Australia's disorderly transition and coal retirement

Energy consumers will pay higher electricity bills, increasing each year of a disorderly transition. New South Wales customers will pay $106 more by FY2027, increasing to $324 by FY2032.

In addition, keeping Eraring coal-fired power station beyond 2025 is unnecessary and will cost consumers $120-150mn a year in subsidies to Origin Energy. More to the point, recent and repeated unexpected shutdowns demonstrate that it will not guarantee power security and reliability. Delays would also increase emissions and risk emissions reduction targets.

We need to get on with the clean energy transition. To do this governments need to accelerate the buildout of the renewable energy generation, and associated storage and transmission. We must give investors and developers certainty. And there must be commitment to the strategic measures designed to support the system in what we must now accept is a 'disorderly transition'.

It is critical that State and Federal governments stick to the timetable set for coal-fired power station retirement and rebuild confidence in the existing mechanisms and reforms currently underway to deliver affordable and reliable electricity.

Governments and industry need to get with the plan - now

The current slow pace of Australia's clean energy not only means we will fail to meet our climate targets, it is putting electricity security and reliability at risk. It will also mean unnecessary costs for taxpayers and energy consumers both large and small.

This is not news. We started our transition late, and our energy system was not designed for the fast build pace required once we got going. We planned, but haven't built the renewable generation[1], storage[2] and transmission[3] we need. This is because our regulatory environment is not fit for purpose in the transition, there was and still is a lack of national planning and coordination, we didn't put the work in to build social licence and community acceptance, and we have failed to give investors and developers certainty on the timetable for the retirement of coal-fired generation.

There have been some market reforms and action by state and federal governments to drive and coordinate a market-led transition. However, we are still staring down the barrel of a gun loaded with high electricity prices and reliability risks.

These reliability risk fears in particular are giving rise to potential government intervention in the form of recent discussions about an orderly exit mechanism[4] and potential delays to the closure of Eraring power station in NSW.

Nexa Advisory has grave concerns that actions by governments to try to alleviate reliability risks in the short-term will not only cost consumers and taxpayers unnecessarily, but undermine the consultative action undertaken to date, and harm investment certainty. This will threaten renewable generation and storage penetration in the longer term.

Keeping Eraring - a 42-year-old coal-fired power station - open beyond its use by date is also not a guaranteed route to power reliability as demonstrated by recent and repeated unexpected shutdowns.

Government and industry must coordinate better to regain order and accelerate the transition.

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[1] Nexa Advisory, Submission on the Expanded Capacity Investment Scheme, 2024
[2] Nexa Advisory, Energy Storage Financeability in Australia, 2024
[3] Nexa Advisory, Removing the Roadblocks to New Transmission to Achieve the Transition, 2022
[4] Nexa Advisory, NSW Orderly Exit Management Framework Consultation, 2024

We are running behind and energy consumers will pay for it

Nexa Advisory has previously undertaken analysis of the impacts of the 'disorderly transition' which is now coming to pass.[5]

The *disorderly transition* scenario in this work reflects a slower and restricted buildout of critical renewable generation, storage and firming capacity, and transmission assets compared to that required for an *orderly transition* – which sees development proceeding as per the Australian Energy Market Operator's (AEMO) Integrated System Plan (ISP) *Step Change* scenario.

As shown in Figure 1, our analysis found that a disorderly transition results in a significant increase in consumer bills in all states from FY2026, compared to an orderly transition.

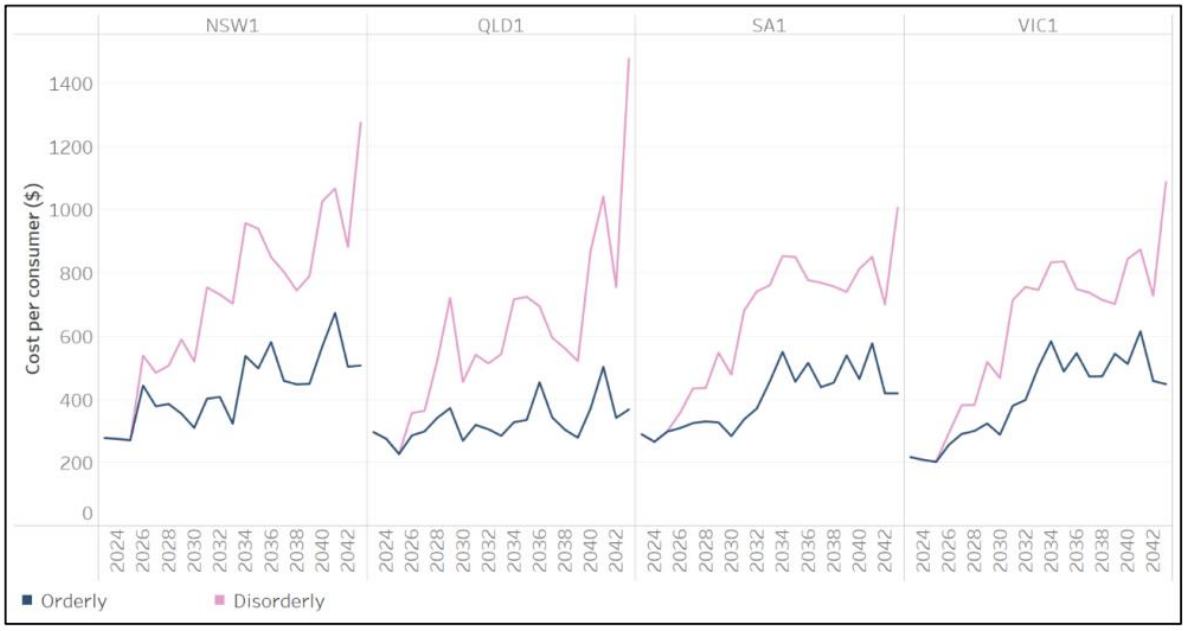

Figure 1 - Modelled wholesale energy cost per consumer, by region

	2026	2027	2028	2029	2030	2031	2032
NSW	94.7	106.3	121.2	234.7	210.1	352.0	323.9
QLD	70.9	65.0	182.3	348.4	186.3	221.8	208.2
SA	48.0	109.3	106.1	220.5	194.4	343.9	370.3
VIC	37.4	90.5	82.3	194.8	179.3	334.3	357.3

Table 1 – Annual additional wholesale energy cost ($) per consumer in the disorderly scenario compared to the orderly scenario by region and FYE

Table 1 shows that consumers will pay higher electricity bills, increasing each year of a disorderly transition. For example, New South Wales customers will pay $106 more by FY2027, increasing to $324 by FY2032.

[5] Nexa Advisory, Eraring can be closed on time to save consumers money, 2023

We must commit and get on with the transition

Federal and State government must continue to:

- Streamline the planning and approvals processes to minimise any further delays in renewable generation, storage or transmission projects.
- Remove barriers to take up and integration of consumer energy resources to accelerate the transition and benefit the community and consumers.
- Provide confidence in the system planning undertaken by AEMO, and the ability of existing mechanisms such as the Long-term Energy Service Agreement (LTESA) and Capacity Investment Scheme (CIS) schemes to deliver the affordable, secure and reliable electricity.

Extending Eraring is a drag on the transition

Eraring was commissioned in 1982 and is at the end of its economic life. It is currently scheduled to be retired in 2025, extending it would be a knee-jerk response to perceived power system reliability fears. Moreover, it would not solve the reliability problem, and it would be bad news for electricity consumers and new investment trying to enter the market.

There have been several unplanned outages experienced by three Eraring units in late April and early May 2024[6]. Additionally, notably high levels of price volatility were experienced in early May, which was likely contributed to by these outages.

It has been estimated that the cost of prolonging the operation of Eraring would be $120-150m per year[7]. Nexa Advisory has found that this will increase electricity bills for NSW electricity consumers by up to $44 each year for NSW consumers, equating to a 2.5% increase to NSW residential bills[8].

In addition, the dangerous precedent set by extending a lifeline to Eraring will have a domino effect, creating uncertainty and eroding market confidence, and therefore delaying investment and delivery of renewable generation and the firming capacity delivered by storage. It would undermine the NSW Government's Electricity Infrastructure Roadmap and LTESA framework – which is expected to underpin a cumulative 22.8TWh of annual generation, 374MW of long-duration storage and 1,075MW of firming capacity by FY2027.

This will in turn create further reliability risk, increasing the likelihood of delays to the scheduled closures of Vales Point and Yallourn.

[6] WattClarity, More considerations, about the possible extension of Eraring Power Station, 8 May 2024

[7] Clean Energy Finance, More coal subsidies to extend Eraring? Heads, Origin wins; Tails, taxpayers lose, March 2024

[8] Based on the 2024-25 Default Market Offer price for NSW residential customers (without controllable load), which sets the reasonable customer price and is intended to set a 'reference' for market offers.

Governments must stick to the plan

We are now in a disorderly transition. To get traction again, Federal and state governments must rebuild confidence in the transition and Australia's ability to meet our renewable generation and emissions reduction targets.

To do this, our governments must stick to the plan – and commit to the reforms and processes currently underway. This is particularly true for the current exit plans for coal-fired generation and reliability forecasting.

Orderly Exit Management Framework

The NSW Government Office of Energy and Climate Change has recently consulted on the Orderly Exit Management Framework (OEMF), which has proposed that the costs of propping up coal-fired generators will be recovered through jurisdictional scheme charges recovered from transmission customers (i.e. Transmission Use of System charges). These amounts will be recovered from retailers through the annual regulatory pricing process, flowing through to NSW electricity consumers via retail bills.

This is expected to be finalised imminently – and should guide all existing thermal capacity due to exit the system, including Eraring.

There must also be transparency around the consumer cost impacts of any extension. This was strongly supported through submissions to the OEMF.

Transparency and confidence in reliability forecasts

The NSW Government has already undertaken work to address a potential reliability gap identified in the Energy Security Target Monitor (ESTM) Report released in October 2023, including a firming LTESA tender round and delivery of the Waratah Super Battery (WSB).

The ESTM has not identified any further gap[9]. The NSW Government already has mechanisms in place to progress future tenders for new capacity (firming LTESA and Federal CIS). This mechanism should be used if a gap is identified, so that the market can have an opportunity to meet it.

Finally, the NSW Government can ensure that any additional identified firming capacity is delivered as soon as required by expediting NSW planning and approvals and AEMO's connection processes to support timely delivery of priority projects. We note that WSB was announced in 2022 and will be delivered by next year – highlighting the potential to deliver projects in an expedited timeframe before the scheduled closure of Eraring.

Together, these measures will help to rebuild confidence in the transition and provide the certainty required to mobilise investment that will deliver reliable and affordable electricity.

[9] NSW Climate and Energy Action, Energy Security Target Monitor, accessed 14 May 2024

About Nexa Advisory

Nexa is a full-service advisory firm. We work with public and private clients including renewable energy developers, investors and climate impact philanthropists to help accelerate efforts towards a clean energy transition. We've been shaping the energy industry for over 20 years. With a proven track record across policy creation, advocacy, political risk assessment and project delivery, we're holistic in our approach and deliver solutions with commercial intent.

The Nexa Advisory team is a collaboration of passionate energy specialists, all committed to the successful transformation of Australia's energy markets. The team is focused on helping clients grasp the unpredicted opportunities the energy transformation will bring. The decentralisation of energy promises, for the first time, to enable a truly democratised ecosystem with people and communities at the centre. We believe in an energy industry where people are at the centre of every recommendation we make. This belief guides our approach to the challenges we solve, and the outcomes we create.