Notes **SLIDES**

I want to cover these three main topics today and hopefully answer your questions. Overview slide

It is a real pleasure to be with you today for many reasons, both personal and professional. It is the first time that Stu Wood and I have been in the same room as each other for a very long time. Stu and I shared a magnificent study—18 feet by 25—at Ormond College. That was 1989: the year the world changed. Back to now.

The picture shows the area under the house after the Brisbane flood of 2022. When you are talking to someone on the phone days later and you suddenly dissolve in tears you know you've had a cathartic event. No, it didn't make me suddenly believe in climate change. It's stranger than that. In one of those sodden archive boxes was a letter I wrote to the AFR in the early 1990s advocating the merits of cap and trade over carbon taxes. Stu came into the Senior Common Room (we were both tutors by then), congratulated me on the letter ***"Nice letter Willow"*** and then said casually: Flood pictures

"But I don't believe in climate change." That deeply shocked me. It didn't change my mind, but a decade later I realised that Stu had planted a fertile seed of doubt.

So, Stu, this is my chance to thank you personally.

That seed of doubt sprang forth about a decade later during my years in London. It was cultivated through an email friendship with the late Ray Evans, who I know many of you knew, and his **Lavoisier Group**. I never met Ray, but I was a classmate of his son Richard at Geelong High School in the '80s. Lavoisier

Ray, along with other good friends of the IPA, was not ashamed to speak up for the value of our natural resource endowment in the Latrobe Valley, understanding its value to the prosperity and security of our nation. Latrobe Valley picture

This image taken in May 2008 from Tyers Lookout shows all of the Latrobe Valley power plants. Hazelwood is now gone. The Maryvale pulp and paper mill has now closed and Reflex paper is no more. We buy imported Norwegian paper.

Yallourn is on a support deal involving confidential payments from the Victorian Government to remain in operation until 2028. In South Australia, the last coal-fired plant was dynamited in 2016.

Where is your thinking at with our current energy situation? Three panel slide

If you are anything like me, you are deeply worried.

- Our energy **SECURITY** is being eroded.
- System **COSTS** are rising, and this is already showing up on everyone's bills.
- And meanwhile, our energy **EMISSIONS** are not actually being reduced.

But what is energy security? It is the power to be free and to do work. Definition slide

After I was an energy consultant in Hong Kong at the turn of the millennium, and long before I led coal and uranium industry analysis in Rio Tinto Energy, I was an electricity guy turned gas guy in London. As project manager on an independent gas pipeline development in the Southern Gas Corridor from the Caspian Sea to Europe, I saw close up the way Europe, and in particular Germany blundered on its gas security, its energy security, and its national security. The results are clear today in Ukraine. Southern Corridor slide; Putin-Schroeder slide

Here are **Germany's big three blunders**, its natural **advantages** and **disadvantages**. WinGas map

Here are Australia's **big three blunders**, its natural **advantages** and **disadvantages**. Australia's and Germany's **advantages** and **disadvantages** are opposite of each other. Australia is today making all three (and more) of Germany's energy policy blunders. This has been spelled out clearly in writing to the Prime Minister. And we could add other blunders. BP gas trade; PM letter slide

I don't need to persuade anyone in this room that if Australia stays on its current official policy path, we will fail to meet all three objectives: emissions; costs; security. But for us to succeed, we need to be able to describe an alternative future. That future must be **practical**. It must **resonate** with mainstream Australians. It must create a **coalition of the winners**. And enable a **winning Coalition**.

It must first get the **priorities** right.
First: Energy **security *IS*** national security. DC with quote.
Second: **cost** matters, at the system level, and on the bills consumers actually pay.
Thirdly: we need a grown-up understanding of approach to minimising impacts on the **environment** as a whole, not a simplistic, child-like, or ideological attitude.

In the United States (and Canada) everyone 'gets' that energy security is priority №1: on the left and right, in think tanks and industry bodies, state and federal governments, companies and utilities. It is clear that Australia has not yet understood energy security properly and isn't taking energy security seriously.

Washington picture / US map

The IPA's new Energy Security research programme has the goal of changing that. I have taken on the challenge of working with Scott and the IPA staff, supported and encouraged by the far-sighted group of donors that Nick Jorss is bringing together.

Maria Korsnick quote

The excellent articles by Kevin You and Scott Hargreaves in the Autumn edition of the *IPA Review* strike the right notes. Australia must shake itself from it complacent slumber in the **comfort zone** that we inherited from the 20th century.

Autumn issue articles

We are in the process of destroying our low-cost, high-security energy systems and replacing them with a high-cost, low-security mess. Combining CO_2 emission constraints and wind and solar subsidies with a naïve 1990s version of free market competition in electricity has proven to be **dynamite**: literally.

Northern PS

These slides show what the quote from Maria Korsnick means
"Stop blowing up your coal plants — you're not ready to live without them yet!"

Burning platform 'Cliff' slides

In my testimony to the Commonwealth parliamentary inquiry in 2019, I linked energy security with national security. I was perhaps a little optimistic on the level of thinking in Australia at that time. I also said that ***we are testing the National Electricity Market to destruction***. The chart on the left shows how the price formation mechanism working as intended in the bulk energy spot market. The example is for South Australia in the month of August 2009. They still had coal-fired power generation. Each dot represents a half-hourly spot price settlement. You can see the average price of $24/MWh which is 2.4c per kWh and the range. You can see the average demand was just under 1500MW, and the range. You can see the wholesale revenue pool was $27 million in the state for over 1000 GWh of energy.

Price formation charts

The chart on the right is the same month in South Australia in 2021. The average price is more than double. The month's energy is slightly lower. The wholesale market pool revenue is almost double. The volatility is extremely high and unpredictable.

The bankers understand this problem, as we found from interviewing them in 2017. Bankability slide

This is a preview of two charts from some research work at UQ that is yet to be published. Please do not cite this.

The first chart shows installed power generation plant capacity on the left and total system costs averaged over all energy on the right. This shows the extremely large attractiveness of allowing nuclear SMRs to reduce wind and solar footprints, and to avoid huge battery and pumped hydro investments. Figure 7.2

The second chart shows the effect on the optimum installed generation capacity of changing the average CO_2 emissions intensity allowed, combined with the effect of different capital cost levels for nuclear SMRs. The results are very interesting. Figure 7.7

There are two MYTHS that we need to dispel through the IPA energy security work:

Myth 1: Wind and solar power reduce costs. **The reality is they increase costs.**

Myth 2: Wind and solar increase energy security. **In reality they erode security.**

What about emissions?

Myth 3: Wind and solar help reduce emissions. **In reality there is scant evidence.**

Let's quickly review our national emissions accounts and international commitments. GHG accounts

We are past half-way from 1990 to 2050. But nowhere near half way on reductions.
Most countries are likely to fail to meet their commitments.
Things are going to get harder and harder. How we play this game will be crucial.

In my assessment, the two wider concerns that backed the conservative side of politics into the bipartisan geopolitical corner on emission reductions were: Cornwall AUKUS Glasgow

1. The need to agree to Net Zero by 2050 before the Glasgow Conference of the Parties on climate change **to secure the agreement on AUKUS**, and
2. The concern that Australia's **access to debt and equity capital markets** would be curtailed in the absence of joining the emissions reduction bandwagon

"The market can remain irrational longer than you can remain solvent."
(—Keynes: apocryphal) **We face the challenge of being solvent contrarians.**

Acceptance of the changed national security environment provides a platform for lift the level of discussion on energy security. San Diego slide

Japan's perspective will be crucial in addition to U.S. and U.K. voices. Japan depends on **Australia** for 70% of its coal imports, 60% of iron ore imports, 40% of gas imports.[1] Quad-AUKUS-5 Eyes slide

Returning to our definition, energy security—***the power to be free and to do work***—is inextricably linked with national security. It is a key part of the missing *National Security Strategy* that the late Senator Jim Molan said Australia urgently needs. Molan slide

We can also see that energy security is deeply connected with all of the IPA's other programmes. The connections extend well beyond climate change and energy. Without secure, affordable and internationally competitive energy supplies, we will not be able to sustain the Australian Way of Life, people will lose the Dignity of Work, our Rights and Freedoms will be undefendable, and if the West more generally sacrifices its energy security, we will struggle to sustain Western Civilisation, let alone defend it from attack. IPA programmes slide

We need to be contesting in the public arena for sound policy on energy security.

Practical arguments, explanations, and questions of principle will be required.

Measures of success are focused have three horizons. The work aims to make a difference on things that matter to the short-term crisis, the medium-term outlook, and the longer-term well-being of Australia. Directional indicators of success
Our founding donors have a three-year vision to develop the research programme into a Centre for Energy Security, with a series of publications, a programme of events, engagement with like-minded organisations and international guest speakers.

[1] Comments by His Excellency Ambassador YAMAGAMI Shingo to the Perth USAsia Centre Japan Symposium 2023 University of Western Australia Tuesday 28 March 2023. (In agricultural commodities, the top three are: 90% of sugar, 40% of beef, 20% of wheat)