

2025 Central Queensland Transmission Network Forum

Welcome



Acknowledgement

Powerlink acknowledges the Bailai, Gurang, Gooreng Gooreng and Taribelang Bunda Peoples as the Traditional Owners and custodians of the lands and waters of this region.

We pay our respects to their Ancestors, Elders and knowledge holders and recognise their deep history and ongoing connection to Country.



Agenda

Opening Address with Bryson Head, State Member for Callide and Assistant Minister for Regional Development, Resources and Critical Minerals

State of the network with Paul Simshauser, Chief Executive

Central Queensland update with Ian Lowry, Executive General Manager

Revenue Determination with Roger Smith, Director Revenue Reset

Panel discussion: Economic development in Central Queensland
moderated by Jacqui Bridge, Executive General Manager
Network Investment

Networking

2025 Central Queensland
Transmission Network Forum

Opening Address

Bryson Head

State Member for Callide and Assistant
Minister for Regional Development,
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State of the network

Paul Simshauser
Chief Executive
Powerlink Queensland



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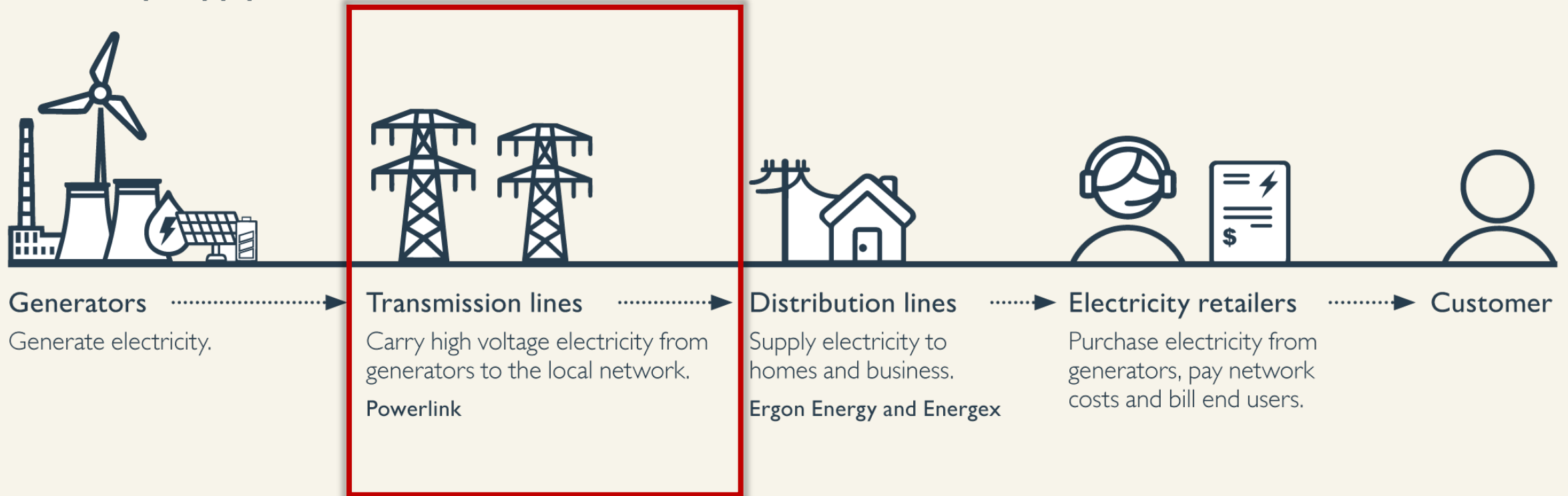
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The role of transmission

Electricity supply chain



Powerlink Queensland

Queensland Government owned – one of Australia's leading transmission network utilities.

We own, develop, operate and maintain the **high voltage transmission** network.

Our network runs **1,700km** from north of Cairns to the New South Wales border.

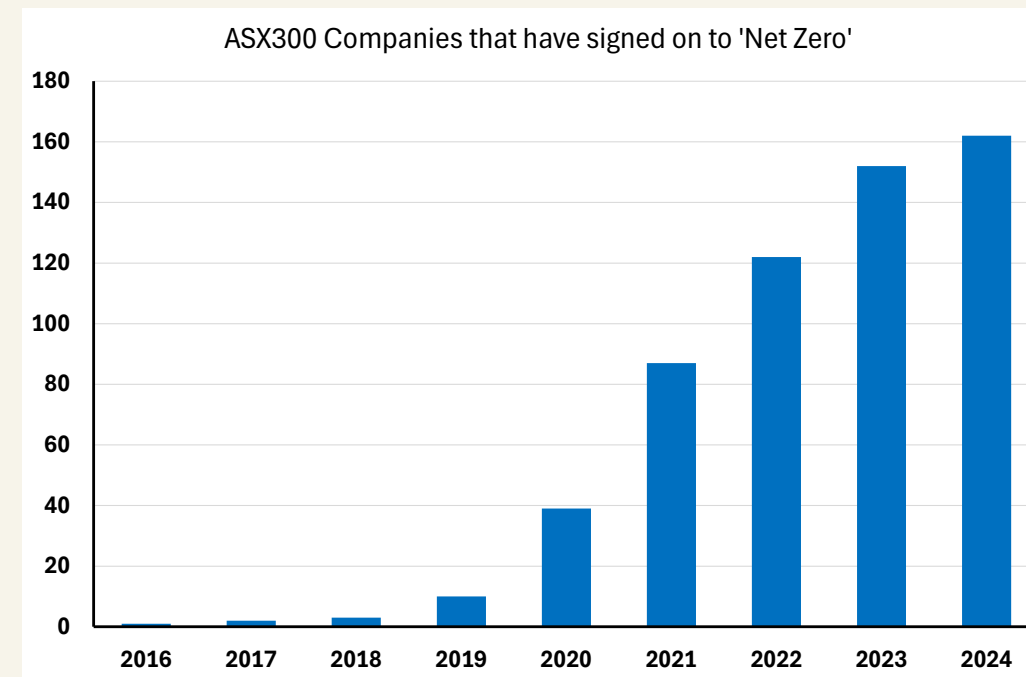
Comprises **15,559** circuit kilometres of transmission lines and **152** substations.



National Electricity Market renewables... *market led*

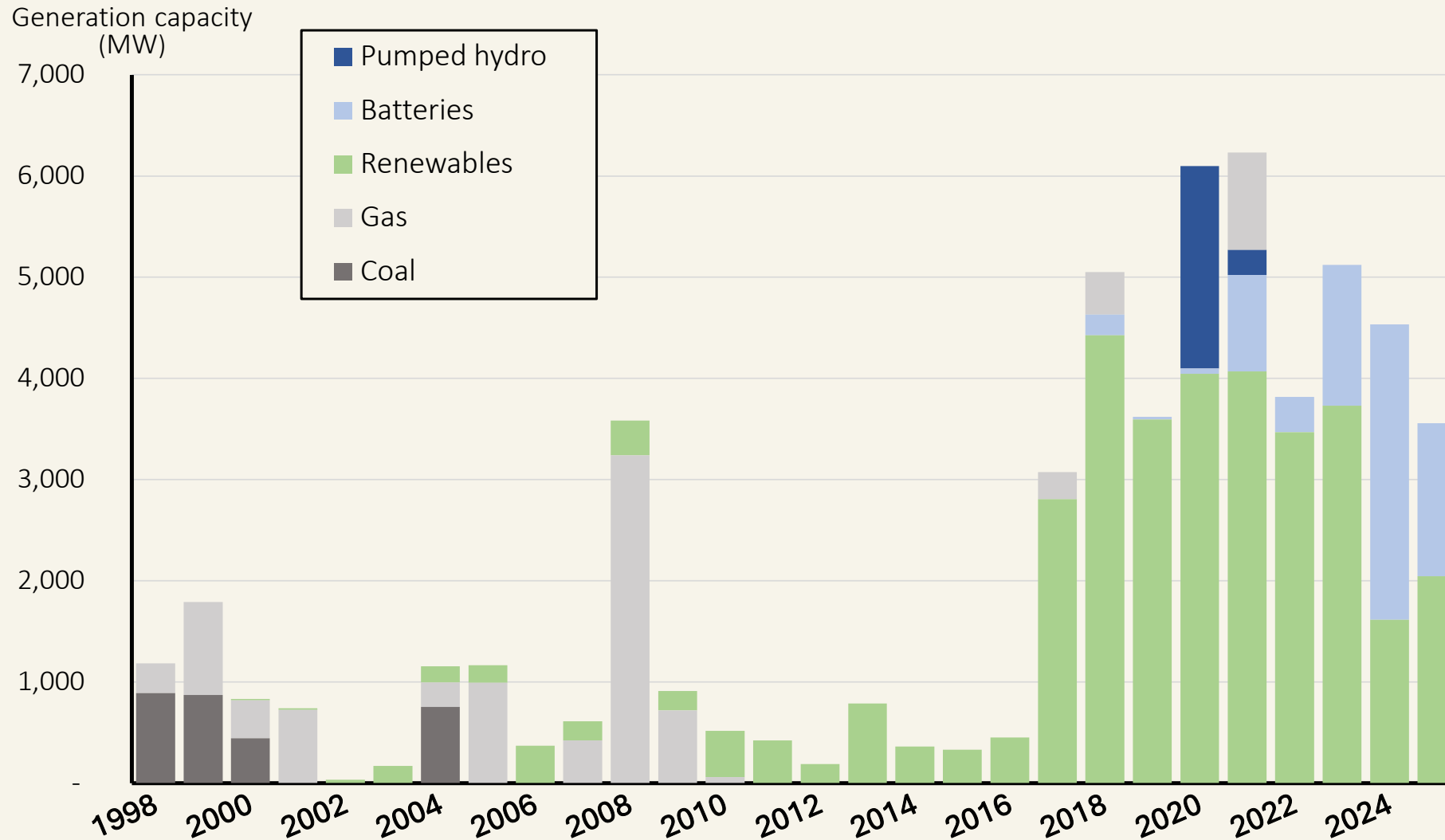
In Australia's National Electricity Market (NEM), investment commitments in renewable (RE) projects have been 'market led' from 2019...

- Government policy & RE subsidies drove investment from 1998-2018 in the NEM
- Capital markets and entry economics took over (2019 -)
- Boardroom Investment Commitments in RE and firming:
 - 2019 to 2025 = \$66 billion, 150 projects, 29,000 MW
 - 1998 to 2018 = \$32 billion, 125 projects, 11,300 MW
- Plus, *kitchen table* Investment Commitments (rooftop PV)
 - \$10 billion, 14,400 MW (2019-2025)
- Total (2019-2025) ~43,000 MW



Sources: Simshauser & Gilmore (2022), Climate change policy discontinuity & Australia's 2016-2021 renewable investment supercycle. ASX300 Chart - Macquarie Research.

NEM investment commitments 1998-2025 – New capacity



2017-2025

- 224 projects
- 37.2GW
- \$84.3 billion

Wind

- 51 projects
- 10.6GW
- \$27.8 billion

Solar

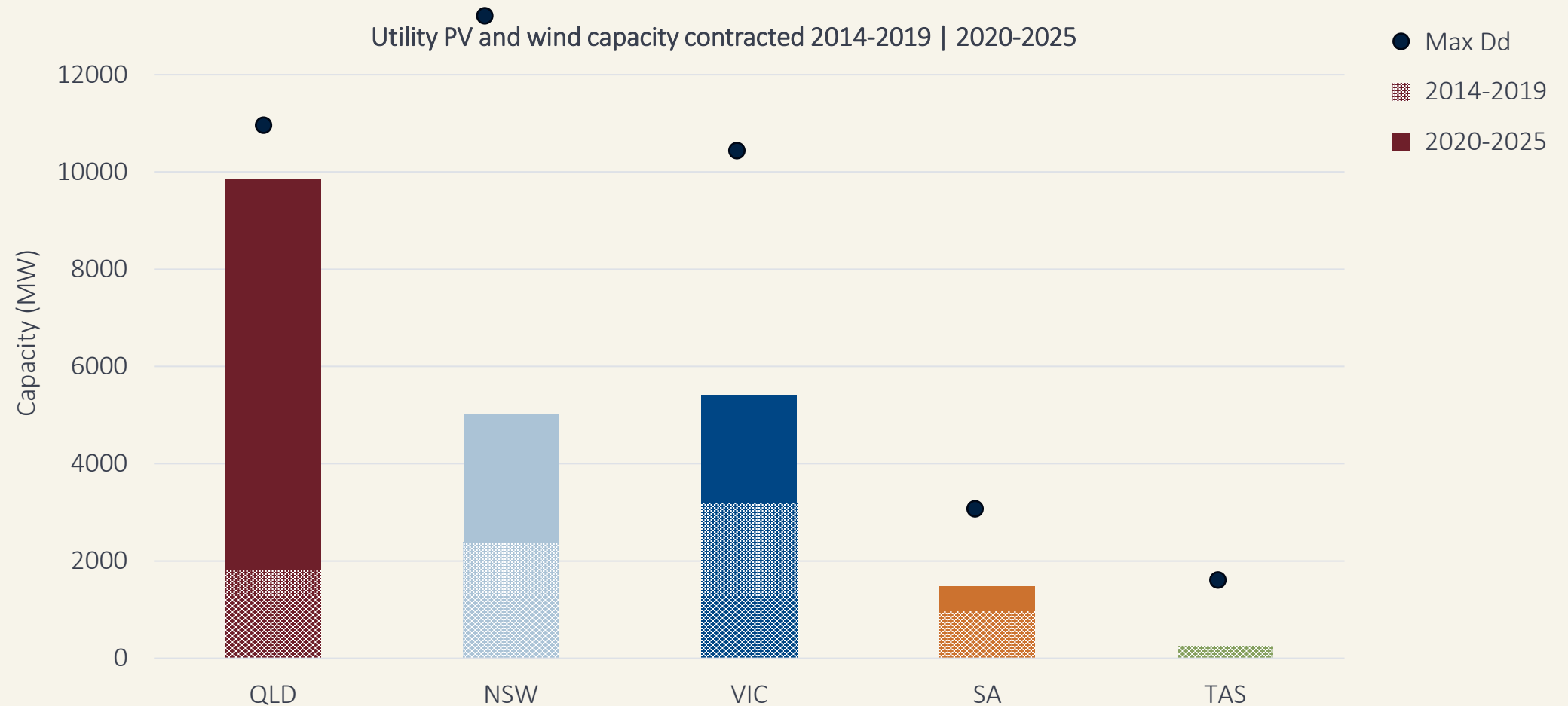
- 118 projects
- 15.2GW
- \$27.6 bn

Batteries

- 48 projects
- 7.4GW
- \$10.7 bn

Source: Simshauser & Gilmore (2022), Climate change policy discontinuity & Australia's 2016-2021 renewable investment supercycle. Energy Policy, Vol.160

RE commitments (2014-2025) by NEM region

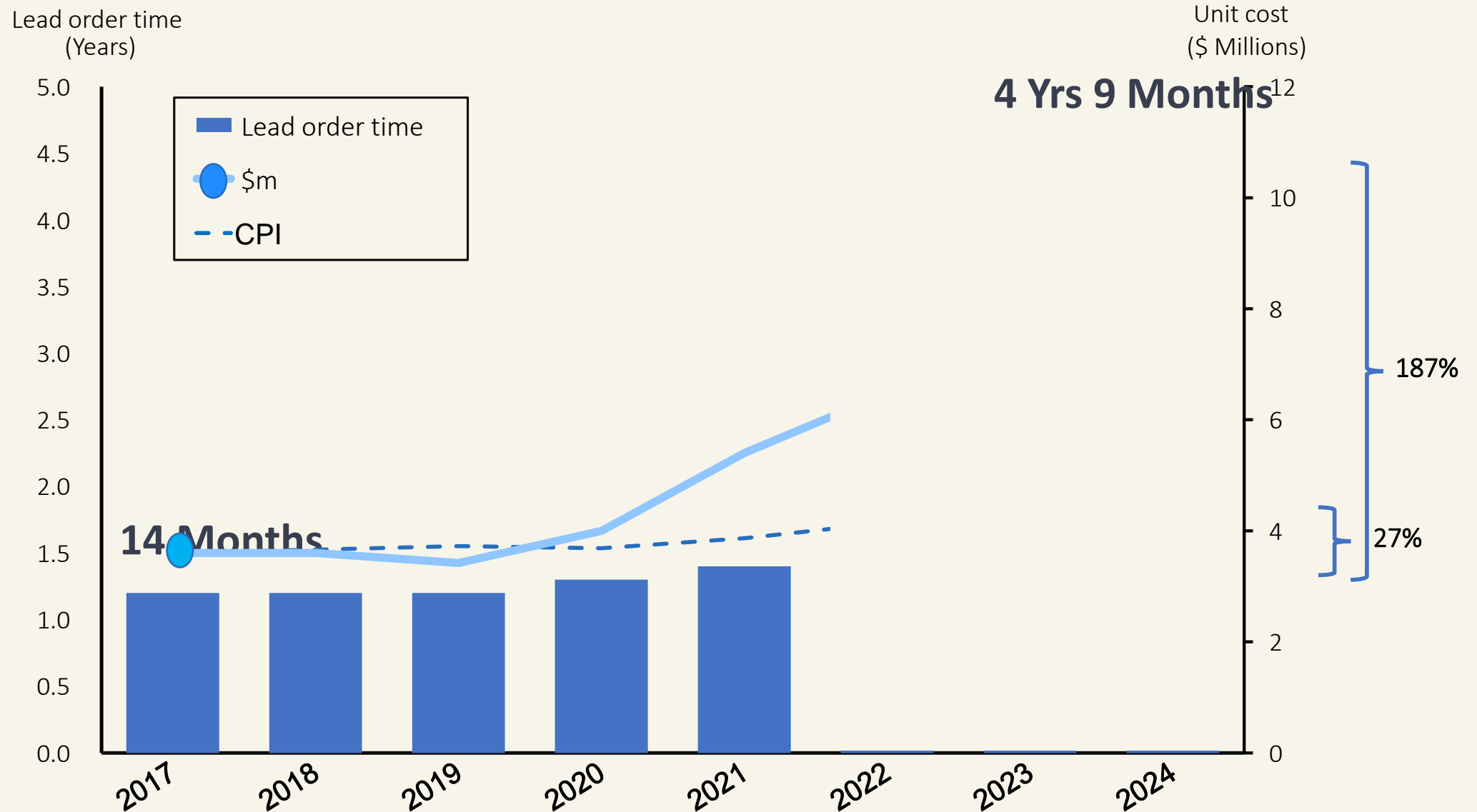


Source: Rystad Energy Research and Analysis

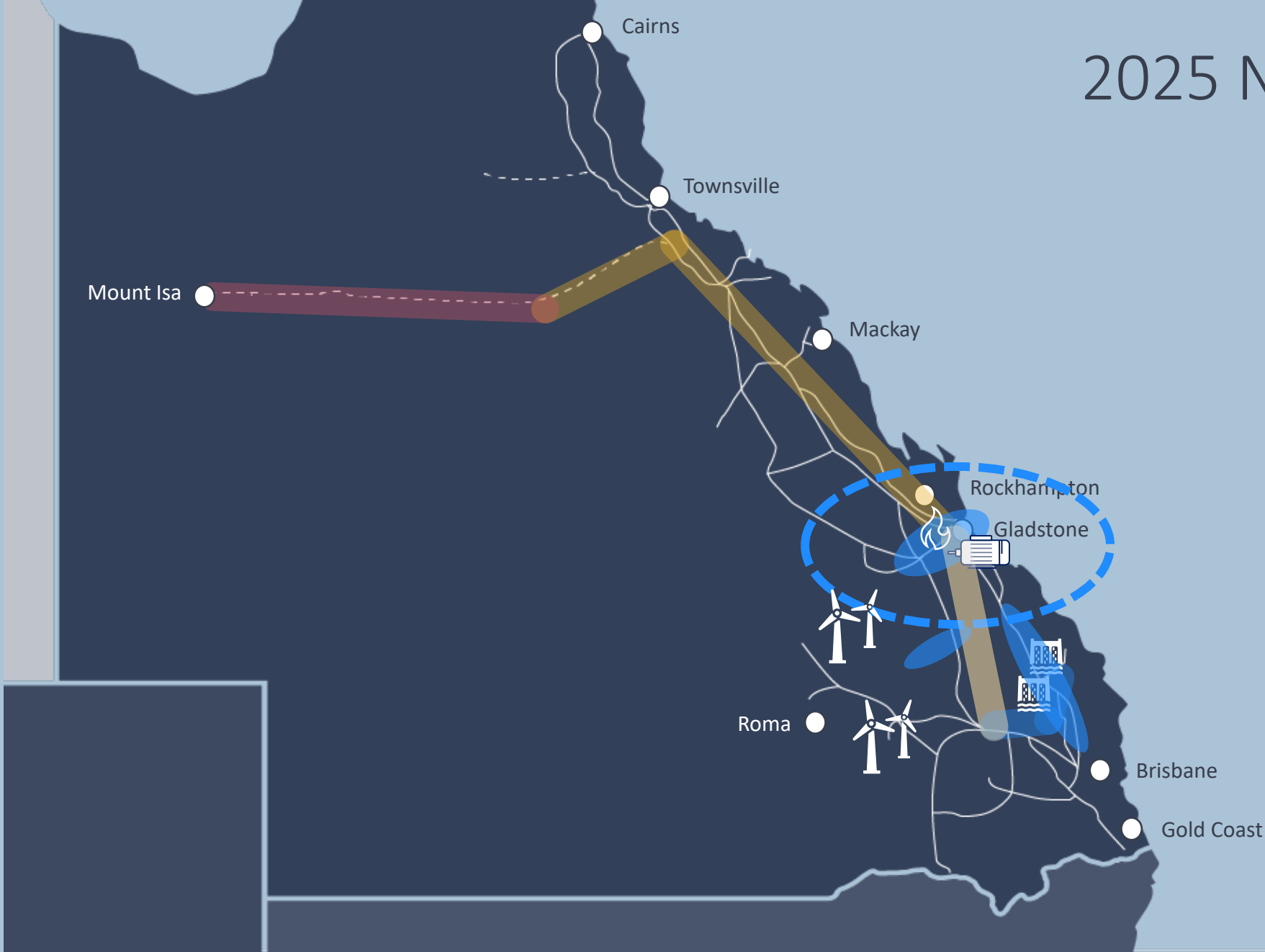
2021-22 NETWORK PLAN



275kV transformers – time and cost



2025 NETWORK PLAN



Central Queensland is a critical part of the power system, and the Queensland economy more broadly





Gladstone region load

20-25%
state electricity supply

1.1GW
Largest load outside SEQ



Gladstone region generation

1680MW

Gladstone
Power Station
Scheduled close in 2035

700MW

Callide B
Power Station
Scheduled close in 2031

27,000MW

Battery/solar/wind
already in
development

At least 3.5 years' notice of expected closure required

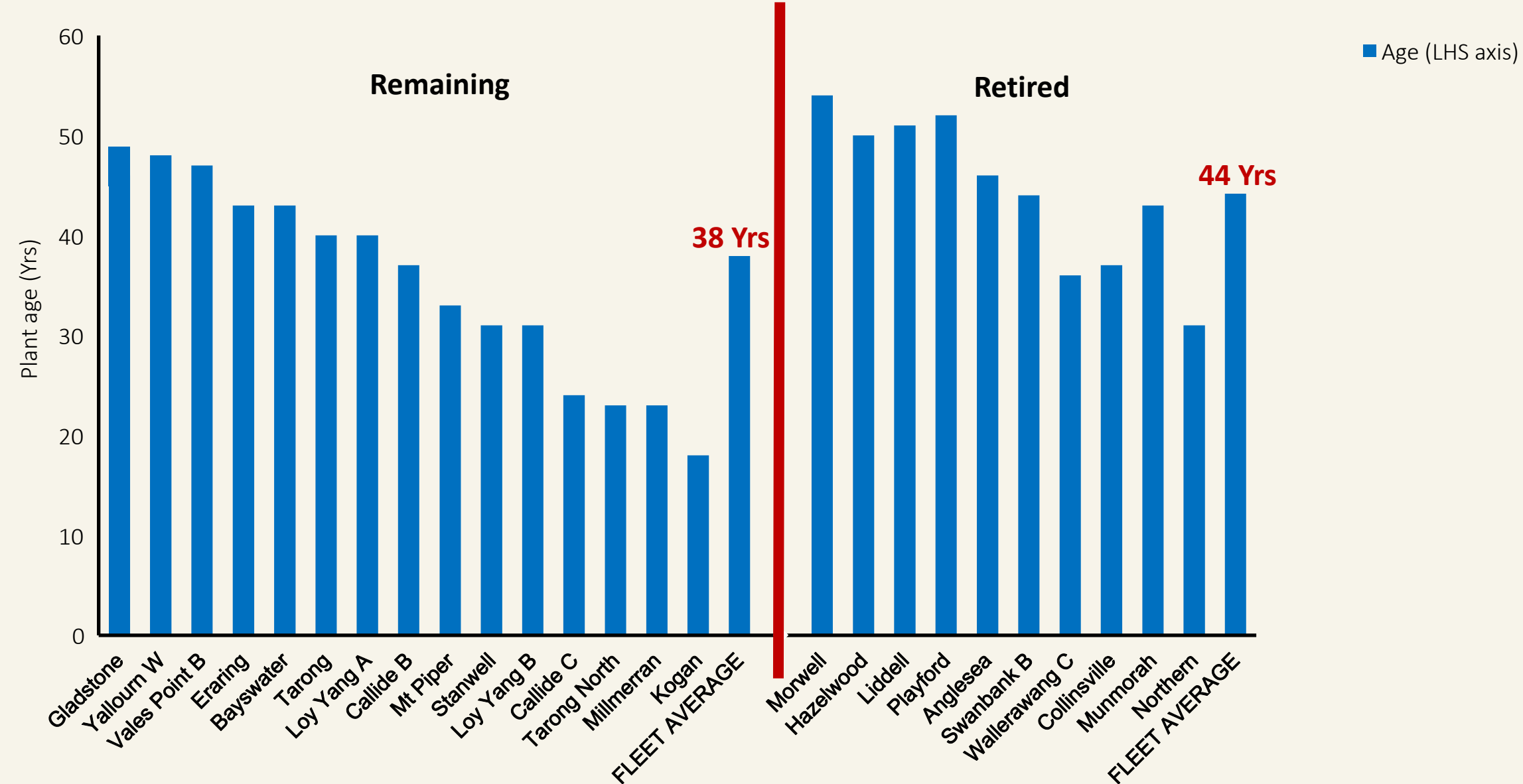
Our legacy coal fleet is important for price stability, reliability and system services.

However,

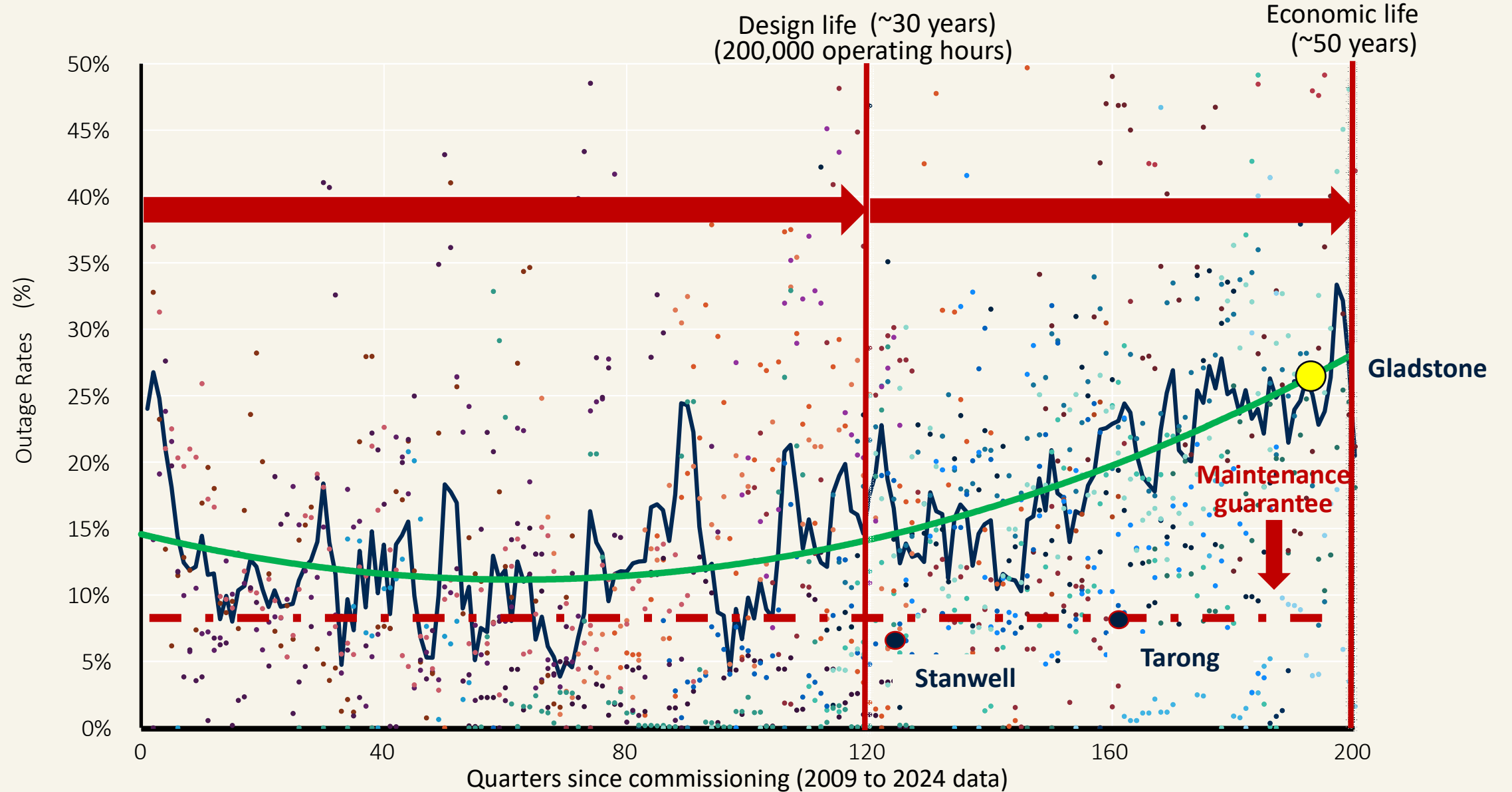
- Not all coal plant is low cost
- Plant age and outage rates are correlated



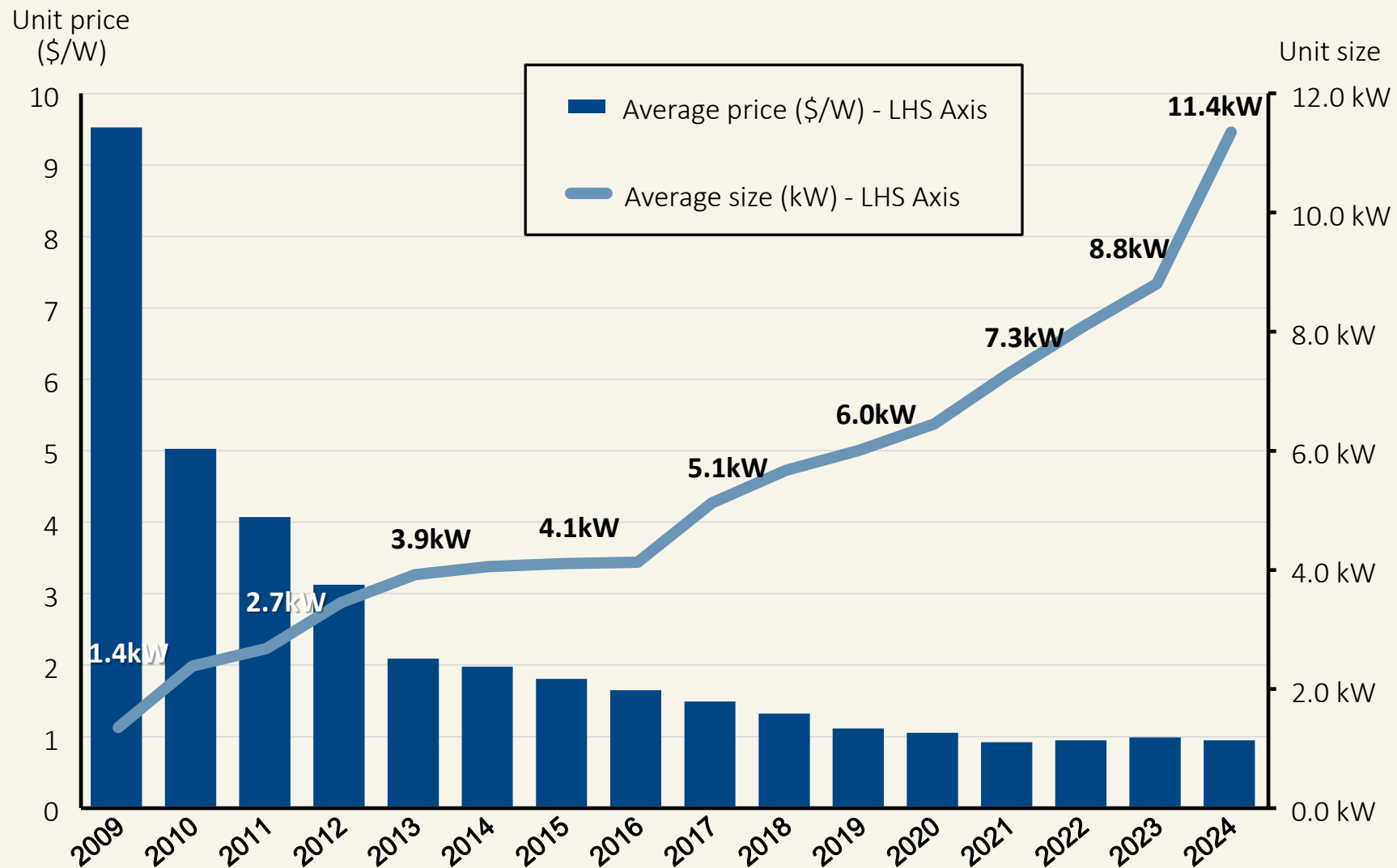
National Electricity Market coal fleet – Remaining vs Retired



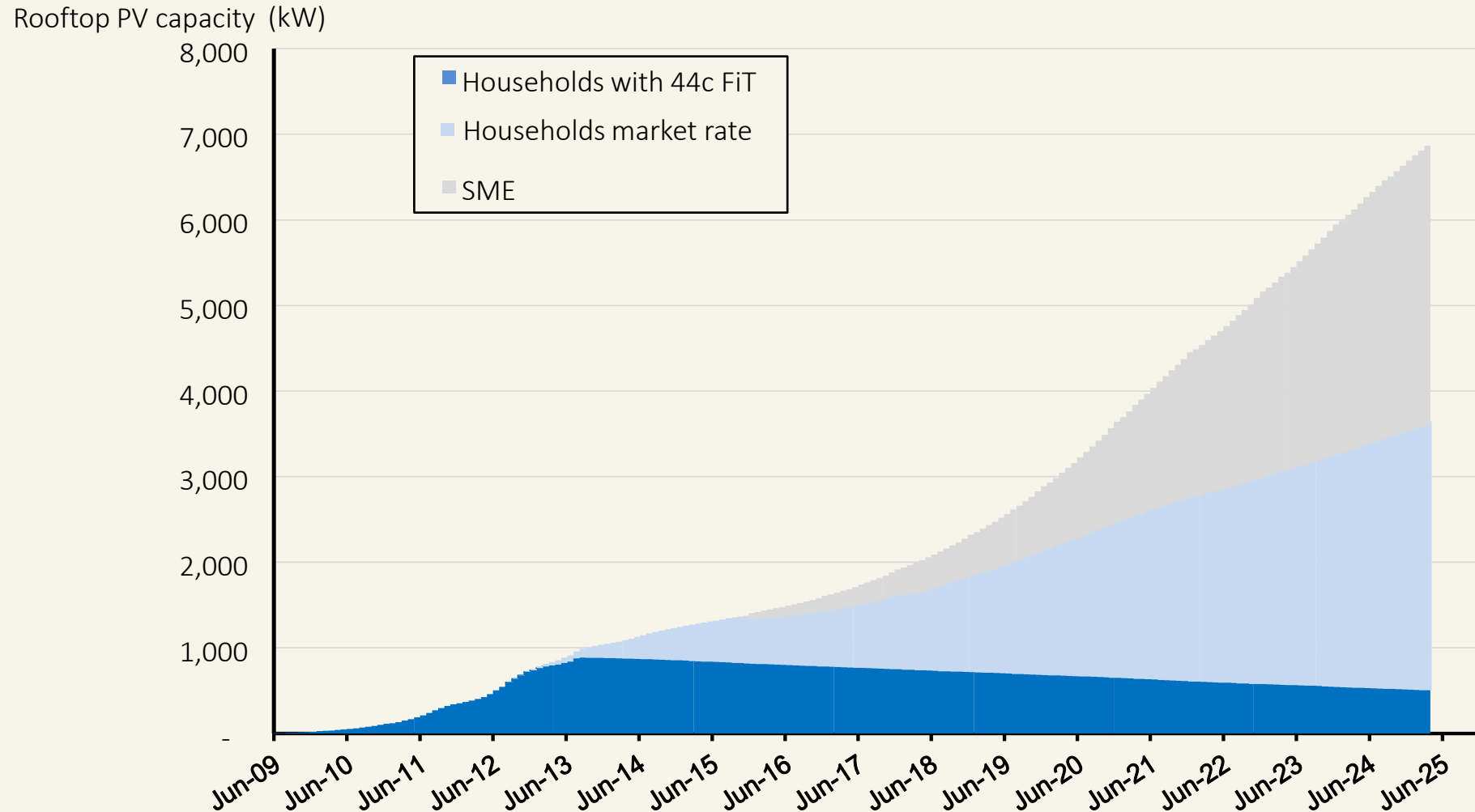
National Electricity Market Coal Fleet: Age vs Outage Rates



Rooftop solar, cheaper and larger



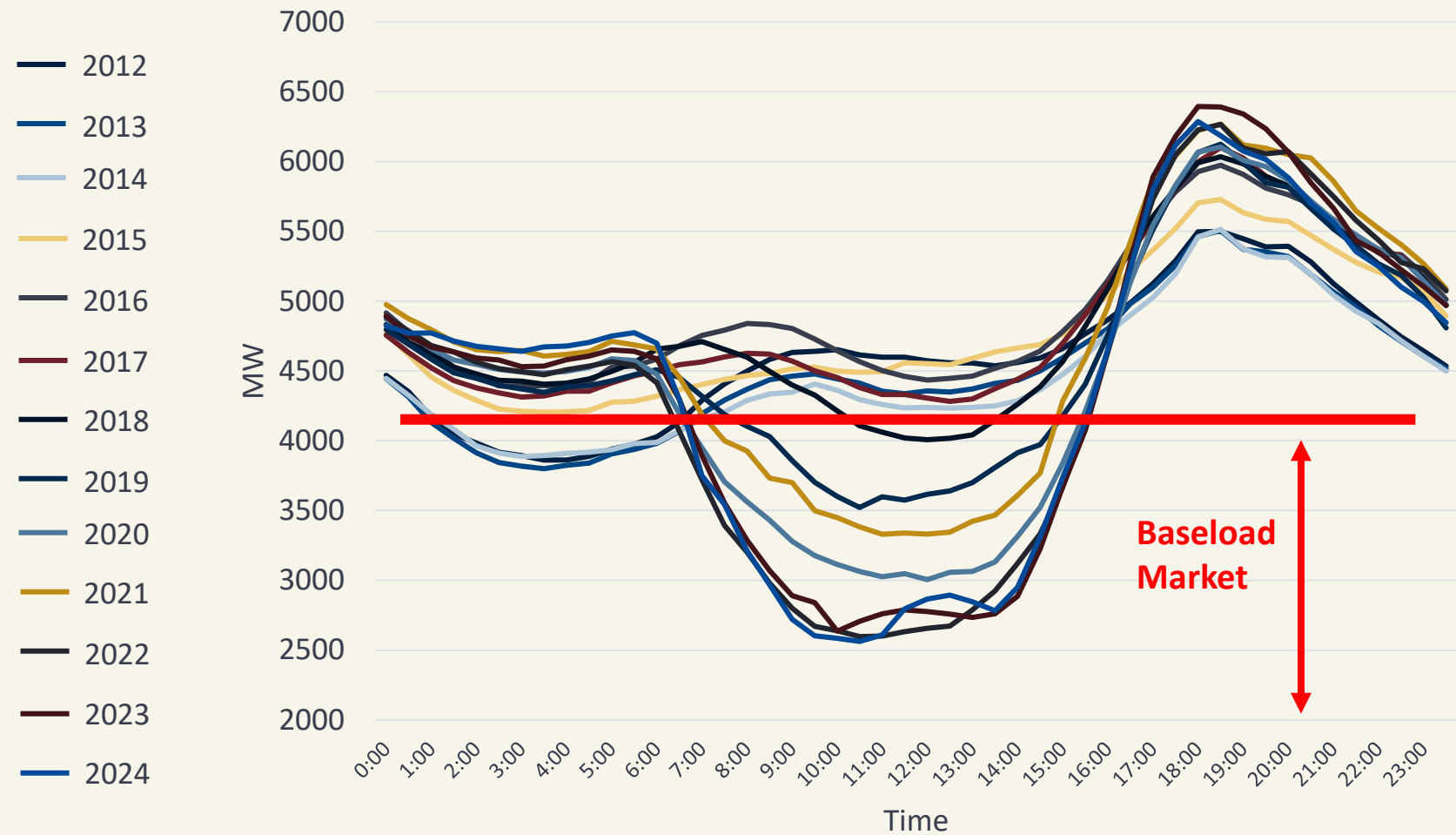
Queensland rooftop – 53.7% (highest take-up rate in the world)



The baseload market is contracting

Coal plants need to run continuously between their minimum stable load and maximum rated capacity.

“Two shifting” a coal plant grinds against its technical design, adds to outage risk and maintenance costs, and is uneconomic.

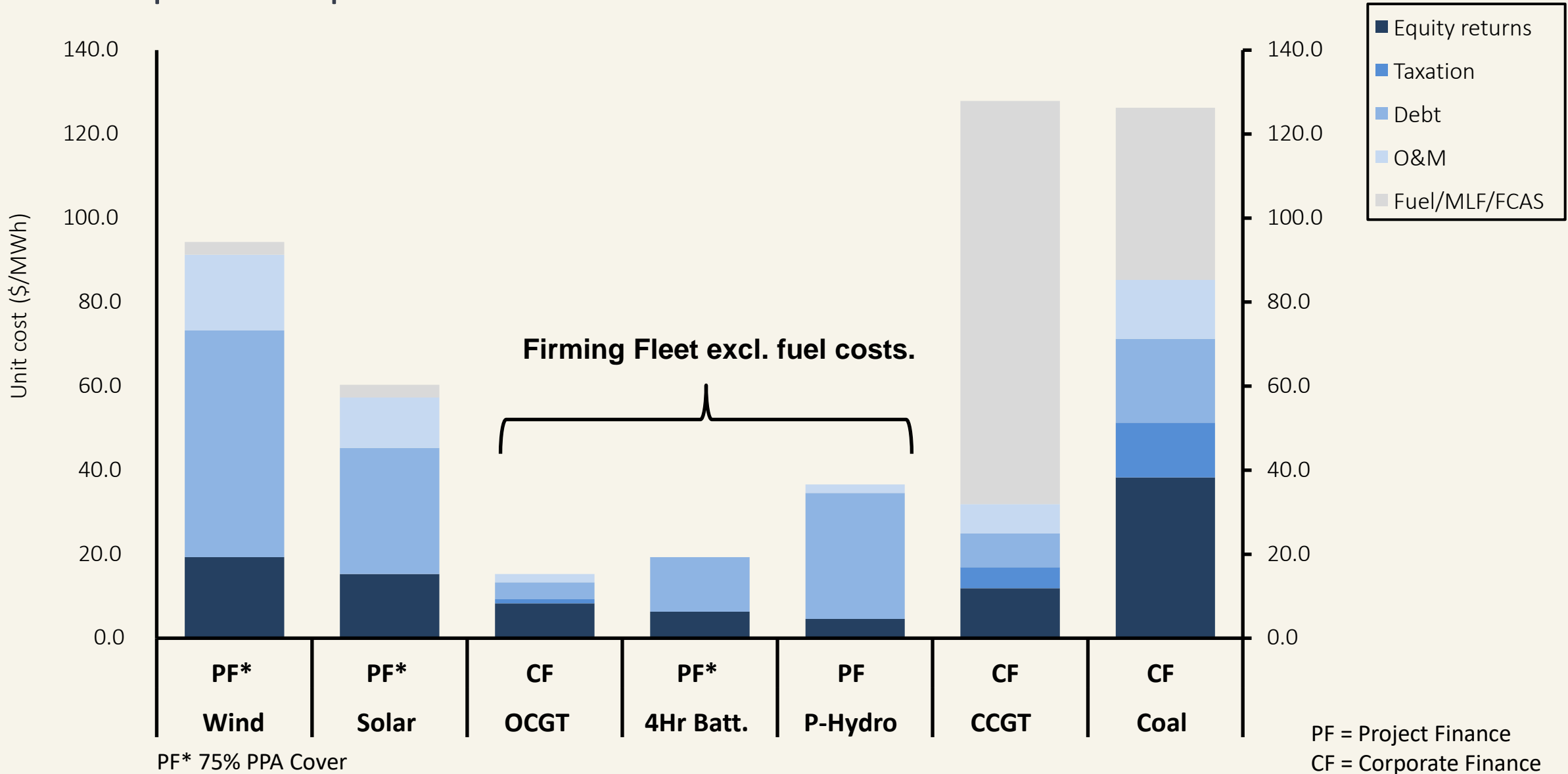


Given the NEM's current cost dynamics, power system planning requires *'everything in balance'*.

- Right now, our incumbent coal fleet remains critical re: price stability, system services and reliability and security of supply
- Marginal coal plant are exposed to export coal prices and realities of aged-based reliability
- Lowest cost replacement *at pace* requires
 - RE (i.e. wind and solar); and
 - dispatchable fleet (GTs, batteries and pumped hydros).



2025 plant options



Queensland connections

44 renewable and storage projects operational or under construction with combined maximum output of 9,610 MW

As at July 2025, 103 RE and gas applications being processed representing 42,442MW

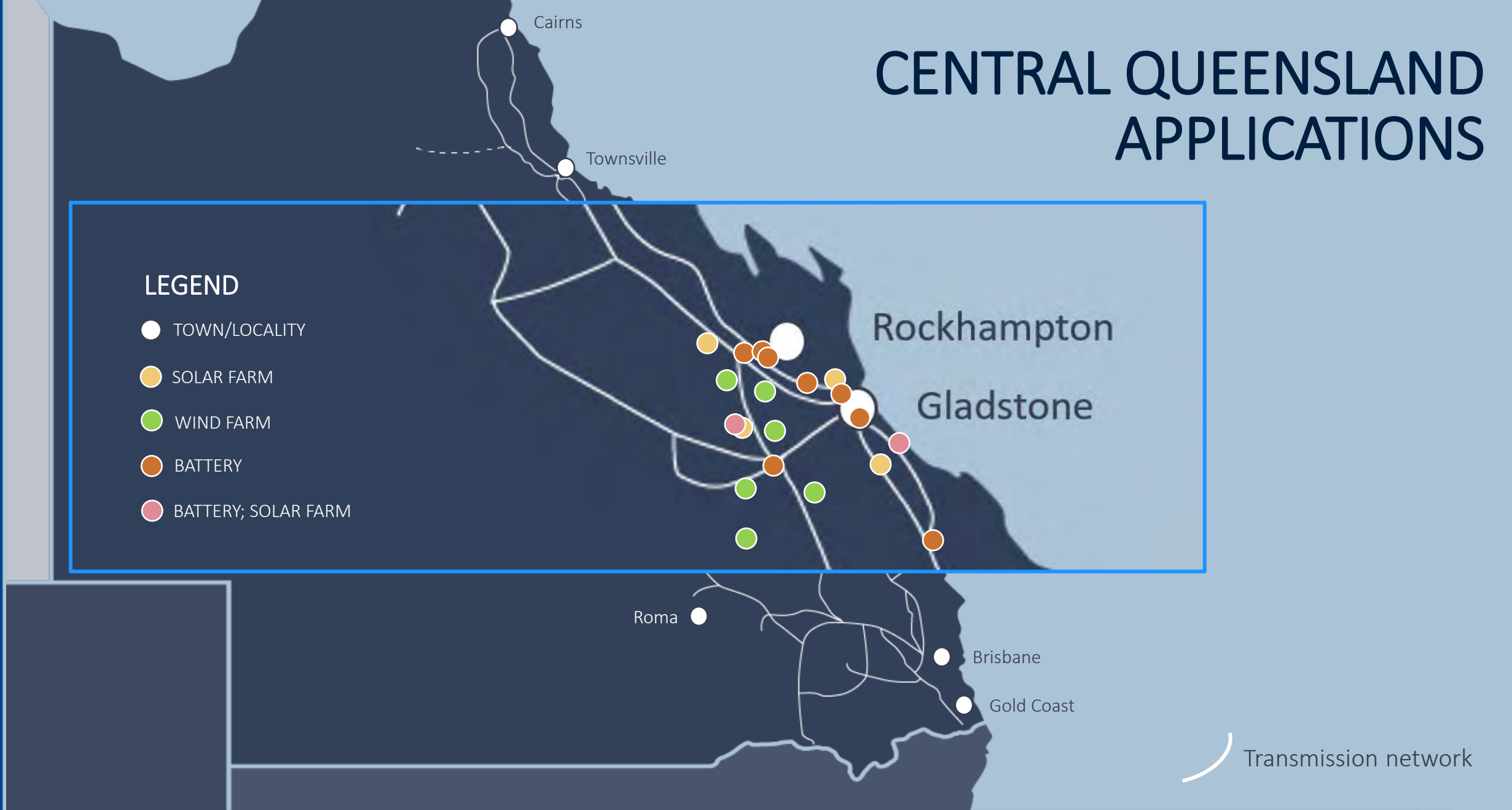
73 projects at the enquiry stage with combined max output of ~36,000MW



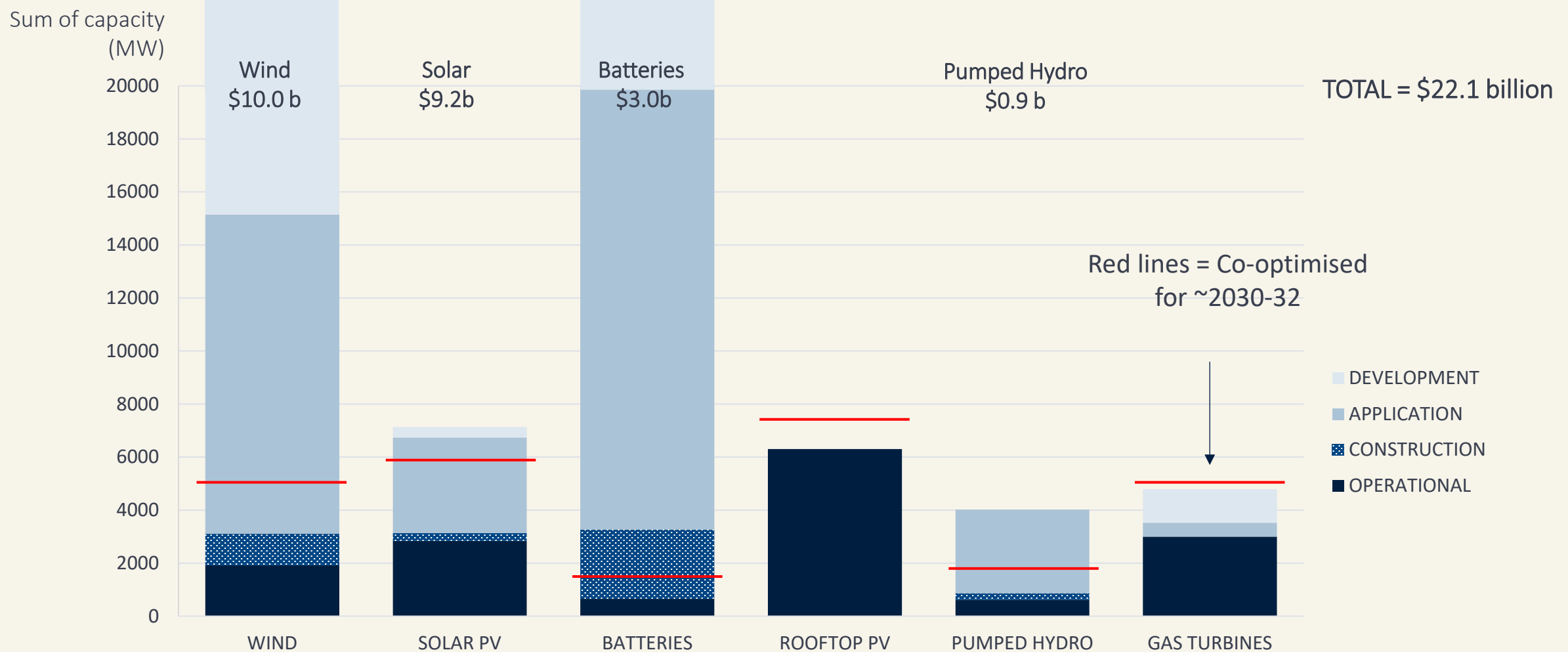
CENTRAL QUEENSLAND APPLICATIONS

LEGEND

- TOWN/LOCALITY
- SOLAR FARM
- WIND FARM
- BATTERY
- BATTERY; SOLAR FARM



Queensland's forward pipeline is (mostly) ready



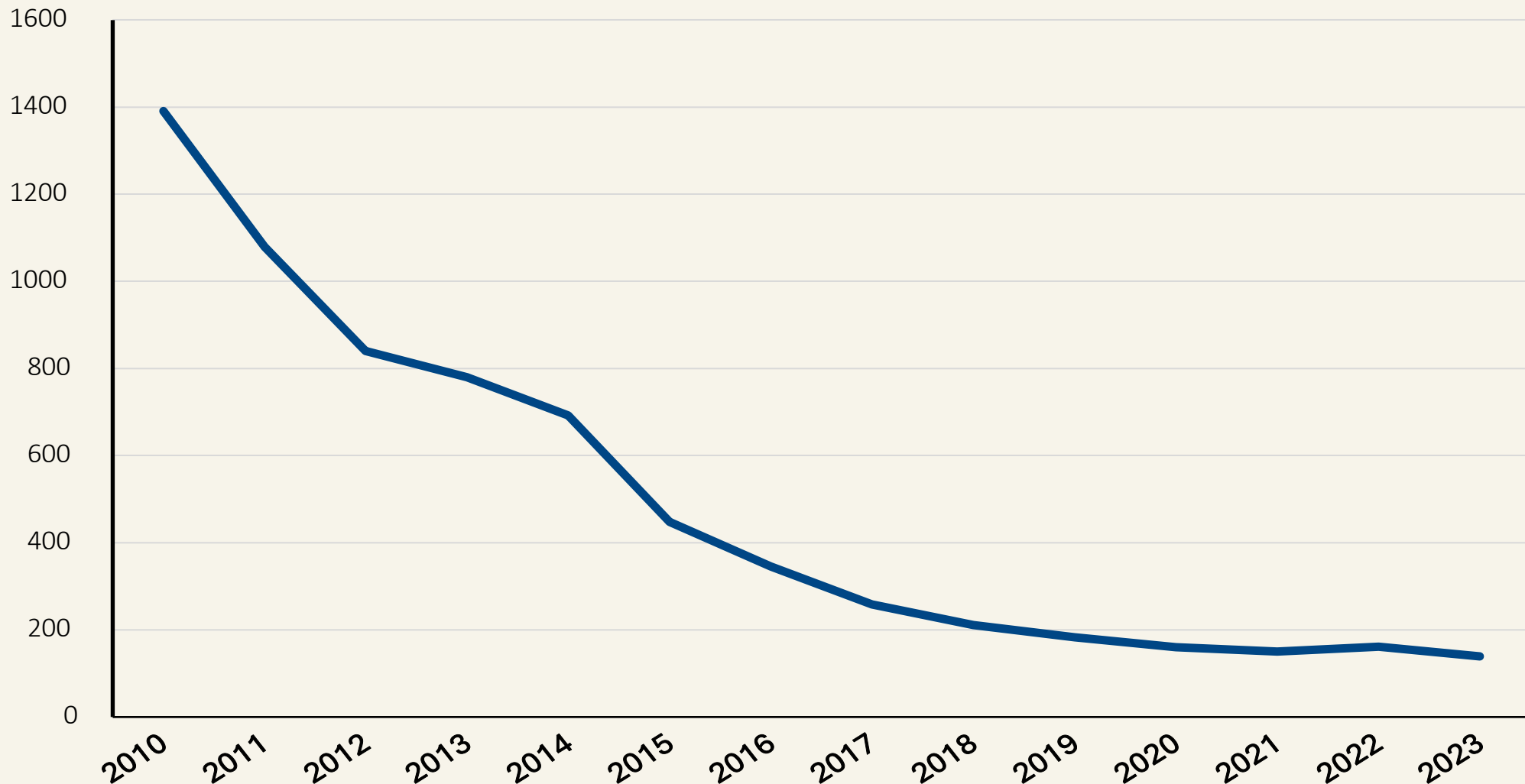
Power system planning and investment is tough and complex in the current environment.

Given recent National Electricity Market (NEM) cost dynamics, power system planning requires *‘everything in balance’*.



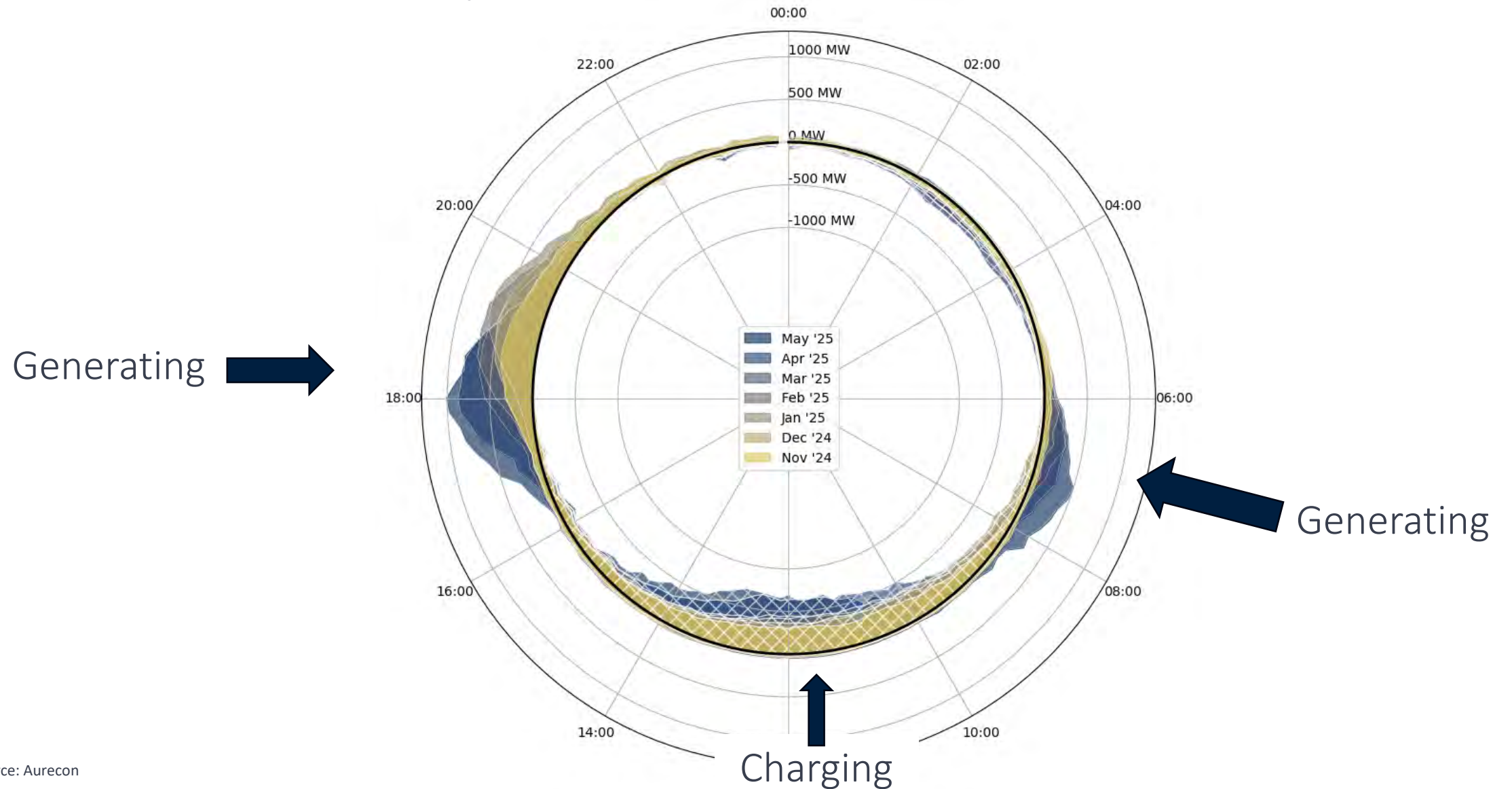
Lithium-ion battery pack prices (\$/kWh)

Battery pack price (\$/kWh)



Source: Aurecon

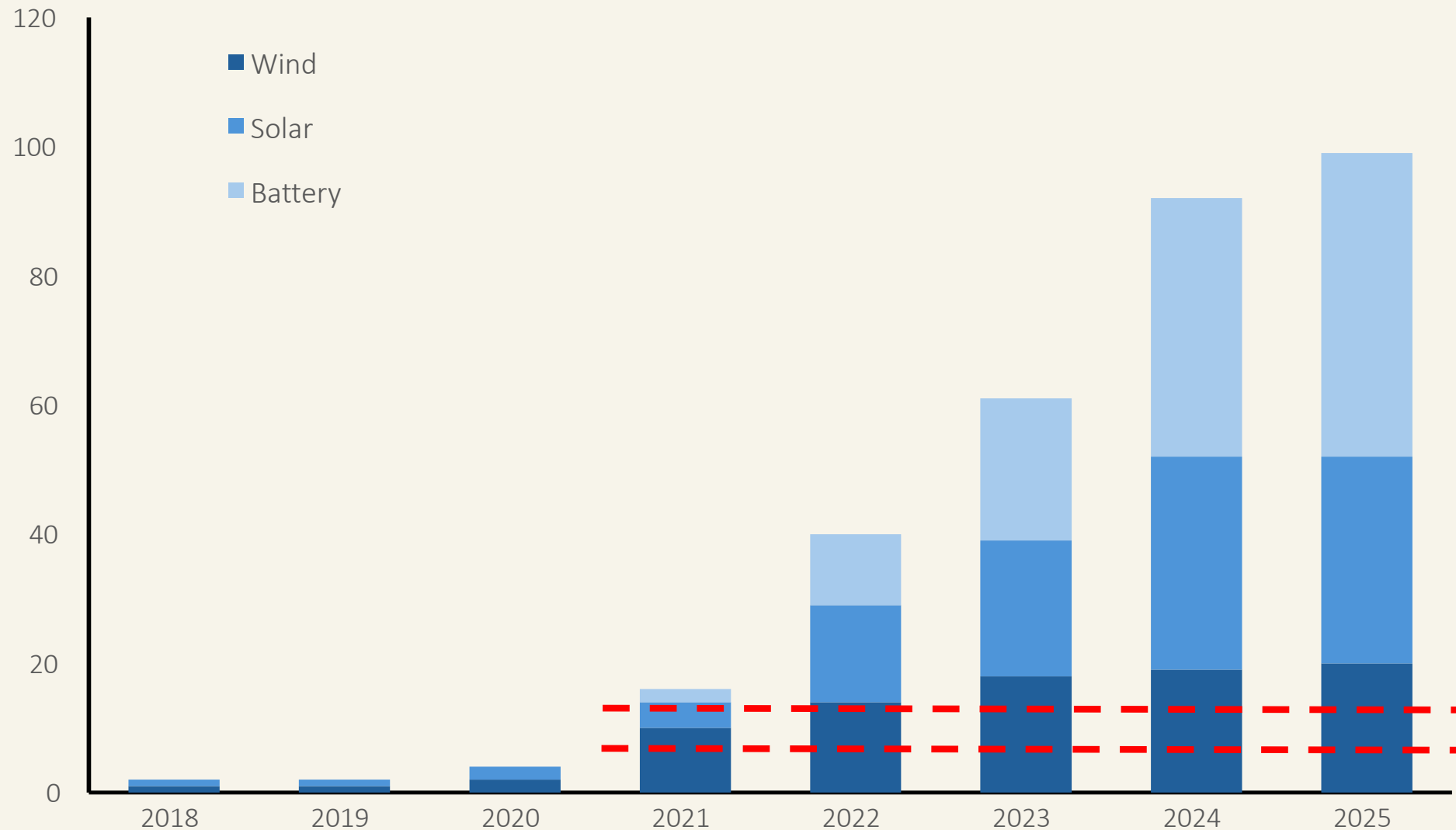
Queensland battery duties



Source: Aurecon

Queensland connection applications

Live connection applications



Innovation



Live lines and live substations



Real-time line ratings



Wide Area Monitoring Protection and Control



Line phase lifter



Line stringing



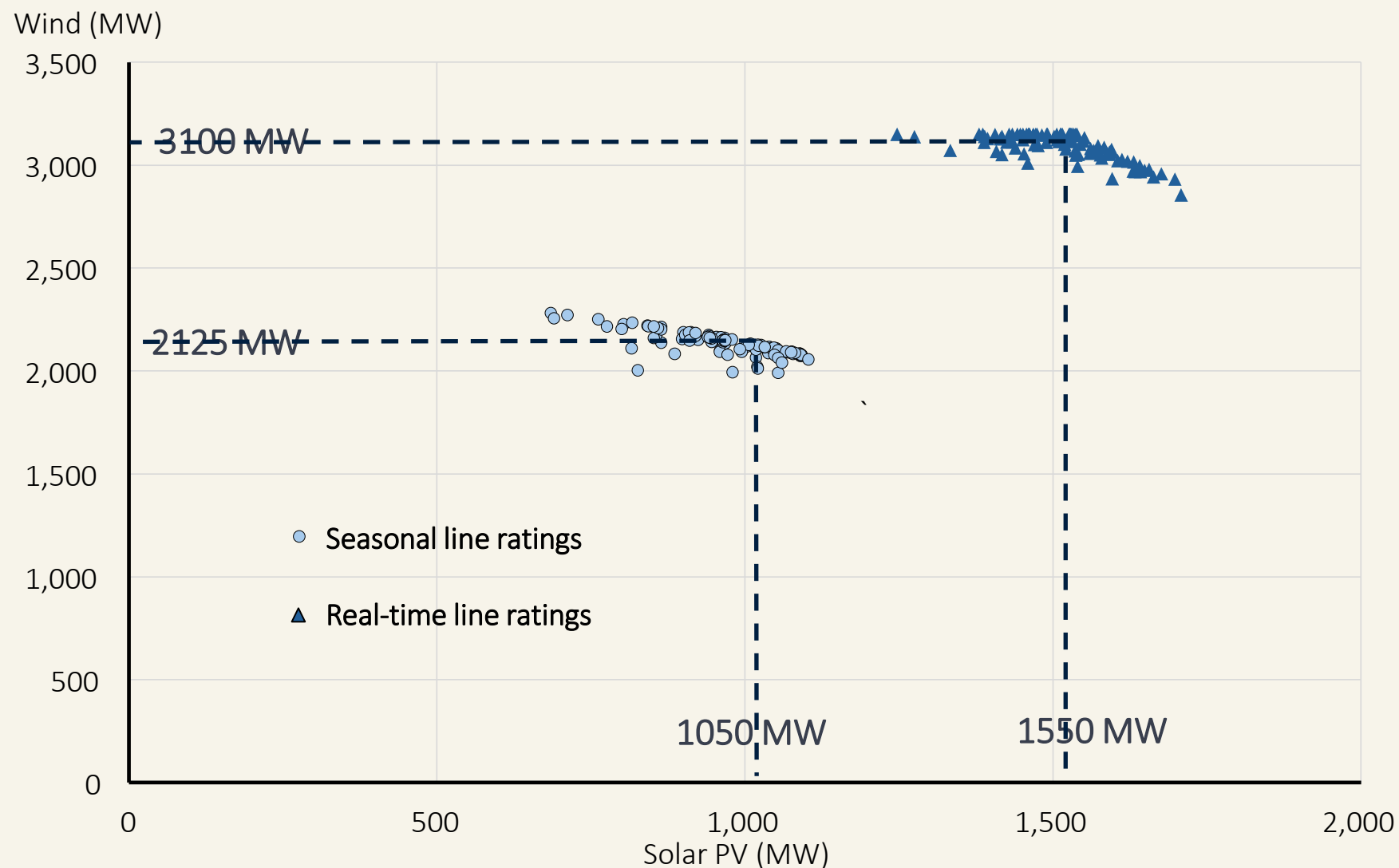
Robotic space installer



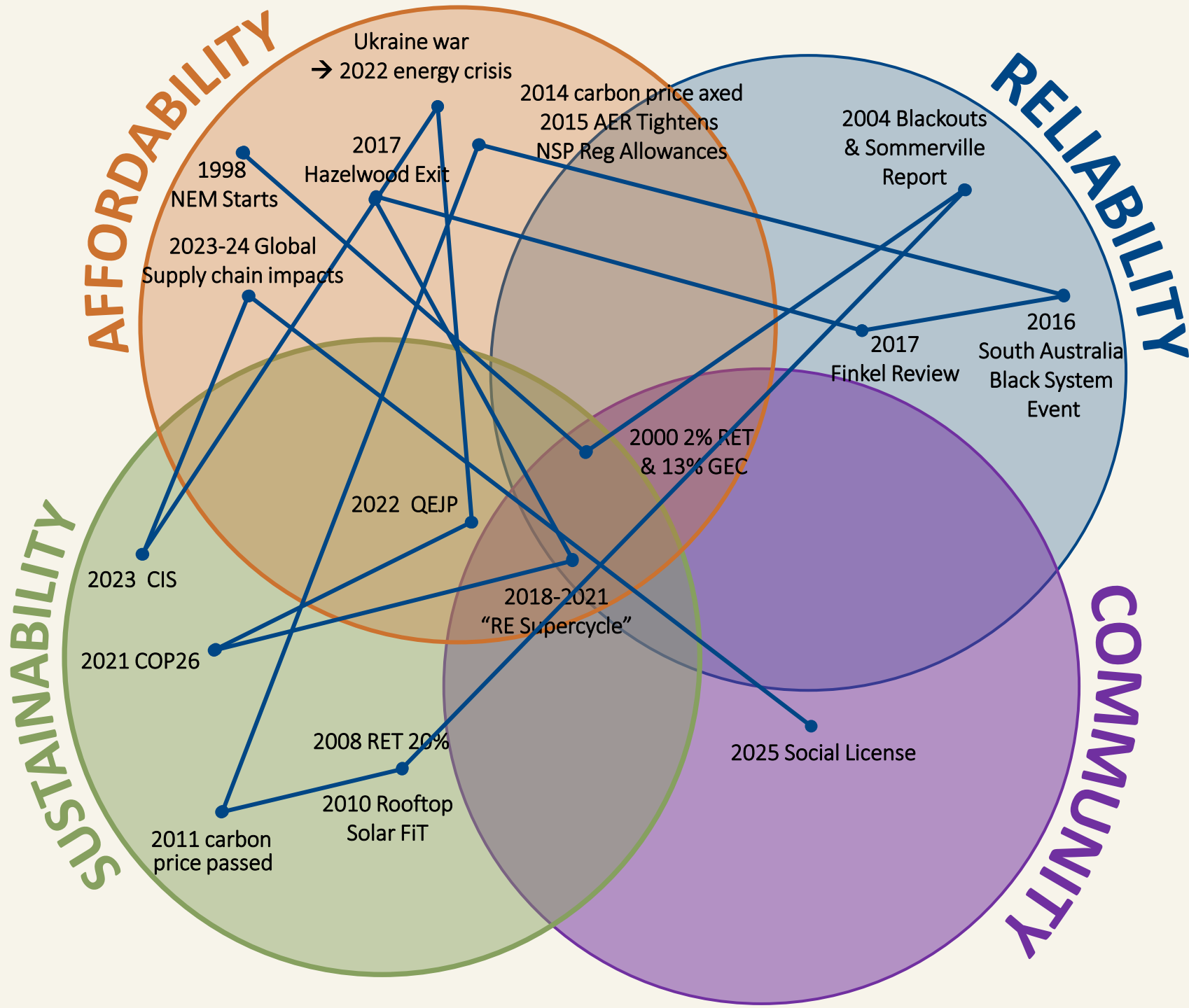
Concrete sensor strength maturity



Real-time line ratings



Looking through the lens of the Trilemma, policy change is quite predictable.



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Central Queensland update

Ian Lowry
Executive General Manager Major Projects
Powerlink Queensland



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Agenda

1. Central Queensland
2. The big picture
3. Reinforcing the transmission network
4. Developer connections
5. Our focus on communities

Central Queensland

Powerlink has work underway to support:

- transitioning industries
- changing power generation technologies
- future industrial growth.



Central Queensland projects



Transmission
reinforcement

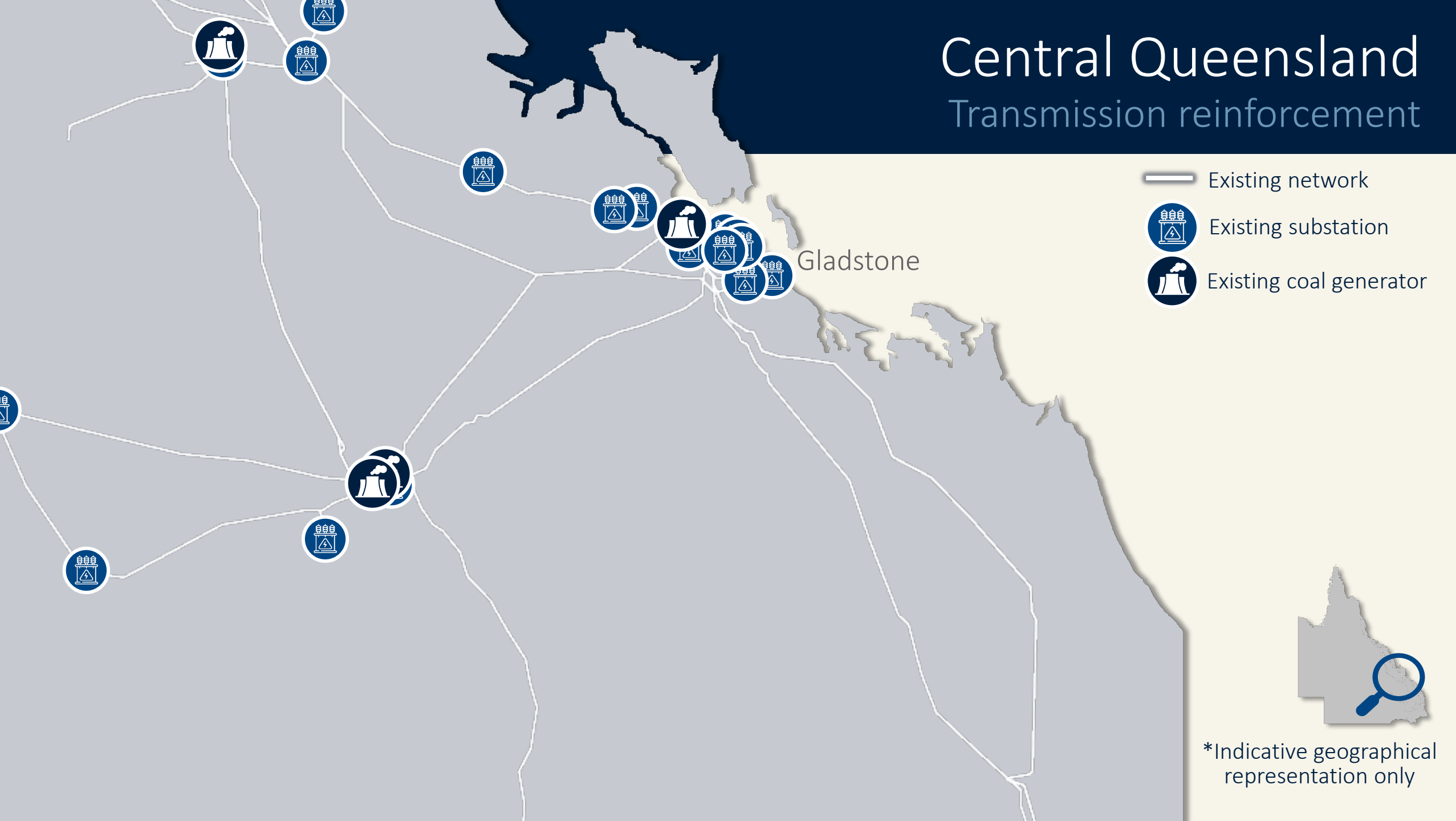


Developer
connections



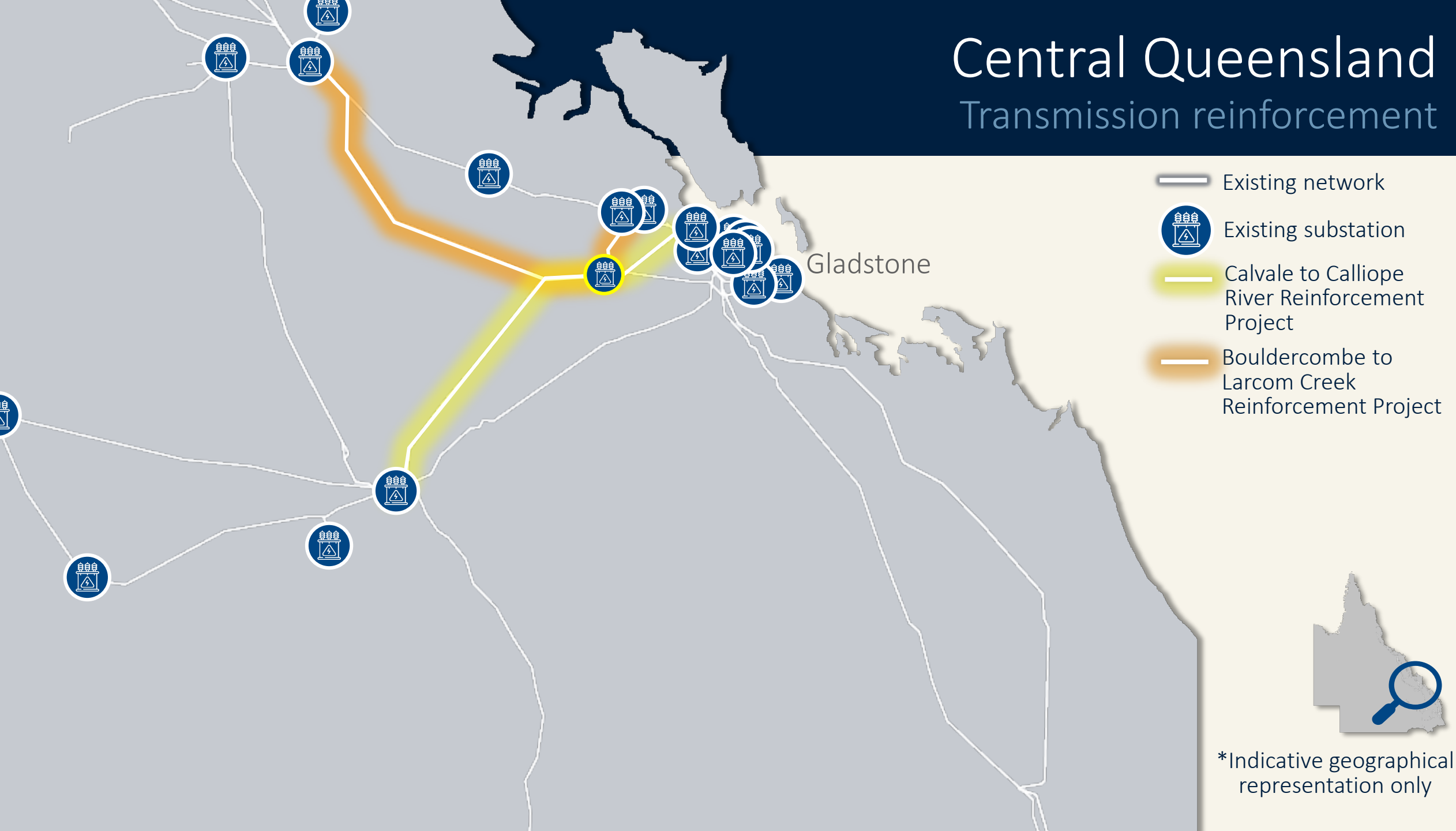
Central Queensland

Transmission reinforcement



Central Queensland

Transmission reinforcement



Synchronous condensers

What is system strength?

- System strength describes how well the power system can recover from disturbances or faults.
- Queensland's existing fleet of large thermal generation provides much of this system strength today – but this will change over time.
- Synchronous condensers provide a foundation for system strength – Powerlink is progressing investigations into synchronous condenser investment in Central Queensland.



Developer applications to connect to the transmission grid

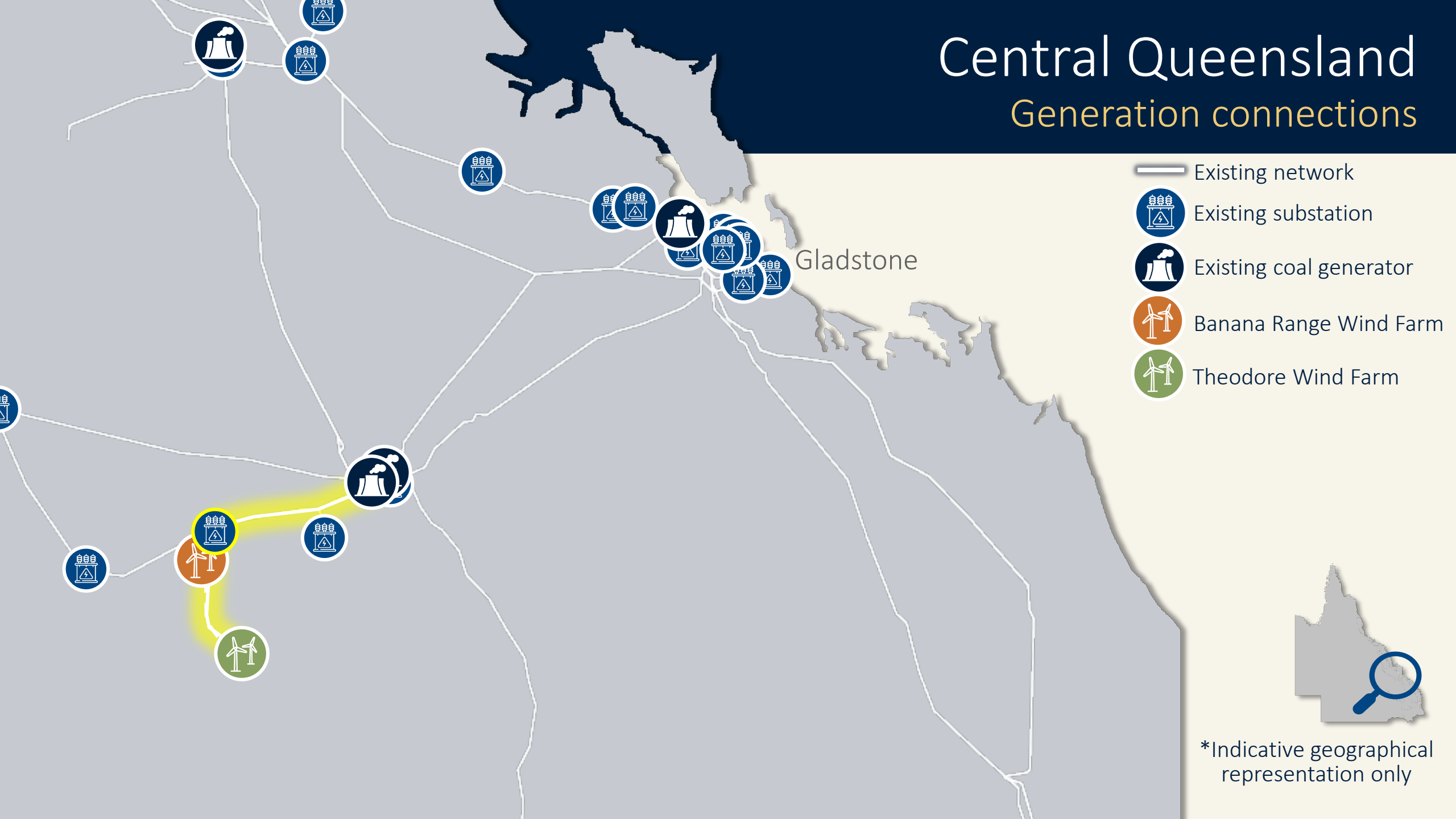
LEGEND

- TOWN/LOCALITY
- SOLAR FARM
- WIND FARM
- BATTERY
- BATTERY; SOLAR FARM



Central Queensland

Generation connections



Commitment to the region



Gladstone Hub



Local workforce



Focus on Central Queensland communities

What is our approach?

COMMUNITY ENGAGEMENT

Better understanding community needs and potential social impacts.

PARTICIPATION PLANS

Working with contractors to ensure local suppliers and businesses benefit from Powerlink projects.

RELATIONSHIP AGREEMENTS

Long term, whole of country agreements providing direct support to social and economic aspirations of Traditional Owners.

LANDHOLDER PAYMENTS

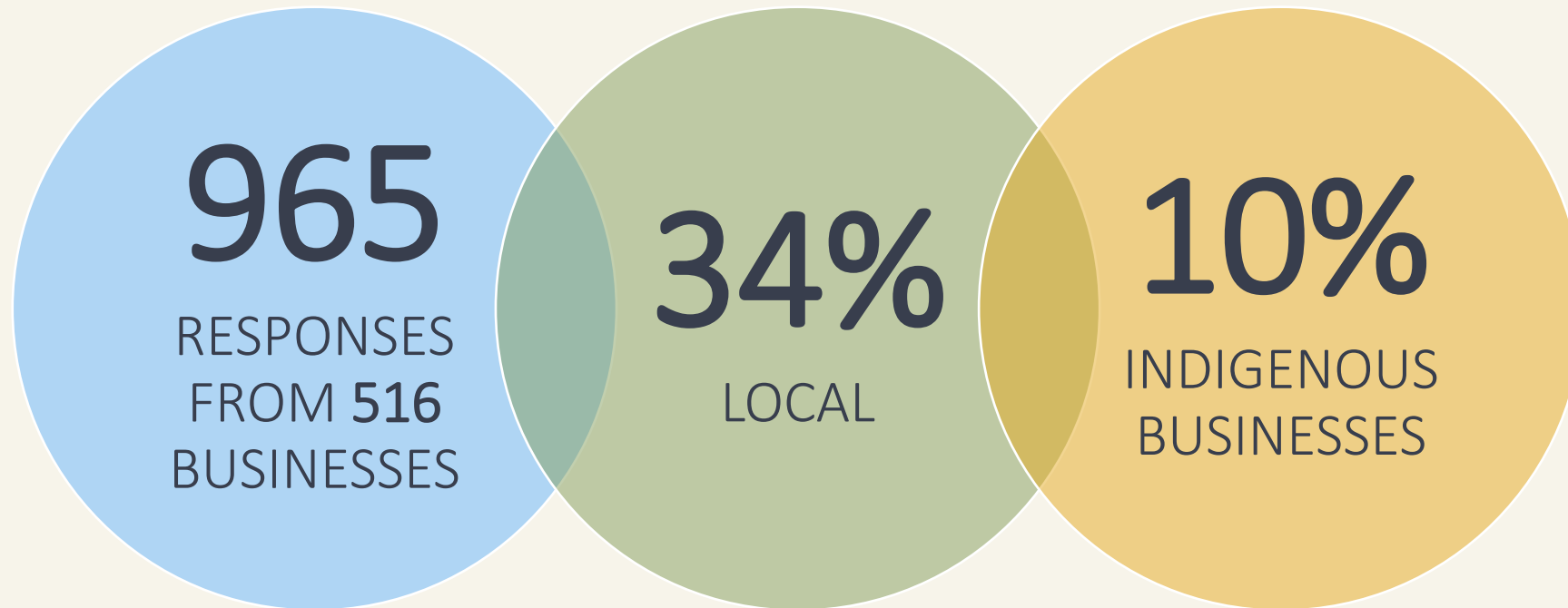
Boosting payments to landholders and neighbours – delivering them in a more flexible way.

COMMUNITY BENEFITS

From strategic partnerships to grass roots programs, we are committed to communities.

Local opportunities in Central Queensland

Market testing response



Community investment



Questions

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Revenue Determination

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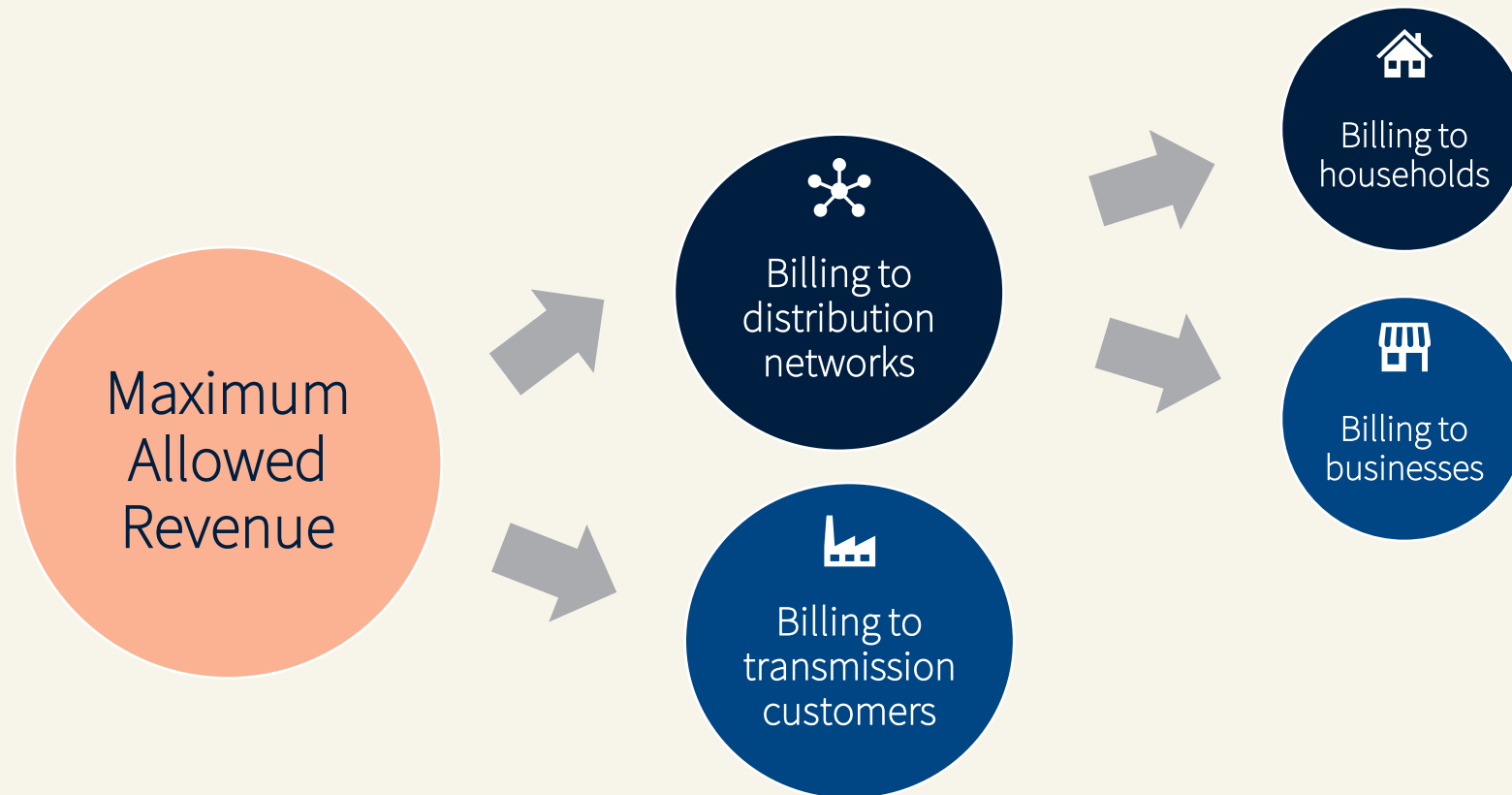
Revenue Determination Process

Each electricity network business in the National Electricity Market (NEM) is required to submit a Revenue Proposal to the **Australian Energy Regulator (AER)** every five years.

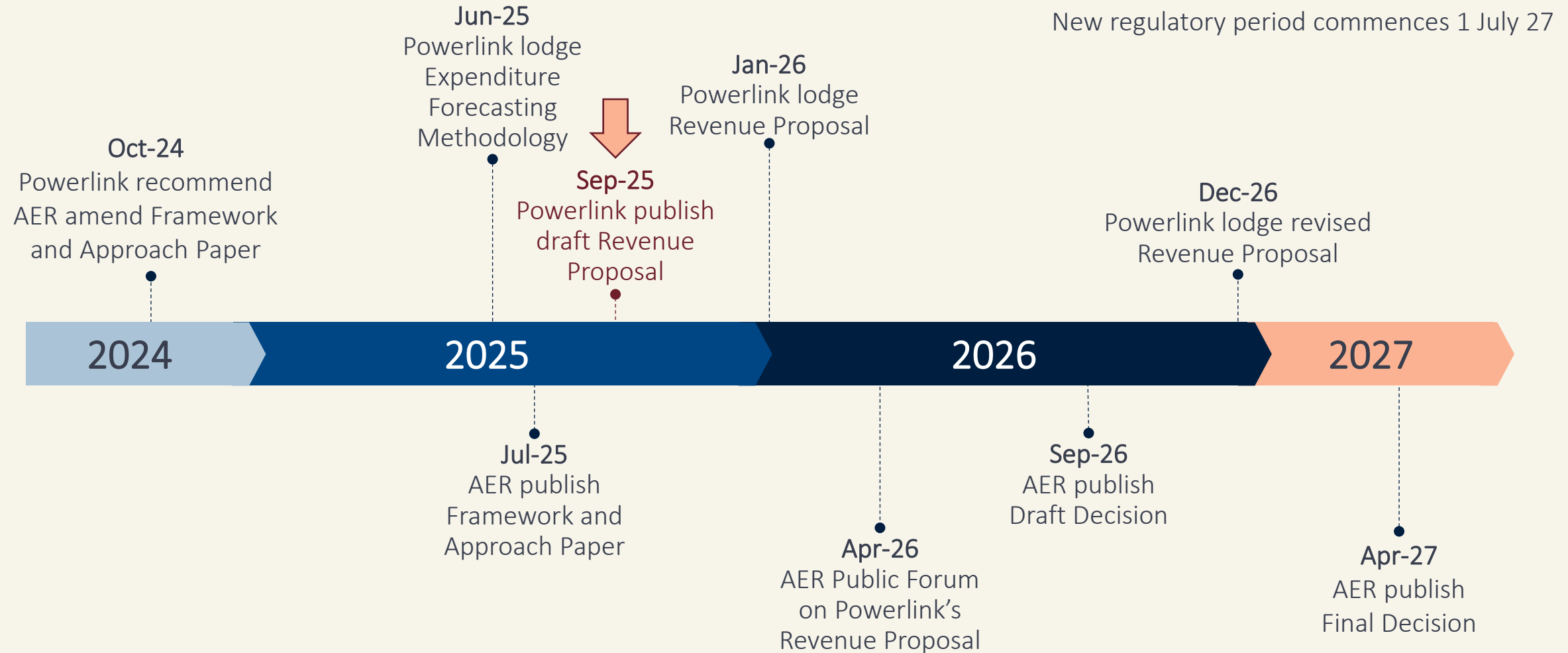


Impact for households and businesses

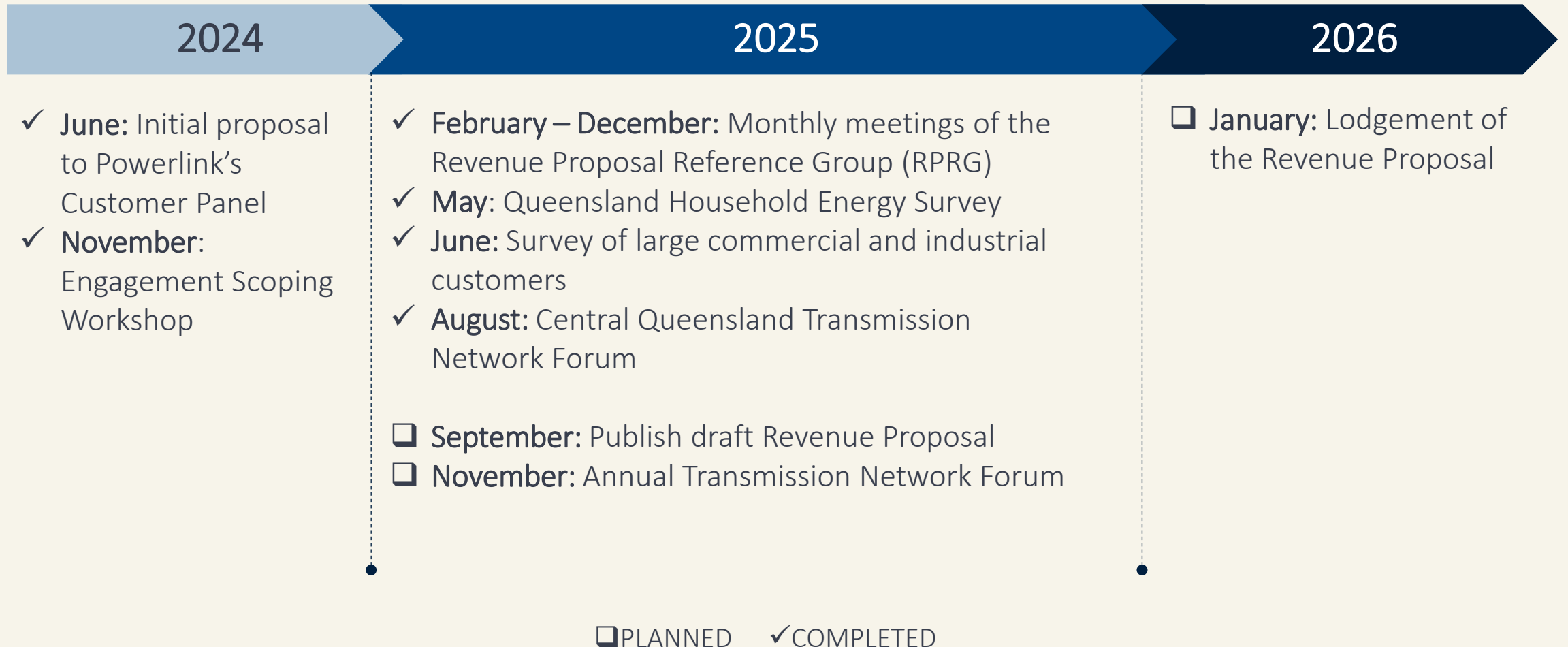
The Maximum Allowed Revenue is recovered from customers, with transmission charges making up around **7%** of an average household bill.



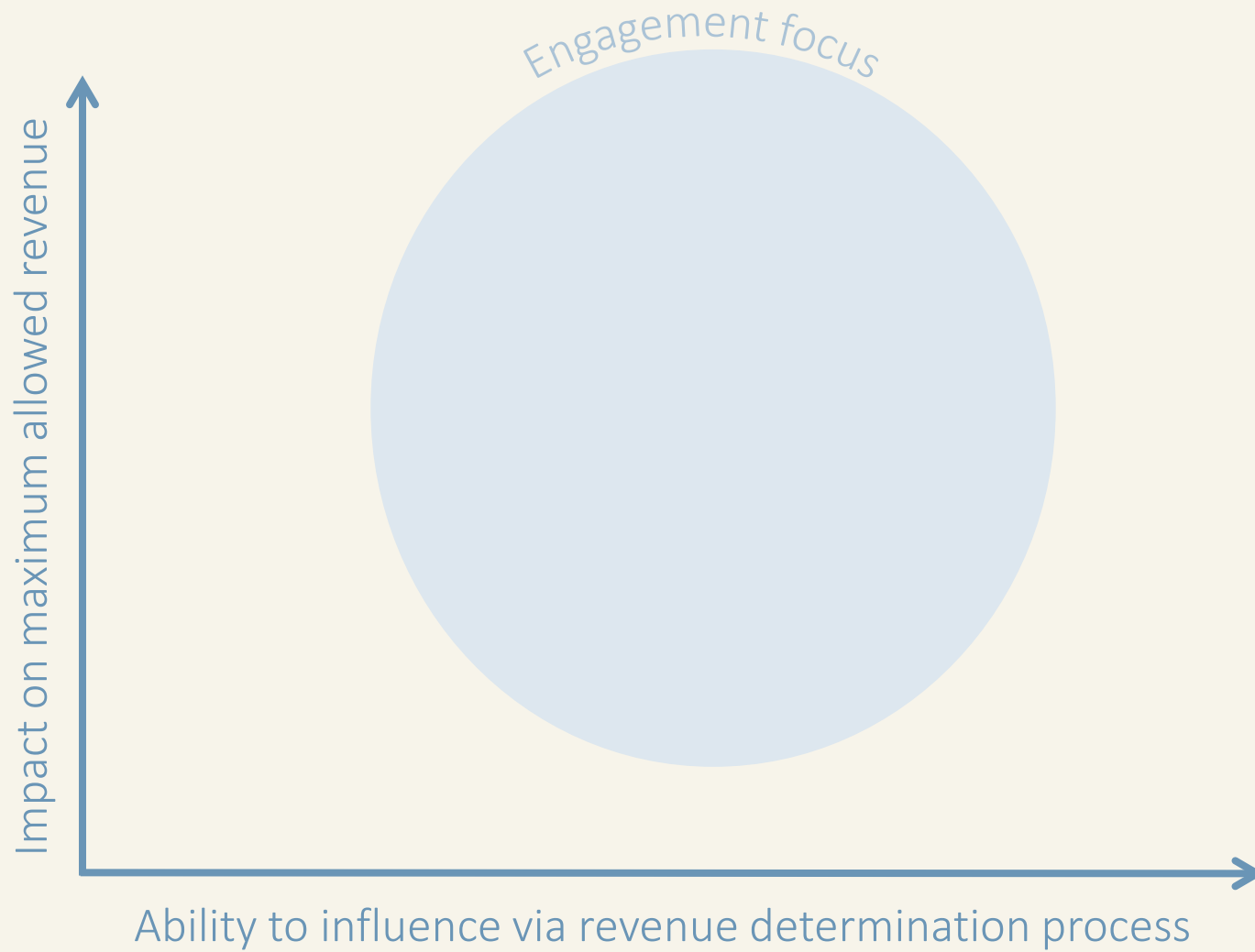
2027-32 Revenue Determination milestones

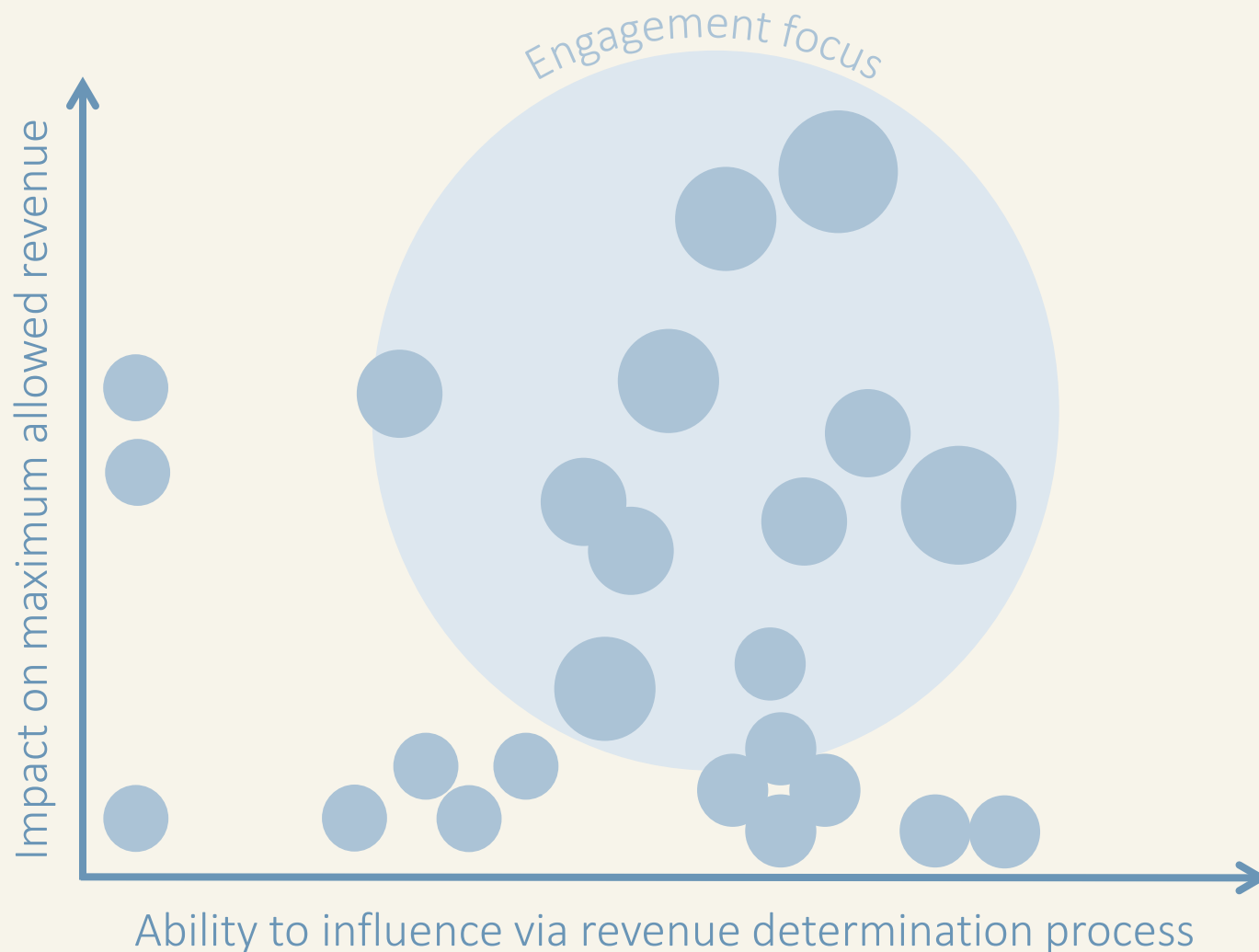


Engagement timeline



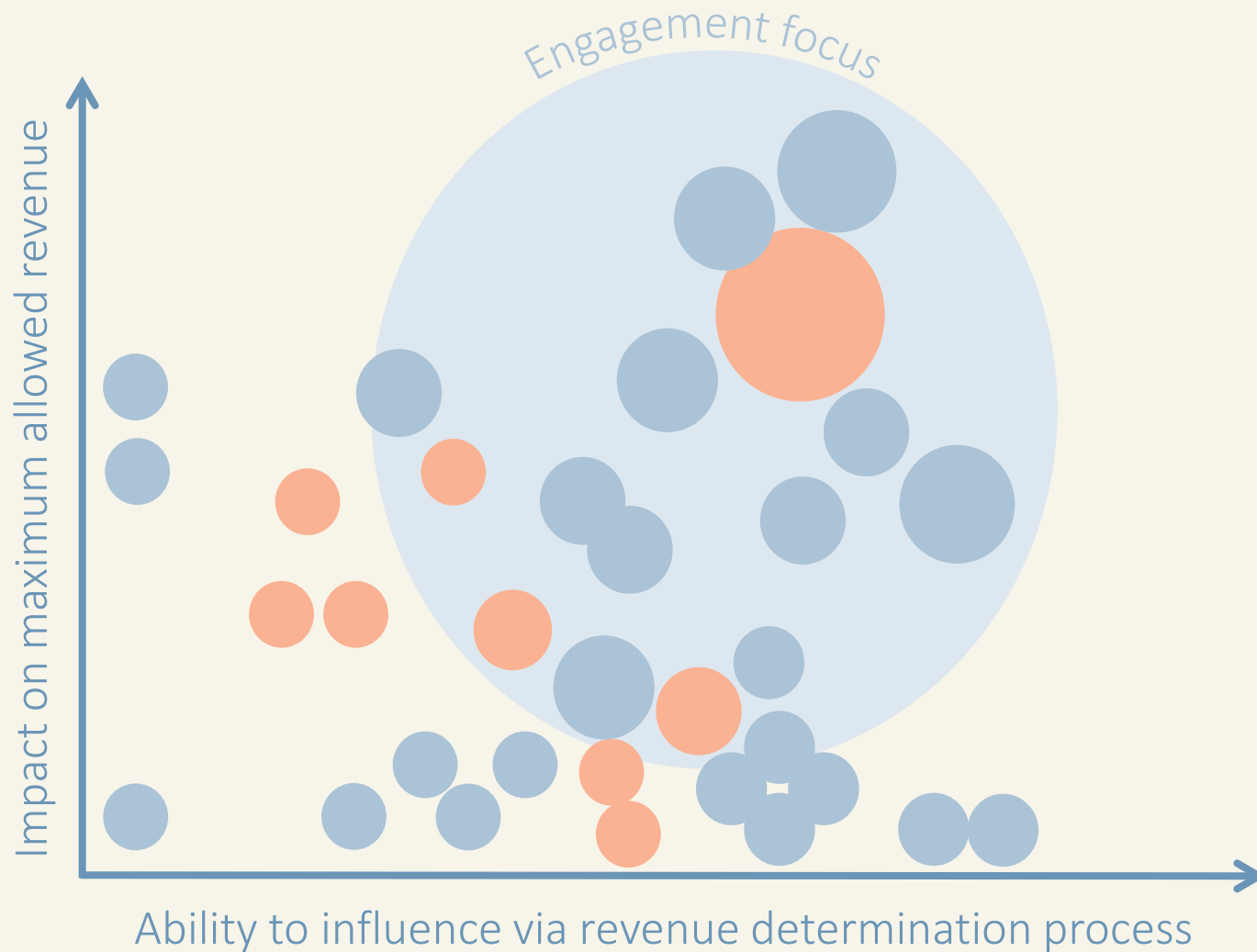
Engagement topics





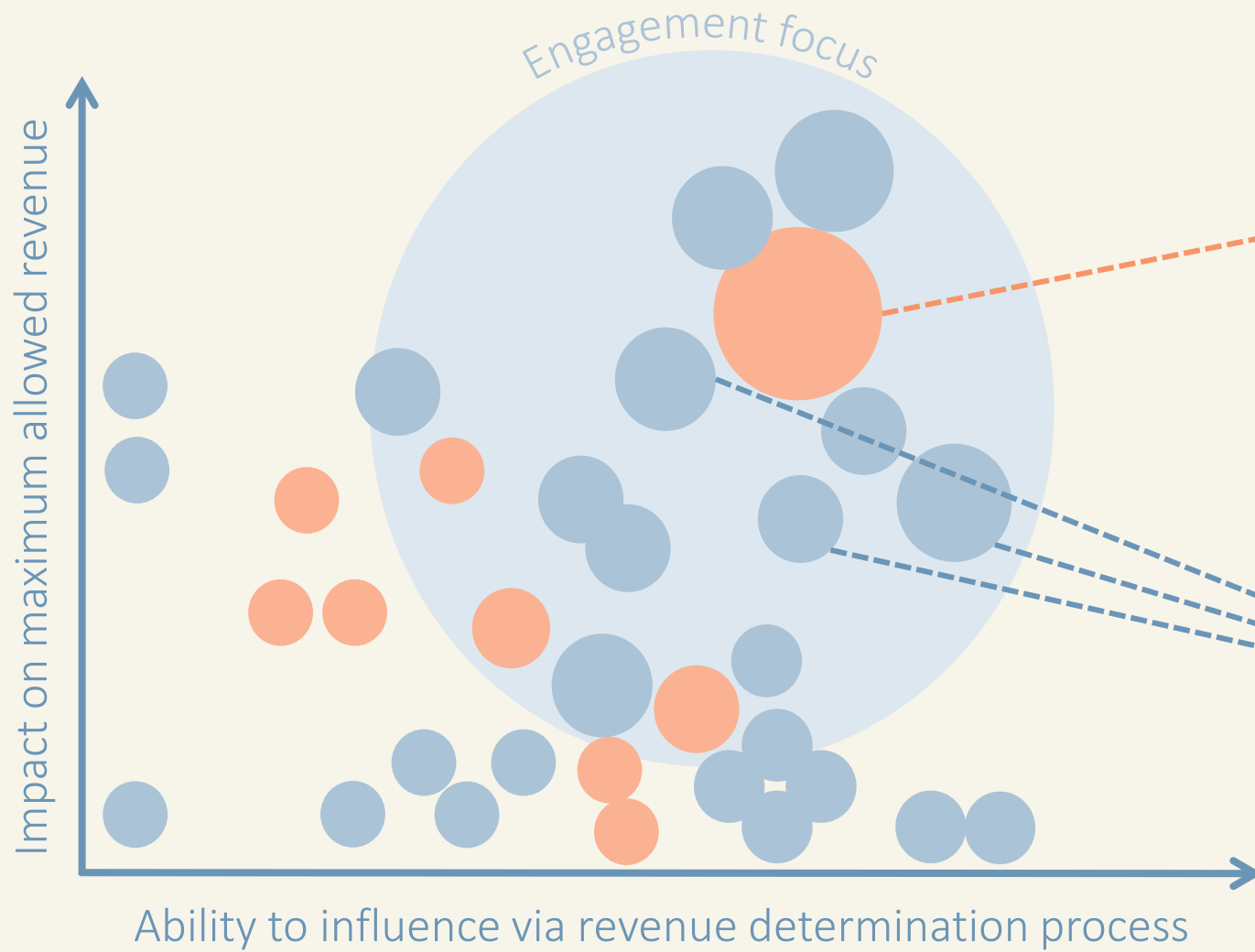
Engagement aspects included in 2023-27

- CAPEX inputs and assumptions
- OPEX step changes
- Contingent and ISP projects
- OPEX base year
- Pricing methodology
- Depreciation
- IT CAPEX
- OPEX trend (productivity)
- OPEX forecasting method
- CAPEX forecasting method
- Cost pass throughs
- Engagement approach
- Operating environment (narrative)
- Regulated Asset Base
- Rate of Return
- Insurance
- Price path and impacts
- Shared assets
- Revenue path
- STPIS, CESS, EBSS, DMIAM, AEMC levy



NEW engagement aspects identified for 2027-32

- CAPEX forecast – all
- Resilience and climate adaptation costs
- Trade-offs optionality
- CAPEX ex-post prudence
- RAB transfers
- Cyber security
- Social licence costs
- ESG commitments
- Environmental offset costs

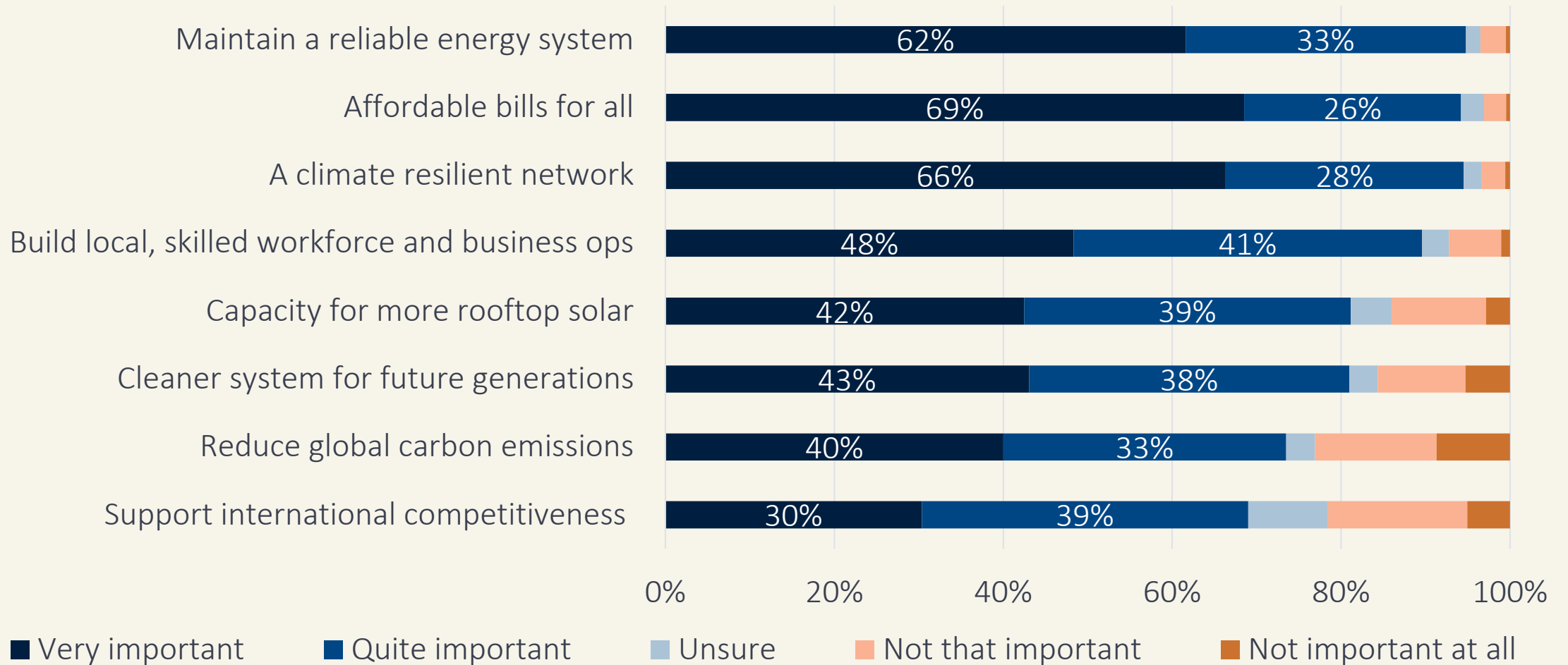


Menti activity

Let's hear from the room.



Here's what we heard from households





Thank you

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Panel | Economic Development in Central QLD



Jacquie Bridge

Executive General
Manager Network
Investment Powerlink



Tim McDougall

General Manager
Decarbonisation
Rio Tinto



Alison Murdoch

CEO
Gladstone Engineering
Alliance



Ian Lowry

Executive General Manager
Major Projects
Powerlink



Dr Ivan Ingram

Co-Chair First Nations
Leadership Group
Powerlink

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HAVE YOUR SAY



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and help us shape
future forums

bit.ly/CQForumFeedback





Thank you for being part of our
2025 Central Queensland
Transmission Network Forum