DELAY IS PUTTING VICTORIA'S ENERGY SECURITY AT RISK

The cost of delaying replacement generation and transmission delivery

Nexa Advisory – August 2026

nexa ADVISORY

About Nexa Advisory

Nexa is an advisory firm with an unwavering focus on accelerating the clean energy transition, in a way that provides secure, reliable, and affordable power for consumers of all types. Nexa Advisory is a team of experienced specialists in the energy market, policy and regulation design, stakeholder engagement, and advocacy.

We work with public and private clients including renewable energy developers, investors and climate impact philanthropists to help them get Australia's clean energy transition done.

Nexa Advisory stands at the nexus of the energy sector's complex web of stakeholders. We support and direct their dialogue so as to remove the roadblocks to the transition.

We have a track record in policy creation, advocacy, political risk assessment, and project delivery. We are holistic in our approach and deliver solutions with people in mind, and commercial intent.

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The modelling and analysis in this report builds on work originally undertaken for Nexa Advisory's October 2025 report, *Gas-fired Electricity Generation is a Bridge, Not a Destination* , which was funded by climate philanthropy. Nexa's work provides an independent, evidence-based perspective on how Australia can accelerate the energy transition while maintaining secure, reliable and affordable electricity for all consumers.

Environment Victoria commissioned this report to provide an independent, Victoria-specific application and analysis of that modelling.

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Executive Summary

Staying the course on the energy transition is now an energy security and consumer cost imperative. Yallourn Power Station is currently scheduled to close in mid-2028, removing a plant that has supplied around one-fifth of the state's electricity. The state has a narrow delivery window to bring forward the renewable generation, storage, transmission, demand response, and limited firming capacity required to replace it.

Extending Yallourn is not a credible back-up plan. Its 1,450 MW nameplate capacity overstates what the system can depend on: since 2020 its four units have averaged more than 8,000 hours of total downtime each year, and the annual unplanned outage rate reached 32 per cent in 2024. The plant is approaching the end of its technical life, has declining output, and is poorly suited to the flexible operation required by Victoria's changing system.

Victoria must therefore plan on the basis that Yallourn closes in 2028. Any delay - or cancellation without equivalent replacement - of the transmission, onshore wind, solar, and battery projects needed to replace it would increase the risk of insufficient supply during periods of peak demand, low renewable output, generator outages or network constraints.

The replacement pipeline exists. Nexa's earlier analysis identified more than 7 GW of solar, 1 GW of wind and 4 GW of large-scale batteries with state planning, development and/or environmental approvals, alongside a broader proposed pipeline of around 16 GW of solar and wind and 5 GW of large-scale batteries. These projects are at different stages of development, and not all will proceed, but they show that Victoria has investable options if access, approvals, connections and transmission are unlocked.

Renewable Energy Zones (REZs) remain important for coordinated development at scale. However, the REZ access rights framework and delayed transmission cannot be allowed to strand advanced projects or make the transition dependent on a handful of future corridors. Projects inside and outside zones that can use existing capacity, connect near demand, co-locate with storage or proceed with modest augmentation should have a clear, timely and transparent pathway.

Major transmission is not being delivered fast enough. The Western Renewables Link (WRL) is now expected in 2029, and Victoria to New South Wales Interconnector West (VNI West) around 2031. Nexa's modelling shows these delays defer up to 2 GW of wind and 0.6 GW of solar between 2027 and 2035. Cancelling or further delaying these projects without credible replacement solutions would deepen the capacity gap following Yallourn's closure.

Gas-fired generation has an important but limited role in firming the system. It can support reliability during peaks, renewable droughts, and unexpected outages, but it is not a low-cost or readily available substitute for Yallourn's routine energy production. Southern gas supply is tightening and the Australian Energy Market Operator (AEMO) forecasts peak-day shortfall risks from winter 2029, leaving less readily available gas when it is most needed. Addressing these shortfalls would require infrastructure that is not committed and whose commercial viability is not assured. Additionally, global demand for gas turbines has created multi-year equipment lead times, which would constrain any new gas-fired generation being built this decade. It cannot be assumed that new gas-fired generation can arrive quickly or operate cheaply.

Replacing delayed renewable generation with gas would expose Victorian consumers to scarce fuel, international gas prices, and the capital cost of new turbines and supporting infrastructure. Nexa's modelling shows that a disorderly transition - where new transmission and renewable generation projects are delayed - could require up to 1.1 GW of additional gas -fired capacity, increase gas consumption for electricity generation by 118 PJ between 2027 and 2035.

Over the period between 2027 and 2031, the average Victorian wholesale price could increase from $62.29/MWh to $85.20/MWh under a disorderly transition – a difference of $22.91/MWh (37 per cent) on average across this period.

Those wholesale impacts would flow through to Victorian customer bills. Between 2027 and 2031, delays would cost up to $472 for a representative household, up to $4,719 for a representative small business, and $11,797 for a representative large business over the five-year period.

Between 2027 and 2050, the disorderly pathway increases total wholesale electricity costs by $33.0 billion and emissions by a further 8.6 Mt CO2-e.

While permanent cancellation was not modelled, cancelling core transmission infrastructure without an equivalent replacement would constrain the renewable generation capacity dependent on these projects, potentially prolonging or compounding the modelled impacts on reliability, gas dependence, wholesale prices and emissions.

The lowest-risk course is not to pause the transition but to double down on delivery: confirm Yallourn's closure, accelerate transmission, unlock onshore wind, solar, and batteries, enable credible projects outside REZs, expand demand response and Consumer Energy Resources (CER), and contract a diversified firming portfolio in which gas generation plays a targeted back-up role.

Summary of key recommendations

Victoria should stay the course on the energy transition, and act more decisively to address the delivery risks that are already emerging. This requires providing investors with greater certainty, accelerating transmission and replacement capacity, making better use of storage and demand-side solutions, and ensuring gas generation remains a limited back-up rather than a substitute for delayed investment in renewables generation.

1. Confirm Yallourn's 2028 closure and procure dependable replacement capacity

The Victorian Government should confirm that Yallourn will close in 2028 and publish a delivery plan for the reliable capacity, energy and essential system services required before and immediately after closure. The plan should not count Yallourn's nameplate capacity as a fallback and should provide investable contracting signals for replacement projects now.

2. Accelerate transmission and hold delivery bodies accountable

The Victorian Government and VicGrid should accelerate WRL, VNI West and other critical works with transparent milestones, cost control, and accountability. Where faster market-led, contestable or non-network solutions can unlock capacity, they should be assessed alongside the major regulated projects rather than deferred behind them.

3. Unlock the onshore wind, solar and battery pipeline inside and outside REZs

The Victorian Government and VicGrid should actively progress advanced onshore wind, solar and battery projects, including credible projects outside REZs. The access framework should coordinate efficient development without becoming a barrier to projects that can use existing capacity, add storage, reduce constraints or connect closer to demand.

4. Contract a diversified firming portfolio and keep gas in a limited back-up role

The Victorian Government should secure enough flexible capacity for peak and low-renewable conditions through batteries, longer-duration storage, demand response, interconnection and some gas. A diversified firming portfolio is critical to reliability, reducing the risk that fuel constraints, generator outages or delays to any one technology leave insufficient supply when the system is under greatest pressure. Gas-fired generation should be procured for residual firming, not treated as a substitute for delayed renewable energy, given fuel constraints, turbine lead times and the wholesale cost exposure transferred to consumers, which would mean higher bills and greater exposure to reliability risks.

Victoria's energy security is at risk

The 2028 deadline: Victoria must replace Yallourn

Uncertainty around the retirement of coal-fired power stations erodes the confidence of clean energy investors and developers and therefore poses a significant risk to an orderly energy transition.

Brown coal-fired generation remains a significant portion of Victoria's energy mix – comprising 53.4 per cent of electricity generated in the state in 2025.[1] In recent years, Yallourn Power Station has provided around 22 per cent of Victoria's electricity.[2] As such, the closure of this power station in 2028 will be a pivotal milestone in Victoria's decarbonisation and clean energy transition.

The transition is also changing how and where electricity is produced and consumed. Distributed solar, batteries, electric heating, electric vehicles and new large loads are materially changing both supply and demand patterns. In 2024-25, Victoria recorded an annual maximum operational demand of 9,851 MW, up from 9,294 MW the previous year, while also reaching an all-time minimum operational demand of 1,504 MW.[3] AEMO notes that managing this widening range of system conditions will require coordinated and timely investment in the Victorian network.

As coal-fired generation retires, Victoria will increasingly depend on the timely delivery of replacement renewable generation and storage, and the transmission capacity needed to connect it to maintain reliable electricity for the state.

Nexa's modelling projects that Victoria's electricity system will need to support around 1.5 GW of solar, 10.4 GW of wind and 7 GW of large-scale storage by 2030, increasing to 2.5 GW, 16 GW and 8 GW respectively by 2035.[4] This compares to 1.5 GW of solar, 5.5 GW of wind and 1.7 GW / 3.3 GWh of large-scale storage today.[5]

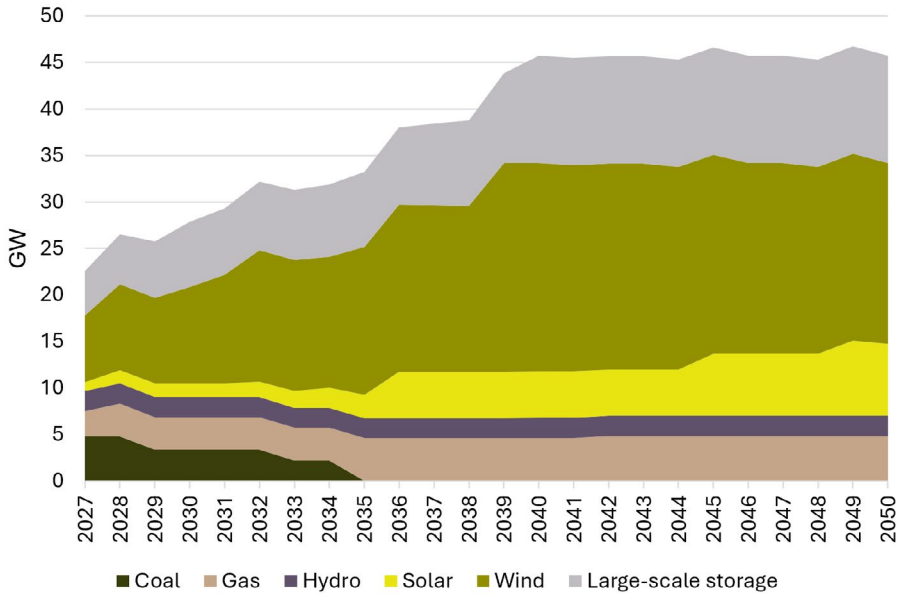

Figure 1 – Capacity mix

Delivering this replacement capacity on time is critical as Yallourn exits the system and electricity demand increases.

1 Source: Open Electricity

2 EnergyAustralia, History, accessed 3 April 2025

3 AEMO, Victorian Network Performance & Insights Report, October 2025

4 Nexa's modelling presented in Gas-fired Electricity Generation is a Bridge, Not a Destination

5 AEMO, Generation Information - July 2026

Yallourn is closing and cannot be relied on as a fallback

Yallourn's scheduled closure in mid-2028 is sometimes framed as a contingency that could be deferred if replacement infrastructure is late. The plant's actual performance shows why this is not a credible reliability strategy.

Yallourn is a 1,450 MW power station on paper, but nameplate capacity is not the same as dependable capacity. Its ageing units have experienced sustained downtime, frequent unplanned outages and declining output. Extending the closure date would therefore retain a large source of uncertainty in the system rather than provide a firm insurance policy.

The correct response to delivery risk is to accelerate and diversify replacement capacity - renewable generation, storage, interconnection, demand response and CER - and to plan explicitly for outages and low-renewable periods.

An ageing power station with declining reliability

Yallourn's four units were commissioned between 1974 and 1982. By the scheduled closure date, they will be approximately 46 to 54 years old and at or beyond the technical life originally contemplated for the plant. EnergyAustralia brought forward $400 million of maintenance work to support operation through to 2028.[6] That expenditure is important to safe operation, but it does not reverse the underlying age, condition and operating limitations of the asset.

Nexa's May 2025 performance analysis of half-hourly generation, outage and rebidding data found a clear deterioration in operational performance.[7] Yallourn's capacity factor has declined since 2016 and remained around a historical low of 60 per cent since 2022. Since 2020, total downtime across the four units has averaged more than 8,000 unit-hours a year - equivalent to each unit being unavailable for more than 12 weeks annually. This is a material gap between nominal and dependable capacity.

Unplanned performance is particularly important for reliability. Between 2012 and 2020, unplanned outages averaged around 1,400 hours a year and accounted for almost half of outage hours.

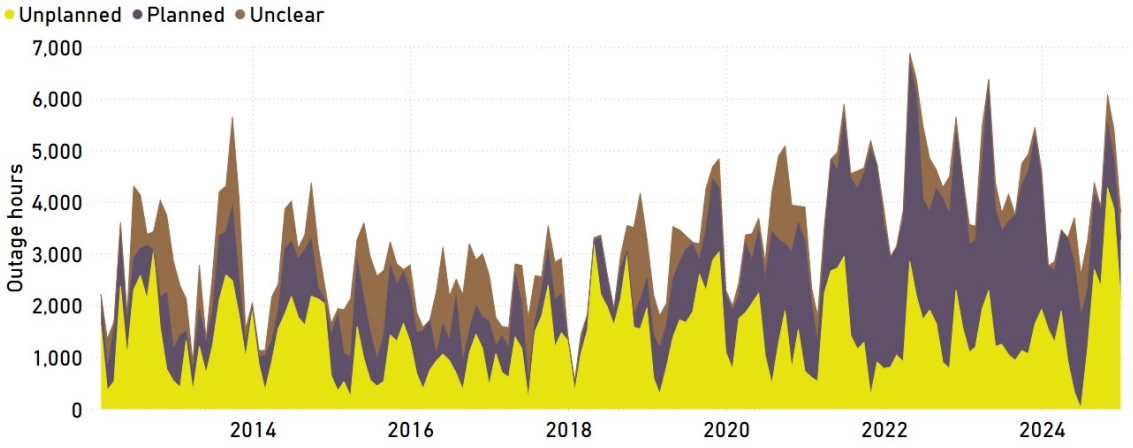

Figure 2 – Yallourn's outages by type

6 Australian Financial Review, EnergyAustralia, owned by Hong Kong-based CLP Group, to tackle Yallourn outages after big loss, 27 February 2023

7 Nexa Advisory, Coal performance in the NEM: Yallourn Power Station, May 2025

Although planned maintenance became a larger share after 2020, Yallourn's annual unplanned outage rate remained elevated and reached 32 per cent in 2024. Nameplate capacity is not dependable capacity

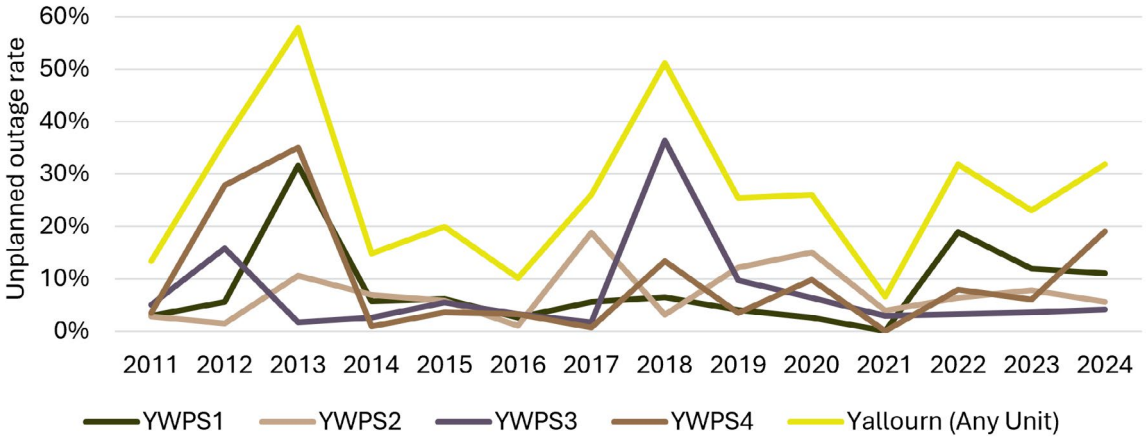

Figure 3 - Yallourn's annual unplanned outage rate by unit

The plant and its dedicated mine also create common-mode risks that cannot be captured by considering each generating unit in isolation. Damage to the Morwell River diversion and mine flooding temporarily shut three units in 2021;[8] a similar event in 2012 shut 75 per cent of the station.[9] Safety incidents, mine stability, cooling water, coal supply and shared infrastructure can therefore affect several units at once. Retaining all four units does not necessarily provide four independent sources of back-up.

8 RenewEconomy, Too wet for coal power: Yallourn units shut down due to flooded mines, 15 June 2021

9 ABC News, Yallourn coal mine failings should be subject of inquiry, environment groups say, 1 September 2021

Nameplate capacity is not dependable capacity

Frequent forced outages mean capacity can disappear with little notice, precisely when replacement energy is most expensive and the system has the least time to respond. Outages at a unit of 350 MW or 375 MW are also large contingencies for Victoria; multiple-unit or mine-related events are larger still.

Yallourn is also poorly matched to an increasingly dynamic power system. Nexa's analysis found that the plant did not consistently increase generation during high-price periods above $300/MWh between 2020 and 2024. This indicates limited price responsiveness and an inability to reliably ramp output when scarcity signals suggest the system values additional generation most.

Figure 4 shows average quarterly generation of Yallourn's units since 2020. While there are some instances of minimal price responsiveness - such as unit 1 in Quarter 2 and unit 4 in Quarter 1 - the plant overall does not consistently respond to market price signals.

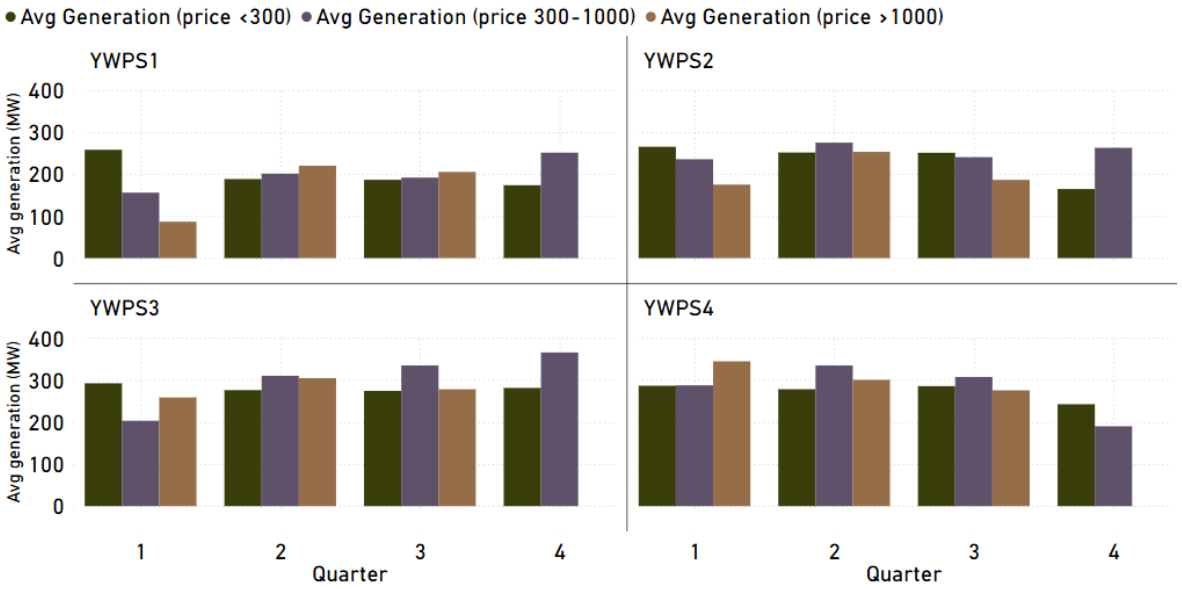

Figure 4 - Yallourn price responsiveness, average 2020-2024

A plant that is available in aggregate but cannot respond flexibly at the required time provides less reliability value than its nameplate capacity implies.

Keeping Yallourn open may also create a false sense of security in reliability planning. Governments and the market could treat 1,450 MW as having been retained, while the system still needs reserves, storage, demand response, interconnection and gas capability to cover its outages and inflexibility. An extension would not remove the need for replacement capacity; it would add another uncertain dependency to the transition plan.

Extending Yallourn would add risk and cost

The consequences of extending Yallourn would reach well beyond the plant itself.

Investment and delivery

A clear closure date is one of the strongest signals to developers and investors about when replacement capacity will be needed. Moving the date would weaken contracting and investment signals for wind, solar, batteries, flexible demand, and supporting network solutions. Projects could be deferred or repriced, increasing the risk that Victoria will confront the same capacity gap later, with less time to respond. An extension may appear to buy time, but it can also reduce the incentive to use that time productively.

Wholesale prices and consumer costs

Unplanned coal outages remove large blocks of supply and can increase spot price volatility, hedge costs and risk premiums. Keeping Yallourn in the market does not eliminate these costs if its output cannot be relied upon. Consumers may also be exposed to the cost of any government support, maintenance underwriting or commercial arrangement required to keep the plant operating beyond its owner's announced closure date. Those costs should be assessed against alternatives that provide dependable capacity and continue to deliver value after 2028.

System operation and renewable integration

Ageing brown coal units were designed for relatively steady operation, not the frequent ramping and cycling required in a system with high levels of variable renewable generation. Continued inflexible output during low-demand, high-solar periods can deepen minimum-demand challenges, displace lower-cost renewable generation and increase curtailment. Conversely, limited ramping and forced-outage risk reduce the plant's usefulness during sudden scarcity. This combination means extension could make the system harder, not easier, to operate.

Emissions and Victoria's legislated transition

Yallourn has emitted around 12 Mt CO_2 a year in recent years. Nexa's performance report estimated that retiring it on schedule would deliver around half of the remaining emissions reduction effort needed, at the time of that analysis, for Victoria's 2030 interim target. Extending operation would lock in a substantial emissions source, make the state's renewable energy and emissions targets harder to meet, and shift a larger reduction burden onto households, businesses and other sectors.

Safety, environmental and fiscal risk

Operation beyond 2028 would require confidence in the condition of the generating units, mine, river diversions, and other shared infrastructure. Further capital expenditure would not guarantee improved availability and could expose the state to pressure to underwrite maintenance, fuel security, rehabilitation or operational losses. Any proposal to extend should therefore be assessed as a new investment decision with transparent costs, availability obligations and risk allocation - not treated as a cost-free continuation of the status quo.

Plan for closure, not extension

Victoria should plan on the basis that Yallourn closes in 2028 and that its output may remain variable before closure. This is the more conservative reliability assumption because it forces replacement resources and contingency arrangements to be delivered rather than assumed.

The priority should be to accelerate the portfolio already identified elsewhere in this report: renewable generation and storage, WRL and VNI West, market-led projects outside REZs, virtual transmission, stronger interconnection, demand response and CER. Firming arrangements should be diversified so the loss of one generator, mine or transmission element does not create a single point of failure. Gas-fired generation may have a limited residual back-up role, but should not become the default substitute for delayed delivery.

If a short-term extension were nevertheless proposed, government should not describe it as a reliability solution without demonstrating, publicly and independently, the plant's dependable capacity, expected forced-outage rate, multi-unit and mine risks, maintenance and support costs, emissions impacts, effects on renewable investment and a fixed final closure date. It should also show that the arrangement is lower cost and more reliable than contracting equivalent capacity from storage, demand response, interconnection and other dispatchable resources. On the available performance evidence, that threshold would be difficult to meet.

The replacement pipeline exists - but policy and network delays are holding it back

Victoria's Renewable Energy Zones are central to coordinating new transmission, generation, and storage. They provide an important mechanism for directing development towards strong renewable resources, planning network capacity and creating clearer expectations for communities and investors. However, REZs should not become the only pathway for replacement capacity. Victoria's project pipeline also includes renewable generation and storage proposals that sit outside declared zone boundaries or were initiated before those boundaries and access arrangements were established.

This wider pipeline matters because Yallourn's scheduled closure is fixed in time while the major transmission projects that unlock some REZ capacity have been delayed. Projects outside REZs may be able to use existing network capacity, connect closer to demand, co-locate with storage or large loads, or proceed with smaller and more targeted network works. Where they can be delivered earlier and without materially increasing congestion or reducing access for other generators, they can diversify Victoria's replacement portfolio and reduce reliance on a small number of major transmission projects.

The pipeline identified in Nexa's Yallourn performance report illustrates the scale of the opportunity. At the time of that analysis, more than 7 GW of solar, 1 GW of wind and 4 GW of large-scale batteries had received state planning, development and/or environmental approvals. A broader proposed pipeline included approximately 16 GW of solar and wind and 5 GW of large-scale battery storage. These totals include projects at different stages and both within and outside REZs; they should not be treated as committed capacity. However, they do show that Victoria has more options than the projects dependent on the current REZ transmission timetable alone.

Onshore wind, solar and batteries can be delivered sooner

A geographically and technologically diverse pipeline reduces concentration risk. It avoids making the transition dependent on one transmission corridor, one planning process or one development region. Projects closer to Melbourne and regional load centres can also reduce the distance electricity must travel, while generation co-located with batteries or flexible commercial and industrial demand can make more effective use of constrained connections.

Outside-REZ projects may also provide a faster path for capacity that is already advanced. Some projects were proposed or entered development before Victoria's REZ boundaries were declared. Requiring viable projects to wait for a future REZ allocation or major augmentation could strand development work, weaken investor confidence and delay capacity that could otherwise contribute before or soon after Yallourn closes.

The opportunity is not limited to large standalone wind and solar farms. It includes hybrid renewable-and-storage projects, batteries that enable additional renewable output through existing network connections, private or market-led intra-regional transmission, generation matched with new large loads, and commercial and industrial solar and storage near demand. Together, these projects can complement - rather than compete with - the coordinated development occurring within REZs.

REZ access should coordinate - not block - viable projects

Supporting this pipeline does not mean accepting uncoordinated development or weakening planning, environmental and community protections. Each project must still demonstrate that it is technically viable, has a credible connection pathway and will not impose unacceptable congestion, system-strength or security costs on other users. It must also meet the same expectations for early community and Traditional Owner engagement and deliver meaningful local social and economic benefits.

This is consistent with Victoria's emerging access framework. VicGrid has confirmed that, when the Victorian Access Regime (VAR) commences, developers outside a REZ will be able to seek access through a Grid Impact Assessment (GIA). They will need to demonstrate that their connection will not negatively affect the ability of projects within a zone to supply electricity to the grid, as well as satisfy engagement and benefit-sharing requirements. The regime is expected to commence in July 2027; until then, the existing open-access arrangements continue to apply.

The policy challenge is therefore to establish a rigorous but workable pathway. If the assessment is too uncertain, slow or weighted towards protecting a future in-zone project regardless of comparative system value, viable capacity may be lost. If it is too permissive, new projects could worsen congestion or undermine coordinated REZ investment. The test should focus on demonstrated network impacts, timing, whole-of-system value and fair allocation of costs - not location outside a mapped boundary alone.

Replacement generation and transmission is not being delivered fast enough

The factors contributing to the slow transition are many and complex, but a key issue is the ongoing delays to delivering new transmission projects, particularly interconnectors[10,11]

This is evident in Victoria, where critical transmission projects such as VNI West and WRL have not been delivered as originally scheduled, resulting in significant cost escalations. For example, WRL was originally expected in 2025 but is now expected in 2029. VNI West has moved from an expected 2027–28 completion to late 2030.[12] VNI West also depends on WRL being completed first.[13]

Their delivery is also subject to further policy uncertainty following the Victorian election, including the risk that projects may be paused, delayed or cancelled under future policy settings. Permanent cancellation would compound the impact of delays modelled in this report. If VNI West or WRL were cancelled without equivalent replacement, the associated renewable hosting capacity and, in the case of VNI West, additional access to generation and storage in New South Wales would not be delivered. This would increase reliability risks and place continued upward pressure on electricity costs, compared to when these projects are delivered on time.

WRL is required to expand the ability of western Victorian renewable generation to connect and move electricity towards major load centres. VNI West is intended to expand Victoria's connection with New South Wales, provide access to generation and storage in that state and increase renewable hosting capacity in western Victoria.

The failure to deliver these transmission projects on time places the state's transition at risk, threatening power system reliability and security after the closure of Yallourn in 2028, as well as increasing costs for consumers both large and small. Cancellation without credible replacement infrastructure would compound these impacts.

VNI West and WRL ultimately enable approximately 1.8 GW of wind and solar capacity in Victoria.[14] Nexa's modelling demonstrates the direct consequence of these delays for replacement generation. Up to 2 GW of wind and 0.6 GW of solar is delayed in Victoria between 2027 and 2035 (shown below). This replacement capacity is critical in ensuring reliable electricity generation, particularly given the closure of ageing coal-fired generation.

These delays come at a time when Victoria's electricity demand is also increasing, from around 46 TWh in 2027 to more than 60 TWh by the mid-2030s.

As a result of these delays, up to 1.1 GW of additional gas-fired generation capacity will be needed in the late 2020s to meet this electricity demand. This compares to 2.4 GW of installed gas-fired generation capacity in Victoria today.[15]

10 Nexa Advisory, We Plan and then Don't Build, May 2024

11 Nexa Advisory, Supercharging Transmission Buildout, September 2024

12 VNI West Project Update: July 2025

13 Victorian Auditor-General's Office, Managing the Transition to Renewable Energy, December 2025

14 AEMO, 2025 Electricity Network Options Report, August 2025

15 Source: Open Electricity

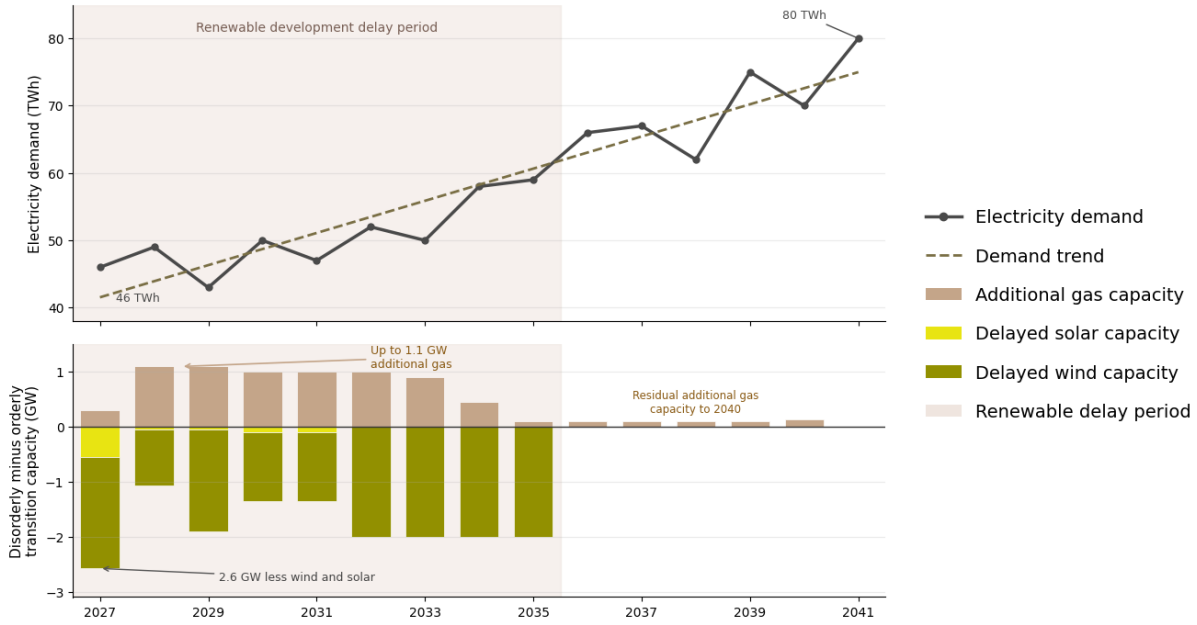

Figure 5 – Delayed capacity buildout

Note: capacity difference between the disorderly and orderly transition where negative values indicate less capacity under disorderly transition.

This reflects the delay of major transmission projects and the renewable generation and storage dependent on them; the modelling assumes that delayed generation capacity eventually enters service. However, if this infrastructure is cancelled rather than delayed, this generation capacity would not be built at all, resulting in ongoing impacts on reliability, gas dependence and wholesale prices.

Uncertainty around coal closure and transmission delivery remain two of the largest risks faced by renewable developers. If this delays replacement investment, Victorians face higher electricity costs, greater reliability risks and increased reliance on gas, while progress towards the state's 75–80 per cent by 2035 emissions reduction target is also put at risk.

Without timely delivery of new renewable generation and storage being delivered by 2030, Victoria faces significant reliability risks

The 2024 Electricity Statement of Opportunities (ESOO) by AEMO showed a potential risk to electricity reliability in Victoria after Yallourn's closure (in 2028) if new generation, storage, and transmission capacity is delayed or fails to eventuate.[16] While this outlook improved in the 2025[17] and 2026[18] ESOOs, there remains little margin for delivery risk immediately after this closure. This outlook remains dependent on timely project delivery, with further renewable investment required to maintain reliability from 2030–31, reinforcing the need for timely transmission delivery and certainty around scheduled coal-fired power station closures.

Notably, interconnection remains an important contributor to the state's electricity reliability. In 2024-25, Victoria was a net exporter for 82 per cent of the year and exported 4,724 GWh net across its interconnectors.[19]

This does not mean interstate transfer capacity is unnecessary. Interconnectors allow electricity to flow in either direction as system conditions change, providing access to geographically diverse generation and storage when Victorian supply is tight.

Failure to deliver replacement capacity and transmission projects on time creates greater reliance on existing dispatchable capacity, including expensive gas-fired generation, to meet the state's electricity demand.

Nexa's modelling shows that Victorian gas-fired generation increases to 2.4 TWh by 2030 and 2.6 TWh by 2035 (shown below). This requires 208 PJ of gas consumption between 2027 and 2035, compared to just 90 PJ under an orderly transition - an additional 118 PJ of gas consumption over the period.

Additional gas generation falls as the modelled delays are progressively resolved and replacement projects come online by around 2032. Further delays or project cancellations could therefore prolong Victoria's additional reliance on gas beyond the early 2030s.

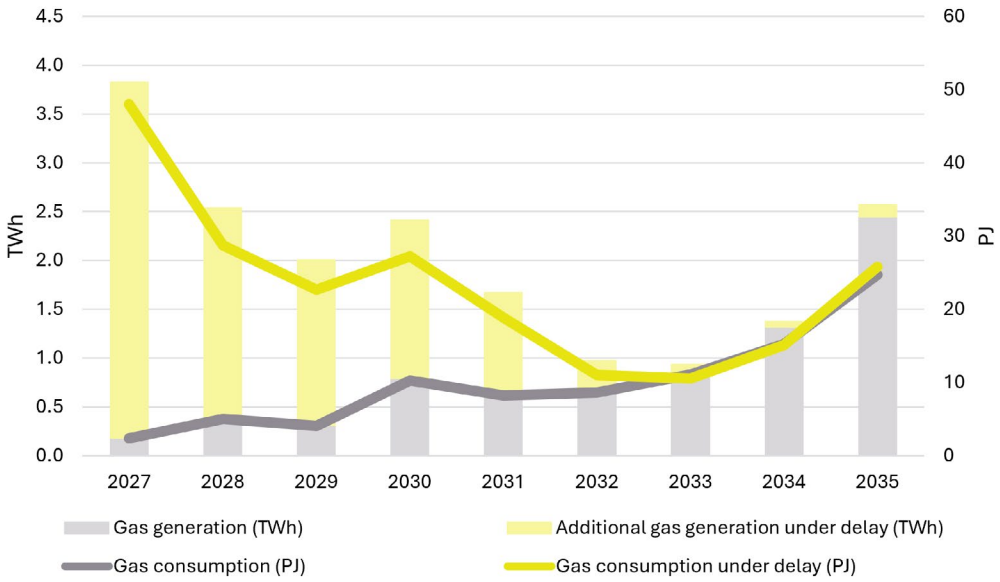

Figure 6 – gas generation (TWh) and consumption (PJ)

16 AEMO, 2024 ESOO
17 AEMO, 2025 ESOO
18 AEMO, 2026 ESOO
19 AEMO, Victorian Network Performance & Insights Report, October 2025

This additional gas requirement would emerge at the same time as the southern gas system becomes increasingly constrained. AEMO's 2026 Gas Statement of Opportunities forecasts risks of peak-day gas shortfalls in southern Australia – including Victoria - from winter 2029, and a need for additional gas supply to meet demand from 2030 under most scenarios.[20] AEMO identifies declining southern gas production as the primary driver of these risks, with Victoria becoming increasingly reliant on gas transported from northern Australia and on storage to meet periods of high demand.

AEMO's 2026 Victorian Gas Planning Report forecasts the balance between available Victorian gas production and consumption shifting from a 59 PJ surplus of available local production in 2028 to a 7 PJ deficit in 2029, widening to 40 PJ in 2030 and 115 PJ by 2035.[21] Nexa's modelled additional gas demand under a disorderly transition would add to this forecast deficit, increasing Victoria's reliance on interstate supply, storage and potentially LNG imports (shown below).

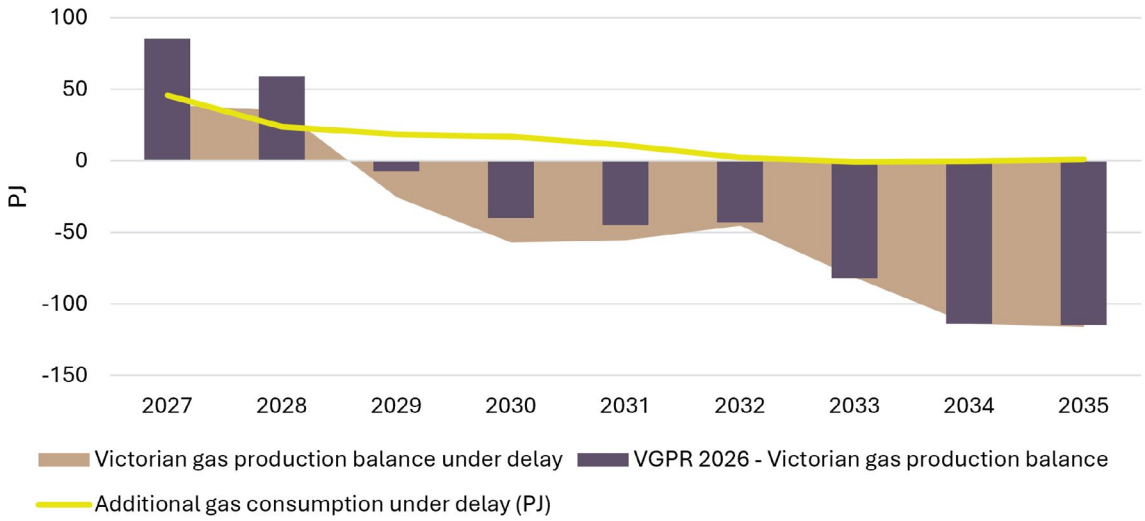

Figure 7 – Transition delays add to Victoria's forecast gas supply deficit

These constraints are particularly relevant for gas-fired generation because AEMO expects gas use for electricity generation to become increasingly 'peaky' and concentrated in winter, when household and commercial gas demand is also highest. Greater gas-fired generation arising from a disorderly electricity transition would therefore place further pressure on an already tightening system, increasing the amount of the fuel that must be supplied, transported and withdrawn from storage during periods when infrastructure is already constrained.

Gas storage and Liquefied Natural Gas (LNG) import projects can provide additional flexibility to meet this demand, but do not remove the underlying constraint. AEMO estimates that a Victorian LNG import terminal could defer forecast southern peak-day shortfalls to around 2031 and annual supply gaps to 2034, rather than eliminate them.[22] Both proposed Geelong LNG terminals also remain subject to final investment decisions, and greater reliance on these terminals would expose Victoria more directly to international LNG supply and prices. This reinforces the importance of limiting residual gas requirements: AEMO explicitly identifies that 'more investment in renewable generation and electricity storage solutions in the NEM will lower GPG needs, reducing gas adequacy risk'.[23]

20 AEMO, 2026 Gas Statement of Opportunities

21 AEMO, Victorian Gas Planning Report Update, March 2026

22 Ibid

23 Ibid, p.3

Gas is needed for firming - but it cannot replace Yallourn

Victoria will need some gas-fired generation to maintain reliability during peak demand, prolonged low-renewable periods, unexpected generator trips and major network outages. This is a firming role: low-utilisation, flexible capacity that operates when batteries, demand response, hydro and interconnection are insufficient. It is fundamentally different from using gas to replace the large volume of energy generated routinely by Yallourn.

Using gas as the default replacement fuel would be expensive. Gas-fired generators have higher short-run fuel costs than wind and solar and expose wholesale prices to gas-market volatility. New plant also requires capital investment in turbines, connection, and potentially gas transport and storage. If this infrastructure is built because renewable generation or transmission is delayed, Victorian consumers ultimately pay for both the delay and the higher-cost substitute.

Gas supply is tightening as electricity demand for gas becomes more 'peaky'

AEMO forecasts the risk of peak-day gas shortfalls in southern Australia from winter 2029 and a need for additional supply from 2030 under most scenarios. Victorian local production is declining, increasing reliance on interstate supply, storage and potentially LNG imports. Additional gas-fired generation would compete for scarce fuel during winter, when household and commercial gas demand is also highest.

New gas turbines are not an immediate contingency

Global gas-turbine demand has surged. GE Vernova reported 116 GW of gas-power equipment backlog and slot reservation agreements in the second quarter of 2026, up from 83 GW at the end of 2025.[24] Mitsubishi Heavy Industries reported that global gas-turbine orders reached 41.7 GW in the first half of 2025 and were expected to reach around 70 GW for the year, up from 57.4 GW in 2024.[25]

These market conditions are translating into multi-year equipment lead times. Siemens Energy indicates around two to four years from contract signing to turbine installation for a representative gas-turbine project.[26] More directly for Victoria, AEMO reports that major manufacturers are quoting turbine lead times of around four years, and that announced expansions in turbine manufacturing capacity are unlikely to reduce lead times below four years.[27]

These figures establish that equipment is scarce and delivery takes several years. New gas projects must also progress other project development activities, including approvals, contracting, connection, civil works and commissioning. While some of these activities can occur alongside turbine procurement, they mean that it cannot be assumed that new gas-fired generation will be delivered in time for Yallourn's 2028 closure.

24 GE Vernova, *GE Vernova reports second quarter 2026 financial results and raises 2026 financial guidance*, 22 July 2026.

25 Mitsubishi Heavy Industries, GTCC Business Briefing, 7 October 2025

26 Siemens Energy, Oxcap Power Day, 16 March 2026

27 AEMO, Victorian Gas Planning Report Update, March 2026, p.73

The secure portfolio is renewables, transmission, storage and limited gas

Victoria's secure pathway is a diversified portfolio: onshore wind and solar for low-cost energy; transmission and interconnection to move diverse generation; batteries and demand response for fast flexibility; longer-duration storage for extended events; and some gas for the residual periods when those resources are insufficient. The more Victoria delays wind, transmission and storage, the more gas-fired generation it will need - and the more consumers will be exposed to scarce fuel, equipment bottlenecks and higher wholesale prices.

Delays and gas dependence increase Victorian wholesale electricity prices

Delays to transmission, renewable generation and storage place sustained upward pressure on Victorian wholesale electricity prices, particularly in the near term. This is driven by the increased reliance on gas-fired generation and increased exposure to international gas prices.

Over the period between 2027 and 2031, the average Victorian wholesale price increases from $62.29/MWh under an orderly transition to $85.20/MWh under a disorderly transition – an average difference of $22.91/MWh, or around 37 per cent across this period (shown below). This increase is particularly pronounced in the years immediately following Yallourn's scheduled closure. For comparison, Victoria's wholesale price in 2025 was $94.68/MWh, more closely reflecting the delayed scenario.[28]

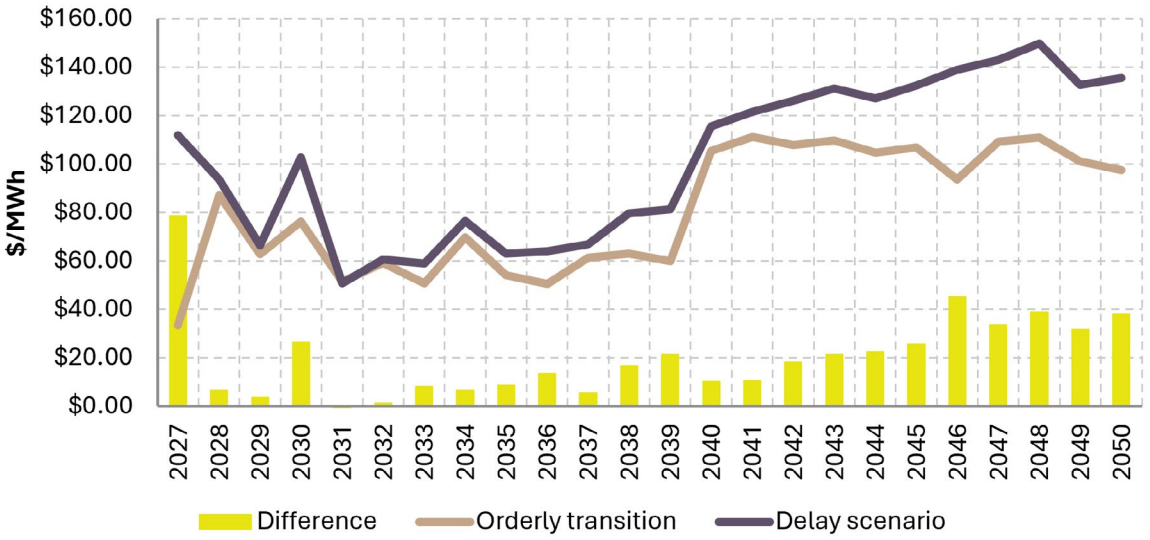

Figure 8 - Average wholesale price (Victoria)[29]

28 Source: Open Electricity

29 Prices are presented in real June 2026 dollars.

In later years, prices remain generally higher under the delayed pathway, demonstrating the ongoing cost of slower transition delivery for Victorian electricity consumers. These delays result in a total wholesale cost of $161.0 billion over the horizon, a 26 per cent increase from $128.0 billion under an orderly transition (shown below).

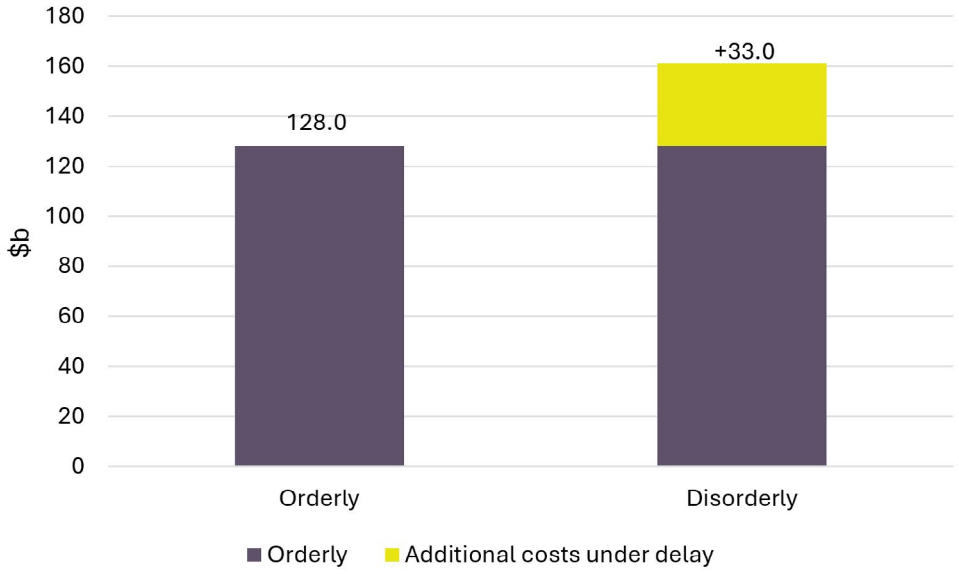

Figure 9 – Total wholesale costs (Victoria)

Victorian households and businesses pay for the delays

These wholesale price impacts would flow through to Victorian electricity bills. Between 2027 and 2031, bills could increase by $472 for an average household, $1,180-$4,719 depending on the assumed consumption threshold of a small business, and $11,797 for a representative large business over the five-year period (shown below).

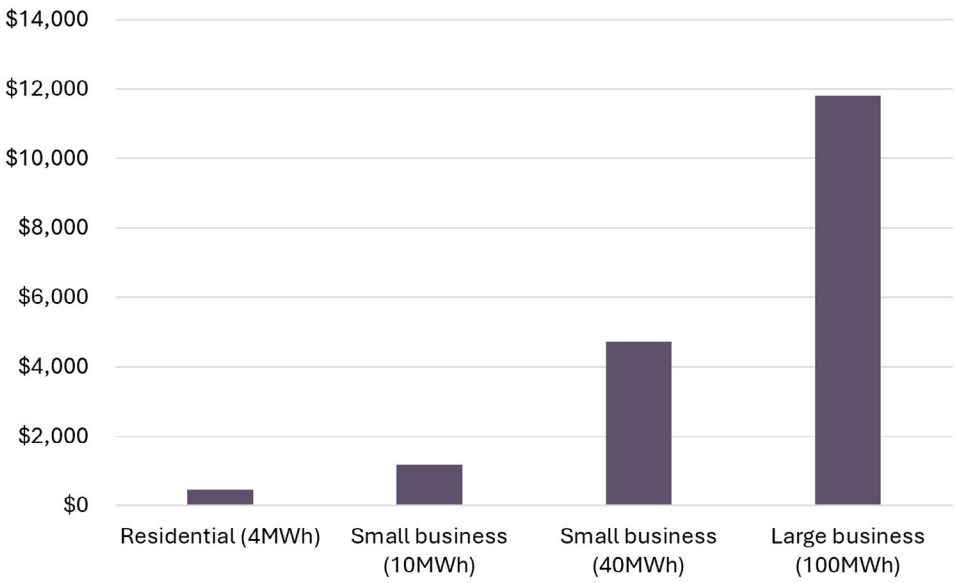

Figure 10 – Cumulative bill impact by customer (2027-2031)

Delays increase emissions

Coal-fired generation remains the major driver of Victoria's electricity sector emissions, particularly through the late 2020s and early 2030s, before falling sharply as coal-fired power stations retire. Victorian emissions total 93 Mt CO2-e until 2034 and 130 Mt CO2-e until 2050 under an orderly transition.

Delaying the delivery of replacement renewable generation, storage and transmission increases emissions by 8.6 Mt CO2-e above the orderly transition pathway, largely as a result of additional gas-fired generation until the early 2030s (shown below). This compares to Yallourn's annual emissions of 11.3 Mt CO2-e (in the 12 months to July 2026), which is equivalent to the remaining electricity sector emissions from the state by 2030.

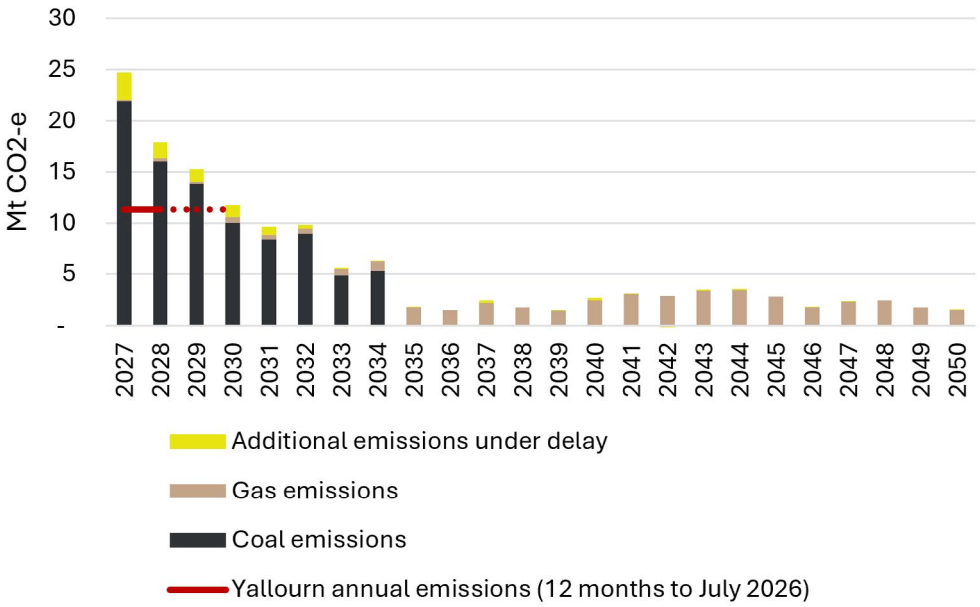

Figure 11 – Emissions (Victoria)

Stay the course: double down on replacement capacity

Victoria's energy security risk is now a delivery risk. Yallourn will close in 2028; its operating record does not support extension as a dependable fallback, and new gas-fired generation is neither cheap nor quickly available. The state must therefore deliver replacement renewable generation, storage, transmission and firming capacity on time.

The answer is to stay the course and double down on the transition pipeline. Further pauses, reviews, cancellations or access delays without funded and deliverable alternatives would increase reliability risk, gas dependence, wholesale prices, and consumer bills. Victoria should accelerate the projects already available and broaden the delivery pathways that can bring capacity online sooner.

1. Confirm Yallourn's 2028 closure and procure dependable replacement capacity

Victoria must better identify what is required to ensure the orderly closure of Yallourn and provide a clear signal to investors and developers of the renewable generation and storage required to replace it.

Uncertainty around coal-fired generation retirement and transmission delivery erodes investor confidence and poses a significant risk to an orderly transition. Replacement wind, solar and storage projects will not reach commercial operation overnight. Investors and developers require upfront visibility and certainty around transmission capacity and access, approvals, procurement and coal power station closure timelines if the required capacity is to be delivered in time.

The Victorian Government should therefore provide this certainty around coal-fired power station closures and lean into new, onshore capacity build. This means facilitating better and faster approval processes, maintaining a strong pipeline of renewable generation and storage, and looking beyond declared REZs where high-value projects can make use of available network capacity and be delivered sooner.

2. Accelerate transmission and hold delivery bodies accountable

Transmission infrastructure is a key enabler of the transition, connecting new renewable generation and storage and improving the geographic diversity and reliability of supply.

Major projects such as WRL and VNI West therefore remain critical and must be delivered with greater accountability for timing and cost. However, there is no silver bullet, and Victoria should not rely solely on the existing pipeline of major interconnectors and REZ infrastructure.

The Victorian Government and VicGrid should identify and facilitate market-led intra-regional transmission and virtual transmission solutions. This should include:

- private or market-led intra-regional transmission projects, including outside REZs, identified by investors, renewable developers and non-traditional transmission providers; and
- non-network solutions such as 'virtual transmission', including large-scale Battery Energy Storage Systems (BESS) with System Integrity Protection Schemes to enhance the capacity of existing transmission infrastructure, or the co-location of generation and large loads (e.g., data centres and associated generation and grid infrastructure).

These solutions can be delivered alongside major transmission projects to unlock additional hosting capacity and bring forward renewable generation and storage that may otherwise be delayed.

3. Unlock the onshore wind, solar and battery pipeline inside and outside REZs

The Victorian Government and VicGrid should actively identify advanced projects outside REZs that could contribute before major delayed transmission projects are completed. This should include publishing clearer information on available network capacity and constraints, offering early and transparent grid-impact screening, and developing defined timeframes for access and connection decisions.

Priority should be given to projects that can demonstrate a near-term delivery pathway, make efficient use of existing infrastructure, add storage or flexible demand, reduce a known constraint, or improve geographic diversity. Where modest, contestable network augmentation would unlock material capacity, the state should compare that option with waiting for a larger regulated project. Support should remain conditional on planning approvals, community acceptance, technical performance and developers carrying the appropriate commercial and connection risks.

REZs remain essential to Victoria's long-term transition, particularly for developing renewable resources at scale. But the immediate task is to replace Yallourn reliably and affordably. Victoria should therefore pursue a portfolio approach: deliver REZ and interconnector transmission infrastructure with greater urgency while enabling credible market-led projects outside REZs where they can add dependable capacity sooner and without transferring unreasonable costs or risks to consumers.

4. Contract a diversified firming portfolio and keep gas in a limited back-up role

As coal-fired power stations reach the end of their operating lives and renewables become a larger part of Australia's generation capacity, more fast-acting, 'back-up' generation will be needed to ensure electricity reliability during renewable droughts (short or long), seasonal peak demand, unexpected generator trips or major network faults.

This 'back-up' role is increasingly being met by large-scale BESS, and long-duration storage. As new storage capacity comes online, they will comprise a greater share of dispatchable output for short durations (several hours), while larger storage technologies will provide longer duration dispatchable output (spanning days to weeks). Gas-fired generation will also continue to play a limited role through the transition. A diversified firming portfolio is critical to reliability, reducing the risk that fuel constraints, generator outages or delays to any one technology leave insufficient supply when the system is under greatest pressure.

Gas should be clearly defined as a back-up, rather than a substitute for delivering the transition. Greater reliance on gas as a result of delayed renewable generation, storage and transmission would expose Victorian consumers to higher fuel costs and an increasingly constrained gas system, meaning higher bills and greater exposure to reliability risks.

Victoria should therefore continue to reduce routine gas demand and support the development of alternative firming technologies, while preserving gas-fired generation for the limited periods when it is genuinely required.

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