AUSTRALIAN DEMOCRATS

ENERGY

POLICY FRAMING STATEMENT

Contents

Energy

The economy is completely underwritten by the energy market in Australia. The challenge remains to provide adequate supply cheaply for today's consumers while ensuring that the impact of the generation and consumption of that energy is not unfairly borne by future generations.

The energy market in Australia is complex and encompasses all forms from liquid, gas and solid fuel systems to renewables like solar, hydro, wind and geothermal systems. The consumption of energy is also wide ranging in utilisation of electricity for stationary applications to fuels for transport and industry.

The major energy sources in Australia in 2016 were approximately coal (31%), oil products (38%), gas (25%) and renewables (6%). Nuclear does not feature currently in the Australian domestic energy landscape due in part to our natural advantages in renewables[1].

Electricity has been primarily the domain of state governments historically, however the emergence of the interstate transmission grid has shifted the responsibility. Increasingly there is an emerging conflict between corporatisation and full privatisation of electricity assets. The ownership of generation and transmission assets is of primary concern to the national interests of Australia and a rethink of the role of the federal government in this space is warranted.

In 2016 approximately 63% of Australian electricity is currently generated on simple cycle thermal coal fired power stations. This generation technology is nearly a century old and the full climatic and ecological impacts of this generation system will not be fully realised and borne for generations to come. Notwithstanding the long-term impacts of relatively inefficient generation of 33% in energy conversion, the current electricity prices do not include capital or replacement costs for the fleet of generators that are fast approaching their decommissioning as they literally wear out.

Major generators are now coming off line and increasingly running below capacity. It is becoming urgent to make decisions on infrastructure in this sector to ensure the Australian economy is not exposed to increasing volatility in supply and price of electricity.

Newer generation technologies must be incorporated to dramatically reduce the climate impact of our electricity needs. For example, combined cycle gas turbines are much more efficient generators in the energy conversion sense, approaching 60%, effectively halving greenhouse gas emissions per kilowatt hour. However there needs to be a much greater emphasis on incorporating renewables and newer technologies into the generation mix to replace the ageing fleet of generators in an orderly fashion without exposing the economy to price or supply shocks.

Regarding the development of new power generation infrastructure, the cost of wind and solar energy systems will be no greater than fossil fuel generation systems. Wind and solar is already cheaper than new coal or gas fired generation. These are critical points because renewables are often painted as expensive when compared to fully depreciated forty plus year old fossil fuel plants, but this simplistic cost comparison is not borne out when we fairly compare the cost of renewables against capital cost of new fossil fuel systems required to replace the ageing fleet or meet new demand.

[1] Numbers for 2016-2017: Coal 31.5%, Oil 37.7%, Gas 24.7%, Renewables 6.1% per Table 2.1, page 7; Australian Energy Update 2018 (PDF 2MB)

Beyond electricity, Australian energy demands are massive in the form of oil and gas products. Currently Australia consumes approximately 18.5 billion litres of diesel and 2.7 billion litres of petrol annually. Intuitively diesel is more geared to commerce and industry with mining consuming approximately 30%, transport approximately 35% and agriculture about 2% of annual diesel usage. Gas consumption in 2016 stood at approximately 1500 PJ of which manufacturing consumes approximately 40% and electricity and heating consume approximately 42%.

Clearly Australia is heavily dependent on fossil fuels to meet current demand. It is unlikely that the current energy demands can be met cost effectively in the short term through renewables. However, current assets and infrastructure deployed in the Australian economy are unacceptably exposed to increasing fuel cost and supply volatility.

The “just in time” practice of supply in modern supply chains dramatically increases the social and economic risks associated with disruptions in the energy sector. The Australian government has a responsibility to assure adequate supply at an affordable and stable price to ensure long term economic prosperity and effective public utility.

Rural and regional Australia’s exposure to disruptions in fuel supply is amplified significantly simply due to the vast distances over which industry operates and the goods and services are transported.

There is an ongoing demand for fossil fuels and there is a need responsibly manage the current energy market to maximise Australia’s competitive advantage. However, in the face of irrefutable scientific consensus around carbon emissions it is essential to balance the short-term economic concerns with longer term climate and environment outcomes.

The challenge in energy policy is not that we face a crisis in the means of meeting the domestic demand. The challenge is that we face a crisis in the development of any timely and sensible policy and the delivery of a coherent plan that brings certainty and confidence to the market and the population.

The energy problem is not an issue of resource or technology; it is a symptom of the current political dysfunction. The solution requires a shift in administration of energy matters conceptually to provide the best means of managing the political dysfunction that is crippling our energy future.

One model is to establish an independent authority to replicate the work of the various commonwealth energy agencies outside of the Ministerial control in a similar context to the Reserve Bank’s role to countervail Fiscal Policies of the Government of the day through independent administration of Monetary Policy.

The Australian Democrats does not pretend to be the expert authority in any policy area, energy included. However, we are committed to addressing problems through coherent and orderly processes. We look to identify areas of concern, identify the underlying causes and then develop genuine solutions to what is causing the problem without being distracted by the symptoms.

Australian Energy Authority - An Australian Democrats Energy Solution

Stable society is a function of a stable economy and adequate distribution of wealth, goods and opportunity to satisfy human needs and social expectations. The supply of affordable energy is fundamental to this and Government is beholden to ensure it.

There is no doubt that Australia has ample resources to meet its energy requirements. The solutions to our current and emerging problems in the energy matrix are already available. Technological advances will provide more efficient and cheaper options with time.

Australia's energy crisis is the manifestation of a leadership crisis. Solving the current problem and managing the energy market effectively into the future requires courage and vision today and is simply too important to trust to the current dysfunctional partisan politics.

The Australian Democrats was founded in response to broad dissatisfaction with the current political system and the Australian Democrats' response to the energy issue considers the current fundamental leadership problem.

Often the problems we face as a society are contextual. In this we mean that it is more often how we think about problems that prevents workable solutions rather than the problems being unsolvable.

Why we need to act on energy

We are sleepwalking our way into an energy crisis. Australia is vulnerable to disruptions in supply and price of energy now more than ever. It is essential that the energy debate is not limited to electricity. It must encompasses all forms of energy requirements in electricity generation, transport, industry and heating.

Some key issues that need to be resolved include:

- *Electricity supply and price volatility*
- *"Just in time" supply chain vulnerability*
- *Fuel price volatility*
- *Increased dependence on offshore product for gas and liquids.*
- *Over-commitment of domestic resources to export markets.*
- *Requirement to reduce emissions*
- *Generation capacity as traditional generation assets approach end of life*
- *Threats to industry viability with increasing volatility in cost and supply*

Why we need an AEA

Government appointed energy regulators, advisors and operators are failing to provide adequate strategic direction for the sake of the nation and are currently captured by the political process. This highly politicised environment is a key impediment to their effectiveness.

Currently there are a range of bodies operating to poor effect and with highly questionable independence and or accountability. For example:

AEMC - Australian Electricity Market Commission

- *Reports to the Minister and is captured politically*
- *The Chair and Commissioners are political appointments*
- *Advisory body with no real ability to act*

AEMO - Australian Electricity Market Operator

- *Tactical focus no real strategic capacity particularly in the context of intergenerational equity*

- *Vision to provide energy security for all Australians, but clearly ineffectual*
- *Short term and reactive structure.*
- *Constrained by legislation and function of the AER and AEMC*

AER - Australian Electricity Regulator

- *Enforces rules and legislation established by others subject to direct political interference*
- *Board members are statutory appointees*
- *Ultimately captured by the political process*

These bodies have failed to provide long term energy security and clearly have no ability to manage the partisan politicisation of the energy debate in Australia.

The AEMO is itself heavily implicated in the recent SA blackouts because they prescribed the safety settings that tripped wind generators and caused them to drop out of the grid. AEMO was warned of the possibility of the SA blackout nearly a decade ago and failed to act. The AEMO also ignored Bureau of Meteorology temperature forecasts, underestimated demand and failed to bring gas fired generators online ahead of the event. The SA blackout did not need to be so disruptive and the cost of the added disruption rests almost entirely with AEMO.

The AEMC, AEMO and AER have overseen energy rules that have resulted in overselling of our gas resources, underinvestment in new generation capacity and overinvestment in poles and wires in the national grid (that has driven up energy prices).

The overinvestment in poles and wires due to energy market rules has arguably been one of the single biggest contributors to energy price rises in recent years and very much larger than the impact of the carbon tax at any point. At the same time these investments have delivered little to no net improvement in supply efficiency or supply.

The current public energy debate is poorly informed and subject to extreme pressure from vested political and commercial interests. Neither side of Government is seriously considering impartial and credible information if it strays from their ideological or policy leanings.

It is critical now to establish a suitable vehicle to develop a long-term strategic energy policy. It is essential that the vehicle and policy are not captured or corrupted by short term partisan politics or vested interests including bureaucratic interests.

The looming energy crisis impacts on:
- Cost of living
- Cost of doing business
- Job security and business confidence
- Continued supply of goods, services and amenities

Simply our entire economy and lifestyle are under serious threat now from poor preparation for an evolving energy future.

What are the Australian Democrats proposing?

The Australian Democrats has proposed that Australia should establish an independent energy Authority (AEA) to replace the AER, AEMC and AEMO that is not captured by partisan politics and vested interests.

It is essential that the AEA is independent of Ministerial interference and electoral cycles to provide certainty to the development of energy policies and market rules.

The AEA will be responsible for developing a whole of nation energy strategy and market aimed at ensuring a resilient nation over the long term with a specific view to intergenerational equity.

The AEA would be responsible for all aspects of the energy sector including renewables and all solid, liquid and gaseous fuels for industry, transport, heating and generation.

The AEA will provide market signals to ensure that infrastructure is delivered as it is required on a generational timeframe. In turn this means meeting current and future demand with an evolving energy matrix that satisfies socio economic and environmental concerns. Despite the current rhetoric this is achievable, but it will rely on policy and market certainty for investment and development.

The Australian Democrats is proposing that the charter, function and mission of the AEA would resemble the energy equivalent of the Reserve Bank of Australia. In this the AEA would possess similar political and commercial independence. Functionally the AEA would have a role in balancing the impacts of variations in fiscal policies of successive Governments through manipulation of the energy market policy and rules to maintain a consistent adherence to target range tolerances in suitable long-term energy security indices.

The AEA would establish national frameworks that encourage statutory as well as commercial investment in strategic infrastructure and resources to ensure the energy security of the nation.

The decline in political leadership and political statesmanship in Australian politics has now resulted in an inability for any major party to rise above partisan political gameplay. As a result, essential legislation and nation building policies are not emerging to meet the real needs of the nation.

It is therefore clear that issues such as energy policy must be structurally safeguarded from the political nonsense and prioritised and managed as a national priority in the same way we do the monetary system.

Ongoing destabilisation of the energy market in Australia will ultimately impact small business, regional communities and the vulnerable most profoundly. It is essential that we address the leadership void for the energy sector immediately.

Australian Energy Sector Snapshot

Australia uses approximately six thousand petajoules (6 000 000 000 000 000 000 joules) of energy per year. One petajoule would power about nineteen thousand homes for a year.

It is very important to note the spread of generation and consumption. The current energy debate remains focused on electricity supply and gas more generally, but the reality is that the entire energy matrix is in crisis as the political obfuscation continues to breed uncertainty.

Table 1. Energy Consumption by Industry

	2016–17		Average annual growth	
	PJ	share (per cent)	2016–17 (per cent)	10 years (per cent)
Electricity supply	1,692.7	27.5	-2.0	-0.8
Transport	1,691.5	27.5	2.8	1.7
Manufacturing	1,093.7	17.8	-2.1	-1.1
Mining	669.0	10.9	11.8	8.0
Residential	458.4	7.5	-0.5	0.7
Commercial	344.6	5.6	1.7	2.0
Agriculture	116.3	1.9	5.9	2.3
Construction	24.2	0.4	-0.8	-1.0
Other	55.5	0.9	-5.9	-3.1
Total	**6,145.8**	**100.0**	**1.1**	**0.8**

Source: Department of the Environment and Energy (2018) Australian Energy Statistics, Tables D, F, O[2]

This table outlines the major consumers of energy in the economy. Many people do not consider the non-electricity elements of the energy market and so do not understand the scope of the energy crisis facing the nation.

It is important to consider the impacts of rising energy costs on key industries and the impact they potentially have on regional communities. While this briefing is not intended to preempt to specific solutions and AEA may provide, it is important to highlight a few of the regional issues, particularly for transport, agriculture, manufacturing and mining.

Energy Efficiency

Efficiency is a critical part of energy usage in Australia. While Australia's energy productivity (the amount of GDP per unit of energy consumed) has improved nearly 20% over the last decade[3], this is probably more of a sign of shifting industry sizes and its overall efficiency ranks poorly when compared to other developed economies[4].

[2] Report available at Australian Energy Update 2018 (PDF 2MB). Also refer to the '2016-17 Australian Energy Flows (PDF 245KB)' diagram that was published together with the above report
[3] Section 2.1, page 6, Australian Energy Update 2018 (PDF 2MB)
[4] http://www.eec.org.au/news/eec-news/article/australia-ranks-worst-for-energy-efficiency-in-developed-world

Transport

Australia is a large country and heavily reliant on transport of people and goods locally, interstate and internationally. Our just in time culture is completely dependent on prompt transport services that are almost exclusively dependent on internal combustion engines.

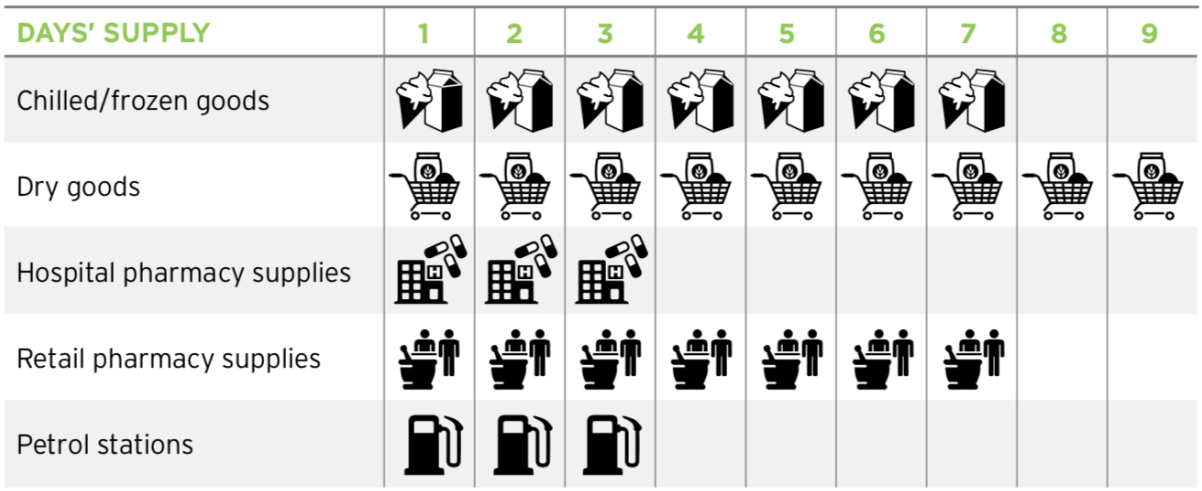
There are just over seven hundred thousand registered trucks and buses in Australia. The ABS indicates that there are nearly sixteen million registered passenger and light commercial vehicles in Australia and Australians buy approximately one million new cars per year[5].

As an island nation that is highly engaged in trade through exports and imports, Australia is vulnerable to any volatility in supply or price of transport fuels for freight of goods. This impacts exporters and importers equally.

The quantity of goods moved on Australian roads annually is staggering and this sector is almost exclusively run on diesel power[6]. There are no public fuel reserves and commercial stocks would be unlikely to last more than a few weeks and less in regional areas[7].

Any disruption to transport systems will impact on the entire population as the supply of food, fuel, medicines etc are all governed by a just in time supply chain culture. This supply chain management is completely reliant on diesel powered freight runs.

Figure 1. Australia's estimate stockholdings at point of sale



Source: NRMA Submission to parliamentary inquiry[8]

[5] https://www.abs.gov.au/ausstats/abs@.nsf/mf/9309.0
[6] Per the ABS data; 96.2% of 605,692 trucks run on diesel (94.5% of 'light rigid trucks', 96.3% of 'heavy rigid trucks', and 98.8% of 'articulated trucks')
[7] 18 Days for diesel, per Table 7 in Australian Petroleum Statistics 2019 (January)
[8] Attachment 1 from the NRMA's November 2014 submission to the Senate Standing Committees on Rural and Regional Affairs and Transport inquiry into Australia's Transport Energy Resilience and Sustainability, available at https://www.aph.gov.au/DocumentStore.ashx?id=86e8dfbc-1467-47fe-ad1e-bc635407ecf8&subId=301736

The implications of rising fuels costs threaten the viability of the current supply chain and in turn threatens the value of the transport assets and infrastructure in the longer term.

Ultimately consumers will carry the added freight costs and regional communities will suffer most profoundly as centralised packing and handling facilities undermine the independence of regional centres.

In January 2019, a federal parliamentary committee released a report with recommendations to accelerate the use of electric vehicles in Australia. Electric vehicles are one way of reducing our reliance on imported liquid fuel – as long as there is sufficient electricity generation and charging infrastructure in place to support them[9]. Although it is important to consider the vehicle 'renewal' rate: from 2010 to 2018, there has been an average annual increase in the number of vehicles of 2.2% (while the population growth has averaged 1.6% per year over the same period of time[10]). Even if a substantial proportion of new vehicles were electric from today onwards, it would still be decades until a corresponding percentage of all vehicles in Australia were electric.

In addition to new technology for how vehicles are powered, there is emerging technology for improving vehicle and freight movement efficiency through traffic management[11].

Agriculture

Australian farmers are regarded as the most efficient in the world. Australian agricultural efficiency is completely dependent on energy intensive mechanization, both in on farm activities and in the transport and distribution of goods produced.

Production, packing and distribution of fresh produce is heavily reliant on refrigeration. These costs are not discretionary in terms of production and or food safety.

It is essential to the future prosperity of the nation to mitigate the exposure of Australian agriculture to the looming increase in volatility of price and supply of the current fuel stock. Agricultural supply chains do not provide any capacity for producers to set prices to recoup costs associated with rising energy input costs. Australian agriculture currently relies on diesel powered farm equipment. The equipment has an estimated value in excess of fifty billion dollars. These assets are at risk of becoming stranded in the event of rising fuel costs.

If diesel prices continue to rise, the existing economic commitment to existing plant, equipment and infrastructure becomes unmanageable. There is an urgent need to create diesel alternatives at an affordable price and to mitigate the potential capital write downs of existing plant and equipment.

Agricultural production is increasingly reliant on fertilisers. Fertiliser production has already been moved off shore due to rising gas domestic gas costs. This exposes production indirectly to rising energy costs.

Regional Australia is heavily reliant on viable agricultural sectors and these in turn are unavoidably captured by the energy market.

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[9] Report by the Senate select committee on Electric Vehicles: https://www.aph.gov.au/Parliamentary_Business/Committees/Senate/Electric_Vehicles/ElectricVehicles/Report

[10] Using Table 1 *.xls download from 'Australian Demographic Statistics, Sep 2018': https://www.abs.gov.au/AUSSTATS/abs@.nsf/DetailsPage/3101.0Sep%202018?OpenDocument

[11] https://edition.cnn.com/2019/01/15/tech/alibaba-city-brain-hangzhou/index.html

Australian agriculture is an essential industry. The contribution of agriculture to the Australian economy belies the largely unrewarded and unrecognised social and environmental contribution to the nation.

The outcomes of rising energy costs will be diabolical for agriculture and all who rely upon its viability in the service sectors.

Mining

While mining has a considerably different social foot print, much of the same arguments apply for mining as they do for agriculture.

There is a high reliance on energy intensive mechanisation in extraction, processing and distribution processes with limited opportunity to manipulate the global pricing systems to accommodate disproportionately high energy costs in Australia.

One additional issue is the power requirement for mines that are often isolated. Remote power generation is often diesel or gas powered. In the face of softening commodity prices and rising energy costs, these methods are unlikely to be economically sustainable.

The lack of infrastructure in key mineral precincts has seen delays in development of these resources and ongoing energy cost increases may see perpetual under development of these assets.

Mining is an important component of the economy and it is essential that the energy investment and development is optimised to ensure the sector is fully utilising the resources that are available.

Manufacturing

Manufacturing in Australia is under siege in the global context. We endure a highly regulated and comparatively expensive labour market. Government compliance costs are significantly higher than for our competitors and successive Government policies have eroded support and the trade balance to undermine domestic manufacturing.

Energy has been one of the few comparative advantages that Australian manufacturing enjoyed. This has now been completely eroded and rising costs and decreasing reliability in supply will be unmanageable imposts.

We have seen a constant shift of manufacturing processes offshore. Decisions are now being directly influenced by energy cost. Fertiliser manufacture is linked to gas availability and domestic production has now been shifted off shore.

We have seen steel works and aluminium smelters shut down, with cost of energy a major concern

The Australian manufacturing sector is vitally important in value adding and capturing more of the inherent value of what we produce. It is a key employer and its viability is a significant economic driver for the wealth retention and creation for the nation.

Energy is derived from a range of sources and it is important to consider the sources of energy in the current matrix. Table 2 outlines these current sources of energy, buy this matrix is constantly evolving and new technologies will have a massive bearing on how this changes.

It is important in shaping energy strategies to understand both what is desirable and what is achievable. Much of the current rhetoric in the debate is not based in fact, further confusing the debate.

Australia has so far failed to understand the opportunity to proactively shape our energy future and set about implementing policies to make it happen. Too much of the debate is focused on preconceived notions of what is unachievable based on outdated knowledge in a sector that is changing rapidly.

Table 2. Energy Production by Fuel Type

	2016–17		*Average annual growth*	
	PJ	share (per cent)	2016–17 (per cent)	10 years (per cent)
Black coal	12,154.4	67.7	0.0	3.9
Brown coal	584.2	3.3	-8.0	-2.5
Natural gas	4,154.8	23.1	22.7	9.4
Oil and NGL	596.9	3.3	-12.3	-5.1
LPG	88.1	0.5	-2.4	-2.2
Renewables	378.7	2.1	5.3	3.2
Total	**17,957.1**	**100.0**	**3.7**	**4.0**

Source: Department of the Environment and Energy (2018) Australian Energy Statistics, Table J[12]

Coal

Australia has abundant supplies of coal of varying quality including vast deposits as yet unmined. Australia currently exports ninety percent of its coal production.

Coal is unsuitable as an internal combustion engine fuel and increasingly unpopular/undesirable as a fuel stock due to the comparative inefficiency of single cycle steam turbine power generation.

Australia's coal fired power generator fleet is nearing its end of life. While the fuel stock is comparatively cheap, the amortised cost of constructing coal fired generators is now higher than alternative generations methods including large scale solar.

Overlaying the economic considerations of construction with the increasing environmental and climatic concerns associated with the inefficient nature of burning coal to heat steam as a generator suggests coal is highly questionable in the future power matrix.

Regardless of the Coalition rhetoric, it is unlikely any bank will finance a new coal fired power station because they are no longer economically competitive as a power source.

[12] Report available at *Australian Energy Update 2018 (PDF 2MB)*. Also refer to the '*2016-17 Australian Energy Flows (PDF 245KB)*' diagram that was published together with the above report

If coal is to have a future in our energy matrix, Australia needs to invest in technology that can elevate coal to be suitable for internal combustion engine to increase its energy yield efficiency and compete with oil and gas.

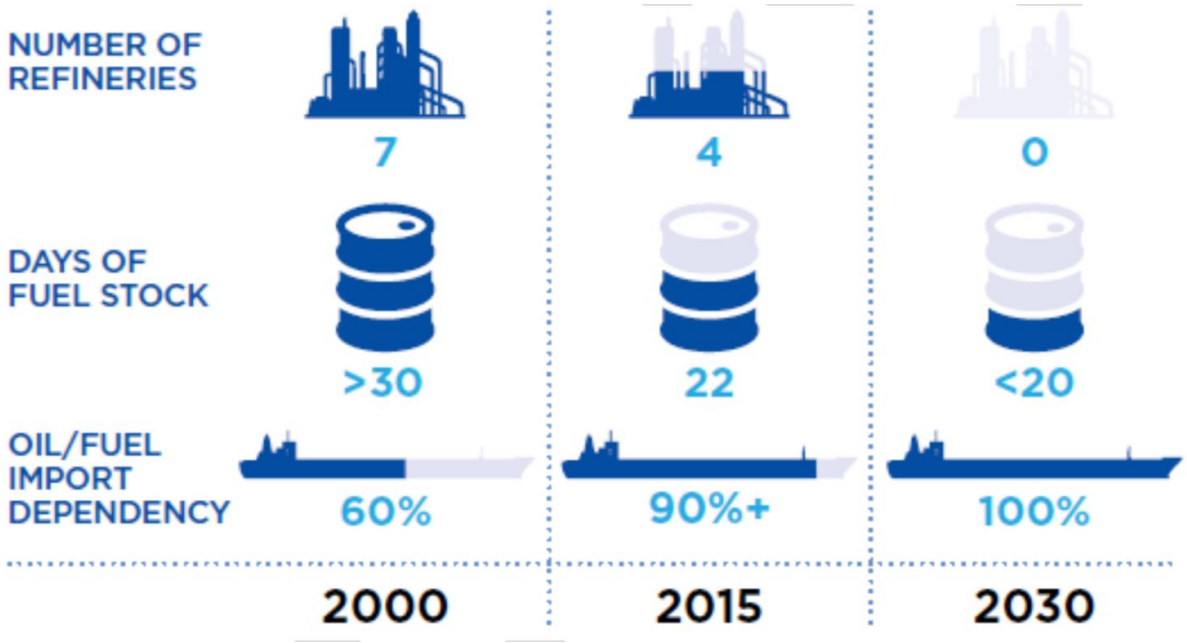
Oil

Virtually all of the liquid fuels consumed in Australia are produced off-shore, with the remaining oil refineries scheduled for closure in the near future.

The majority of Australian liquid fuels are produced and supplied by one, off-shore supplier that wholesales to Shell, BP, Mobil etc. for retailing throughout Australia.

Australia does not have any public fuel reserve policy in play and commercial operators do not carry significant stocks in the event of any disruption to supply.

Figure1. Australian fuel production and stockholding



Source: NRMA Submission to parliamentary inquiry[13]

On average for FY2017-18[14];

- *Australia produced 15,657 megalitres of oil (crude and condensate)*
- *Australian refineries used around 2,470 megalitres of unrefined oil & gas to make refined fuel products (like diesel, petrol, avgas etc.)*
- *Australia used*

[13] Attachment 2 from the NRMA's November 2014 submission to the Senate Standing Committees on Rural and Regional Affairs and Transport inquiry into Australia's Transport Energy Resilience and Sustainability, available at https://www.aph.gov.au/DocumentStore.ashx?id=677ff8dd-ce35-40ee-9af8-bfec1e43d125&subId=301736

[14] https://www.energy.gov.au/publications/australian-petroleum-statistics-2019

- *Australia imported 4,950 megalitres of oil & oil products*

Australia has oil resources including shale oil reserves that are as yet undeveloped. The decline in refining capacity and distribution is an added impediment to the development of Australian oil reserves.

Gas

Gas is one of the most versatile fuels in our economy. It is used in electricity generation, manufacturing, domestic heating and transport applications. It burns relatively cleanly with no particulate or gas pollutants other than carbon dioxide.

Combined cycle gas turbine generators provide twice the energy efficiency of coal generators and are more responsive to fluctuating demand.

Australia has considerable natural gas deposits that should adequately supply the Australian industrial and consumer markets.

Unfortunately, most states and all territories in Australia have no resource reserve policy in place and gas resources have been oversold to foreign entities with no caveat to supply Australian domestic needs.

Current (2017) indicative wholesale gas prices are above $10/gigajoule for the east coast of Australia. In 2013 gas was $7/gigajoule. In 2009 gas cost $5/gigajoule[15].

The result of the global gas rush has seen the proliferation of unconventional gas extraction in many parts of the world with alarming consequences. Australia is now wrangling with Coal Seam Gas development that should not be necessary to meet domestic gas needs.

In recent years it appears gas generators have been implicated in the high wholesale electricity prices because they have been gaming the system and causing price spikes.

Renewables

There are a range of renewable energy sources, but the top four in order of their current utilisation are plant products (bagasse and timber products), hydro, wind and solar.

Much focus is being applied to wind and solar as the debate rages about reliability and intermittent production and the range of renewable energy targets that should be applied to the energy matrix in the future.

The reality is that the technology is evolving at an increasing pace. Proactive energy markets, including highly industrialised economies like Germany, elsewhere in the world are now incorporating over 50% renewable sources cost effectively and without disruption.

Australia has some of the best wind and solar resources in the world and we are underutilising these resources, particularly in regional areas.

[15] Per DOEE report in 2018; https://www.energy.gov.au/publications/gas-price-trends-review-report, prices vary for retail, small & large users – shown here is the large industrial customer delivered wholesale gas prices per the tab 'State Comparison 2017' in the excel file https://www.energy.gov.au/sites/default/files/gas_price_trends_review_2017_-_large_industrial_customer_-_data_and_graphs_2017_xlsx_2mb.xlsx

Nuclear

Australia has excellent nuclear fuel resources.

Nuclear energy suffers greatly from social stigma and the “not in my back yard” (NIMBY) attitude where people recognise the validity of the technology, but don’t want it near them. Largely this is born from concerns about waste and potential for failures.

The evolution of the technology has addressed these concerns so that modern reactor waste is genuinely benign and building standards accommodate most construction risk.

Australia has sufficiently abundant energy alternatives to not require the development of large scale nuclear generators at this stage. However, some options may exist for smaller mobile nuclear generators for rapid deployment or remote applications.

Conclusion

The Australian Democrats are responding to the current energy debate proactively. Consistent with current policy this document seeks to clarify the proposal to establish an independent energy authority hereafter referred to as the Australian Energy Authority (AEA).

Energy security is critically important to our economic and social stability. No sector of the economy is free from reliance on energy, be it in form of electricity, transport fuel or heating fuel. Due to the sheer size of Australia and the nature of regional industry generally, rural and regional Australia is the most exposed to supply and price shocks in the energy markets.

The ongoing shambles that is the energy debate demonstrates the lack of political leadership capacity and courage to develop and implement long term energy policies that will provide generational certainty in energy security.

Our entire way of life has been developed and is critically dependent upon an abundant supply of affordable energy. Our reliance on domestic and international trade and just in time supply chains makes transport fuel security as important an issue as power generation and gas.

Access to affordable energy in all its forms is under threat and this raises serious questions about what we can expect of the future.

When the Deputy Prime Minister declares any aspect of energy policy aspiration is “bat poo mad” based solely on an ideological opposition to the proponents, the debate is in crisis. Australia deserves and desperately needs better leadership and management of the debate in all its detail.

The challenge is immense, but there are solutions to every challenge if we can put aside partisan and combatant politics.