THE ROCKY ROAD TO NET ZERO:

CONFLICT AND CONTESTATION IN CREATING A GAS-FREE VICTORIA

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There is little dispute about the need to urgently reduce the use of fossil (a.k.a. 'natural') gas, as part of the global effort to address human contributions to climate change. Researchers have established that human wellbeing and the satisfaction of basic needs do not require dependence on fossil fuels, and that a good life for all is possible while remaining within planetary boundaries (Millward-Hopkins *et al.* 2020; O'Neill *et al*. 2018). Yet this is not happening in practice. No country is 'even close to achieving sufficient need satisfaction within sustainable levels of energy use' (Vogel *et al*. 2021:12).

This article focuses on the situation in the Australian state of Victoria. Climate campaigners there, as elsewhere, want gas use to be rapidly reduced through regulation and greater investment in electrification and energy performance (Pears 2023). But fossil gas companies continue to invest and profit by selling gas to Victorian and other markets, and fears of gas shortages for winter heating are repeatedly stoked. The climate impacts of such investments are significant, not least because methane (CH_4) emissions from leakage across production, supply and use have 80+ times the global warming potential of carbon dioxide (CO_2) over a 20-year period (IEA 2024). Each delayed or rejected investment in fossil fuels thus reduces the cumulative emissions years into the future (a point repeatedly made by online science writer Ketan Joshi). The Victorian Government, alongside being a world-leader in efforts to reduce consumption, actively supports the gas industry.

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Seeking to unpack the different interests involved, this article draws on the Systems of Provision (SoP) approach in modern political economy (Chang 2022). Taking consumption as the end point in a chain of provisioning enables deeper understanding of how the energy system is shaped by interested parties. Household gas consumption can be understood as part of a system of provision dominated by corporations, enmeshed in circuits of global capital and enabled by state actors who are driven by geopolitical and domestic political interests. Concerns about energy scarcity and supply security, commonly presented as reasons to increase or at least maintain gas production are widely seen as linked directly to the creation of gas markets, now connected globally via gas exports. Revealing such dynamics shows how processes that create immense wealth for gas companies continue, despite being far removed from the goal of living within planetary boundaries.

This article begins by providing background to Victorian gas consumption. The following section explains the SoP approach, leading into a review of the main agents involved in the supply of gas and consideration of the multi-faceted role played by the state.[1] Attention then turns to ideological narratives around the importance of fossil gas to Victoria. The concluding section suggests how a SoP analysis like this may help to strengthen existing challenges to the currently unsustainable system.

Overview of the Victorian gas system

While household consumption is the largest use of gas, and is the focus for efforts to reduce demand, the gas system is larger. Over 80 petajoules (PJ), or about one-third of gas produced in Victoria, is exported to other states. Approximately 200PJ per year is used within the state – households and small commercial users (over 60%), industrial and large commercial use (30%) and electricity generation (under 10%) (Infrastructure Victoria 2022).

Available supply is now rapidly diminishing. Expecting their gas fields to last about 50 years, in 1969, BHP and ExxonMobil began piping gas from the Longford production plant to Melbourne, Victoria's coastal capital city,

[1] Throughout this article, the state refers to all Australian arms of government including statutory authorities, not just the State of Victoria.

along the Longford to Melbourne (LMP) pipeline (Figure 2). The gas fields were directly offshore from Longford in Bass Strait, which separates the mainland from Tasmania. The companies had a captive market as regulations required all new dwellings to be connected to gas and Melbourne's population doubled in size to over 5 million in 2023. Gas distribution and retailing was publicly owned from 1950 until the 1990s when all gas and electricity provision was privatised. Initially the gas market was isolated to Victoria. Privatisation created incentives for gas companies to expand the pipeline network interstate to New South Wales, Tasmania and South Australia between 1996 and 2004. Later pipeline connections into Queensland linked Victoria to international markets via three huge export liquefied natural gas (LNG) terminals. These terminals were opened in 2015 to export gas from onshore fields in Queensland.

As east coast energy markets were developing, Victoria passed most responsibility for 'managing' its gas and electricity system to national energy authorities. One of these authorities manages the Declared Wholesale Gas Market (DWGM), which is unique to Victoria.

Despite huge exports, concerns about possible shortages of gas led to government inquiries beginning in 2017 (ACCC 2024). Demand reduction possibilities were largely absent from official reports until Victoria's *Gas Substitution Roadmap* in 2022 (Victorian Government 2024). The gas industry began lobbying for more supply to domestic markets. The supply proposals have included: new infrastructure to import LNG into Victoria and NSW; new gas fields onshore and offshore in Victoria; expanded capacity to pipe gas from interstate; and blending hydrogen and other gases to the gas mix. Energy authorities are planning around these options (AEMO 2025; GHD 2025). There is an inherent contradiction because, within 15 years, gas use in Australia is expected to be very small, primarily used as a back-up for renewables in electricity generation, and to support an expected doubling of electricity consumption to over 400TWh (AEMO 2024a:25-30).

Finding an adequate research approach

The impact of commodity production on earth systems has been of concern to some economists since Kenneth Boulding's seminal article, *The Economics of the Coming Spaceship Earth* (Boulding 1966). In resource economics and environmental economics, the problem is treated as market

failure leading to 'externalities' that need to be addressed by altering market signals. This approach to identifying and monetising benefits and costs, including intangible non-market ones (Nordhaus 2019), is now foundational in Australian government policy and public administration (Dobes *et al*. 2016; Australia. Office of Best Practice Regulation 2020).

Much is missing, however, in this supposedly neutral, technocratic approach. Reducing gas consumption impacts a host of different agents and there are winners and losers. Energy is a derived demand, consumed for what it enables (warmth, light and so on) rather than for its intrinsic values. Hence, to understand consumption levels requires attention to the provisioning systems that act as 'intermediaries between need satisfaction and energy use' (Vogel *et al*. 2021:11). Energy use is thus driven by a range of factors including lock-in and escalation of need satisfiers that leads to over-production and over-consumption (Brand-Correa *et al*. 2020; and citations in Vogel *et al*. 2021).

Boulding's article (and later work by Daly 1974) underpinned the development of ecological economics (Victor 2015) and is the forerunner of the concept of a circular economy (Ekins *et al.* 2019). However, corporate power is either ignored (Raworth 2017), vaguely defined (Ekins *et al.* 2019:38-46) or alluded to only in making policy proposals (Ekins *et al.* 2019:47-52). Only a small number of researchers within ecological economics are facing up to these 'difficult' questions (for example: Pirgmaier 2021; Martinez-Alier and Muradian 2015). Similarly, in consumption studies, corporate power features in only limited research (Ropke 2005). This is inadequate when, across the world, gas and electricity systems are typically dominated by a handful of global companies.

The Systems of Provision (SoP) approach to political economy can help to overcome these limitations. It was originally developed by Fine and Leopold (1993), scholars in the Marxist tradition who were concerned about the shallowness of consumption studies. The SoP approach challenges the mainstream economics assumption that consumption results from given individual preferences whose origin and evolution are supposedly beyond the proper scope of economics. The SoP approach began with the study of consumer durables and then moved onto food systems (Fine 1994) and to wider applications, such as the provision of water, energy and buses (Bayliss *et al*. 2021), housing (Robertson 2017),

rail transport (Haines-Doran 2022), energy systems (Bayliss and Pollen 2021), and car dependency (Mattioli *et al.* 2020).

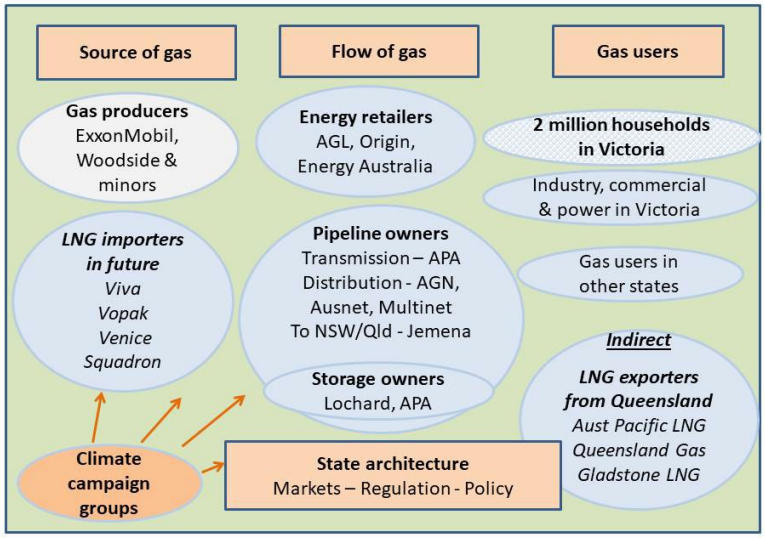
Using a SOP framework helps to show that the interests of each agent may be in partial or substantial conflict, causing the system to be contested rather than mutually beneficial and harmonious as presupposed within neoclassical economics. The different interests of each of the agents are seen as emerging within context-specific, historically evolved structures and processes. The agents themselves vary in their perceptions of the SoP, and have different abilities to shape it and its surrounding cultures (Fine *et al.* 2018; Bayliss and Fine 2020). Indeed, the material culture of the commodity in question may be so deeply embedded that it is seen as 'common sense' or not even observed. By explicitly considering these aspects, the SoP approach can highlight the narratives that perpetuate the status quo and limit action to curb consumption, thereby contributing to the discourses on climate delay (Lamb *et al*. 2020).

Developing a qualitative analysis of the SoP for gas in Victoria, this article draws on the first author's research and continued involvement in the fossil gas arena since 2018, including briefing MPs and ministerial advisors, participating in public inquiries, and writing submissions and articles. It also draws on advice from and collaboration with industry experts in the *Gas Free Victoria* network, many of whom have been employed in key sectors – gas production, gas distribution, energy market operation, energy finance and energy justice. Information from government and industry sources and analyses by independent experts is also used.

Contestations and contradictions among agents

Understanding a system of provision requires primary attention to the interests of the agents involved. For the gas system, we need to examine how the interests vary from producer to retailer, and how these interests conflict with those of households. Figure 1 shows the major agents in the SoP, with producers on the left, consumers on the right and the intermediaries in between. Setting aside the other agents who influence household consumption, such as appliance retailers, plumbers/installers and builders, we can begin by looking at the gas consumers, in particular households, where the contestation over narratives about the future of gas use is fiercest and where the near-term potential for demand reductions is greatest.

Figure 1: The system of provision for gas production and consumption in Victoria



Gas consumers in Victoria

Households have little direct influence over the SoP, although gas use is falling year by year through their individual actions to install solar panels and electrify appliances. Over two million households, nearly 90% of the total, are connected to gas (Sustainability Victoria 2023). Demand is three times as high in winter as in summer, and gas use is dramatically higher on very cold days when over 1,000 TJ (terajoules) can be required primarily for space heating (Infrastructure Victoria 2022). An estimated 75% of gas is used for heating, 23% for heating hot water, and about 2% for cooking (Northmore Gordon 2020).

Many houses are poorly insulated, draughty and energy inefficient (Sustainability Victoria 2023). New homes have faced increasingly tighter standards of energy efficiency, especially since 2005, but two thirds of the 2.8 million dwellings were built before then. The potential for reducing

gas use is far greater in old housing stock than in relatively new houses (Pears 2022). Just three changes would reduce Victoria's winter gas use by 30% (63 petajoules) – improving building insulation, replacing old, ducted gas systems with reverse cycle air conditioners (heat pumps), and encouraging the use of *existing* air conditioners for heating as well as cooling (Northmore Gordon 2020).

The lifetime savings of electrification are significant; and crucially, even incredibly, the payback periods in all cases are now under 12 months for Victorian households (Environment Victoria 2024a). However, high up-front costs mean that replacing gas appliances is likely to be staged over years rather than months, even in homes owned by passionate advocates of changing (Forcey 2024). A lack of credible and easily accessible information about appliance choices, suppliers and installers contributes to the significant barriers faced by low-income households (Chandrashekeran *et al.* 2024).

Energy retailers

Households articulate with the SoP mainly through their interactions with energy retail companies that sell energy, rather than gas *per se*. Four companies and their subsidiaries (AGL, Energy Australia, Origin Energy and Snowy Hydro) supply 80% of residential gas customers in Victoria (Table 1) (AER 2024:275). These 'gentailers' also own ageing coal generators and/or gas-fired generators that provide huge profits during periods of peak demand. Financial interests have key interests in the dominant companies (see Table 1), although Snowy Hydro is fully owned by the Australian Government.

Large companies retailing less energy include UK-based OVO Energy, Shell through Powershop, and retailing group Kogan. In total, about 30 companies retail energy in Victoria. Market authorities have striven to increase 'choice', but households tend not to switch providers (ESC 2021).

The big gentailers are capitalising on their relationship with households by offering to help customers electrify their homes and to manage household energy use and storage. Non-energy retailers with a strong customer base, like Bunnings, Tesla and Telstra, are doing the same. These companies will take advantage of the large sums already invested by households in solar panels and electric appliances (Kuiper 2024), and they have little incentive to reduce household energy consumption.

Table 1: Energy retailers in Victoria, by residential customers, June 2025

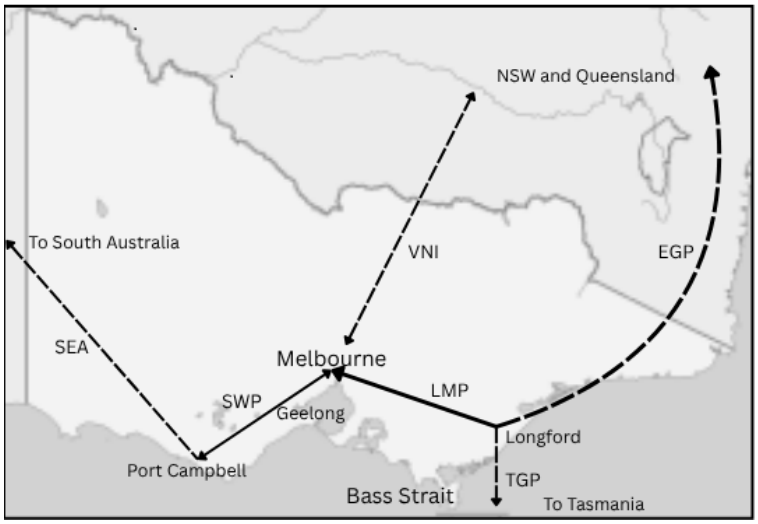
Retailer	Residential gas customers		Residential electricity customers		Owner and shareholdings
	Number of meters	*%*	*Number of meters*	*%*	
AGL	569,371	26	690,591	24	ASX-listed – HSBC (26%), JP Morgan (14%), Citicorp 9%. Billionaire climate activist Mike Cannon-Brooks controls 11% of voting shares (Market Index 2025a).
Energy Australia	377,179	17	441,392	15	CLP Group (Hong Kong)
Origin	348,932	16	517,094	18	ASX-listed – JP Morgan (33%), HSBC (27%), Citicorp (9%). Australian Super controls 16.5% of voting shares (Market Index 2025b).
Red Energy	166,795	8	217,858	8	Snowy Hydro (Australian Government)
Lumo Energy	120,954	6	162,136	6	Snowy Hydro
All others	612,762	28	854,740	30	
Total	**2,195,993**	**100**	**2,873,812**	**100**	

Source: ESC (2025).

Gas pipeline owners

Pipeline owners, including powerful global financial interests, have a strong interest in continued gas use because pipelines can only be repurposed for other gases. Regulated pipelines across eastern Australia made $1.8 billion over eight years in supernormal profits, on top of the $2 billion assessed as reasonable by regulators (Gordon 2024).

Figure 2: Key Victorian Transmission System and interstate pipelines (with direction of gas flow)



The Victorian Transmission System (VTS), with 1,900 kilometres of high-pressure transmission pipes, is owned by APA, including the high capacity LMP pipeline (Figure 2, Table 2). Gas retailers and other participants in regulated markets pay a carriage services levy for each gigajoule of gas at both injection and withdrawal points on the VTS. In other states, markets are based on bilateral arrangements (AEMO 2024b).

Table 2: High pressure pipelines

Pipeline	Capacity TJ/day	Fully regulated	Owner
LMP	1,160	Yes	APA Group. ASX-listed – HSBC (26%), JP Morgan (11%), BNP Paribas (9%), Citicorp (7%). Substantial shareholdings giving control of voting rights are: 10% with UniSuper and 40% split between Vanguard, State Street, Blackrock and Franklin Resources (Market Index 2025c).
VNI	218	Yes	APA Group
EGP to NSW	350	No	Jemena (State Grid Corporation of China 60%; Singapore Power 40%)
SEA to Adelaide	251	No	50% divided between APA Group and Retail Employees Superannuation Trust
TGP to Hobart	129	No	Palisade Investment Partners

Source: AER (2024c). *Note:* VNI reverse capacity is 224TJ/day.

Three regional monopolies own 30,000 kilometres of smaller distribution pipelines, drawing gas from the VTS and supplying households and most businesses. Owners are funded from fixed charges that households pay to retailers. Ausnet is owned by fund manager Brookfield and superannuation fund Australian Retirement Trust. AGN and Multinet are controlled by Hong Kong based CK Group (Foote 2022), through Australian Gas Infrastructure Group.

The Eastern Gas Pipeline (EGP) (see Figure 2, Table 2) was the first interstate pipeline, initiated by BHP to sell ('export') Bass Strait gas to NSW (Cutler and Farrar 1996). The EGP remains crucial to the export of gas by ExxonMobil and Woodside. The SEA and TGP take gas to South Australia and Tasmania (Figure 2).

Gas comes *into* Victoria from northern states through the bi-directional Victoria Northern Interconnect (VNI) (Figure 2) owned by APA. Jemena is installing bi-directional valves in the EGP enabling additional flows to Victoria.

Gas storage owners

Owners of the two gas storages in Victoria profit from the sale of capacity rights in their facility and so have an interest in maintaining gas use at a high level. As major gas fields decline, Victoria will rely more heavily on these storages, leading the State to support their expansion (Victorian Government 2024).

A LNG gas storage facility, owned by APA, is located at Dandenong, a suburb of Melbourne (Figure 2). Through rapid injections of gas, the facility can meet over 20% of requirements on a peak demand day in winter. The much larger underground Iona gas storage in south-west Victoria can supply 10% of annual consumption in Victoria from gas stored in its depleted gas wells (Figure 2). It is owned by Lochard Energy, and ultimately the Queensland Government through QIC, which globally has over $110b in assets under management (QIC 2024). Iona storage capacity is expanding, partly based on a 25-year agreement with Snowy Hydro to store gas for its gas-fired power stations.

Gas producers

Problematically, while supply from Bass Strait gas fields is in decline, producers have been unimpeded in piping large quantities out of the state (Robertson 2022). Woodside is now operational manager of the gas fields, co-owned with Exxon-Mobil, and the production facilities at Longford (Figure 2) which have recently been upgraded to handle poorer quality gas. Impacting on available supply for Melbourne, closure of one of the three Longford processing plants is imminent, and a second closure is expected by 2030, reducing total capacity by 40% (AEMO 2024b). Mid-tier Australian-based companies Beach Energy and Cooper Energy are also extracting and processing gas from off the coast of Victoria. Origin Energy could also supply gas from its proposed inland Narrabri gas field in NSW. Planning is difficult for authorities as the major producers have a history

of sowing doubt about the adequacy of their gas reserves and intentions (Forcey 2020).

ConocoPhillips engaged international specialist companies, Schlumberger-SLB and TGS, to search for gas off the coast of south-west Victoria, though the size of potential fields and profitability are in doubt (MacDonald-Smith 2024). Indigenous and community groups are fiercely opposed, not least because plans for seismic blasting, at up to 250 decibels, will affect whales in their migratory pathways (Friends of the Earth Melbourne 2023).

Players in global markets

Australia is one of the world's top three exporters of LNG, most coming from Western Australia but also from the Northern Territory and Queensland. In 2024, LNG exports accounted for 4,508PJ, use in LNG production 361PJ, leaving 930PJ for domestic consumption (IEEFA n.d.). The exporters directly or indirectly control nearly 90% of the proven and probable gas reserves in Australia (Robertson 2022). One factor enabling this control was the creation of the east coast gas market linked by interstate pipelines. Australia Pacific LNG, Queensland Gas Company and Gladstone LNG each have their own LNG terminal at Gladstone in Queensland. Major investors in these terminals include ConocoPhillips, Sinopec, Shell, PETRONAS, Total and KOGAS. Origin and Santos are also important Australian-based co-owners with significant assets elsewhere in Australian gas.

The influence of the exporters stems from direct control of available gas, but also their joint ventures, joint marketing, and exclusivity provisions in contracts with buyers (ACCC 2024). Nearly all the gas exported from Australia is sold under long-term fixed contracts, leaving just 10% 'uncontracted' and potentially available to supply the east coast market. LNG exporters may vary the quantity exported using flexibility clauses in their long-term contracts and by either buying or selling gas domestically to take advantage of price movements (ACCC 2024). This contributes to concerns about gas prices and the security of supply to the domestic market, especially in the southeast of Australia.

These companies avoid responsibility for emissions once the LNG is sold (Scope 3 emissions), and do not even have to report emissions to the Clean Energy Regulator (2024). Burning of exported fossil fuels also does not

count against Australia under international carbon accounting rules for Scope 3 emissions – only Scope 1 and 2 count (Morton 2023).

Potential LNG importers

Claimed gas shortages have created the opportunity to sell high-priced gas into Victoria using leased Floating Storage and Regasification Units (FSRUs). Each can supply up to 100 PJ of gas annually, or 50% of Victorian consumption, and up to 350TJ per day. They will command high prices during peak demand periods.

Squadron Energy is planning to supply gas to Victoria via the EGP pipeline, as early as 2027, from its now completed terminal at Port Kembla, south of Sydney. Squadron is ultimately owned by Twiggy Forrest, renewables-loving mining billionaire (Cooper and Mathieson 2023).

Viva Energy, ASX listed and 30% owned by global oil trader Vitol, now has approval for a terminal adjacent to its petroleum refinery at Geelong (Figure 2). The terminal could be operating in 2028 if Viva proceeds. A 2021 Memorandum of Understanding gives Woodside capacity rights to use the FSRU and hence additional influence in the Victorian gas market. Viva has faced widespread community opposition. Other gas industry interests are threatened. Iona storage would have reduced access to the SEA pipeline, while use of APA's VNI pipeline would fall.

Less likely, a South Australian terminal, proposed by Venice Energy and strongly supported by the SA Government, could also supply Victoria. South Australia is a world leader in renewable energy, with 70% of its electricity coming from variable renewable sources, with gas-powered generation seen by the Government as a vital backup.

Finally, if Viva does not proceed, Vopak may moor a FSRU offshore near Avalon, between Melbourne and Geelong (Figure 2). Environmental plans were lodged with the Victorian Government in 2022. Vopak operates LNG storages and import terminals globally.

Agents within the state

With conflicting mandates and pressures, state agents often have an inconsistent and contradictory approach to the role of fossil fuels. Within

and across jurisdictions, the state is in effect an 'arena of struggle' (Stilwell 1997). There are many dimensions to the state's involvement in the SoP. We firstly examine the Victorian government's policies and governance, and then the responsibilities that it has transferred by legislation to national bodies. Finally, we examine the position of the national government.

At the broadest level, governments set energy policy, are responsible for regulation, and use budgets funded through taxation and borrowings to influence energy investments. They also provide the legal framework under which markets operate and, since the 1990s, have collaborated to directly create energy markets. Since then, conceiving of the gas system as a market has become central to how state actors understand their involvement.

Victorian Government

The 2022 Victorian *Gas Substitution Roadmap* was arguably a policy imperative in response to the anticipated fall in gas supplies available to Victoria. Until then, the place of gas was rarely questioned in electoral and parliamentary contests over energy provision. Victoria's Minister for Energy, Lily D'Ambrosio, is now a central figure in these contests. In a foreword to the *Roadmap*, she wrote that gas is 'getting too expensive, because Victorians are at the mercy of private companies exporting gas overseas, which has a real impact on the cost to Victorians at home' (Victorian Government 2024).

Regulations now ban gas connections to new houses and, from 2027, landlords will be required to replace gas hot water services with energy efficient electric systems at end of life and install insulation when leases change. A major program, Victorian Energy Upgrades (VEU), requires large retailers of fossil fuels to buy credits that fund household energy efficiency and electrification. Advice and links to electric appliance installers are now available to households via a trusted 'one-stop shop' (Premier of Victoria 2025), while in 2025 the Government has also begun generating and retailing electricity (SEC 2025).

Yet, while focused on reduction of gas use, the Minister for Energy is simultaneously actively participating in national initiatives to secure gas supplies, expand pipeline and storage capacity, and allow hydrogen to be added to the gas mix. These actions, identified in the *Roadmap*, are also agreed actions of the national Energy and Climate Change Ministerial

Council (ECMC 2024a), of which she is an active member representing Victoria. In its own ventures, Victoria is also exploring opportunities for onshore and offshore carbon capture and storage (DJSIR Victoria 2024) and use of the vast resources of brown coal in the coal mining region of Latrobe Valley for generating and shipping hydrogen to Japan (Environment Victoria 2024b). All these supply-boosting initiatives are vigorously contested by the environmental movement.

Energy market authorities and regulators

The role of markets was cemented when Australia's east coast State governments agreed in the 1990s to create the National Energy Market, of which the gas system is now one part. The Australian Energy Market Commission (AEMC 2024) sets the rules of the markets. The Australian Energy Regulator (AER) regulates and monitors performance of the owners of gas pipelines and electricity networks, as well as wholesale and retail markets (AER 2023). Expenditure on regulated pipelines is set through five-yearly Access Arrangements, which also govern the highly contested rate at which regulated companies can depreciate their assets (AER 2021).

The Australian Energy Market Operator (AEMO), owned 40% by industry and 60% by state governments, has managed the trading system in Victoria, known as the DWGM since 2009. AEMO can intervene with directions to market participants or through its own trading of gas, if supply is falling short.

The Australian Competition and Consumer Commission (ACCC) was given powers in 2023 under a Gas Market Code to ensure producers deliver gas at reasonable prices (ACCC 2024). The ACCC has been running an ongoing inquiry into the gas market since 2017 and has repeatedly issued warnings about lack of transparency and abuse of power (ACCC 2024).

The Victoria's Essential Services Commission licences gas businesses and monitors competition between retailers (ESC 2021, 2025). Mandatory codes of practice for retailers cover matters such as customer contracts, payment difficulties, and content of bills. Codes for distributors cover matters such as connection, disconnection and metering. Gas retailers are not obliged to provide the same price safety net that is available for electricity customers.

Australian Federal Government

Energy was solely a State matter under the constitution adopted at Federation in 1901, but now the Australian Government also exerts significant influence due to its environmental obligations under international treaties, and judicial interpretations by the High Court. Crucially, the Australian Government raises over 80% of tax revenue in Australia, giving it leverage over the State Governments.

The Federal Labor Government, first elected in May 2022 and re-elected with a larger majority in May 2025, has contradictory policies. Emissions reductions are now part of the national energy objectives which energy market authorities must follow (ECMC 2024b). Renewable energy is strongly supported through many programs, such as Rewiring the Nation, the Capacity Investment Scheme and, new in 2025, a Household Energy Upgrades Fund, a Social Housing Energy Performance Initiative and a Cheaper Home Batteries Program.

However, the Federal Labor Government is also supporting expanded exports of LNG. Following its 2025 re-election, its approval for Woodside's proposed expansion of the Burrup Peninsular project in Western Australia will lead to massive new offshore gas fields and expanding existing infrastructure – global emissions will soar (Morton 2023). Many other gas projects are being supported under the *Future Gas Strategy* (DSIR 2024). Australia continues to play a delaying role in COP proceedings, pays lip service to concerns of Pacific Island nations and has offset schemes and other dubious mechanisms to minimise reported emissions (Feik 2023; Ryan and Rosewarne 2023).

Economic strategy – national and corporate interests entwined

Support for fossil fuel investment remains, in the short-term, consistent with Labor policy based on attracting private investment to a market-based economy in the pursuit of economic growth. Since the COVID pandemic, investments in fossil fuels have offered higher returns compared to renewable projects (Abel *et. al.* 2023), and over 2024 international financiers increased investment in fossil fuel companies (Rainforest Action Network 2025). Labor is extremely sensitive to the charge of irresponsible economic management, even though, for 50 years, it has pursued an agenda of liberalising Australian capitalism rather than

replacing it or nationalising key economic sectors. Fears of energy shortages and unreliability feed into this timidity. Its modest interventions, characterised by opponents as 'picking winners' in the form of industry policy, are vehemently attacked, especially when some failures occur. However, opponents of industry policy often make an exception to support expanding gas infrastructure (Thornton 2020).

Reluctant to confront the globally based fossil fuel corporations and their financiers, the Australian Government also faces the challenge of finding an alternative green economic strategy acceptable to major investors and trading partners. Market-based proposals to use Australia's excellent solar and wind capacity to produce and export energy-intensive goods, such as green iron, steel, aluminium, silicon and ammonia (Finighan 2024), face stiff internal and external opposition. Japanese Ministers, diplomats and officials have publicly criticised Australia, warning against potential changes to energy policy that could reduce gas supply into the future. We can also assume that, given the scale of US corporate investment in Australia (Herlihy 2023; Fernandes 2022), the US government lobbies hard on behalf of its fossil fuel giants. Moreover, the Singaporean government and the Chinese government both own significant shares in Victoria's gas and electricity companies. Because Australia has free trade agreements with Japan, Korea, Singapore, China and USA, threats by their corporations to use Investor-State Dispute Settlement provisions in those agreements may also be at play (AFTINET 2024). Fossil fuel corporations are constantly testing the boundaries of the market and regulatory system and are frequently found to be using their power to 'game the system' (Parkinson 2024; Keane 2022).

Stakes and narratives in the gas industry

All agents are not uniformly invested in the gas system. Households want the heating and other services that fossil fuels or renewable energy can provide. Retailers want to profit by selling energy *per se* and by holding onto their gas customers while the energy transition speeds up. Pipeline and storage owners and producers are the agents particularly committed to gas because their fixed assets do not have other uses. The state is caught in a juggling act of ensuring energy supplies, fostering renewables and above all creating investment opportunities.

While gas remains in use, each industry player stands to make short-term profits. This particularly applies to future LNG importers like Woodside if, on days of peak demand, they can supply the gas-powered generators producing electricity and households still using gas. These supply issues are generating intense rivalry, between potential LNG importers and other players, to capture state support.

Despite these differences, the industry relies on the same supply-side narratives. By 2017, the five gas industry associations were ready with *Gas Vision 2050* (ENA 2017) as a response to public concern and the ACCC inquiries that began that year. Their narratives are deeply ingrained and are easily read as a 'common sense' story. They define how the provisioning system has evolved and how the wealth transfer away from consumers is defended. We consider the main narrative themes, as follows:

- *Lifestyle choice and cost:* Upgrading household appliances to use fossil gas instead of coal gas and even electricity was portrayed as 'modern' in the 1970s. The industry has since used the term 'natural gas' to build a narrative of easy, trouble-free cooking, warm, cosy living, and a reliable source of hot water. The gas industry paints Victorians as being in danger of being deprived of their lifestyle choices by claims such as: electric stovetops are not as responsive as gas; reverse cycle air conditioners (heat pumps) don't heat a whole house and create uncomfortable air flow; and heat pumps cost far more than gas units.
- *Technology will save the day and renewable energy is unreliable:* In *Gas Vision 2050,* hydrogen and biofuels are presented as the gases of the future; and carbon capture and storage will deal with emissions from fossil gas. On renewable energy, doubt is spread about energy shortages, the unreliability of wind and solar, likely high prices and job losses, and increasingly the size of the renewables challenge. The gas industry points to future energy needs when coal-fired power stations close and electric vehicles are soaking up energy from the grid. In their narratives, electrification of everything could lead to power failures.
- *Gas is needed to support renewables:* This is used as an overall 'gas is good' argument. While some gas is required to support the stability of renewables, this role is likely to become redundant quickly with the availability of renewable energy storage

(pumped hydro and batteries) and exports and imports of electricity between states.

- *Energy companies are renewable companies:* Because the big retailers, and many other agents, are also investing in renewables, they can badge themselves as socially responsible while also testing out opportunities that might be profitable. In its public relations for the LNG import terminal, Viva Energy is rebadging its operations as the 'Geelong Energy Hub', which may include hydrogen refuelling, recycling soft plastics into oil, and a small solar farm.
- *Gas is essential for economic growth:* Foreign earnings are used to justify Australia's continued expansion of LNG production and exports. In moving to a hydrogen economy, the gas pipelines and skilled workforce are said to give Victoria a new competitive advantage (Meagher and Dyrenfurth 2020).
- The most deeply ingrained narrative involves *conceiving production and consumption of gas simply in terms of a market.* Consistent with the neoliberal thinking that led to privatisation, capitalist markets are portrayed as the best means by which the energy needs of households can be met. Moreover, the market framing fundamentally shifts the core premise of the system away from one of collectively meeting essential needs to one where users are exercising their energy choices independently and providers are responding to market signals.

The gas industry communicates these narratives in the typical corporate pattern (Edwards 2019). Media teams are employed to create glossy public relations materials and to mount social media, television and radio campaigns. Expert consultants are engaged to compile data and help prepare submissions to public inquiries in support of their investment proposals. Energy authorities operating within the legacy framework of Australia's east coast energy markets by and large endorse and use these supply-side narratives.

The SoP approach, by focusing on these ideational aspects as well as the material interests and investments buttressing gas supply, aids our awareness of the impediments to a more sustainable future.

Conclusions

This article has presented an explanation of why there is such sluggishness in the transition away from fossil gas in Victoria, aiming to assist environmental campaigners and other community groups in countering the prevailing interests and hastening the transition. While many consumers are largely supportive of change, powerful agents have a strong financial or reputational interest in maintaining the current system. Proposals from the latter to invest in more gas infrastructure are rooted in multiple causes, ranging from the nature of the existing housing stock and the upfront cost of renewables to the creation of the east coast gas market, the decline of rich gas fields, the LNG exports from Australia, and the influence of foreign governments and globally significant shareholders.

Understanding and framing the gas system primarily in market terms legitimises gas as a commodity to be extracted, bought and sold for corporate profits. The narrative about markets leads policy attention to revolve around market-shaping, not the demand-side investment needed for the energy transition. This framing is the lens through which most players consider the questions of how the decline of gas will be managed and who pays – whether households, fossil fuel companies or the state.

Demand-side solutions, although increasingly in the public eye since Victoria's *Gas Substitution Roadmap*, do little to challenge the operation of energy markets, nor the complex and ever-changing state bureaucracy that is required to govern them. The climate impacts are legitimised as market outcomes reflective of consumer preferences, even though most consumers cannot immediately change their energy behaviours. The gas suppliers are then regarded as merely responding to market forces; and governments have little appetite for major change.

This situation is not unchangeable though. The Victorian Government may be moving towards incrementally reversing energy privatisation; the federal Labor government's *Future Made in Australia* policy is somewhat interventionist: and the conservative coalition parties went to the last Federal election proposing public ownership of nuclear power stations. However, the fundamental framings of the neoliberal era continue, emphasising facilitation of private sector investment; a 'steer not row' approach to government; departmental budgets constrained and subject to 'efficiency dividends'; benchmarking with the private sector under national competition policy; and a 'revolving door' of private sector

managers rotating through the public sector. Both state and national jurisdictions could instead be building their capabilities for *direct intervention* on the scale required for a rapid transition away from fossil fuels.

Community campaigners have a key role to play. Their campaigns have had significant successes in banning onshore gas fracking in Victoria; halting and delaying proposals for import terminals; strengthening regulations to limit more gas connections; lobbying for renewables; and, all the while, contesting spurious arguments that industry lobbyists present to politicians. Understanding the SoP can help to guide and strengthen the campaigners' future actions.

Crucially, we encourage scholars and activists to collaborate in widely disseminating information about the SoP in simple and digestible ways. While participating in state structures and processes – and working where helpful with energy experts and political economists – climate groups and social justice groups can expose how basic design flaws and systemic inadequacies favour each group of agents. A knowledge of the SoP can also guide strategic campaigning against agents such as Woodside which intends to use LNG imports to further strengthen its foothold in Victoria. Moreover, the fossil gas SoP will profoundly change as the energy transition speeds up. Because tipping points in the energy transition are being passed, there is a growing recognition that people power is necessary and can make a difference (Rosenow 2025). Each dollar of gas investment that is halted or delayed counts towards reducing the cumulative emissions damaging the planet. Every small action to speed up the transition matters.

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References

Abel, M., Appathurai, S., Fitz, R., Follette, C., Vannier, B. and Vekilov, D. (2023) *A Path Forward for Cash-Rich Companies: Value Creation in Oil and Gas 2023*, BCG Energy Report, available: *https://www.bcg.com/publications/2023/report-on-oil-and-gas-tsr-in-volatile-times?*

ACCC (2024) 'Gas Inquiry 2017-2030', *Australian Competition and Consumer Commission*, available: *https://www.accc.gov.au/inquiries-and-consultations/gas-inquiry-2017-30.*

AEMC (2024) 'National Gas Rules', *Australian Energy Market Commission*, available: *https://www.aemc.gov.au/regulation/energy-rules/national-gas-rules*.

AEMO (2025) *Gas Infrastructure Options Report*, Australian Energy Market Operator, available: *https://aemo.com.au/consultations/current-and-closed-consultations/2025-gas-infrastructure-options-report-consultation*.

AEMO (2024a) *Integrated System Plan for the National Electricity Market: A Roadmap for the Energy Transition*, available: *https://aemo.com.au/energy-systems/major-publications/integrated-system-plan-isp/2024-integrated-system-plan-isp.*

AEMO (2024b) *Victorian Gas Planning Report 2024*, Australian Energy Market Operator, available: *https://aemo.com.au/energy-systems/gas/gas-forecasting-and-planning/victorian-gas-planning-report*.

AER (2024) *State of the Energy Market 2024*, Australian Energy Regulator, available: *https://www.aer.gov.au/publications/reports/performance/state-energy-market-2024.*

AER (2023) 'Our Role', available: *https://www.aer.gov.au/about/aer/our-role*.

AER (2021) *Regulating gas pipelines under uncertainty*, Information paper, Australian Energy Regulator, available: *https://www.aer.gov.au/publications/reports/performance/regulating-gas-pipelines-under-uncertainty-information-paper*.

AFTINET (2024) 'Updated briefing paper on Investor-State Dispute Settlement (ISDS)', January, available: *https://aftinet.org.au/publications*.

Australia. Office of Best Practice Regulation (2020) 'Cost-benefit analysis: guidance note', *Department of Prime Minister and Cabinet*, March, available: *https://oia.pmc.gov.au/sites/default/files/2021-09/cost-benefit-analysis.pdf*.

Bayliss, K. and Fine, B. (2020) *A Guide to the Systems of Provision Approach: Who Gets What, How and Why*, Palgrave MacMillan, Cham.

Bayliss, K. and Pollen, G. (2021) 'The Power Paradigm in Practice: A Critical Review of Developments in the Zambian Electricity Sector'. *World Development*, *140*, p. 105358.

Bayliss, K., Mattioli, G. and Steinberger, J. (2021) 'Inequality, poverty and the privatization of essential services: A "systems of provision" study of water, energy and local buses in the UK', *Competition and Change*, *25*(3-4), pp. 478-500.

Boulding, K. (1966) 'The Economics of the Coming Spaceship Earth', in Jarrett, H. (ed.), *Environmental Quality in a Growing Economy: Resources for the Future*, John Hopkins University Press, Baltimore.

Brand-Correa, L.I., Mattioli, G., Lamb, W.F. and Steinberger, J.K. (2020) 'Understanding (and tackling) need satisfier escalation', *Sustainability: Science, Practice and Policy*, *16*(1), pp. 309-25.

Chandrashekeran, S., de Bruyn, J., Sullivan, D., Bryant, D., (2024) 'Electrification and lower-income households in Australia: An integrated analysis of adaptive capacity and hardship', *Energy Research & Social Science*, 116.

Chang, R. (2022) 'The Systems of Provision Approach', in Stilwell, F., Primrose, D. and Thorton, T. (eds), *Handbook of Alternative Theories of Political Economy*, Edward Elgar, Cheltenham, pp. 313-28.

Clean Energy Regulator (2024) 'Emissions and Energy Types', available: *https://cer.gov.au/schemes/national-greenhouse-and-energy-reporting-scheme/about-emissions-and-energy-data/emissions-and-energy-types#reporting-energy-under-nger*.

Cooper, C. and Mathieson, K. (2023) 'Behind the scenes: A billionaire at COP28', December 10, available: *https://www.politico.eu/article/behind-the-scenes-cop28-climate-change-summit-billionaire-businessman-andrew-forrest/.*

Cutler, J. and Farrar, P. (1996) 'Eastern Gas Pipeline Project: Breaking new ground in coordinated approvals', *The APPEA Journal*, *36*(2), pp. 117-29.

Daly, H.E. (1974) 'The economics of the steady state', *The American Economic Review*, *64*(2), pp. 15-21.

DJSIR Victoria (2024) 'About the CarbonNet project', *Department of Jobs, Skills, Industry and Regions*, Victoria, available: *https://djsir.vic.gov.au/carbonnet/about-the-project*.

Dobes, L., Leung, J. and Argyrous, G. (2016) *Social Cost-Benefit Analysis in Australia and New Zealand: The State of Current Practice and What Needs to be Done*, ANU Press, Canberra.

DSIR (2024) *Future Gas Strategy,* Department of Science, Industry and Resources, available: *https://www.industry.gov.au/publications/future-gas-strategy.*

ECMC (2024a) 'Communiques. Energy and Climate Change Ministerial Council', available: *https://www.energy.gov.au/energy-and-climate-change-ministerial-council.*

ECMC (2024b) 'Incorporating an emissions reduction objective into the national energy objectives', *Energy and Climate Change Ministerial Council*, available: *https://www.energy.gov.au/energy-and-climate-change-ministerial-council/working-groups/energy-governance-working-group/incorporating-emissions-reduction-objective-national-energy-objectives*.

Edwards, L. (2019) *Corporate Power in Australia: Do the 1% Rule?* Monash University Publishing, Clayton.

Ekins, P., Domenech, T., Drummond, P., Bleischwitz, R., Hughes, N. and Lotti, L. (2019) 'The Circular Economy: What, Why, How and Where', Background paper for an OECD/EC Workshop on 5 July 2019, *Managing Environmental and Energy Transitions For Regions and Cities*, available: *https://discovery.ucl.ac.uk/id/eprint/10093965/.*

ENA (2017) 'Gas Vision 2050. Energy Networks Australia', available: *https://www.energynetworks.com.au/projects/gas-vision-2050/*.

Environment Victoria (2024a) 'How we electrify: Easy cost-saving options to replace gas heating', available: *https://environmentvictoria.org.au/2024/10/16/switch-from-gas-to-electric-can-save-two-thirds-off-annual-energy-bills-increase-comfort-and-reduce-emissions-new-report/*

Environment Victoria (2024b) 'Blog', 17 April, available: *https://environmentvictoria.org.au/2024/04/17/converting-brown-coal-to-hydrogen-the-zombie-coal-project-that-we-need-to-stop/.*

ESC (2025) 'Energy Market Dashboard', *Essential Services Commission*, available: *https://www.esc.vic.gov.au/electricity-and-gas/victorian-energy-market-reporting-hub/victorian-energy-market-insights/energy-market-dashboard* .

ESC (2021) *A 'striking consumer preference' for large energy retailers in Victorian energy market report 2020-21*. Essential Services Commission, available: *https://www.esc.vic.gov.au/sites/default/files/documents/Victorian-Energy-Market%20Report-2021-20211130_0.pdf*

Feik, N. (2023) 'Climate Change Policy', *Journal of Australian Political Economy*, *92*, pp. 224-39.

Fernandes, C. (2022) *Sub-Imperial Power: Australia in the International Arena*, Melbourne University Press, Parkville.

Fine, B. (1994) 'Towards a Political Economy of Food'. *Review of International Political Economy*, *1*(3), pp. 519-45.

Fine, B. and Leopold, E. (1993) *World of Consumption*, Routledge, London and New York.

Fine, B., Bayliss, K. and Robertson., M. (2018) 'The Systems of Provision Approach to Understanding Consumption', in Kravets, O., Maclaran, P., Miles, S., and Venkatesh, A. (eds), *Sage Handbook of Consumer Culture*, Sage, London, pp. 27-42.

Finighan, R. (2024) *The New Energy Trade: Harnessing Australian Renewables for Global Development*, The Superpower Institute, available: *https://www.superpowerinstitute.com.au/work/the-new-energy-trade.*

Foote, C. (2022) 'They're not shivering in Honkers: Australians' electricity pain is two billionaires' gain', *Michael West Media*, 22 June, available: *https://michaelwest.com.au/theyre-not-shivering-in-honkers-australians-electricity-pain-is-two-billionaires-gain/*.

Forcey, T. (2020) 'Goodbye to Bass Strait gas,' *Renew*, 15 April, available: *https://renew.org.au/renew-magazine/renewable-grid/goodbye-to-bass-strait-gas/.*

Forcey, T. (2024) *My Efficient Electric Home Handbook*, Murdoch Books, Sydney and London.

Friends of the Earth Melbourne (2023) 'Campaign to stop seismic blasting in Southern Sea Country', 1 September, available: *https://www.melbournefoe.org.au/stop_seismic_blasting_save_southern_sea_country.*

GHD (2025) *Gas Infrastructure Cost: Building Block Costs for Gas Infrastructure*. Report to the Australian Energy Market Operator, available: *https://www.aemo.com.au/-/media/files/stakeholder_consultation/consultations/nem-consultations/2025/2025-gas-infrastructure-options-report/2025-gas-infrastructure-costs-report.pdf*.

Gordon, J. (2024) 'Gas networks are making persistent and significant supernormal profits', *Institute of Energy Economics and Financial Analysis*, available: *https://ieefa.org/resources/gas-networks-are-making-persistent-and-significant-supernormal-profits*.

Haines-Doran, T. (2022) 'Critical accounting scholarship and social movements: The case of rail privatisation in Britain'. *Critical Perspectives on Accounting*, *86*, p. 102126.

Herlihy, J. (2023) *Money Talks: The Australia-America Economic Relationship – Where From and Where To?* The Australia Institute, available: *https://australiainstitute.org.au/report/money-talks-the-australia-america-economic-relationship-where-from-and-where-to/*.

IEA (2024) *Understanding Methane Emissions*, International Energy Agency, available: *https://www.iea.org/reports/global-methane-tracker-2024/understanding-methane-emissions.*

IEEFA (Institute for Energy Economics and Financial Analysis) (n.d.) 'Australian Gas and LNG Tracker', available: *https://ieefa.org/australian-gas-and-lng-tracker#section4*.

Infrastructure Victoria (2022) *Towards 2050: Gas Infrastructure in a Net Zero Emissions Economy*, available: *https://www.infrastructurevictoria.com.au/resources/towards-2050-gas-infrastructure-in-a-net-zero-emissions-economy-final-report*.

Keane, B. (2022) 'A market not worthy of the name: state capture to blame for energy crisis'. *Crikey*, 16 June, available: *https://www.crikey.com.au/2022/06/16/energy-crisis-coal-gas-renewables-nem/*.

Kuiper, G. (2024) 'How the consumer energy sharing economy can help Eraring close on time', *Renew Economy*, 19 November, available: *https://reneweconomy.com.au/how-the-consumer-energy-sharing-economy-can-help-eraring-close-on-time/*.

Lamb, W.F., Mattioli, G., Levi. S., Timmons, R., Capstick, S., Creutzig, F., Minx, J., Muller-Hansen, F., Culhane, T. and Steinberger, J. (2020) 'Discourses of climate delay', *Global Sustainability*, *3*(e17), pp. 1-5.

MacDonald-Smith, A. (2024) 'Choke in gas supply makes imports, once unthinkable, almost inevitable', *Australian Financial Review*, 19 October, available: *https://www.afr.com/companies/energy/choke-in-gas-supply-makes-imports-once-unthinkable-almost-inevitable-20240628-p5jpow*.

Market Index (2025a) 'AGL Energy Ltd (AGL) Substantial Shareholders', available: *https://www.marketindex.com.au/asx/agl*.

Market Index (2025b) 'Origin Energy Ltd (ORG) Substantial Shareholders', available: *https://www.marketindex.com.au/asx/org*.

Market Index (2024c) 'APA Group (APA) Substantial Shareholders', available: *https://www.marketindex.com.au/asx/apa.*

Martínez-Alier, J. and Muradian, R. (2015) 'Taking stock: the keystones of ecological economics', in Alier, J.M. and Muradian, R. (eds), *Handbook of Ecological Economics*, Edward Elgar, Cheltenham, pp. 1-25.

Mattioli, G., Roberts, C., Brown, A. and Steinberger, J. (2020) 'Elements of a Political Economy of Car Dependence', *Energy Research and Social Science*, *66*, p. 101486.

Meagher, D. and Dyrenfurth, N. (2020) *Power State: Building the Victorian Hydrogen Industry*, Curtin Institute, available: *https://curtinrc.org/*.

Millward-Hopkins, J., Steinberger, J.K., Rao, N.D. and Oswald, Y. (2020) 'Providing decent living with minimum energy: A global scenario', *Global Environmental Change*, *65*, p. 102-168.

Morton, A. (2023) 'Fossil fuel projects awaiting approval could blow Australia's "carbon budget" tenfold, climate groups say', 1 December, available: *https://www.theguardian.com/environment/2023/dec/01/over-20-bn-tonnes-of-co2-could-be-emitted-if-australian-fossil-fuel-projects-up-for-approval-go-ahead*.

Nordhaus, W. (2019) 'Climate change: The ultimate challenge for economics', *American Economic Review*, *109*(6), pp. 1991-2014.

Northmore Gordon (2020) V*ictorian Gas Market – Demand Side Measures to Avoid Forecast Supply Shortfall*, Report to Environment Victoria, available: *http://environmentvictoria.org.au/wp-content/uploads/2020/06/Vic-Gas-Market-Demand-Side-Study-Final-Report-1.pdf*.

O'Neill, D.W., Fanning, A.L., Lamb, W.F. and Steinberger, J. (2018) 'A good life for all within planetary boundaries', *Nature Sustainability*, *1*, pp. 88-95.

Parkinson, G. (2024) 'Generators fill their pockets again, pushing grid prices to new highs and leaving renewables to cop the blame', *RenewEconomy*, 14 November, available: *https://reneweconomy.com.au/generators-fill-their-pockets-again-pushing-grid-prices-to-new-highs-and-leaving-renewables-to-cop-the-blame/*.

Pears, A. (2022) 'Did you know? A shift from 1-2 star NatHERS is worth five times 5-6 Star NatHers', *The Fifth Estate*, August 29, available: *https://thefifthestate.com.au/innovation/did-you-know-a-shift-from-2-3-stars-nathers-is-worth-five-times-5-6-stars-nathers/.*

Pears, A. (2023) 'Reflections on 40 years of slow progress on building energy performance', *The Fifth Estate*, 12 July, available: *https://thefifthestate.com.au/energy-lead/alan-pears-reflections-on-40-years-of-slow-progress-on-building-energy-performance/*.

Pirgmaier, E. (2021) 'The value of value theory for ecological economics', *Ecological Economics*, *179*, p. 106790.

Premier of Victoria (2025) 'SEC One-Stop-Shop Will Help You Slash Energy Bills', Media Release, 28 May, available: *https://www.premier.vic.gov.au/sec-one-stop-shop-will-help-you-slash-energy-bills*.

QIC Limited (2024) *Annual Report 2023-2024*, available: *https://www.qic.com/About-QIC/Corporate-governance/Annual-Reports*.

Rainforest Action Network and others (2025) *Banking on Climate Chaos Fossil Fuel Finance Report 2025*, available: *https://www.bankingonclimatechaos.org/*.

Raworth, K. (2017) *Doughnut economics: Seven ways to think like a 21st-century economist*, Chelsea Green Publishing, London.

Robertson, B. (2022) 'What's a Fair Price for Domestic Gas?', *Institute for Energy Economics and Financial Analysis*, available: *https://ieefa.org/resources/whats-fair-price-domestic-gas-12-gigajoule-too-high*.

Robertson, M. (2017) 'The Great British Housing Crisis', *Capital and Class*, *41*(2), pp. 195-215.

Røpke, I. (2005) 'Consumption in ecological economics', *Online Encyclopaedia of Ecological Economics*, available: *https://hetecon.net/wp-content/uploads/2019/09/ROPKE._I_-_Theories_of_practice.pdf*.

Rosenow, J. (2025) 'LinkedIn', available: *https://www.linkedin.com/posts/janrosenow_i-get-asked-all-the-time-how-do-we-stay-ugcPost-7366040666398683138-EMoJ?*

Ryan, M. and Rosewarne, S. (2023) 'Energy Policy', *Journal of Australian Political Economy*, *92*, pp. 130-47.

SEC (2025) 'Lights, camera, action! SEC powers into retail', Media release, 1 July, available: *https://www.secvictoria.com.au/news/lights,-camera,-action!-sec-powers-into-retail*.

Stilwell, F. (1997) 'Australia Reconstructed: Oops, missed the turning', *Journal of Australian Political Economy*, *39*, pp. 39-47.

Sustainability Victoria (2023) *State of Sustainability Report 2023*, available: *https://www.sustainability.vic.gov.au/research-data-and-insights/research/research-reports/state-of-sustainability-report-2023*.

Thornton, T. (2020) 'Morrison's COVID-19 Commission: Industry policy in reverse', *Independent Australia*, 10 August, available: *https://independentaustralia.net/politics/politics-display/morrisons-covid-19-commission-industry-policy-in-reverse,14190.*

Victor, P.A. (2015) 'The Kenneth E. Boulding memorial award 2014: Ecological economics – A personal journey', *Ecological Economics*, *109*, pp. 93-100.

Victorian Government (2024) 'Gas Substitution Roadmap Update', available: *https://www.energy.vic.gov.au/renewable-energy/victorias-gas-substitution-roadmap*.

Vogel, J., Steinberger, J., O'Neill, D., Lamb, W. and Krishnakumar, J. (2021) 'Socio-Economic Conditions for Satisfying Human Needs at Low Energy Use: An International Analysis of Social Provisioning', *Global Environmental Change*, *69*, p. 102287.