Australia’s Energy Security and Statecraft in an Era of Strategic Competition

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Abstract: Previously published studies on Australia’s energy security did not examine the country’s domestic energy security situation in tandem with its international energy statecraft. This paper fills this research gap. In order to provide a robust analysis of a country’s strategic options in the energy sector, it is paramount to balance domestic and international dimensions, along with internal and external factors. The paper utilizes the strengths, weaknesses, opportunities, and threats (SWOT) method to review Australia’s strategic options by balancing the inward-looking, domestic risk minimization dimension (energy security), with the outward-looking, international power projection dimension (energy statecraft). The paper also applies the 4A framework (availability, accessibility, affordability, and acceptance) to assess Australia’s energy security performance. On the one hand, the results demonstrate that Australia has many strengths and opportunities as a reliable and stable energy supplier, endowed with traditional and renewable energy resources, and critical minerals. On the other hand, numerous internal weaknesses and external threats may affect Australia’s strategic options in the future. The most pressing issue is the historical lack of strategic government intervention in the energy market, which has, paradoxically, resulted in domestic energy accessibility and affordability crisis. The market-based approach is also the main reason why Australia has not transformed its energy resources into capabilities to be used as instruments of statecraft. The paper uses the SWOT analysis and the 4A assessment as the basis for discussion on how Australia can transform its energy sector weaknesses and threats into strengths and opportunities, to benefit the national interest.

Keywords: Australia; energy; strategy; security; statecraft

1. Introduction

The 2022 Russian invasion of the Ukraine is having a major impact on global energy markets. In the immediate aftermath of the invasion, international crude oil, natural gas and thermal coal prices reached record highs. Australia has a rare status in the global energy markets among developed countries. It is both an energy importer and an exporter. Implications for Australia of Russia’s war in the Ukraine are Janus-faced. On one hand, in contrast to the 1970s oil crises when Australia had ample supplies of domestic oil and its refining capacity was self-sufficient, the country is no longer insulated from global energy crises. Australia’s growing import dependence on crude oil and refined petroleum has left the country’s energy security and economy vulnerable to geopolitical events in other regions. With domestic fuel prices largely determined by the international market, Australians have been paying record high prices for petrol, adding to underlying inflationary pressure. Australia’s crude oil and refined petroleum import dependence is a source of strategic vulnerability.

On the other hand, while increasingly dependent on imported oil and refined petroleum, Australia is blessed with an abundance of other non-renewable energy resources, renewable energy, and critical metals and minerals required for the energy transition. To illustrate, Australia’s liquefied natural gas (LNG) exports were the world’s largest in 2020 and 2021. Its coal exports have been the world’s largest since 2013. The country is also the world’s...
largest low-cost uranium reserve holder and the fourth largest uranium producer and exporter. In addition to traditional energy sources, Australia has significant potential as a renewable energy and green hydrogen producer and exporter. Finally, Australia is abundant in critical metals and minerals and rare earth metals required for the energy transition. In the immediate and short-term, Australian producers and exporters are well positioned to benefit from record-high thermal coal and LNG prices following Russia’s invasion of the Ukraine. In the longer term, Australia’s abundance in other fossil fuels, uranium, renewable energy, critical energy transition minerals, and rare earths may serve as a potential strategic lever that can be utilized as an instrument of statecraft to advance the country’s national interests.

The aim of this paper is to assess Australia’s strategic options in the international and domestic energy sector in an era of strategic competition. The key question that the paper aims to answer is: How can Australia’s energy strategy be transformed in order to benefit the national interest? In order to provide a robust analysis of a country’s strategic options in the energy sector, it is paramount to balance domestic and international dimensions, along with internal and external factors. Against this background, this paper reviews Australia’s strategic options by balancing the inward-looking, domestic risk minimization dimension (energy security), with the outward-looking, international power projection dimension (energy statecraft). Previously published studies on Australia’s energy security did not examine the country’s domestic energy security situation in tandem with its international energy statecraft. We have little knowledge about how these two dimensions of energy strategy interact. This paper fills this research gap. Specifically, the paper utilizes the 4A framework (availability, accessibility, affordability, and acceptance) to assess Australia’s energy security. In addition, it utilizes the strengths, weaknesses, opportunities, and threats (SWOT) analysis method, to bridge insights from two separate bodies of theoretical work, on energy security and statecraft, and apply them in the context of the energy strategy of a nation-state. By combining insights from two distinct areas of inquiry, this paper offers an empirical contribution to the nascent theoretical debate that combines domestic and international dimensions of energy strategy [1].

The paper proceeds as follows. Section 2 describes materials and methods, specifically the SWOT method and the 4A framework. This section also engages two primary theoretical bodies of work, energy security, and energy statecraft. It also briefly outlines Australia’s national interests, and the Australian Government’s approach to energy policy and intervention in energy markets. Section 3 outlines the results of employing the SWOT method and the 4A framework to review Australia’s energy security and the use of energy as a tool of statecraft. Key messages from the SWOT analysis and from applying the 4A framework are used as the basis for discussion and policy recommendations in Section 4. The specific focus in this section is on outlining strategic insights for Australia, which can assist the government in transforming weaknesses and threats in its energy security and statecraft into strengths and opportunities that may ultimately benefit the national interest, defined broadly around security and prosperity. Section 5 offers brief concluding remarks.

2. Materials and Methods
2.1. Methods
2.1.1. The SWOT Method

The paper utilizes the SWOT method to review Australia’s domestic energy security and the use of energy as a tool of statecraft in international relations. The SWOT method originates from the business management literature. In strategic studies, SWOT analysis is a commonly used structured planning method. The method has also been applied to energy research in various contexts [2–7]. The SWOT analysis was chosen as the method in this paper because of its straightforward approach, flexibility, and practical and strategic output. In the context of this paper, the SWOT method is fit-for-purpose as it provides the flexibility to simultaneously assess Australia’s energy security and statecraft, while enabling practical and strategic conclusions. The SWOT analysis was also selected because it produces a
strategic blueprint for Australia to leverage its strengths, maximize opportunities, subdue systemic weaknesses, and combat the impending threats to its energy system. The method also helps to assess both the negative and positive influences of internal (strengths and weaknesses) and external (opportunities and threats) factors on a country’s energy system. The paper does not seek to improve the SWOT method, but to demonstrate its utility as a strategic analytical tool in the energy sector from the perspective of a nation-state.

In this paper, strengths refer to the inherent abilities, resources, or capacities of a country to compete and grow strong, or otherwise reach its objectives. They serve as a country’s critical success factors and provide its competitive advantage vis-à-vis other countries. Weaknesses are the inherent deficiencies or limitations that negatively affect national growth and survival, and make it difficult to achieve objectives. They refer to the characteristics that put one country at a disadvantage over others. Strengths and weaknesses refer to largely internal characteristics. Opportunities refer to favorable situations, chances, and openings for potential national growth. They are created by external factors, such as new trends and changes in the market, such as the energy transition. Threats are external challenges to a country, which might diminish strengths, enhance weaknesses, and prevent opportunities from being exploited.

2.1.2. The 4A Framework

In addition to the SWOT method, the paper utilizes the 4A framework to offer a brief assessment of Australia’s energy security performance. This framework has been applied to assess the energy security performance of China, the Association of Southeast Asian Nations (ASEAN), Pakistan, and Bangladesh, along with energy security implications associated with the penetration of electric vehicles (EVs) in ASEAN [8–12]. The 4A framework is framed around three key dimensions of energy security present in the supply chain, namely the supply security dimension (availability and accessibility), the economic dimension (affordability), and the social and environmental dimension (acceptability). The supply security dimension includes the availability of energy resources, specifically the geological existence of energy resources, along with production potential. This dimension also includes accessibility, or the capacity for energy, the quality of supply chain infrastructure, and also includes geographic and geopolitical challenges related to energy access. The economic dimension refers to the affordability of energy, or the cost across the supply chain. The acceptability dimension refers to environmental and social acceptance of energy production, transportation, and usage [13].

2.2. Key Concepts and Theory

2.2.1. National Interest

The concept of national interest is defined broadly in the Australian context, allowing for interpretation as dictated by the circumstances [14]. In Advancing the National Interest, the Department of Foreign Affairs and Trade (DFAT) defines Australia’s national interest as “the security and prosperity of Australia and Australians” [15] (p. v). According to Conley Tyler and Ivimey, there has been continuity across Australian governments in defining the national interest to include security, prosperity, and international order [16]. These national interests may come in conflict with each other due to competing national and foreign policy priorities, and may require trade-offs and balancing [17]. Therefore, the national interest is best conceptualized as “a hybrid of carefully balanced elements in a nuanced equilibrium” [16] (p. 275). A more detailed appraisal of Australia’s national interests is out of scope. For the purposes of this paper, Australia’s national interests are discussed below in relation to the theory of energy security and energy statecraft.

2.2.2. Energy Security

Energy is at the nexus of national security, economic prosperity, and environmental considerations. The United National Development Programme (UNDP) defines energy security as the uninterrupted availability of energy, in various forms, in sufficient quantities
and at affordable prices, without unacceptable or irreversible impacts on the economy and the environment [18]. While noting the contested nature of the concept, energy security is often conceptualized around the four principal dimensions, or 4As (discussed above) [13,19,20]. Within the Australian context, the secure supply of energy is considered essential to economic growth and the prosperity and well-being of Australians. The last official Australian government definition refers to energy security as:

“... the adequate, reliable and competitive supply of energy where adequacy is the provision of sufficient energy to support economic and social activity; reliability is the provision of energy with minimal disruptions to supply; and competitiveness is the provision of energy at an affordable price which does not adversely impact on the competitiveness of the economy and which supports continued investment in the energy sector [21].”

As stated in the introduction, Australia is both an energy importer and exporter. The concept of energy security is salient from the importer’s perspective. In contrast, the concept of energy statecraft, discussed below, is useful from the perspective of energy exporters. Australia’s liquid fuel security relies on market stability and the maintenance of the rule-based international order in the energy markets [22]. As a net importer of crude oil and refined petroleum, it is in Australia’s national interest to ensure uninterrupted availability of these commodities in sufficient quantities and at affordable prices. With Australia’s road transportation sector and the Australian Defence Force (ADF) heavily reliant on refined petroleum products, potential supply cuts along international supply chains would have a significant effect on the national security and prosperity of Australians. More generally, prolonged periods of high international energy prices would have a significant effect on fuel and electricity affordability in Australia, in turn affecting national prosperity. Therefore, it is in Australia’s national interest to reduce strategic vulnerability to potential supply cuts and exposure to prolonged periods of high prices.

2.2.3. Energy Statecraft

Statecraft refers to the art of conducting state affairs, both domestic and international. Statecraft can also be defined as the skill of securing the survival and prosperity of a sovereign state [23]. Effective statecraft is based upon the interplay of all sources of national power, political, military, economic, scientific and technological, social, industrial, and informational. To be effective, statecraft must weave all dimensions of national power and influence into an integrated, self-reinforcing whole, in pursuit of national interests. In the Australian context, Kilcullen posits that:

“Statecraft is the art of defining and pursuing national objectives in their domestic and international contexts. It is larger than domestic or international relations, and broader than national security, economic or social policy. It is a conceptual construct of the nation, the state and all their internal and external relationships, which unifies approaches to all areas of policy [24].”

According to Mastanduno, economic statecraft signifies a state’s use of economic instruments and relationships (or means) in the pursuit of political goals (ends) [25]. Energy statecraft is a subtype of economic statecraft. For the purposes of this paper, energy statecraft refers to the use of energy resources and capabilities as instruments in pursuit of national interests. Within the relatively limited literature on economic statecraft, positive economic statecraft (the proverbial “carrot”) is significantly under-researched compared to negative forms of economic statecraft (or “stick”) [26–28]. Similarly, positive energy statecraft has received much less attention academically than its negative counterpart [1].

National resources are the basic forces of statecraft. They include a country’s geographical position, natural resources, climate, population, and level of development. Since the expansion or loss of territory is generally rare in the international system, national resources take generations to change significantly, and are inherited by governments. Energy resources are increasingly considered as strategic factors in competition among global
powers [29]. There is no automatic correlation between the possession of resources and the ability to exert influence. By themselves, resources are not operational levers of influence. Instead, resources need to be operationalized into capabilities before they can be applied in practice as instruments of statecraft [30].

Capabilities are the recognizable elements of a government’s responsibilities for which separate departments might exist and where decisions may have an effect [30]. These include the armed forces, the quality of the civil service, industrial and technological capacity, levels of education, agricultural productivity, reputation, patterns of trade and diplomatic representation, the general strength of a country’s economy, etc. Instruments of statecraft, in turn, are the forms of pressure and influence available to statesmen and decision-makers that amount to projectable power [30]. They comprise the inventory of means or capabilities used by a government or other policy actor in the formation and implementation of its policies [31].

The concept of energy security and the associated scholarly work has traditionally been engaged from the perspective of energy importing states [32,33]. From the perspective of producers, or exporters, this concept implies security of demand. It is also related to energy statecraft, or how energy resources are transformed into capabilities to be used as instruments [34–37]. According to Dalgaard, energy statecraft is more likely to be effective with a high degree of government intervention [1]. In general, energy exporters aim to sell their volumes at high and stable prices to reliable consumers, generating a stable inflow of revenues. Governments of energy exporting states can intervene in markets by regulating or limiting exports, pursuing strategic partnerships with importers and other sellers, establishing national companies to represent their interests in the operation of the sector (both upstream and downstream), and/or by owning the shipping fleet which delivers their export volumes to the markets.

Energy exporters often face a trade-off between increasing export capacity and providing domestic consumers with sufficient supplies at affordable prices. Some exporters have policies that limit energy exports. Common drivers for export limits include the desire to extend national reserves further into the future and to maintain acceptable domestic energy prices. From the perspective of energy exporters, the most important negative effect of a disturbance in the global energy system may be that the security of demand cannot be maintained.

Australia’s resource and energy exports provide significant economic and social benefits to Australia and its people. Australia’s resource and energy export earnings are estimated at A$405 billion in 2021–2022, and forecast to rise to A$419 billion in 2022–2023, delivering two successive record years [38]. Given the significant share of government revenues earned from resource and energy exports, security of demand can significantly impact the health of the national economy. As an exporter, it is in Australia’s national interest to ensure a reliable flow of energy and critical mineral supplies to diverse markets at relatively high but stable prices [39,40].

2.3. The Australian Government’s Approach to Energy Policy and Market Intervention

The Australian government’s long-term energy vision and policy preferences are set out in Energy White Papers (EWPs). In 1988, the government released its first formal EWP [41]. Subsequent versions were released in 2004, 2012, and 2015. The discussion in the white papers has consistently been framed around Australia’s economic policies, espousing a market-based approach and limited government intervention in energy markets, as reiterated in the most recent version:

“`A key to better market outcomes is to limit the role of government in markets . . . Policy interventions in the market framework should not be used to force market outcomes beyond the reliable and competitively priced supply of energy [42].`”

The underlying assumption, shared by both major political parties, is that freely functioning energy markets best serve Australia’s interests and provide optimal outcomes in prices and in balancing supply and demand [43,44]. The underlying philosophy of Aus-
ustraliа’s “macro-economic” approach is reflected in policies aimed at encouraging private-sector and foreign investment in energy export projects, removing market impediments to energy exploration and production, expanding cross-border energy trade, and supporting free and competitive energy markets, both globally and in Australia [45].

There is notable continuity in the government’s commitment to attract investment and increase the supply of low-cost energy to international markets in the EWPs:

- Australia can, and should, continue to play a major role in supplying the domestic and world economies with low-cost energy [46];
- Export development will continue to play a critical role in Australia’s energy future and bring substantial economic benefits to the nation [47];
- Australia must be a productive, cost-competitive, and reliable energy supplier if we are to secure private sector investment in energy resources developments to increase exports . . . the best way to ensure energy supply at the lowest possible cost is to build more competitive energy markets . . . LNG export industry, underpinned by foreign investment, provides an enormous opportunity for the nation’s economy . . . With the right policy settings, our importance to global energy markets will continue to grow [42].

Notably, EWPs do not give any consideration to potential market oversupply or other risks to demand. Historically, Australia has not sought to assert its influence on key energy markets or to leverage energy exports for broader national interest calculations in a consistent way [48].

3. Results
3.1. Strengths
3.1.1. Reliable and Stable Supplier of Energy

Australia’s stable political environment supports transparent and well-established political processes, a strong legal system, competent governance, and an independent bureaucracy. Strong legal frameworks protect property rights, and the robust rule of law mitigates corruption. Expropriation is highly unusual, and enforcement of contracts is reliable. The judicial system operates independently and impartially. The government enforces laws against bribery and corruption effectively. Australia’s political stability, transparent regulatory system, and sound governance frameworks underpin its economic resilience [49]. Australia is frequently cited as a reliable and stable energy provider of traditional forms of energy to Asia, mainly China, India, Japan, and South Korea [50–52].

3.1.2. Extensive Traditional Energy Resources

Australia has extensive traditional, or non-renewable, energy resources, including thermal coal, natural gas, and uranium. In 2021, it was the world’s largest exporter of coal and liquefied natural gas (LNG) [53]. Australia possesses 14% of global proved coal resources, sufficient for around 315 years’ production at current rates. Around 86% of coal production is exported and the remainder used domestically. Australia is rich in natural gas, possessing 1.3% of the world’s proven gas reserves. Approximately 71% of natural gas is exported as LNG, with the remainder consumed domestically [53]. Australia also possesses the world’s largest low-cost uranium resources. In 2021, it was the world’s fourth largest uranium producer and exporter [54].

3.1.3. Extensive Renewable Energy Resources

In addition to traditional energy sources, Australia is naturally endowed with some of the world’s best renewable energy resources. It possesses world-class wind and solar resources, and the potential to develop other renewable energy technologies such as offshore wind, geothermal, and solar thermal [55]. The abundance of sunshine creates possibilities for the export of excess clean energy abroad, either stored and transported as hydrogen, or as electricity carried by high voltage transmission lines [55]. These opportunities are discussed in more detail in Section 3.3.
3.1.4. Extensive Critical Mineral and Rare Earth Resources

Australia is also among the top three global reserve holders for each of the four critical minerals—nickel, copper, lithium, and cobalt—leaving the country in a prime position to benefit from the energy transition (see Figure 1). The four minerals are used as key components in batteries and renewable energies that are crucial in the transition from fossil fuels to low-emission electricity. The name “rare earth” refers to a group of rare earth elements, also called rare earth metals and rare earth oxides. This group of 17 chemical elements is moderately abundant in the Earth’s crust and has unique properties. Due to China’s dominant position in rare earth markets, Western countries have been increasingly concerned about a stable supply and their increasing dependence on China [56]. As an alternative supplier to China, Australia is rich in rare earth elements (dysprosium, terbium, praseodymium, and neodymium), which are in high demand for permanent magnets used in EVs.

Figure 1. Leading producers and reserve holders of critical minerals [57].

3.2. Weaknesses
3.2.1. Market-Based Approach

Historically, Australia has not sought to assert its influence on energy markets or to leverage energy exports for broader national interest calculations in a consistent way. In contrast, the leading importers of Australian energy have always regarded their purchases as serving strategic goals [48]. The federal government has largely left energy security to be determined by the self-interest of commercial and industry bodies and has been convinced by the arguments of economic liberals who have claimed that since Australia has not had any supply problems, it will not have any in the future [58]. In addition, with the government committed to free market principles, there has been no sustained line of thinking about leveraging the power of its energy and resources base [43]. Strategic influence will not arise directly out of market share, but from meaningful adjustments to the ends served by energy and resources. The “hands-off”, or market-based approach, has left Australia at a strategic disadvantage vis-à-vis its Asian customers and other, more proactive, exporters. Scholars find it surprising that Australia’s energy policy documents do not address the export market or demand security as a threat to its prosperity [59].
Australian government’s ability to act as a market participant is limited under circumstances where a strategic approach may be required. For example, in February 2022, the Morrison government announced that Australia “stands ready to support its friends and allies” with extra LNG cargoes to avert any threat of a shortfall in Europe [60]. However, analysts were quick to point out that the government has little to no control over where private energy companies send their cargo [61].

3.2.2. Energy Transition Laggard

Australia has been referred to as an energy transition laggard [62]. In 2021, fossil fuels accounted for 87% of the overall primary energy consumption (see Figure 2) [53]. In the same year, coal accounted for 51% of power generation, while the Organisation for Economic Cooperation and Development (OECD) average is 20% [53]. Australia’s carbon intensity is the highest among members of the International Energy Agency (IEA) [63]. Australians emit 3.37 times more CO$_2$ per capita than the global average citizen, a value that increases to 4.15 when more potent greenhouse gases, such as methane, are included [64]. Australia’s overall energy transition performance between 2005 and 2019 has been worse than the other 22 OECD economies and Russia [65]. Unique amongst OECD countries, Australia does not have mandatory fuel economy standards [66]. Australia also still has no policies in place to transition away from crude oil and refined petroleum [67]. Australian petrol prices are among the lowest in the OECD. Relatively low petrol prices and taxes have discouraged fuel substitution and uptake of EVs. In Australia, in 2021, EVs accounted for only 2% of new car sales, significantly less than the 10% global average [68]. There is a large body of literature that examines obstacles to Australia’s energy transition. As summarized in [69], the most frequently cited issues include:

- Political division, or national polarization, between those who support large-scale exploitation of fossil fuels and those who advocate that the nation should grasp the opportunity of its rich renewable resources [70];
- Disconnect between climate policy and energy policy [71,72];
- Paralysis in climate change policy in the context of the inability of the political establishment to develop a sustainable consensus on climate change [73];
- Resistance of legal and regulatory arrangements in the electricity sector to adaptive change [74];
- Influence of energy-intensive industry players and fossil fuel interests, along with the energy regime that sustains them [75–78];
- Capture by the powerful resources sector [79];
- Institutional features that constrain local actors and reinforce the existing regime [80,81];
- Australia’s federalist system of government [82].

3.2.3. Growing Liquid Fuel Import Dependence and Inadequate Stockpiles

In 2000, Australia’s net crude oil and refined petroleum imports stood at 12,500 barrels per day (bpd). A consumption surge coupled with production decline has meant that by 2021, Australia’s net crude oil and petroleum imports stood at 508,000 bpd [53]. Similarly, around the turn of the century, eight local refineries were able to supply most of Australia’s petroleum demand. As of 2022, there are just two refineries, both subsidized by the government, producing less than 10% of Australia’s petroleum needs. This implies that 90% of refined petrol is imported, principally from Korea, Singapore, Japan, Malaysia, and China [83]. In contrast to two decades ago, Australians are at the mercy of international oil markets, as geopolitical developments across the globe affect petroleum supplies.

In addition to the growing liquid fuel import dependence, Australia has for years been the only country consistently in breach of the IEA 90-day of oil imports requirement for emergency stockpiles [84]. At the time of joining the IEA in 1979, Australia was a net exporter of oil and was therefore exempt from the stockpiling requirement. A decline in domestic production and increased demand largely account for the decline in Australia’s IEA compliance position.
3.2.4. Structural Deficiencies in the National Electricity Market

The Australian Energy Market Operator (AEMO) is responsible for operating the National Electricity Market (NEM), a wholesale market covering Australia’s east and southeast. Over the past decade, the lack of policy certainty, and participants’ exposure to rising, export parity-induced coal and gas prices, led to economic pressure on thermal plant operators and the unexpected and sudden exits of large-scale generators [85]. On one hand, uncertainty over energy policy at the national level for more than a decade had sowed the seeds for underinvestment in renewable energy that would be needed to replace aging fossil fuel generation [74]. On the other hand, the market has been unable to respond to significant wholesale price increases that resulted from the exit of large-scale coal-fired plants. The long-term consequence is an approximate doubling in residential electricity prices over the past decade [85].

3.2.5. Departmental Inconsistency

Departmental inconsistency is an underlying issue that serves as a source of weakness for Australian energy security and statecraft. The Department of Minerals and Energy was first established in December 1972. Over the next half-century, there were 15 departmental name changes, with energy and resources portfolios separated and merged on average every 3.3 years, or the length of an electoral cycle (see Figure 3). The longest period of consistency was between July 1987 and October 1998, with the Department of Primary Industries and Energy. In contrast, the United States Department of Energy (DoE) has been in consecutive existence since 1973. Canada’s Department of Energy, Mines and Resources existed from 1966 to 1995, when it was replaced with Natural Resources Canada (NRCan), which is still in existence. In Japan, the Agency for Natural Resources and Energy (ANRE) has been in uninterrupted existence since 1973. In Australia, the Department of Defence has existed continuously since 1942, and DFAT since July 1987.
A related point of structural weakness is the short parliamentary term and electoral cycle. Federal elections must be held every three years in Australia. Globally, more than 90% of countries have four or five-year terms. Australia, Mexico, and the Philippines are the only three countries that use a three-year lower house term out of 77 countries with a bicameral (two-chamber) parliament. The actual average length of a term in Australia since 1990 has been 32 months, as governments rarely complete the full 36-month three-year cycle [86]. Shorter terms discourage long-term energy policymaking and major reform agendas. Instead, they encourage short-term political considerations to support re-election, which may not serve the national interest.

3.3. Opportunities

3.3.1. LNG and Uranium Exports

Australia’s traditional, or non-renewable, energy endowment makes the country ideally positioned to benefit from its continued importance in the energy transition. This specifically applies to natural gas (or LNG), as a transitional fuel, and to uranium, as a low-emissions power source. While global primary energy demand declined by 4.5% in 2020, the largest drop since 1945, LNG demand increased by 0.6% during the same year [87]. In 2021, global trade in LNG increased by 5.6% [53]. As mentioned in Section 3.1, Australia was the world’s largest LNG exporter in 2021. Given the continued global growth in LNG demand, and its particular utility as an alternative supply to Russian pipeline gas to European allies, there is a long-term opportunity for Australian LNG to gain a foothold in regions beyond the Indo-Pacific. In addition to LNG, nuclear energy generation is projected to increase in some markets in the coming decades [88]. In possession of the world’s largest high-quality reserves of uranium, Australia is also well positioned to benefit from a potential resurgence in nuclear power, including a surge in small modular reactors (SMRs) as energy sources.

3.3.2. Hydrogen Exports

A global transition towards renewable services is underway. There is international recognition of Australia’s potential as a future major hydrogen supplier. The World Energy Council’s International Aspects of a Power-to-X Roadmap identifies Australia with the potential to become a world key player [89]. The International Energy Agency’s World Energy Outlook projects Australia to produce hydrogen equivalent to 100 million tons of oil, an amount equating to 3% of global gas consumption today [90]. According to Australia’s
Chief Scientist, Alan Finkel, the growing demand could foster an export industry worth A$1.7 billion by 2030, providing 2800 jobs, many of them in regional areas [55].

Research recognizes that Australia is well-positioned at the government and industry levels to pursue industrial-scale hydrogen production, which could provide new export potential [91] and help meet potential global demand [92]. Specifically, research has been conducted on clean hydrogen production [93], including transitioning to green hydrogen [94]. Research has also been conducted on the prospects for exporting hydrogen to South Korea and Japan [95], specifically coal-generated hydrogen to Japan [78]. Moreover, since the release of the National Hydrogen Strategy [96], Australia has been advancing international collaborations with potential export partners, including Japan, through the Australian Clean Hydrogen Trade Program, and Germany, through the Australia–Germany Hydrogen Accord [97].

3.3.3. Renewable Energy Exports

As the home of some of the world’s best renewable energy resources, Australia has the potential to emerge as a renewable export superpower [98]. Australia possesses substantial wind and solar resources, and the potential to develop other renewable energy technologies such as offshore wind, geothermal, and solar thermal. One of the biggest developments in the Australian renewable energy industry in recent years has been the emergence of several lighthouse projects. These developments, which are among the world’s largest renewable energy projects, serve as a beacon for the future of renewable energy in Australia and around the world. The largest of these projects is the Asian Renewable Energy Hub in Western Australia’s East Pilbara region. The proposed hub includes a 26 GW wind and solar farm spread across 6500 km², with 3 GW of the project’s output to be used by businesses in the Pilbara region and the remainder to be used to produce renewable hydrogen and ammonia for export [99]. The Australia–ASEAN Power Link (AAPL) in the Northern Territory has significant potential to export solar power to countries in the Indo-Pacific that have little capacity for solar installations due to relatively high population densities. In the first instance, the project aims to supply 15–20% of Singapore’s electricity needs [100]. Moreover, rooftop PV has been recognized as an area of competitive advantage with technology export opportunities [101].

According to Burke et al., about 2% of Australia’s land mass, and 27 times Australia’s current electricity output and use, would be needed for solar and wind farms to enable Australia to: (1) export the same quantity of energy in green electricity and hydrogen as it exports in thermal coal and LNG; and (2) process currently exported iron ore, bauxite, and alumina into green steel and green aluminum for value-added export [96]. Proposals for exports of solar electricity (Sun Cable), green hydrogen (Fortescue Future Industries and the HyEnergy Project), and green ammonia (Asian Renewable Energy Hub, Western Green Energy Hub, and Yara Pilbara) are lighthouse projects that are leading the way in this direction. The combined renewable electricity peak capacity for these projects alone (>100 GW) already exceeds Australia’s electricity generating capacity by a considerable margin [102].

3.3.4. Critical Minerals and Rare Earth Exports

As stated in Section 3.1.4, Australia is among the world’s top three reserve holders for all four critical minerals, lithium, cobalt, nickel, and copper. An op-ed in the late March 2022 issue of The Economist referred to Australia as one of the major “electrostates” [103]. According to the International Monetary Fund (IMF), these four energy transition metals are likely to see surges in prices and production as the world works towards net zero emissions by 2050 [57]. Demand for lithium, cobalt, and nickel is closely related to the demand for lithium-ion batteries. Copper is used in renewable power generation, power grids, and electric end-use applications such as EVs. Australia also has some of the world’s largest recoverable resources of manganese, tungsten, and vanadium. The Australian government’s 2022 Critical Minerals Strategy aims to put Australia at the center of meeting
the growing global demand for critical minerals. The strategy aims to make Australia a global critical minerals powerhouse by 2030 [104]. In addition to critical minerals, Australia is also among the top reserve holders and producers of rare earth elements. Australia’s role as an alternative supplier to China is particularly valuable within the Western alliance system in an era of heightened strategic competition [105]. There is much scope for Australia to establish itself as a major supplier of critical minerals and rare earth elements that are critical for the energy transition. A net zero by 2050 scenario would more than quadruple the revenues generated by copper, nickel, cobalt, and lithium companies [57]. Australia’s reputation as one of the world’s leading and most stable and attractive mining jurisdictions makes the country well placed to reap the benefits of increased production of critical minerals and rare earth elements under a global net zero scenario [106].

3.3.5. Battery Value Chains

In addition to hydrogen, renewable energy, critical minerals, and rare earths, Australia is well-positioned to benefit from other clean energy industry capabilities and skills. For example, global demand for batteries is rising rapidly, due to technological transformations in the energy, industrial, and transport sectors. Existing battery value chains face significant governance challenges which threaten both their security and sustainability. The battery industry offers significant economic opportunities for Australia [107]. Australia’s strong international relationships make it an ideal partner for international efforts to develop more resilient battery value chains [107]. Australian governments and businesses have identified building the battery sector as a major national economic imperative [108]. More generally, a national manufacturing industry supporting clean energy technologies would add value to Australia’s raw materials production to create a new industry for Australia and position the country as a significant force in clean and renewable energy [109].

3.3.6. Green Steel

A report by the Grattan Institute assesses the potential of three sectors to help make Australia a green energy superpower: aviation fuel, ammonia, and steel. It concludes that green steel represents the best opportunity for exports and job creation in key regions [110]. The report suggests that green steel, green ammonia, and biofuels for aviation industries could generate 40,000–55,000 jobs in regions that host 55,000 carbon workers who would be ideally positioned to take up jobs in new industries [110]. Green steel uses hydrogen, produced from renewable energy, to replace metallurgical coal to reduce iron ore to iron metal. Capturing about 6.5% of the global steel market through the manufacture of green steel could generate about A$65 billion in annual export revenue and could create 25,000 manufacturing jobs in Queensland and New South Wales (NSW) [98].

3.3.7. Mining Companies and Critical Minerals as Instruments of Statecraft

Australian mining companies operate all around the world. For example, DFAT counts more than 170 ASX-listed mining companies operating in 35 African countries [111]. PwC estimates that there are more than 200 [112]. There are also more than 50 ASX-listed mining companies in Latin America. Their overseas presence can be utilized as a tool of statecraft, but this requires a higher level coordination from the Australian government and genuine interest from the Mineral Council of Australia (MCA), the industry peak body. The growing mining-related relations between Australia, Latin America, Africa, and Southeast Asia are particularly relevant, as key mining jurisdictions in these regions control the majority of critical mineral deposits globally. Strategic partnerships with these jurisdictions can be powerful if coupled with the promotion of leading practice social and environmental performance in the sector, akin to, or perhaps in partnership with, Canada’s Towards Sustainable Mining (TSM) initiative, which serves as the guiding post in setting world standards in sustainable mining [113].
3.4. Threats

3.4.1. Due to Slow Energy Transition and Climate Policy Stalemate

Australia was labeled a “climate change pariah” at the COP26 climate summit, damaging the country’s reputation [114,115]. Prior to the May 2022 elections, the Climate Action Tracker rated Australia’s overall performance as “highly insufficient” [116]. The Climate Change Performance Index ranks Australia as sixth last overall (out of 64) [117]. Prior to the change in government in May 2022, climate policy weakness made it impossible for Australia to be seen as a trusted partner by Pacific Island countries, who are most at risk from climate change [118,119]. Climate inaction has made Australia at risk of international trade implications, such as penalty tariffs on imports from environmental free riders [120]. The loss of markets for thermal coal exports is an immediate threat for Australia. China’s decarbonization and energy security policy aim to reduce coal imports. Australia’s coal export boom may end abruptly because of an “imminent and substantial” drop in purchases by China [121]. Job losses in coal-producing regions are an immediate threat stemming from a significant decline in thermal coal exports.

3.4.2. Job Losses Due to Net Zero Targets

Without strong policy guidance, shifts from fossil fuels to renewable energy can lead to painful transitions for key stakeholders and affected communities. A report by the Institute of Public Affairs (IPA) estimates that the industries directly at risk from a net zero emissions target, responsible for 78.3% of total emissions, employ 653,600 Australians [122]. This estimate does not include potential indirect job losses which could occur in related industries and the communities where at-risk jobs are vital.

3.4.3. Climate Change

Australia’s size and existing extreme weather conditions leave it extremely vulnerable to the effects of climate change. Longer, hotter summers, more rainfall in some regions, less rainfall and droughts in others, melting snow caps, as well as coastal erosion higher than the global average may hit Australia over the coming decades [123]. Australians are on track to suffer 12–24 times more of the damages from climate change than the global average [64]. Approximately 520,940 properties, or one in every 25, will be “high-risk”, having annual damage costs from extreme weather and climate change that make them effectively uninsurable by 2030 [124]. In an open letter to Australia’s political leaders, former senior defense and security practitioners described the climate crisis as the greatest threat to Australia’s future and security [125].

3.4.4. Due to Growing Liquid Fuel Import Dependence

The government’s failure to implement policies that could reduce Australia’s dependence on oil, such as electrifying the transport sector, will ensure that energy security remains a concern well into this decade [67]. A potential disruption to crude oil or refined petroleum product supplies, along with persistently high crude oil and petroleum prices, are major threats to Australia’s energy security and economic prosperity (national interests). In a crisis, there is every reason to expect that Australia would not have sufficient liquid fuel supplies to keep essential services running for more than two months [126]. Western Australia (WA) is particularly vulnerable to a supply shock given that it has no refineries and is 100% import dependent. Senior defense analysts have called for Australia to hasten its transition to EVs and other forms of green transport, arguing that the country’s heavy reliance on imported oil is a “massive security weakness” [127].

In the U.S., jet fuel comprises the majority of the Department of Defence’s (DoD’s) energy budget, and air transport has proven difficult to decarbonize [128]. This is due to their use in long-lived systems such as air warfare destroyers, Lockheed Martin’s F-35 aircraft, M1A2 Abrams tanks, and in capabilities in the design stage that will enter service beginning in the mid-2030s such as the Hunter-class frigates [129]. Australia’s military kit will need liquid fossil fuels for years. Defense relies on petroleum for 77% of its
energy needs. The ADF’s energy use represents 0.42% of Australia’s total consumption and over 70% of the energy used by the Australian government [130]. Without secure energy supplies, it would be difficult to defend Australia from potential adversaries.

3.4.5. Due to Non-Interventionism and Prioritization of Energy Exports

In 2021, Australia was the world’s largest LNG exporter. Paradoxically, the country faces a domestic gas shortage due to the unwillingness of past governments to induce LNG exporters to prioritize supplies to the domestic market. Taylor and Soliman Hunter argue that a market-based approach to gas regulation will not provide gas security for Australia without additional regulatory measures and infrastructure investment [131]. In its Gas Inquiry 2017–2025 Interim Report, released in July 2022, the Australian Competition and Consumer Commission (ACCC) pointed out that the east coast gas market is facing a gas supply shortfall in 2023 equivalent to 10% of annual domestic demand, “signifying a substantial risk to Australia’s energy security” [132]. The Australian Energy Market Operator (AEMO) reported in July 2022 that wholesale gas and electricity prices tripled in the June 2022 quarter from the previous quarter to record levels [133]. According to AEMO, the shortfall of coal capacity left gas-fired generation playing an outsized role in the market at the same time as prices for the fuel reached stratospheric levels, caused in part by Russia’s invasion of the Ukraine and subsequent sanctions [133].

Western Australia, which reserves 15% of gas demand for domestic use, does not face the same challenge as the eastern states. Power prices in WA have also not risen as rapidly as in the east. The ACCC notes that major LNG exporters—Australia Pacific LNG, Gladstone LNG, and the Queensland Curtis LNG projects—have influence over about 90% of the east coast of Australia’s proven and probable reserves of the fossil fuel. This highlights their “dominant position and the effective control” [132]. The Australian Domestic Gas Security Mechanism (ADGSM) enables the Australian government to divert LNG cargos from three offshore projects in Queensland from the foreign to the domestic market to ensure it is well supplied [134]. The new Albanese government has accepted the ACCC’s recommendation to “initiate the first step” to trigger the ADGSM for the first time to avert a gas supply crisis in Eastern Australia [135]. In August 2022, the Australian government and the ACCC asked the LNG exporters to divert about a third of gas production expected in 2023, which is not committed in long-term export contracts, for domestic use [136].

3.4.6. Deficiencies in the National Electricity Market

Deficiencies in the NEM, in parallel with the increasingly unreliable nature of coal-fired power plants and international price hikes in the aftermath of Russia’s invasion of the Ukraine, were responsible for a major energy crisis in Australia in mid-2022. An energy crisis and market failure have seen prices spike and supply issues affect much of the country’s east. According to Reuters, nearly 25% of the eastern market’s 23 GW of coal-fired capacity were out of service in mid-2022, with as high as 30% being unavailable at times [137]. In addition, in June 2022, the soaring prices of coal and gas had a domino effect on electricity prices, which led the AEMO to introduce the A$300 price cap. The A$300/MWh price cap, however, was A$100 to A$200 lower than what several power generators were spending on one megawatt-hour. Consequently, many of them decided to withhold capacity from the wholesale market, creating a gap in demand and supply. As the market became impossible to operate under such conditions, the AEMO suspended spot trading in the NEM, and set fixed prices for electricity [138].

3.5. The 4A Assessment

3.5.1. Availability

The availability dimension of energy security refers to the geological existence of energy resources, along with production potential. As illustrated in Section 3.1, Australia has abundant and diverse resources of traditional and renewable energy, critical minerals and rare earth metals. Australia is one of the world’s top three producers, exporters,
or reserve holders of thermal coal, LNG, uranium, copper, cobalt, lithium, nickel, and rare earth metals. Crude oil is the only exception across all primary energy commodities. Australia holds only 2.4 billion barrels of proved crude oil reserves, or 0.14% of world total, with a reserves-to-production (R/P) ratio of only 13.9 years [33].

3.5.2. Accessibility

The accessibility dimension of energy security relates to the capacity to access energy, the quality of supply chain infrastructure, and also includes geographic and geopolitical issues related to energy access. Energy production in Australia is primarily export-oriented. Approximately 85% of energy commodities produced in Australia are exported [139]. The analysis in Sections 3.2 and 3.4 demonstrates that Australia faces significant challenges relates to energy access. In the crude oil and refined petroleum sector, this includes inadequate stockpiles, vastly diminished refining capacity, and growing liquid fuel import dependence. A comparatively low penetration of EVs and the lack of fuel efficiency standards further exacerbates this challenge. In the electricity sector, challenges stem from structural deficiencies in the NEM and a failure to introduce sufficient baseload generation capacity to replace aging coal-fired power plants. In the gas sector, challenges relate to the inability, or unwillingness, of the government to pressure LNG exporters into diverting required supplies to the domestic market.

3.5.3. Affordability

The affordability dimension refers to the cost of different types of energy across the supply chain. Analysis demonstrates that Australia faces significant energy affordability challenges. The country faced a major energy crisis in mid-2022. This included record-breaking domestic electricity and gasoline prices. While the affordability issue is not limited to Australia, the market-based approach which historically treated energy as any other commodity and failed to implement mechanisms to protect the domestic market has left Australian energy users at the mercy of geopolitical developments in Europe. It is paradoxical that one of the world’s leading energy exporters faces a domestic supply security and affordability crisis.

3.5.4. Acceptability

The acceptability dimension refers to environmental and social acceptance of energy production, transportation, and usage. As demonstrated in Section 3.2, Australia is an energy transition laggard. The country has remained largely reliant on fossil fuels, specifically coal in the power generation sector, and refined petroleum in the transportation sector. The emissions-intensive mining sector is also heavily reliant on fossil fuels to provide baseload capacity that is required in operations. Australia’s general political inaction on climate change and energy transition resulted in reputational damage, particularly among the Pacific Island states most at risk from climate change. Australian export industries are also at risk of international trade implications, such as penalty tariffs due to the status of their home country as an environmental free rider. Domestically, senior security and defense experts have referred to the climate crisis as the greatest threat to Australia’s future and security. The annual Ipsos Climate Change Report 2022 demonstrated that the majority of Australians are concerned about climate change (83%), with two-thirds (66%) agreeing that Australia should be doing more to address climate change [140].

4. Discussion and Policy Recommendations

Section 3 provides an overview of Australia’s strengths, weaknesses, opportunities and threats in the energy sector. It also offers a brief summary of Australia’s energy security performance based on the 4A framework, which demonstrates that Australia faces significant energy accessibility, affordability, and acceptability challenges. Ancient alchemists attempted to purify, mature, and perfect certain materials. A common aim was chrysopoeia, the transmutation of base metals (e.g., lead) into noble metals (e.g., gold). This
section uses the SWOT analysis as the basis for discussion on how Australia can transform its energy sector weaknesses and threats into strengths and opportunities. More generally, how can Australia’s energy strategy be transformed in order to benefit the national interest? Recommendations outlined in this section may benefit policymakers in the Australian government who work at the strategic level, particularly in departments responsible for energy, resources, national security, foreign affairs, and trade.

The SWOT analysis demonstrates that the lack of government agency or intervention in energy markets has not benefited Australia’s national interests in terms of domestic risk minimization (energy security) or power projection (energy statecraft). A growing vulnerability due to liquid fuel import dependence is occurring simultaneously with a domestic energy crisis. A domestic energy crisis is paradoxical given Australia’s status as the world’s largest LNG and coal exporter, and a country rich in renewable energy. It is a manifestation of decades of myopic political decisions. Australia’s historical “macro-economic” approach to energy is largely void of strategy and long-term planning. It is also “low” on statecraft as the government can exert limited leverage over major companies. A market-based approach to energy regulation is unlikely to deliver greater energy security without strategic infrastructure investment and additional regulatory measures. When energy issues are discussed in terms of market theories, it is the theme of market failure that is most often at the forefront. It would be prudent for the Australian government to leave behind the outmoded view that energy markets move in response to normal commercial forces. Strategic intervention is a necessity for ensuring domestic energy security, as exemplified by the mid-2022 domestic energy crisis, and the newly elected federal government’s responses.

Moreover, as argued by Dalgaard, a market-based approach does not provide a solid foundation for engaging in energy statecraft [1]. In 2007, Michael Wesley warned that Australia needs to factor energy into its foreign and defence policies [141]. Indeed, Australia needs to adopt a more proactive approach to energy statecraft by market intervention that balances positive and negative statecraft. As an example of positive statecraft, in March 2011, high level visits reassured the Japanese leaders that Australia would remain Japan’s most important ally in the region and a reliable supplier of energy after the Fukushima disaster [52]. In another example, in March 2022, the Australian government committed to donating 70,000 tons of thermal coal to Ukraine to meet its energy needs, valued at over A$30 million at current prices. It is apparent that fossil fuels are not going to disappear from the energy system overnight. Natural gas is a transitional fuel. LNG is the only type of fossil fuel that has grown during COVID-19. Australia’s LNG exports are going to remain important for the region and the globe. Australia can use them strategically (e.g., to offer EU allies an alternative to Russian gas), but this requires government intervention and greater coordination between the federal and state/territory government, and energy companies, at the strategic level. Australia should also engage in negative statecraft when its values and interests are compromised, and allies are threatened. As an example of negative statecraft, in March 2022, Australia prohibited the import of oil, refined petroleum products, natural gas, coal, and other energy products from Russia [142].

As demonstrated in Section 3, Australia has the ingredients to be a leader in the world’s energy transition, but it can also be compared to a well-stocked kitchen in need of a chef with a recipe to combine the raw materials in a strategic and profitable way. As a leading “electrostate”, Australia has the potential to remain a trusted and reliable partner and supplier of strategic commodities to friends and allies, and to deny them to adversaries or those who do not share its values or interests. The argument here is not in favor of economic nationalism or state capitalism. Instead, the argument is for a smarter, coordinated, proactive, and strategically interventionist state. There is much space for improved high-level coordination between key stakeholders. This should include improved coordination across federal and state/territory governments, and mining and energy companies, along with allied countries.
According to Buckminster Fuller, synergy refers to the extraordinarily important property that “the whole is more than the sum of its parts”. Moreover, synergy means “the behaviour of whole systems unpredicted by the behaviour of their parts taken separately” [143]. In an era of strategic competition, there is much potential for greater synergy in energy policy across the Western alliance system. This may include greater policy synchronization across countries and preferred trade and investment deals. As a step in this direction, the Australian and the U.S. governments committed to coordinate their finance for new critical minerals projects. While bilateral technical cooperation dates to 2019, this is the first time Australia and the U.S.—or any governments—have coordinated their critical minerals financing support [144]. It would also be prudent for Australia and allied countries to coordinate future hydrogen trade and value chains on a multilateral basis, building on bilateral agreements with Germany and Japan. In the area of critical minerals, in addition to coordination with the U.S., it would be beneficial for Australia to partner with other key suppliers in Latin America, Africa, and Southeast Asia. Supranational energy and resources strategy coordination with key allies should be taken seriously. This may require a limit to national strategic autonomy to enhance power projection vis-à-vis the adversaries as the alliance based on shared values and interests.

The SWOT analysis demonstrates that energy and climate are already constructed into an existential problem for state survival and prosperity. Australia needs to find ways to insulate itself from political interests, perhaps akin to bipartisan elements of defense and foreign policy. More generally, national energy and climate policies cannot be considered in isolation. Australian people and businesses would benefit greatly from climate and energy policy integration and long-term consistency. As the first step, Australia needs to enter an inclusive and realistic debate about its energy transition plan that aims to identify the most secure and affordable energy choices during its transition to net zero. This should also include a debate about the potential role of nuclear power in the country’s energy future. Nuclear energy can provide for an important component in energy transition due to minimal carbon emissions, high power and energy density, and quick electricity generation capacity [145,146]. A National Energy (Transition) Strategy that is integrated with other strategic documents and white papers (including defence and foreign policy), would be a signal that the country is ready to transition. National leadership on energy and climate is essential. According to Sargeant, significant reform agenda requires an honest and strategic evaluation of where Australia is as a nation, and imagining where it is going [147].

The SWOT analysis demonstrates that it is in Australia’s national interest to support net zero. An edited book by Garnaut provides concrete advice on how Australia can become a leader in a world of net zero [148]. The 2022 Critical Minerals Strategy is a positive step towards transforming Australia’s critical mineral resources into capabilities and, eventually, instruments of statecraft. It would be beneficial for there to be a higher level of strategic coordination between the federal and state/territory governments, power producers, energy exporters, and mining companies with regards to their respective roles and complementarities within critical minerals value chains. Higher level coordination at a strategic level would be beneficial for long-term national interests. In this context, the Australian government should consider a U.S.-style Defense Production Act, a 1950 law that allows the president to order mass production of certain products for national security. In June 2022, President Biden invoked the act to increase the production of materials for EVs and batteries, to reduce U.S. reliance on oil [149]. A similar act may assist in establishing and promoting value-added minerals processing and manufacturing in Australia, such as with EVs and batteries. This may include a revitalized car manufacturing industry that would lead to significant job creation.

The Australian government should move energy and resources into a unified portfolio akin to the U.S. DoE or Canada’s NRCan. Given the growing importance of critical minerals for energy security, there is no logic in keeping the energy and resources portfolios separate. Foreign and defense policy is driven by senior bureaucrats with career-long experiences, and from departments that have existed for many decades. A consolidation of expertise
across energy and resources portfolios, along with long-term departmental consistency, would support more strategic energy policymaking in Australia that is based on a longer-term vision for Australia’s energy and resources future.

Finally, it would be prudent for the Australian government to bring in and listen to Indigenous voices. Energy transition provides a specific opportunity for Australia to address socio-economic inequalities between Indigenous and non-Indigenous Australians [150]. The government’s focus should be on promoting leading practice in how the sector operates and promoting leading social and environmental standards, both in Australia and internationally. In this respect, Australia should consider partnering with Canada in support of its mining industry presence overseas as a tool of statecraft, e.g., by promoting improved social and environment governance in other mining jurisdictions and emerging “electrostates”.

5. Conclusions

In summary, this paper assesses Australia’s energy strategy options by examining the inward-looking, domestic risk minimization dimension (energy security), and the outward-looking, international power projection dimension (energy statecraft). The paper demonstrates that Australia has many strengths and opportunities as a reliable and stable energy supplier, endowed with traditional and renewable energy resources, and critical minerals. At the same time, the paper also demonstrates that numerous internal weaknesses and external threats may affect Australia’s energy strategy options in the future. The underlying factor is the historical lack of strategic government intervention in the energy market, which has, paradoxically, resulted in a domestic energy accessibility and affordability crisis. The market-based approach is also the main reason for why Australia has not transformed its energy resources into capabilities to be used as instruments of statecraft. The paper uses the SWOT analysis and the 4A assessment as the basis for outlining policy recommendations for how Australia can transform its energy sector weaknesses and threats into strengths and opportunities, to benefit the national interest.

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