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Geopolitics of The Energy Transition

After The Ukraine Crisis

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Key Points

- The Energy Transition entails the decarbonisation of the global economy by mid-century to achieve Net Zero emissions and reduce the pace of global warming. The Energy Transition picked up momentum with the 2021 Glasgow climate change conference but geopolitical events such as the 2022 Russian invasion of Ukraine may test the resolve of policymakers to pursue it.

- Energy trade in the Indo-Pacific region could be affected, for better or worse, as Australia and its energy partners work their way through contemporary geopolitical issues.

- Australia's main policy goal for the foreseeable future must surely be to maintain its own energy security. For this, it needs to present itself as a safe place to invest and as an even-handed collaborant with its energy partners in the development and export of a diversified range of low-emissions energy forms and energy technologies.

Introduction: The Geopolitics of Energy

Because of its strategic importance, energy has always provided fertile ground for political differences. The converse is also true: political differences have always tended to threaten energy security.

The Organisation of Petroleum Exporting Countries (OPEC) was formed in 1960 and the International Energy Agency (IEA) in 1974. Both have contributed to the peaceful and reliable supply of energy.

Over the years, disputes over oil exports from the Middle East, as well as over oil and gas exports from Russia, have been prominent. In particular, Russia has been in almost constant dispute with its European gas customers since the Soviet Union fell 30 years ago.

Energy security can however be undermined by any number of factors along the supply chain, including production difficulties, technical failures, shipping and other transport delays, weather-related events, strikes, sabotage of critical facilities, acts of war, terrorist attacks, civil unrest and health pandemics, such as COVID-19.

In 2021, global climate change concerns took centre stage under the banner of the 'Energy Transition', a global campaign to reach the goal of Net Zero emissions by mid-century.

2021 also brought discussion of the possibility of war in Europe and the Indo-Pacific region that could have serious implications for established trading relationships.

2021 was therefore a transformative year for the global energy economy – a year in which the Energy Transition picked up momentum in but was delayed by geopolitical concerns.

The Russian Invasion of Ukraine

Early in 2022, the Russian invasion of Ukraine had significant short-term impacts on the global energy sector as the price of oil exceeded US$100 a barrel for the first time since 2014.[1] This price hike was in direct contrast to the price plummet that followed Russia's annexation of Crimea in 2014, and which severely impacted the Russian oil-dependent economy.

In geopolitical terms, the Russian invasion will test the strength of the US's emerging lead export role following its domestic shale gas revolution, with US gas exports to Europe in January 2022 exceeding Russia's pipeline deliveries for the first time.[2] This market share will likely increase as current German sanctions against Russia suspend the development of the Nord Stream 2 natural gas pipeline.

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[1] Reuters, 'Oil surges above $100 for first time since 2014', (24 February 2022), https://www.reuters.com/business/energy/oil-rises-us-says-russian-attack-ukraine-may-occur-soon-2022-02-24.

[2] U.S. Energy Information Administration, 'Three countries provided almost 70% of liquefied natural gas received in Europe in 2021', (22 February 2022), https://www.eia.gov/todayinenergy/detail.php?id=51358.

The demand for oil during a price shock challenges the 'spare capacity' of oil producing states, being the potential output of wells that can be turned on to supplement global supply. In certain circumstances, the US can access its Strategic Petroleum Reserve to alleviate price shocks and direct oil supply to certain markets.

Australia and China

Australia Is the world's fourth largest energy exporter, its energy exports making up around a quarter of its Gross National Income.

China for its part is increasingly dependent on imports of coal, oil and gas

Australia is a major exporter of coal and natural gas. Its largest energy customer is Japan, followed by China. When Vice Premier Li Keqiang of China made an official visit to Australia in October 2009, the two sides issued a joint statement:

> *"… the two sides agreed that China and Australia enjoy strong economic complementarity, and it serves the common interests of both sides to advance economic, trade and investment cooperation on the basis of reciprocity and mutual benefit. Australia is a long-term stable supplier of mineral and energy resources to China. China is a competitive supplier of goods to Australia. …. The Australian side stated in clear terms that it welcomes investment from China, as China welcomes investment from Australia."*[3]

Over the last several years, Australia-China trade relations have deteriorated, with China imposing unofficial import restrictions on Australian coal imports and Australia tightening up its foreign investment rules.

Although Australia and China might have their political differences, they remain 'natural partners' in the energy sector, as do Australia and Taiwan.

2021: A Transformative Year in Energy Geopolitics

This is how 2021 unfolded:

- In March 2021, Australia joined with the US, India and Japan in the QUAD, a Quadrilateral Security Dialogue, committing themselves to *'an Indo-Pacific region that is free, open, secure and prosperous.'* QUAD members also agreed to work towards the strengthening of the Paris Climate Change Agreement and to end the Covid 19 epidemic.

- In September 2021, Australia joined AUKUS, a trilateral security pact with the UK and the US to cooperate in helping Australia to acquire nuclear-powered submarines and associated undersea capabilities, to be armed with conventional weapons, cancelling a previous contract with Naval Group of France.

[3] Australian Department of Foreign Affairs and Trade, Australia-China Joint Statement, 30 October 2009 www.dfat.gov.au

- In October 2021, G20 Leaders, including Australia, China, the US and the EU, met in Rome and expressed their collective concern about energy security:

  '... we are committed to maintain energy security, while addressing climate change, and guaranteeing just and orderly transitions of our energy systems that ensures affordability, including for the most vulnerable households and businesses ... We emphasize the importance of maintaining undisrupted flows of energy from various sources, suppliers and routes, exploring paths to enhanced energy security and markets stability, while promoting open, competitive and free international energy markets.'[4]

  G20 Leaders agreed that the management of energy security needed system flexibility, technological solutions and sustainable supply chains of critical minerals and materials.

- In November 2021, COP 26 was held in Glasgow, when most countries affirmed the Paris Agreement's 2050 aspirational goal of holding 'Net Zero' emissions to well below 2°C above pre-industrial levels and pursuing efforts to limit the increase to 1.5°C. China was a notable standout in specifying 2060 as its aspirational year by which to achieve Net Zero.

A Review of COP 26

COP 26 was both a success and a failure: it was a success in reaffirming the role of multilateralism in addressing climate change; it was a failure in not bringing about agreement on the specific steps of how to actually limit global warming to the level that most countries were - or are -seeking.

At COP 26, 23 countries went further than others, making commitments to accelerate their efforts towards the phase-down of unabated coal power. Some signed on to help developing countries, such as India and South Africa, to transition away from coal. 25 countries and five financial institutions committed to stop public financing for most fossil fuel projects by the end of 2022.

COP 26 also resulted in two new pledges. First, more than 130 countries pledged to halt and reverse land degradation and deforestation by 2030. The signatories possess 90% of the world's forests. Second, more than 100 countries signed a Global Methane Pledge to collectively slash methane emissions by 30% by 2030.

COP 26 may have signalled the limitations, if not the end, of the global or 'top down' approach to climate control. National governments are likely in future to focus greater attention on their own countries and the pursuit of particular technologies, taking a collaborative approach with other countries wherever it makes sense.

[4] G20, Leaders Declaration, 9 October 2021.

COP 26 did not result in any binding obligations on national governments, and instead re-iterated the need for multilateral action to ensure global warming is kept below 2°C above pre-industrial levels by 2050 and pursue efforts to limit the increase to 1.5°C. However, the COP process continues to be a very useful reference point for tracking international climate ambition alongside the Energy Transition, with Parties expected to expand their nationally determined contributions prior to COP27, which will be held in Egypt later in 2022.

Energy Security Remains a Priority But Not The Only Priority

What domestic initiatives can Australia take to reduce emissions without diminishing its own energy security or that of its major customers?

Which comes first, emissions reduction or energy security? This is not a question for which there is an 'either or' answer. Emissions reduction is a vital, long-term, global goal but the need for continuing, comprehensive, sufficient investment in today's and tomorrow's energy markets cannot be shirked.

Reflecting on the events of 2021, the International Energy Agency (IEA) reported in January 2022:

> *'The world has not been investing enough to meet its future energy needs – and that remains the case today. Clean energy investment is gradually picking up but remains far short of what is required to meet rising demand for energy services in a sustainable way. It would need to triple by 2030 to get the world on track for a pathway consistent with limiting global warming to 1.5°C.*
>
> *Much stronger investment in low-carbon energy technologies including renewables, energy efficiency and nuclear power is the way out of this impasse. But this needs to happen quickly or global energy markets will face a turbulent and volatile period ahead.'*[5]

Energy security is of course a global concern, but it is particularly important for energy-importing countries such as China:

> *"Energy is the important material basis for the development of the entire mankind. The rational exploitation and sustainable development of energy are most significant to the growth of world economy and the progress of human society. The energy issue is a global concern. To strike a balance between world energy demand and supply and to maintain world energy security is an urgent common task for all the nations on the globe."*[6]

There is no international organisation that supplies energy. Furthermore, no amount of international dialogue is going to significantly alter the need for energy or its availability –

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[5] Fatih Birol, '*Europe and the World Need to Draw the Right Lessons from Today's Natural Gas Crisis',* IEA, 14 January 2022.

[6] Zhou Xinbao, Secretary-General, Council for Security Cooperation in the Asia Pacific, China, "Change in China's Energy Situation and Its Strategy for Energy Security", China International Studies, November/December 2009.

each importing nation must secure its own energy supply and manage its own energy affairs.

It takes a long time for the strategic relevance of international problems like energy security to be fully appreciated at national level and for policies to change.

Although energy security is a global problem, the solutions to it are overwhelmingly a national, not international, responsibility.

The main cause of the current global energy security problem is growth in demand. This has been driven by population growth, economic growth, industrialisation and urbanisation. Year after year, growth in demand has increased the vulnerability of importing countries to oil supply disruptions and price volatility.

The growth of natural gas trade has made a huge difference because it can be transported by pipelines or converted into LNG for shipment by bulk carriers. So has the rapidly increasing growth of the 'new' renewables.

Governments now need to respond to the combined challenge of energy security and climate change. The key response is energy source diversity, coupled with vertical integration of industry to better manage the risks and costs of supply disruptions. There is nothing new about this.[7]

An important longer-term response is vertical integration to better manage the risks and costs of upstream supply disruptions.

Another important longer-term response is research and development (R&D) and utilisation of energy technologies that reduce the risk or cost of future disruptions, as well as lead to low-carbon energy production.

The transport sector is an area where there has been limited progress in new technology utilisation to date. For example, wider use of electric-powered vehicles will increase the diversity of the transport fuel mix and will significantly reduce the risks and costs of oil supply disruptions. Similarly, mass transit systems will be more and more essential.

In the power generation sector, there will be a steady trend towards the greater use of clean coal, natural gas, nuclear energy and renewable energy; there is also the longer-term goal of a hydrogen economy.

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[7] The principal recommendation of the World Energy Congress held in Sydney in 2004 was: *"All energy options must be kept open and no technology should be idolized or demonized. These include the conventional options of coal, oil, gas, nuclear and hydro (whether large or small), and the new renewable energy sources, combined of course with increased energy efficiency. Each is subject to uncertainties, we cannot afford to jettison any one of them. Energy source diversity is the bedrock of a robust system, even if the optimum mix will vary according to local circumstances".* World Energy Council, Sydney 2004 Congress Conclusions www.worldenergy.org.

What Is The 'Best' Energy Security Policy in The Energy Transition?

The best energy security policy for any country includes a diverse mix of emergency and longer-term measures. Each country has different circumstances and different priorities. As energy markets continue to experience a higher share of renewables in the grid, gas will continue for some decades to play, at the very least, a critical 'backstop' role to account for fluctuations in solar and wind penetration.[8]

For a particular country, what might be the 'best' response strategy will depend on the make-up of the particular energy security risks that it faces. Emergency stockpiling systems have a balancing role to play as a temporary response to shortages but each country must analyse its particular circumstances and decide its most appropriate, cost-effective and affordable longer-term response strategies.

Australia released its emissions reduction plan shortly before COP 26. It was elaborated in Glasgow by Prime Minister Morrison. Its goal is to achieve net zero emissions by 2050 while preserving existing industry strengths, aiming to position Australia as a leader in low-emissions technologies and enabling its regional areas to prosper. The plan takes a technology-driven approach without imposing higher taxes.

The Australian Government's Technology Investment Roadmap provides guidance to industry by publishing annual statements reviewing and evaluating ongoing investments in low-emissions technologies.[9]

Collaboration is Critical But National Goals Must Come First

The Energy Transition involves a multi-faceted challenge that individual governments cannot pursue alone. Australia is already developing collaborative arrangements on energy technology with Germany, Indonesia, Japan, Singapore and the UK. More are likely to come.

Climate change is now also being integrated into every aspect of Australia's international development program, which may be particularly relevant to Pacific and Southeast Asian countries.

However, if it comes to the crunch, national goals will inevitably come first. At the same time as proactively pursuing collaboration and cooperation with other countries, Australia must:

- defend its national borders
- guard against any breakdown of its domestic liberal order
- maintain its national security and its energy security
- promote and protect all of its essential industries, serving both domestic and export markets, and
- protect itself against sabotage and activism, including climate activism.

[8] Wood, T. and Ha, J., 'Go for net zero', Grattan Institute', (2021), 30.
[9] DISER, 'Technology Investment Roadmap: Low Emissions Technology Statement', https://www.industry.gov.au/data-and-publications/technology-investment-roadmap-low-emissions-technology-statement-2021/priority-technologies

This may be a tall order but it is an essential order.

China and Australia both remain dependent on imports of oil. Without new oil discoveries, the transportation sector of both countries may become increasingly vulnerable to oil supply disruptions. Substitutes for oil will therefore have to be found. Electric-powered vehicles are likely to play a key part in the transportation sector in the future, as are mass transit systems.

China and Australia might have their political differences but remain 'natural' partners in trade and investment in coal and natural gas. They could also become partners in the development of new energy technologies such as hydrogen. The two countries could help each other enjoy a more secure energy future if they could find further ways of collaborating.

Diversity: The Overriding Policy Principle

A single country like Australia cannot be responsible for delivering the desired outcomes of the Energy Transition but it must do everything it reasonably can and everything it can reasonably afford to achieve the desired outcomes.

At least for now, Australia's energy policy should be based on the overriding principle of delivering diversity: diversity of resources, diversity of technologies and diversity of solutions. Our energy security ought not be jeopardised by geopolitical concerns.

ABOUT THE AUTHOR

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