change needed in the energy sector. Coherent and constructive market reform, and properly integrated polices, will give industry and consumers confidence in energy policy.

Reforms are needed to drive productivity throughout the sector. Improvements in productivity can flow from increasing the return on capital, reducing labour costs, more productive use of energy, clearer community support for resources projects, more efficient regulation, and infrastructure availability. This will maintain the supply of reliable and affordable energy to households and businesses. It will also allow energy resources exports to continue to grow as a source of employment and wealth for the nation.'

• Support for all of the government's 19 energy policy goals – so far as they go

The Institute also supports all of the government's 19 energy policy goals specified in the EGP, most especially technology neutrality and keeping all options open, as well as the need to bring on new gas supply.

The Institute considers however that a number of complementary and augmentative measures are necessary as outlined in this submission.

• A lack of completeness - the need to articulate a clearer vision

The Institute considers that the EGP is incomplete in one fundamental respect – it does not articulate clearly the part that Australia could play in helping the world make the transition to a low-carbon society.

Australia must surely have some part to play. An integrated national energy policy cannot be complete unless it incorporates a vision as to how the global transition to a low-carbon society can be affordably made without destabilising Australia's energy system.

• Excessive politicisation: the main cause of the lack of an 'investment grade' energy policy

We need to be reminded of the uncomfortable reality that Australia presently lacks a reliable or 'investment grade' energy policy.



Politicisation has been the main cause .³ This is now recognised by both sides of politics.⁴

Although there are massive global funds available for investment, investors are risk-averse and will not allocate funds to countries that do not offer policy certainty and stability.

• The central policy response

The Institute is certain that the principles of technology diversity and neutrality and support for innovation are central to an integrated national energy policy.

This needs to be combined with effective, trustworthy institutional arrangements for planning, consultation and delivery.

The Institute's Nine Recommendations

• Ranking

The Institute puts forward nine energy policy recommendations, ranked in order of priority below.

• The need for coherency

All of the Institute's recommendations are directly or indirectly interrelated. They are therefore framed as a package, although they will need further coherency

The Institute's aim at this time is to suggest a platform for a policy statement that could at an appropriate point morph into a coherent whole.

• The need for an implementation mechanism

³ As we explained in our February 2014 submission to the EWP process:

[&]quot;In the view of the Institute, the politicisation of climate change and environmental issues spilled over to the energy industry, causing an excessive and unnecessary politicisation of energy issues.

This excessive politicisation has created uncertainty for investors; it has resulted in discriminatory policy treatment towards competing energy technologies, with governments picking winners and losers; it has created an uneven playing field with unpredictable rules; it has induced the energy industry to fracture into rival interests, forcing them to compete for subsidies or for favourable policy treatment; and it has provoked disquiet and mistrust in the community. There is also a lack of appreciation in the community about the central role of fossil fuels in energy supply and their continuing long-term importance to global economies.

This has led to high electricity and gas prices for consumers and a high level of political risk for investors. Providers of finance for investors find it hard to assess and price political risk. Some will not accept it at all and, when they do, they tend to write it into their financing arrangements as a 'material adverse risk' for which borrowers are responsible, with the possible consequence of triggering early repayment."

⁴ "Never has it been more important to take the politics out of our national energy policy and use a scientifically based and economically sound approach to creating long term solutions." Hon Gary Gray MP, Speech to Energy Users Association of Australia, 14 October 2014.



A mechanism is required for effective strategy determination, implementation, resourcing and oversight, with appropriate systems of measurement and reporting. Such a mechanism should embody provision for stakeholder engagement and for regular policy review.

• The need not to rush

The Institute believes that the task of formulating a reliable energy policy in Australia is vital to the national wellbeing. It is however more important to get it right – hence we caution against rushing it.

• The need for follow-through

Once adopted, energy policy needs to be followed through by the creation of streamlined institutional capacity for regular policy review, supported by new or modernised regulation.

We now turn to our nine recommendations.

Recommendation 1: Technology diversity and neutrality

Technology diversity and neutrality should be the paramount and fundamental principle of modern energy policy. There should be no exceptions to this principle - it is imperative for a secure, resilient and affordable energy supply system. Deployment at scale is also imperative.

This requires keeping all energy sources and technology options open, encouraging competition amongst all of them and fostering innovation in each of them, based on their economic, technical, environmental and social merits. None should be banned. They all have their place and we cannot afford to randomly jettison any of them.

The adoption of technology neutrality as a policy principle does not imply that the government should be constrained in its regulatory functions of protecting public health and safety and the physical environment, including protecting water supplies and limiting the discharge of greenhouse gas emissions, or joining in global schemes for that purpose, so long as regulations are non-discriminatory across technologies.

The need to prioritise technology neutrality as an energy policy principle is underscored by an excessive contemporary degree of contention, politicisation and activism amongst rival technology proponents and opponents. This contention even extends to investor groups.⁵

The arguments tend to revolve around which technology is the cheapest, the cleanest or the greenest, which technology should qualify for special policy treatment and, in particular, whether coal and other fossil fuels should be phased out.⁶ Some businesses are already writing down asset values because of regulatory uncertainties⁷ and investor confidence across much of the energy industry is being undermined. Technology neutrality is critical to the resolution of these issues.

 ⁵ For the most recent example, see Australian National University, University to divest holdings in seven companies, media release, 7 October 2014.
 ⁶ With respect to renewables, see Malcolm Keay, No Such Thing as the Cost of Renewables? The Significance

⁶ With respect to renewables, see Malcolm Keay, *No Such Thing as the Cost of Renewables? The Significance of System and Resource Costs,* EPIA Public Policy Paper #2, June 2014; with respect to coal, see Ian Cronshaw, *The Current and Future Importance of Coal in the Global Economy,* EPIA Public Policy Paper #5, January 2014.

⁷ See for example, Metgasco Ltd, Asset update, ASX announcement, 19 September 2014.



Three issues of technology choice have given rise to most of the contention over energy in Australia: coal seam gas (CSG), renewables and nuclear power.

CSG

The case of CSG has raised the most contention in New South Wales. The main issue has been whether it is environmentally safe to extract CSG.⁸ Land access and measures to minimise the risk of water contamination have also been contentious. New South Wales is now facing near-term tightening of gas supply. The Institute believes that the root cause of this is policy failure at State level, including the lack of genuine stakeholder engagement by both government and industry.⁹

Renewables

With the recent passage of legislation to establish an Emissions Reduction Fund, the main issue of contention is whether intermittent sources of energy, mainly wind farms, should retain the level of subsidies currently afforded by the Renewable Energy Target (RET) scheme, presently under review by the Australian government.¹⁰ Around half of the current revenues of wind farms emanate from government subsidies, hence the understandable alarm of wind farm investors that they will be deprived of them.¹¹ Assuming the issue has to be resolved at political level, there may still be doubt about how long any political solution will last.

Nuclear power

The issue of the most longstanding contention in Australia has been the discriminatory legislative prohibition against nuclear power, a prohibition based at least in part on vesterday's technology. The Institute sees no reason why regulatory approval for future nuclear power development could not be entrusted to the well-regarded Australian Radiation Protection and Nuclear Safety Authority (ARPANSA), supplemented by community representation. This would provide investors with an avenue to seek regulatory approval of the latest nuclear power technology on its merits and would enable investors to carry out technical research and economic and technical feasibility studies with a certain degree of confidence.¹²

ARPANSA monitors and enforces all up-to-date domestic and international standards for the protection of public health, safety and the environment in the nuclear field. The government's role should be to sanction a trustworthy regulatory framework in which nuclear power development can be evaluated on its economic, technical, environmental and social merits.

⁸ See Chief Scientist and Engineer, *Final Report of the Independent Review of Coal Seam Gas Activities in NSW*, NSW Government, September 2014.

⁹ See Robert Pritchard and Keith Orchison, Getting Gas into a Market - Any Market, EPIA Public Policy Paper #3, June 2013. ¹⁰ See Dick Warburton et al, *Renewable Energy Target Scheme – Report of the Expert Panel*, Commonwealth

Government, August 2014.

See Clean Energy Council, Australia's Power Generation Sector at the Crossroads, September 2014.

¹² The EGP noted that Australia now has an overcapacity in electricity generation. However, this does not mean that there is no economic and technical case for the deployment of the latest high-safety, small modular reactors (SMRs) in regional cities and in major mining and industrial locations. Decentralised nuclear generation may be a competitive, low-emissions solution for various parts of Australia and could avoid costly upgrades to transmission grids.



Any future developments would also need to obtain requisite planning approvals from jurisdictional authorities.

Energy policy is likely to remain adversely affected by contentious technology issues until technology neutrality is accepted by all stakeholders as a fundamental policy principle and this is accompanied by modernised, transparent and trusted regulatory regimes to protect public health, safety and the environment.

Recommendations 2, 7 and 8 elaborate on how this principle can be built into a reliable energy policy regime. Recommendation 9 elaborates on how it needs to be reflected in modernised regulatory regimes.

Recommendation 2: Policy integration including climate policy

In August 2009, the Institute first advocated:

"In the interests of reducing policy uncertainty and of lowering the risk to investment in the energy industry, governments should no longer pursue energy policy and climate policy independently of each other – governments must integrate energy policy and climate policy into a coherent whole, whilst they continue to facilitate open energy markets."

The Institute therefore very much welcomed the government's choice of words in December 2013 when it released the terms of reference for the preparation of a new Energy White Paper (EWP):

"The Australian Government is committed to working closely with industry and state and territory governments in the development of an integrated, coherent national energy policy."

However, an essential element is missing from the EGP: energy and climate policy integration requires a clear statement of long term intent (a vision), and the resources and processes for delivery, recognising the long term nature of the problem, and the need to provide for a significant reduction in emissions from energy systems over time in a manner which protects domestic competitiveness and energy security, guarding the economy against the risk of getting ahead of global efforts. This requires more than lip service and there is no clear indication in the EGP of how it will actually be pursued.

The Institute reiterates its support for the EGP's strong emphasis on reforms to drive energy productivity. The Institute acknowledges that there is at present no clear international framework for emissions reduction within which Australia can play its proper part. Nonetheless, by adopting a politically enduring policy that includes progressive improvement in domestic energy efficiency and energy productivity, Australia is better placed to be able to respond to international shifts. It would also be most unlikely for any future change of government to alter this.

Energy policy integration must also necessarily involve a process of factoring in as necessary all relevant issues of water policy, environment policy, climate policy, economic policy, infrastructure policy and transport policy. This submission does not delve into these issues but they will all require further consideration as part of a holistic approach.

The Institute recommends, as an overall principle, that all stakeholders, including major



industrial consumers and the community, should participate in the formulation of a long-term energy vision. A well-constructed long-term energy vision will recognise and accommodate the anxiety within industry over Australia's international competitiveness and amongst the broad community about the build-up of greenhouse gas emissions. The vision will need to look beyond the lifetime of our present energy assets.

This recommendation need not threaten the resilience of the energy system nor undermine investor confidence. We expand on this in recommendations 7 and 8.

Recommendation 3: Open markets and the principle of non-intervention

The nurturing of open, non-interventionist and efficient energy markets remains fundamental. It is pleasing to see the extent of bipartisan agreement on this principle at federal level.

Governments should not intervene in any energy market unless there is clear evidence of market failure and then only to the extent necessary, and for the limited time necessary, to remedy the failure.

Lower domestic electricity prices will result from electricity markets that continue to be open and competitive.

In the same vein, the current tightness in domestic gas markets will dissipate as new sources of supply are brought to market. The Institute strongly endorses the EGP's statement that domestic gas reservation policies and national interest tests will not address current challenges in the gas market and may result in negative long-term outcomes by deferring future investment.

The Institute also considers it imperative that the energy market policies of the Commonwealth and all States and Territories be aligned.

Recommendation 4: Export growth

In his Foreword to the EGP, the Minister emphasised the need for *'a long-term framework in which the energy industry can grow.'* Australia is of course a major exporter of energy and this is of increasing importance not only to economic growth in the region but to the underpinning of Australia's living standards.¹³

It is now widely accepted that, as a result of changes in technology and transport, Australia has become increasingly integrated into the global economy and society, and in particular the economic expansion and social transformations underway in Asia.¹⁴

Export growth should be a key element of Australia's long-term energy vision and should be a key element of energy policy. Ensuring strong trade ties is fundamental to securing regional energy security.

Australia is close to Asian energy markets and is well positioned to supply them. Australia's aim should be to reliably supply its export customers, and to strongly participate in collaborative energy security and technology innovation arrangements.

¹³ The annual value of Australia's energy exports is projected to increase in real terms to A\$133 billion by 2018-19: Bureau of Resources and Energy Economics, "Resources and Energy Quarterly," March Quarter, 2014, Canberra.

¹⁴ Department of the Prime Minister and Cabinet, *Reform of the Federation White Paper*, Issues Paper 1, Australian Government, September 2014. Page iv.



Recognising mutual energy reliance internationally, and providing for sound long-term regional development, enhances our trade position and secures broader energy security for the region. This explains why Australia welcomes foreign investment by overseas customers in resources development in Australia – it recognises this as an important element of vertical integration strategies in a global marketplace and it brings economic benefits to all concerned.

Recommendation 5: Fostering innovation

Improving the prospects of low-carbon energy technologies requires innovation and technology enhancements that reduce investment risk and project costs.

Fostering innovation is an essential component of a sound energy policy for Australia. A policy of technology neutrality will foster innovation in all low-carbon technologies and ensure appropriate delivery.¹⁵ The key elements of such a policy are a portfolio approach to investment in a range of technology options and facilitation of domestic and international collaboration.

Strong trade ties should also extend to strengthening linkages in technology innovation so that Australia plays its part internationally in contributing to and receiving technology improvements.

An international race to develop more efficient and environmentally-effective energy technologies is accelerating strongly without need for political intervention. Australia mainly needs to ensure that none of its policies or regulations present barriers to the free flow of technical information or dampen prospects for international technological collaboration.

Recommendation 6: Attraction of investment and innovation in energy financing

Australia remains heavily reliant on foreign capital. Australia must therefore provide an investment environment where there is policy and regulatory certainty that enables investors to be confident of managing investment risk. In other words, Australia must have an 'investment-grade' energy policy.

The government has recognised the need for Australia to attract investment. The Institute applauds the establishment of its first Minister for Investment within the broad portfolio of Foreign Affairs and Trade.

The Institute believes the importance of innovation in the financing of energy investment has been underrated by policymakers and needs ongoing special attention by the Commonwealth Treasury.¹⁶

Recommendation 7: The need for an energy vision that embodies four key elements

The Institute reiterates its support for the government's pledge to work with industry and state and territory governments in the development of an integrated, coherent national energy policy. As the Institute emphasised in its February 2014 response to the Department's Issues Paper:

"... Australia must adopt a long-term Australian energy vision – which should embody

¹⁵ See Chris Greig, *Energy Innovation Policy and the Need for a Portfolio Approach*, EPIA Public Policy Paper #4, November 2013.

¹⁶ KPMG and the Energy Policy Institute of Australia, *Australia's Energy Financing Challenge*, March 2013.



four key elements: (1) a resilient energy system, (2) export growth, (3) a low-carbon society and (4) innovation in energy production and supply."

A long-term energy vision necessarily involves some integration of energy policy, water policy, environment policy, economic policy and transport policy. It also requires a whole-of-government approach, involving demand-side as well as supply-side considerations.

The entire world is continuing to struggle with the transition towards a low-carbon society. Australia for its part needs a clear vision that is based on practical common sense, is technology neutral and recognises community anxieties about the increasing stock of greenhouse gases in the global atmosphere. Pursuit of this vision must be manageable for industry and be affordable for consumers and investors. The Institute therefore considers that all four of its suggested elements of a long-term Australian energy vision warrant equivalent attention. At the same time, the Institute supports the EGP's strong emphasis on reforms to drive energy productivity.

The Institute favours a transparent, systematic and ongoing debate amongst stakeholders to formulate a long-term, national energy vision and to keep it up to date. Only as an indicative guide, the Institute offers below a short vision statement that could provide the basis for such a debate:

Australia's energy vision is not simply to respond to global forces but to play its optimal role in an increasingly dynamic global energy economy.

Australia's energy goals are: <u>first</u>, to develop a diverse, competitive and resilient domestic energy system, supplying energy reliably and affordably to domestic industry and the community at the same time as progressively improving domestic energy efficiency and energy productivity; <u>secondly</u>, to be the most reliable and competitive supplier of energy to our trading partners; <u>thirdly</u>, to help reduce global greenhouse gas emissions in the most affordable way; and, <u>fourthly</u>, to exploit Australia's skills and resources in pursuing these goals in the most innovative and technology-neutral way.

In aid of its energy goals, Australia will continue to promote international collaboration on efficient energy technologies, it will continue to build its reputation as a stable and safe place to invest and it will continue encourage its energy customers and other foreign investors to participate in the further development of Australia's energy resources.

This leads on naturally to our next recommendation.

<u>Recommendation 8: Reform of the policy development process by involving all levels</u> of government and establishing an appropriate institutional review mechanism

The Institute does not consider that a long-term national energy vision can be achieved simply by the Commonwealth publishing a White Paper. Stakeholder engagement is essential.

The existing institutional arrangements on climate and energy policy are spread between Federal and State arrangements, across multiple organisations. Resources are spread too thinly and lack co-ordination. A fit-for-purpose, independently-operating institution is required to bring together the right resources and expertise to define the long-term vision, to



review policy, including energy technology innovation policy, to oversee implementation and to monitor and report on outcomes. Ultimately, this might evolve into a commercially and technologically literate National Energy Board that operated independently for the benefit of the nation as a whole. Initially, however, it could take the form of a task force.

The Institute suggests that the COAG Energy Council be involved in these early arrangements in a consultative capacity. As an intergovernmental body accountable to its nine constituent governments, the COAG Energy Council has a record of success in domestic energy market reform despite having to struggle with a partly publicly-owned and partly private-owned energy system. Although the COAG Energy Council is not itself equipped to analyse and respond in a timely fashion to the challenges and dynamics of a constantly changing energy world, nor to undertake regular policy review, it is in an unique position to overview the work of a properly-resourced institution that will be more attuned to future industry and stakeholder concerns.

The policy formulation and review challenge is complicated by the need for stronger processes of participation and accountability. As the Institute emphasised in its response to the Issues Paper:

"... agreement on the Australian energy vision should be arrived at by an apolitical, bipartisan process of stakeholder participation, involving industry, the community and all levels of government, a process that is not vulnerable to electoral cycles. <u>This is the key to future policy reliability and predictability</u>."

There is an important place for stakeholder engagement, including community debates, on topics of concern. Without being informed by a participative process in which there is a high level of transparency, and which is conducted in a way that generates community trust in both industry and government, with a certain degree of independence, Australian energy policy will not encourage investors to put their capital at risk.

In a world that is rapidly changing (economically, environmentally, socially, geopolitically and technologically), the EWP should not be seen as a once-off exercise. The Institute reiterates that energy policy should, over the long term, be methodically, transparently and regularly reviewed. Initially, however, a task force reporting to the COAG Energy Council may be a good place to start.¹⁷

Recommendation 9: The EWP as a briefer, more straightforward strategy statement and the need to follow through with regulation

If the need for a more participative and ongoing process is accepted, the EWP itself could be limited to a more straightforward statement of long-term strategic policy.

A straightforward strategy statement would have a stronger chance of attracting broad industry and community support, as well as the support of the states and territories, in turn reducing the degree of uncertainty that surrounds the electoral cycle. The longer the statement, the more difficult it will be to reflect any national vision or purpose. The briefer the statement, the more likely it will attract broad support and survive the next electoral cycle.

¹⁷ See again Energy Policy Institute of Australia, 'Second Submission to the Energy White Paper Process", 4 February 2014, <u>www.energypolicyinstitute.com.au</u>



Finally, given that policy is by definition non-binding on governments, it must be followed through by the introduction or modernisation of transparent and trusted regulatory regimes to give teeth to the policy and to protect public health, safety and the environment.

The Institute's Responses to the Government's 19 Policy Goals

The Institute reiterates its support for all of the government's 19 energy policy goals specified in the EGP.

In the table below, the Institute has provided some brief, specific responses. EGP chapters 1 to 3 are reasonably straightforward in policy terms, Chapter 4 gives rise to the need for greater in-depth consideration.

The Institute's responses in the table should be seen, however, as subservient to its principal recommendations above.



TABLE OF RESPONSES TO CHAPTERS 1 TO 4

CHAPTER 1: ATTRACTING ENERGY RESOURCES INVESTMENT

GOVERNMENT GOALS	INSTITUTE RESPONSE
Streamline environmental and other approvals	Supported.
 Outcome: More certain, timely and accessible approvals. Better regulation will lower costs to business, boost productivity and enhance Australia's international competitiveness. 	Duplication of processes is completely inefficient. A 'one-stop shop' approach to approval processes is imperative.
	Harmonisation of regulations and standards across states and territories is imperative. Harmonisation should apply to all oil and gas and mining activities, including uranium.
	NOPSEMA should be sole regulator of oil and gas activities in Commonwealth and state waters. ARPANSA should be sole regulator of nuclear activities.
Better skills and workforce productivity, including	Supported.
access to skilled migration – Outcome: Industry has access to the skills it needs for timely and cost-effective projects, which will encourage future investment.	The Vocational Education and Training (VET) system should be more resonsive to industry needs. The tertiary education systems needs to include stronger systems to match the delivery of tertiary traing and education to the needs and requirements for employment.
Create supply chain opportunities and Indigenous	Supported.
employment – Outcome: Local small-to-medium enterprises (SMEs) more involved in supply chains, lowering project costs and growing local economies. More Indigenous Australians employed in the energy resources sector.	The recommendations of the Forrest Review are broadly supported.
Enhance pre-competitive geoscience and improve	Supported.
access to environmental data – Outcome: Lower costs and exploration risk. Reduced duplication and regulatory burden. Improved community engagement. Better-informed decision-making and environmental management.	Better geoscience data is imperative to leverage exploration investment and to improve decision- making and environmental management Effective processes and structures for genuine community engagement must be introduced and not just given lip service. There is a need for an independent energy institution which combines Federal and state resources and brings enhanced delivery against agreed outcomes. ¹⁸ There should also be enhanced opportunities for communities to engage in policy issues so as to transcend political stances and build trust and legitimacy in outcomes. ¹⁹

 ¹⁸ Robert Pritchard, *Trust and Energy Governance in Australia*, EPIA Public Policy Paper #1, May 2013.
 ¹⁹ Peta Ashworth, *Community Engagement in Energy Policy in Australia*, EPIA Public Policy Paper #7, April 2014.



Help to identify and address infrastructure bottlenecks – Outcome: Industry has access certainty, reducing infrastructure duplication and cost.	Supported. In particular, the Government's Asset Recycling Initiative should be diligently executed.
Promote Australia's energy products, technology and services exports – Outcome: Increase the export earnings of Australia's energy resources, products and skills.	 Supported. Austrade's FDI facilitation program to maximise investment is supported. Unincorporated joint venture structures need to made less complex to improve investment liquidity and this warrants continuing research. Above all, there is an increasing need for energy financing innovation. The recommendations of the KPMG/ EPIA Financing Study should be followed as a guide.²⁰ It is essential for the Commonwealth Treasury to be involved in advising on and implementing what can be done.

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²⁰ KPMG and the Energy Policy Institute of Australia, *Australia's Energy Financing Challenge*, March 2013

CHAPTER 2: ELECTRICITY PRICES

GOVERNMENT GOALS	INSTITUTE RESPONSE
Pursue tariff reform and improved consumer access (including controlled third party) to energy use data, including electricity network tariff reform to limit cross-subsidies – Outcome: Consumers are better informed, have tariff choice and know how to manage energy use and cost. Energy users pay their fair share of the costs of the poles and wires that supply electricity.	Supported.
Ensure reliability standards do not encourage unnecessary investment in electricity networks – Outcome: Consumers do not receive higher reliability standards than they would be willing to pay for if they understood the impact on electricity prices.	Supported.
Improve the efficiency of electricity use – Outcome: Electricity cost savings for consumers.	Supported.
Rationalise emissions reductions actions to reduce unnecessary costs – Outcome: Consumers do not pay more due to market distortion.	Supported.
Remove unnecessary regulatory barriers and market interventions, and encourage further privatisation – Outcome: Better prices and services for consumers through more competition, efficiency and innovation.	Supported.



CHAPTER 3: BUILDING GAS SUPPLY AND IMPROVING MARKET OPERATION

GOVERNMENT GOALS	INSTITUTE RESPONSE
Bring on new gas supply as quickly as possible	Supported.
 Outcome: Avoid potential supply shortages so that domestic gas users do not pay higher prices than necessary. 	Consideration of the feasibility of a pipeline connecting northern and eastern gas markets should be expedited, as should other options.
	New South Wales should completely overhaul its regulatory regime governing the CSG industry.
	New South Wales may wish to give consideration to an equitable system for sharing of royalties from CSG extraction with landowners whose agricultural activities are affected.
Improve the availability and quality of market information to improve market transparency and competition	Supported.
 Outcome: Gas sellers and buyers have more certainty about the availability of supply and pricing, and the market is more transparent and competitive. 	
Implement other gas market development priorities to expedite gas market reform	Supported.
 Outcome: A development strategy for the unconventional gas industry. More flexible and transparent market arrangements. 	

CHAPTER 4: SECURITY, INNOVATION AND ENERGY PRODUCTIVITY

GOVERNMENT GOALS	INSTITUTE RESPONSE
Maintain secure, competitively-priced and reliable energy supplies	This goal and the strategy for pursuing it need to be considerably tightened.
- Outcome: Consumers have access to adequate	Fundamental principles
and reliable energy.	There are three fundamental principles for ensuring a secure, resilient and affordable energy supply system:
	 (1) the first is to maintain technology diversity and neutrality (which entails keeping all energy sources and technology options open and not discriminating against any of them):
	 (2) the second is to allow open markets to work competitively and free from intervention; and (3) the third is to ensure rapid technology innovation through well directed programs of technology innovation with strong international linkages in technology development and trade.
	The secure supply of affordable energy, in particular electricity, is not only essential for industrial, commercial and domestic consumers but is a prerequisite of a sustainable economy, able to compete in global markets of all types.
	Innovation
	Innovation is best pursued on a competitive and level playing field, free of governments picking winners or losers, with Australia working collaboratively with its international trading partners. The dissemination and sharing of non-proprietary information on new energy technologies is necessary. The energy information hub launched by the Newcastle Institute for Energy and Resources in 2014 is to be welcomed.
	Comments on two specific energy technologies are nonetheless warranted at this time.
	Storage of electricity
	Electricity is simply irreplaceable as an energy form in modern society. Because it cannot be economically stored in commercial quantities with present technologies, there is a major race globally to develop more efficient storage and 'smart grid' technologies.
	Nuclear energy
	It is unlikely that Australia will need additional large- scale, centralised generation capacity for some years but decentralised generation is expected to be suitable for various regional locations.
	The current Australian prohibition on nuclear energy generation should be removed and replaced by an updated regulatory regime that would be evidence-



	 based, would be independent of government and would comply with the international Convention on Nuclear Safety and other safety standards stipulated by the International Atomic Energy Agency (IAEA). It would be expedient for a safe and responsible regulatory regime to be implemented by the Australian Regulatory Protection and Nuclear Safety Agency (ARPANSA) with participation by all stakeholders, including the broad community. ARPANSA would have the authority to approve all siting, construction and operational issues after appropriate consultation. Paramount consideration would continue to be given to public safety as already specified under ARPANSA's legislation. As well, environmental impact assessment processes would continue to apply.
Improve energy productivity – Outcome: Cost savings to Australian households and businesses, improved domestic security and reduced greenhouse gas emissions intensity.	Supported.
Develop a better 'outlook' capacity – Outcome: Government better prepared to respond to supply issues, to global market opportunities, and to invest strategically in research. Industry will have access to better information, giving more certainty and encouraging investment.	Supported. A portfolio approach to energy technology innovation is essential. ²¹
Keep the range of energy options technology neutral by tackling regulatory barriers and making best use of research investments – Outcome: Australia is able to choose from the broadest possible range of energy options. This will strengthen Australia's energy security.	Strongly supported. As repeatedly emphasised, technology diversity and neutrality should be the paramount principle of modern energy policy. It needs to remain so if we are to move progressively over time to a low carbon society.
Look for relevant international technology engagement – Outcome: Australian industries benefit from international experience.	Supported.

²¹ See again, Chris Greig, *Energy Innovation Policy*, EPIA Public Policy Paper #4, November 2013.