The Billion-Dollar Opportunity

Financing the Circular Transition

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Cyan Ventures

Agenda

1 About Cyan Ventures

2 Investment trends shaping the energy sector

3 The end of life opportunity emerging from those trends

4 How to unlock the billion dollar opportunity

Cyan Ventures

"Scaling breakthrough green technologies" through project development and advisory to accelerate the transition to a net zero, nature positive future.

Who we are

- Cyan Ventures is a specialist sustainability project development and advisory firm
- Our focus is singular: helping breakthrough green technology projects get done, whether they have never been done before or never been done at scale.

Our mission

- We aim to help projects that have never been done before get done
- In doing we aim to make 20 years progress on the sustainability transition in less than 10 years.

How do we do it

- **Project development - bottom up.** Working directly with founders to support their projects getting to financial close.
- **Advisory - top down.** Working with key stakeholders, such as regulators, offtakers, and investors to create an enabling environment to allow these projects to get completed

What We Do

Project development – "Bottom-up"

Strategy & Positioning

Clarifying development pathways, competitive positioning, and the sequencing of key milestones toward bankability.

Commercial Offtake Design

Structuring offtake that provides revenue certainty including aggregation models, blended public-private demand, and corporate procurement pathways.

Financial Modelling

Project economics, sensitivity analysis, capital stack design, and scenario modelling to underpin robust investment cases.

Investor Engagement Support

Preparing investment materials, supporting due diligence, and helping teams engage DFIs, government programs, and private capital.

Advisory – "Top-down"

Policymakers & Government

Mandate design, regulatory reform, market mechanism development, and program design to improve the policy environment for breakthrough green technologies.

Offtakers

Supporting corporates, airlines, and industrial buyers to develop procurement frameworks and structure offtake that works for both buyer and project.

Investors & Financiers

Market intelligence, sector deep-dives, and investment case analysis to help capital allocators understand breakthrough green technology sectors and build conviction.

Industry Groups & Philanthropists

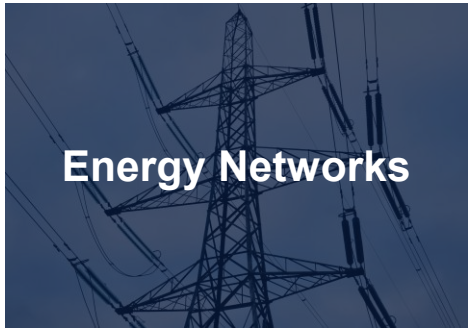
Strategic research, sector analysis, and policy framing for industry associations, foundations, and mission-aligned funders accelerating the transition.

Where We Work

Low carbon liquid fuels are essential to decarbonising aviation, shipping and heavy transport. Australia has a **major opportunity given abundant feedstocks, Asian export markets, and growing policy momentum**.

Diversifying into critical clean tech inputs creates both **sovereign resilience** and a **multi-billion dollar industrial opportunity for Australia**.

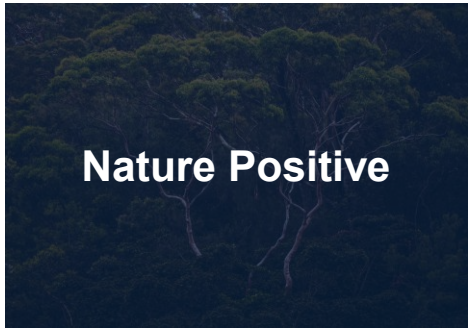
Focus



Better grid management and smarter aggregation of distributed energy could **unlock billions in system value, cut consumer bills, and accelerate Australia's transition** to a clean, reliable grid.

Focus

Australia's **world-class reserves** of iron ore, alumina, lithium and critical minerals (combined with **abundant renewable energy**) position it to become a **global exporter of green metals**.



The transition to nature-positive business models represents both an **urgent environmental imperative** and a **major emerging economic opportunity**, from biodiversity credits to regenerative land use and nature-based solutions.

The energy transition is reshaping where, what and how we build

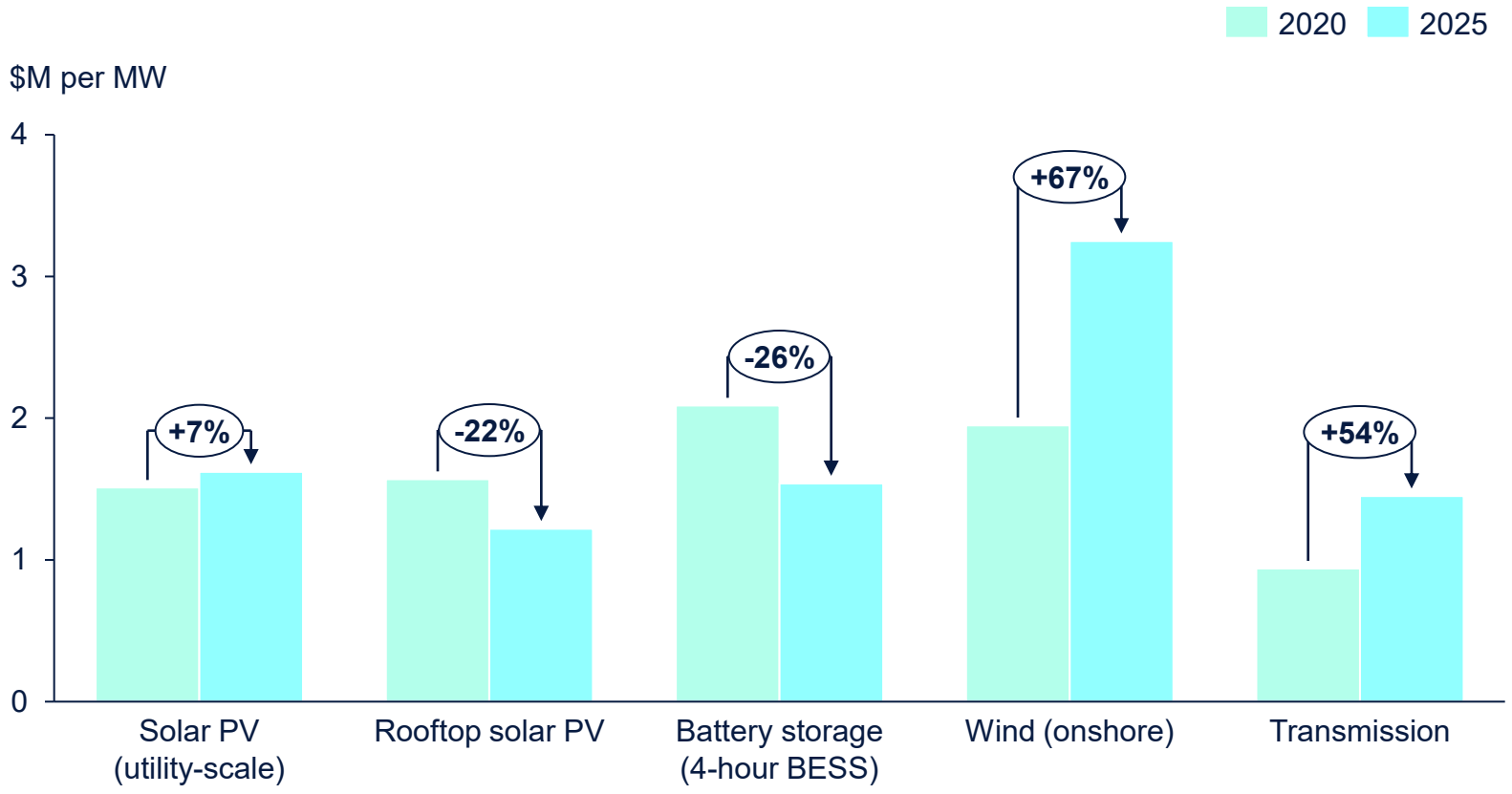
From…	…To	
Combustion	**Electrification**	• By 2050, electricity could power >50% of Australia's final energy demand, up from just 20% today;[1] implies 3 – 4x increase in electricity generation.[2] Electrification could transform manufacturing processes and their supply chains.
Centralised	**Decentralised**	• By 2050, 45% of electricity could be generated on people's rooftops, driveways and local communities, a large shift from today's centralised system,[3] creating new levels of energy independence and complexity.
Analogue	**Digital**	• Rise of smart grids, real time energy and demand-side management could reduce global electricity consumption by 10%. • Increasingly connected systems create new opportunities, benefits and risks.
Slow Change	**Rapid Change**	• Potential for low or zero marginal costs of energy create entirely new business models • New industrial processes likely to emerge (e.g. green steel). • Supply chains are likely to reorganise around clean energy access over the long-term, with strategic opportunity for Australia in areas previously uncompetitive (e.g. polysilicon).
Dispersed, fluctuating loads	**Concentrated, always on loads**	• Data centres currently account for about 2% of Australia's total grid-supplied energy and are projected to rise to 6% by 2030 • Upside opportunity is that with their strong credit ratings they could be anchor tenants for new green industry zones

Notes/Sources: 1. IEA, Net Zero by 2050 (2021), 2. AEMO ISP – Step Change Scenario (2024), 3. BNEF New Energy Outlook (2023), 4. IEA Critical Minerals Report (2023)

Solar and batteries are the most cost-efficient way to bring on new renewable generation in Australia

Distributed solar plus storage now lead on cost; wind and transmission lag

CAPEX for new build, $ per million per MW



Key takeaways

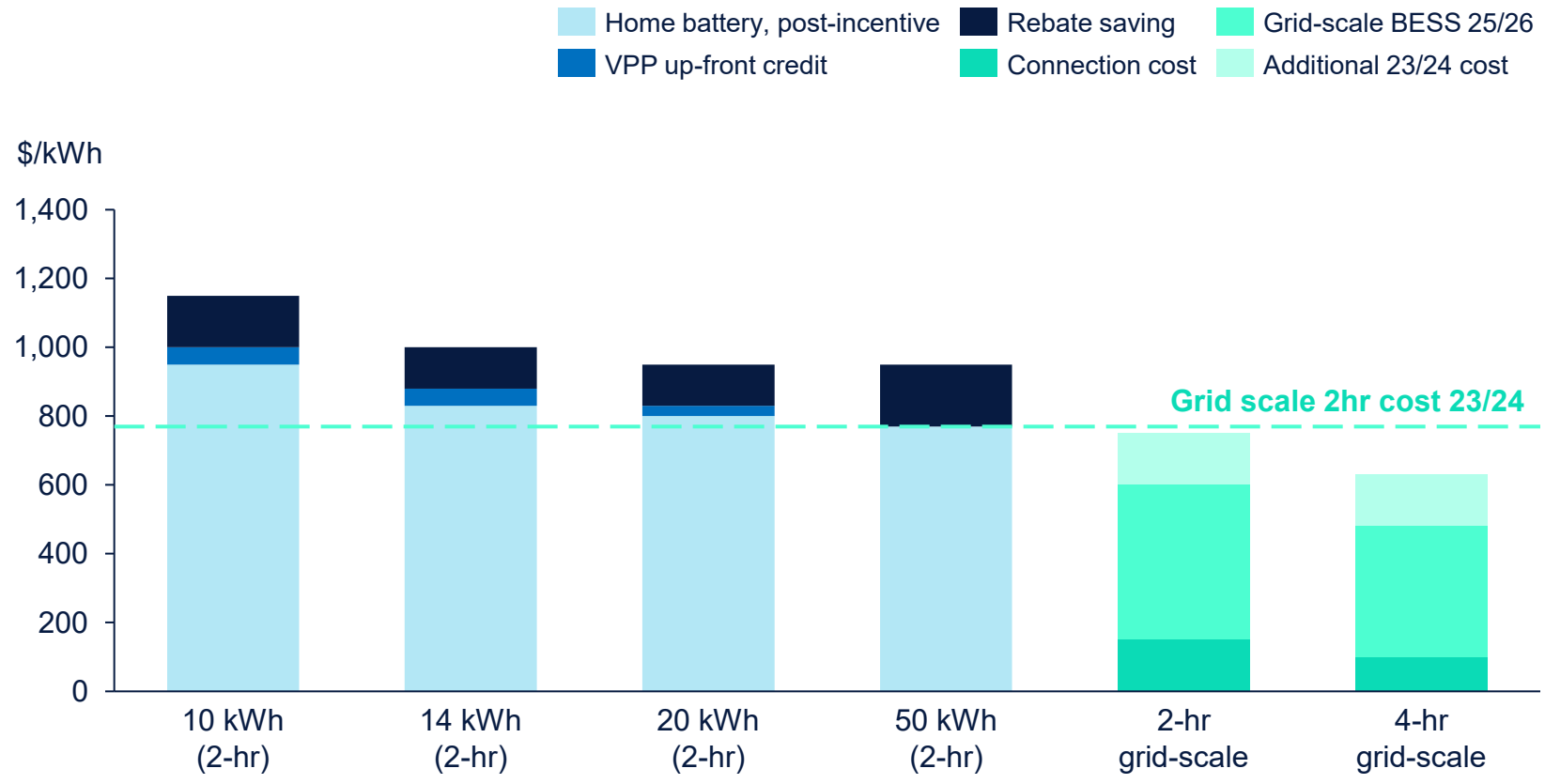
- Rooftop solar and storage has seen large cost declines
- Wind and transmission becoming more costly
- **Implication:** Increased storage and solar in the system

Sources: CSIRO GenCost 2020-21. GenCost 2025-26. HumeLink budget per AEMO and Transgrid: $3.3B 2020 plan, ~$5.0B 2024 revised, 3,500 MW capacity

Home batteries are now cost competitive with grid scale BESS

Post-rebate home batteries match grid-scale BESS coming online today

Battery cost breakdown, $ per kWh, after incentives



Key takeaways

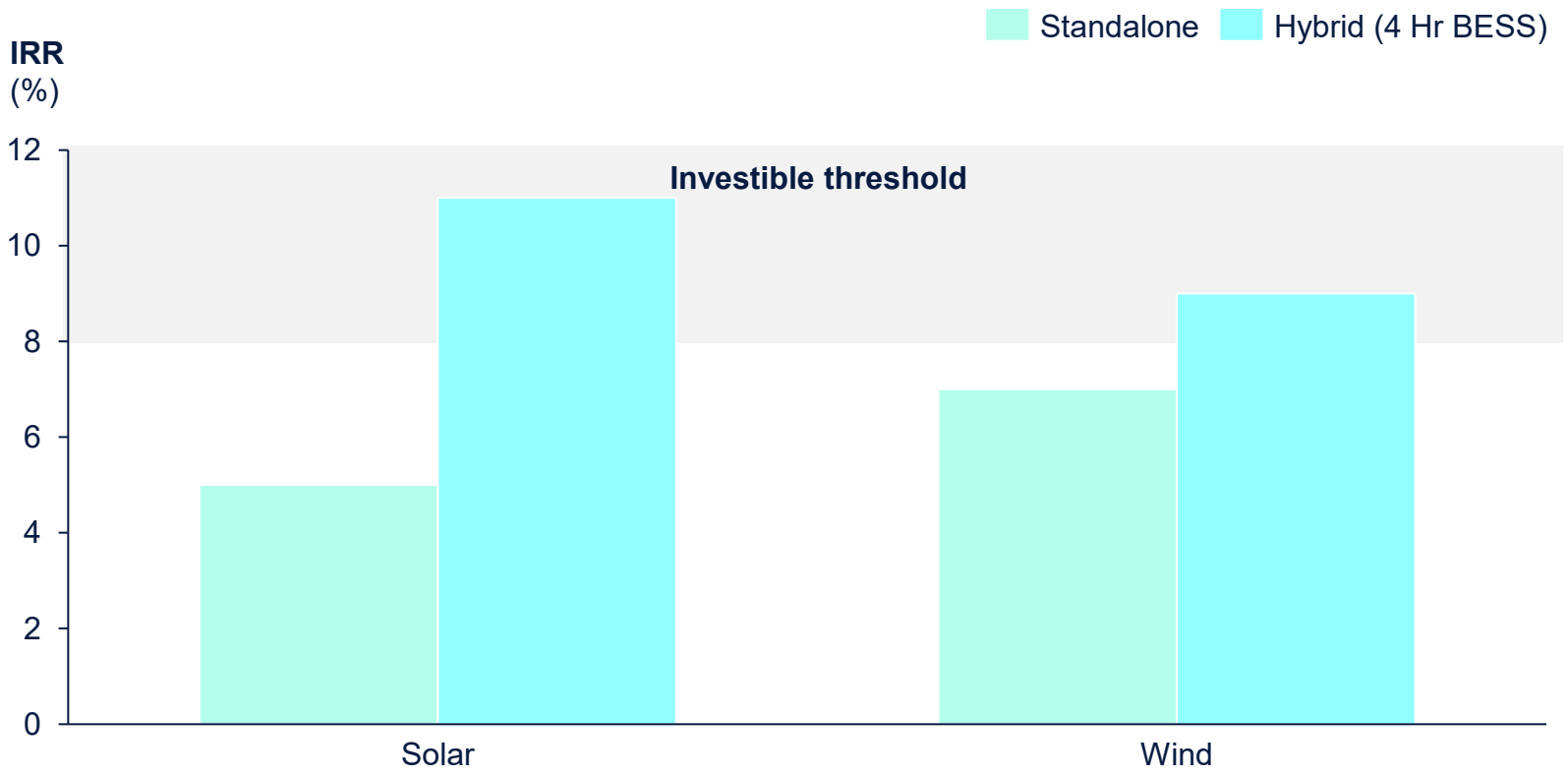
- Distributed storage has hit cost parity
- CHB has driven scale
- Each install can trigger panel upgrade
- **Implication:** Rooftop solar and storage are running ahead of forecast, pulling EoL volumes forward

Sources: Modo Energy battery cost breakdown chart (cites Modo, CSIRO, Solar Choice). Clean Energy Regulator SGU-Battery installations Jul 2025 to Mar 2026. QLD Household Solar Panel Recovery Pilot Final Report (2025). Federal CHB Program scale-up.

Standalone projects fall short of bankability. Hybrids clear the bar.

Hybridisation lifts solar and wind IRRs to a more investible threshold

IRR (%), 2026$



Key takeaways

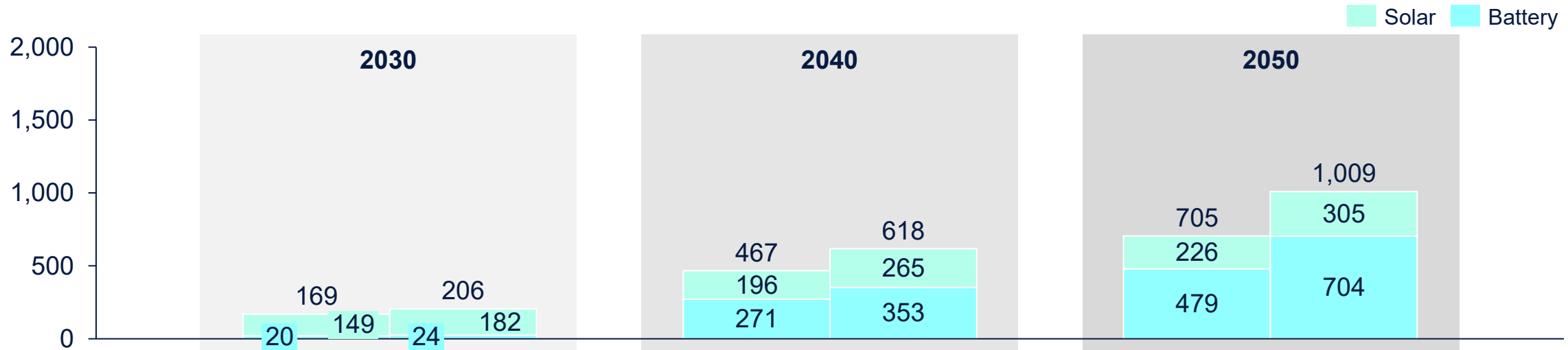
- Standalone systems are not bankable
- Hybridisation improves economics
- **Implication:** More storage into the system co-located with renewables

Sources: Cyan Ventures Modelling using AEMO Draft ISP (2026); NEMOSIS; GenCost (2025); Aurecon (2025)

EoL volumes accelerate across three horizons, larger than published

Key trends could push EoL volume 20 to 30 percent above published forecasts

Annual volume of EoL materials (lithium ion and solar PV), kT



Initial (20% uplift)

Mid-term (30% uplift)

Long-term (30% uplift)

Key drivers

- CHB program
- Retrofitting of existing fleet of solar

- Household scale
- Grid-scale and hybridisation

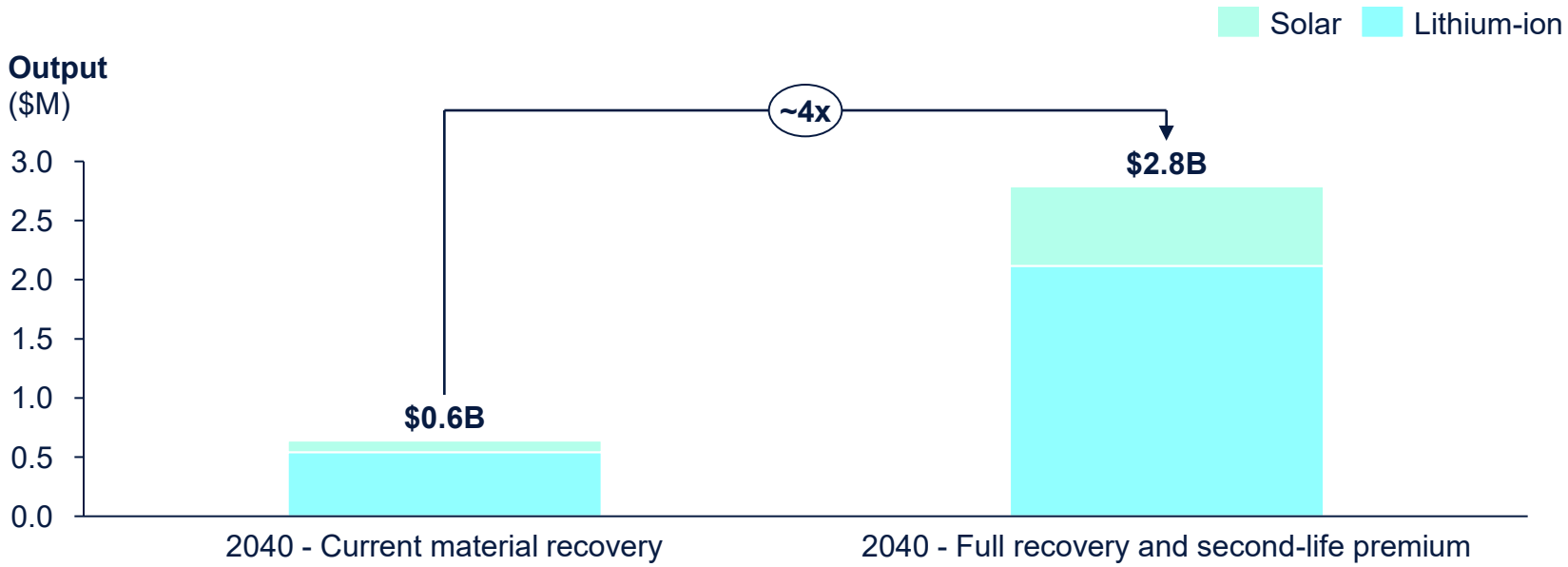
- Upgrades of existing fleet

Sources: Cyan Ventures Modelling using AEMO Draft ISP (2026); Clean Energy Regulator Solar and Battery Installation Data, QLD Government and SEC Household Solar Panel Recovery Final Report; IEA Critical Minerals Outlook

Onshore processing quadruples the value Australia keeps

$0.6B if we ship it. $2.8B if we process it (indicative)

Annual economic output by 2040, materials value recovery, lithium-ion and solar PV, real 2026$



	2040 - Current material recovery	2040 - Full recovery and second-life premium
Cumulative solar output 2026-2040 ($B)	**$1.2B**	**$7.5B**
Cumulative lithium-ion output 2026-2040 ($B)	**$2.7B**	**$10.5B**

What would we need to believe to capture the $2.8B opportunity

1. Forecast EoL volumes materialise and exceed even current expectations
2. Australia invests, develops and pioneers new downstream processing capacity
3. Mandatory stewardship and long-tenure offtake unlock bankable plant economics
4. Second life scales with standards, certification and consumer trust

Sources: Cyan Ventures Modelling using AEMO Draft ISP (2026); Clean Energy Regulator Solar and Battery Installation Data, QLD Government and SEC Household Solar Panel Recovery Final Report; IEA Critical Minerals Outlook; BSC and Sircel Production Economics; SEC Webinar; ABRI Industry Modelling

Key barriers preventing Australia from unlocking the $2.8B opportunity

Degree of risk: Low  High

Key investment risk	Rating	Detail
Demand risk		• No long-tenure offtake mechanism. Existing flows locked into offshore processors. • Recycled material values fell 60% over three years of voluntary operation. • Premium pricing for traceable material is emerging but not yet signalled.
Supply risk		• Voluntary collection plateaued at 18.5%. EU regulated equivalent is at least double. • OEM design innovation reduces material value - producers gain, recyclers and taxpayers bear cost. • Reverse logistics dominate cost - 60% of QLD solar pilot cost was transport, not processing
Technology risk		• First-of-a-kind plant deployment carries 25-50% cost premium and execution risk • Chemistry shift and technology change can create stranded asset risk for plants designed today. • No Australian standards for second-life solar or batteries. Reuse trust is low.
Capital risk		• First-of-kind plants can face 5-10 years of sub-scale negative-margin operation. • Asset lives are 10+ years. Lenders need offtake tenor that matches

Australia has the technology, the feedstock and the capital. What's missing is coordinated action across the actors who hold each lever

Unlocking the opportunity requires coordinated action in 4 key areas

Key unlocks	Barrier addressed	Detail	Implication
Smart, mandatory product stewardship	Supply risk	• Federal mandatory EPR scheme covering all batteries and solar panels. • Eco-modulated levies - lower fees for recyclable designs, higher for hard-to-process ones.	• Producers carry the EoL cost they create, ending the externality • Lifts collection rates
Commercial viability and market incentives	Demand risk and capital risk	• Federal government underwrites (i.e., CFDs) for processed circular materials at premium pricing. • Public procurement minimum volumes • Phase demonstration program plant program with performance gates and sunset dates	• Plants become debt-financeable through long-tenure revenue certainty • Competition is preserved through phased rounds and performance gates
Technology readiness	Technology risk	• Demonstration funding to underwrite the first-of-a-kind premium. • National standards for second-life solar and batteries to unlock reuse. • Targeted R&D investment in next-generation processing (e.g., JESE silver extraction)	• De-risks first-of-a-kind capital and ramp-up costs • Unlocks the reuse premium • Positions Australia for next-generation technology leadership in recycling
System wide coordination and infrastructure	Cross cutting	• Producer-financed reverse logistics built into product price at point of sale. • Regional consolidation hubs co-located at coal and mining transition sites. • Workforce strategy linking coal, mining and auto transition into circular roles.	• Reduces logistics cost (currently 60% of unit cost in QLD pilot) • Combined hubs could reduce CAPEX significantly versus separate facilities • Creates regional jobs aligned with just-transition policy

Key takeaways

Volume are arriving earlier and bigger than published forecasts assume	By 2040 Australia could generate around 1 million tonnes per year of solar and battery EoL materials – 20 to 30 percent above published forecast
The prize is industrial scale, and we capture only a third of the true value	Onshore processing could capture close to $3 billion annually by 2040 and $18 billion cumulatively through 2040. That annual output is the scale of Australian wine export industry today
The risks are solvable with coordination across the ecosystem the key unlock	Risks are medium and solvable. Producers, recyclers, governments and investors must move together