Australian Pipeline Ltd ACN 091 344 704 | Australian Pipeline Trust ARSN 091 678 778 | APT Investment Trust ARSN 115 585 441
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APA Group | apa.com.au

6 May 2022

ASX ANNOUNCEMENT

APT Pipelines Limited (ASX: AP2)

APA Group Investor Morning

Attached is an announcement made by APA Group (ASX: APA) which is provided for the information of APT Pipelines Limited securityholders.

Authorised for release by Amanda Cheney
Company Secretary
APT Pipelines Limited

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About APA Group (APA)

APA is a leading Australian Securities Exchange (ASX) listed energy infrastructure business. We own and/or manage and operate a diverse, $22 billion portfolio of gas, electricity, solar and wind assets. Consistent with our purpose to strengthen communities through responsible energy, we deliver approximately half of the nation's gas usage and connect Victoria with South Australia and New South Wales with Queensland through our investments in electricity transmission assets. We are also one of the largest owners and operators of renewable power generation assets in Australia, with wind and solar projects across the country.

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APT Pipelines Limited is a wholly owned subsidiary of Australian Pipeline Trust and is the borrowing entity of APA Group.

For more information visit APA's website, apa.com.au.

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6 May 2022

ASX ANNOUNCEMENT

APA Group (ASX: APA)

APA 2022 Investor Morning

Responsibly Transitioning Energy

APA Group (ASX: APA) today provides the attached presentations from APA Group's management team in relation to its 2022 Investor Morning.

The Investor Morning will be webcast live at 9:00am (Sydney time) today, Friday 6 May 2022. A replay of the webcast will be made available on APA's website to view on demand for those unable to attend the live webcast.

Further details are available on APA's website in the investor reports and presentation section.

Authorised for release by Amanda Cheney
Company Secretary
Australian Pipeline Limited

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APA Investor Morning
6 May 2022

Responsibly transitioning energy

Disclaimer

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The information in this presentation does not contain all the information which a prospective investor may require in evaluating a possible investment in APA Group and should be read in conjunction with the APA Group's other periodic and continuous disclosure announcements which are available at www.apa.com.au.

All references to dollars, cents or '$' in this presentation are to Australian currency, unless otherwise stated.

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Forward looking statements: This presentation contains certain forward looking information, including about APA Group, which is subject to risk factors. "Forward-looking statements" may include indications of, and guidance on, future earnings and financial position and performance, statements regarding APA Group's future strategies and capital expenditure, statements regarding estimates of future demand and consumption and statements regarding climate change and other environmental and energy transition scenarios. Forward-looking statements can generally be identified by the use of forward-looking words such as, 'expect', 'anticipate', 'likely', 'intend', 'could', 'may', 'predict', 'plan', 'propose', 'will', 'believe', 'forecast', 'estimate', 'target', 'outlook', 'guidance' and other similar expressions and include, but are not limited to, forecast EBIT and EBITDA, free cash flow, operating cash flow, distribution guidance and estimated asset life.

APA Group believes that there are reasonable grounds for these forward looking statements and due care and attention have been used in preparing this presentation. However, the forward looking statements, opinions and estimates provided in this presentation are based on assumptions and contingencies which are subject to change without notice, as are statements about market and industry trends, which are based on interpretations of current market conditions and are subject to risk factors associated with the industries in which APA Group operates. Forward-looking statements, opinions and estimates are not guarantees or predictions of future performance and involve known and unknown risks and uncertainties and other factors, many of which are beyond the control of APA Group, and may involve significant elements of subjective judgement and assumptions as to future events which may or may not be correct. There can be no assurance that actual outcomes will not materially differ from these forward-looking statements, opinions and estimates. A number of important factors could cause actual results or performance to differ materially from such forward-looking statements, opinions and estimates.

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Acknowledgement: Certain icons used in the presentation were designed by Freepik, Icongreek26, Nikita Golubev, Eucalyp and Srip from Flaticon.

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Welcome



In the spirit of reconciliation APA acknowledges the Traditional Custodians of country throughout Australia and their connections to land, sea and community.

We pay our respects to their elders past and present, and extend that respect to all Aboriginal and Torres Strait Islander Peoples today.

Agenda: Responsibly transitioning energy

Session 1

1. The energy transition (30 mins)
Rob Wheals, Chief Executive Officer

The energy sector must decarbonise

- Path to net zero is not clear but transition needs to be orderly
- The rise of new energy technologies creates opportunities in electricity transmission, renewable microgrids and hydrogen
- Gas has a critical role to play

2. Aurora (30 mins)
Hugo Batten, Managing Director, Aurora Energy Research

Our future electricity generation mix

3. Moderated Panel (30 mins)
Kynwynn Strong*, General Manager Investor Relations*

- Panel discussion
  Hugo Batten, Aurora Energy Research
  David Ogilvy, L.E.K. Consulting

Morning Tea Break

Session 2

4. APA's investment considerations (20 mins)
Adam Watson, Chief Financial Officer

- Capital allocation framework
- Investing for sustainable growth

5. ESG – Video (10 mins)

- Introduction by Rob Wheals
- Video showcasing APA's progress with its ESG ambitions

6. Moderated Panel (40 mins)
Ben Pratt, General Manager Corporate Affairs

- Panel discussion – APA Senior Leaders

7. Wrap up – (5 mins)
Rob Wheals, Chief Executive Officer

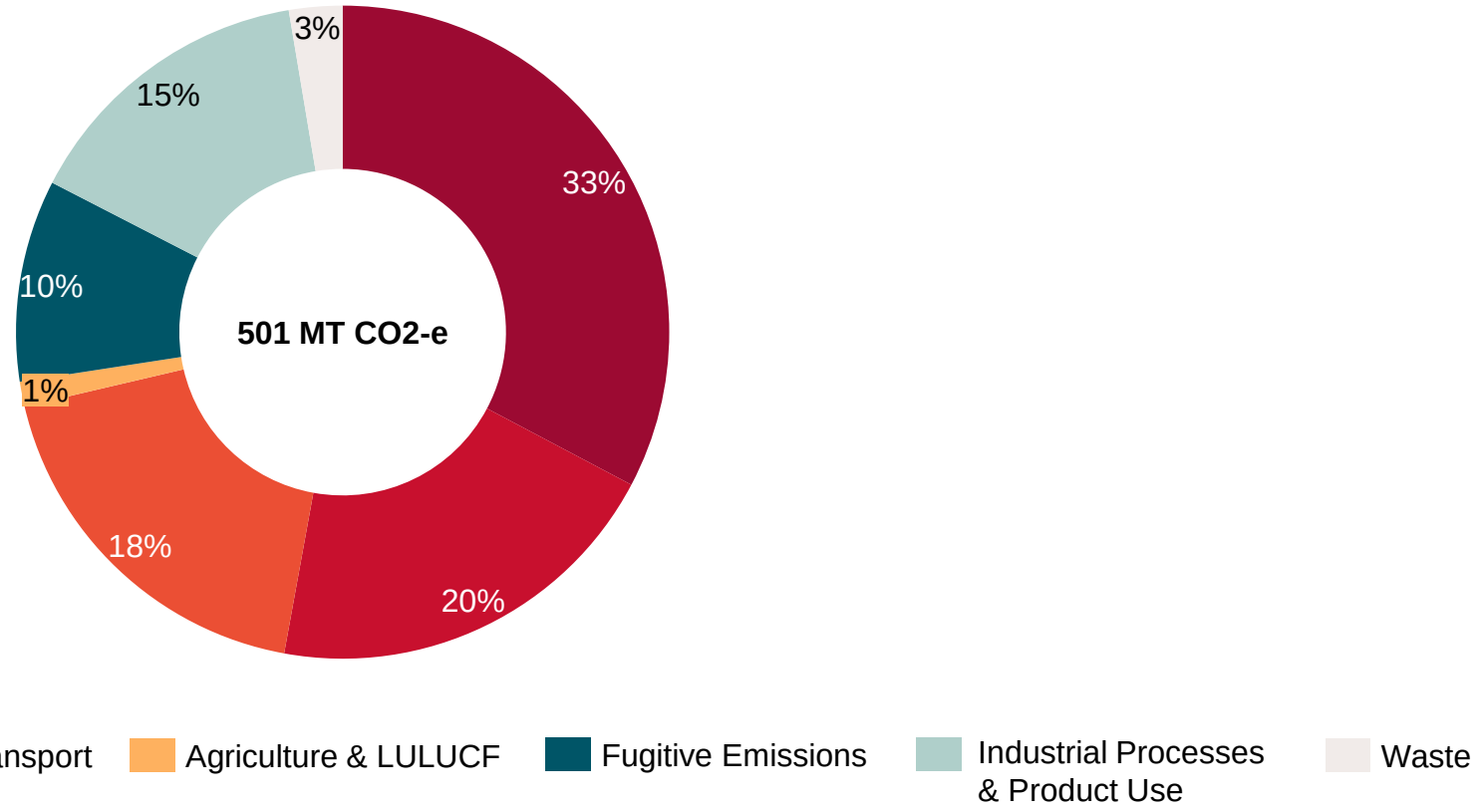
Rob Wheals

CEO & Managing Director

The energy transition

Australia's energy sector must decarbonise to support its ambition to achieve net zero

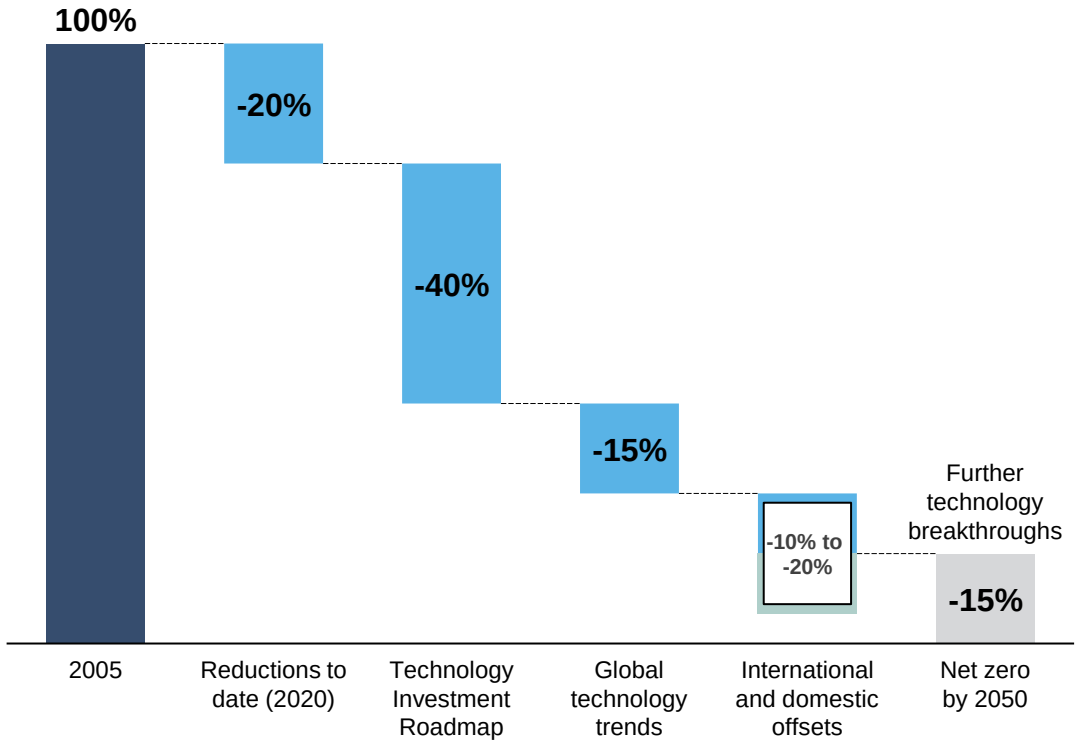
Australia's emissions in 2021 by sector(1)



1. Source: Department of Industry, Science, Energy and Resource; Australia's emissions projections 2021.

The path to net zero is uncertain with current plans dependent on new, often unproven energy technologies

Government's priority low emission technologies for Australia to achieve net zero emissions (by technology contribution)[1]



1. Source: Australian Govt, A Whole-of-economy Plan to achieve net zero emissions by 2050; Based on McKinsey and DISER analysis. *Sources of offsets include voluntary soil carbon of up to 20% depending on cost reductions in technology and voluntary demand.

Multiple technologies are being progressed and explored to support a lower carbon future

Proven and commercial → **Developing**



Wind & Solar

e.g. NSW Renewable Energy Zones

Challenges:
variable, intermittent, social impacts



Hydro

e.g. Snowy 2.0; Battery of the Nation

Challenges:
capital cost, dry nation, environmental impacts



Batteries

e.g. Gruyere Battery; Hornsdale

Challenges:
storage duration, social procurement



Hydrogen

e.g. Hydrogen Hubs; VTS Blending

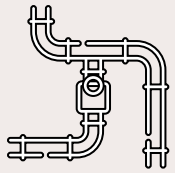
Challenges:
production cost, energy density, location, transportation



Carbon Capture & Storage

Hard to abate industrial capture

Challenges:
cost of capture, transportation, sequestration

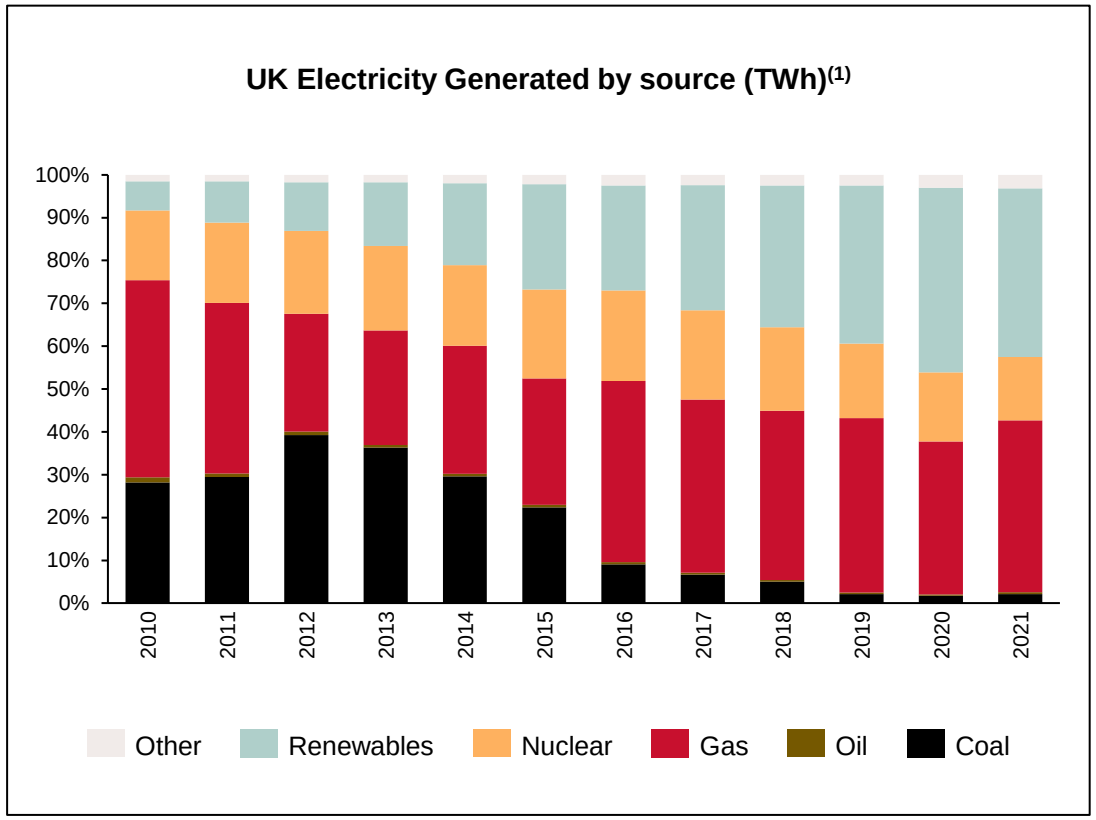


Gas as the foundation energy source

Underwrites energy transition: secure, reliable, affordable

Challenges: requires offsets to get to net zero

The transition needs to balance security, reliability and affordability as the recent experience in the UK highlights (case study)



UK generation mix(1)

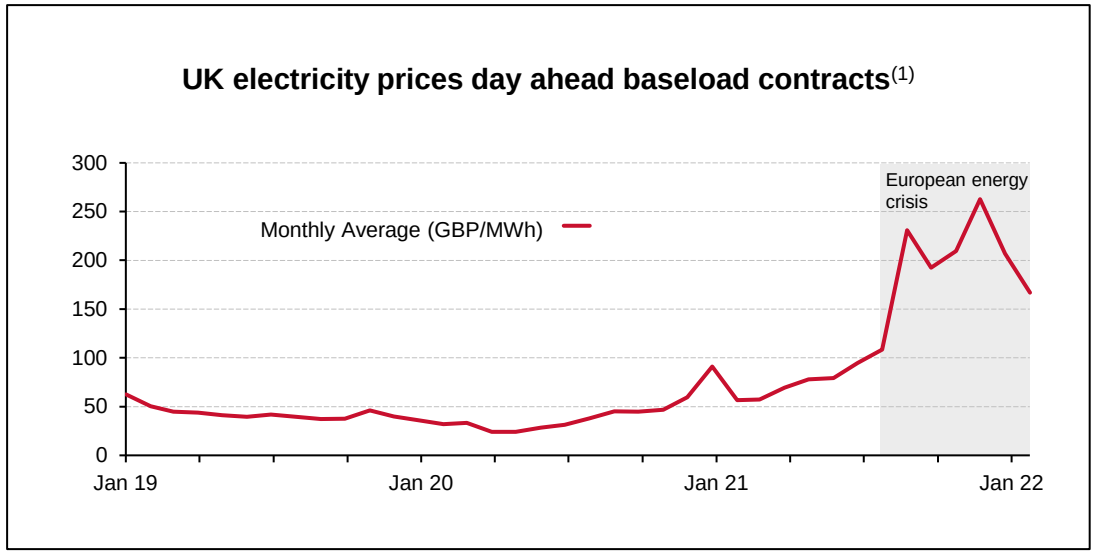
- Coal and nuclear have declined
- Renewables have increased; now ~40%

Recent challenges(1,2,3)

- Renewable 'drought' with low wind and solar generation
- Nuclear plant outages
- Coal response limited as only three plants remain operational
- Gas generation increased 11% on CY20 but limited by low domestic gas production and storage and low European storage levels
- Market required significant increase in electricity and gas imports to meet demand

1. Energy Trends: UK electricity, Fuel used in electricity generation and electricity supplied (ET 5.1 Mar 22) - GOV.UK; 2021 data is provisional. 2. ofgem.gov.uk, Energy and Data Research, Data Portal, Wholesale market indicators. 3. Energy Trends: March 2022, Department of Business, Energy & Industrial Strategy – GOV.UK

A disorderly energy transition without appropriate firming can result in significant energy price increases (case study)



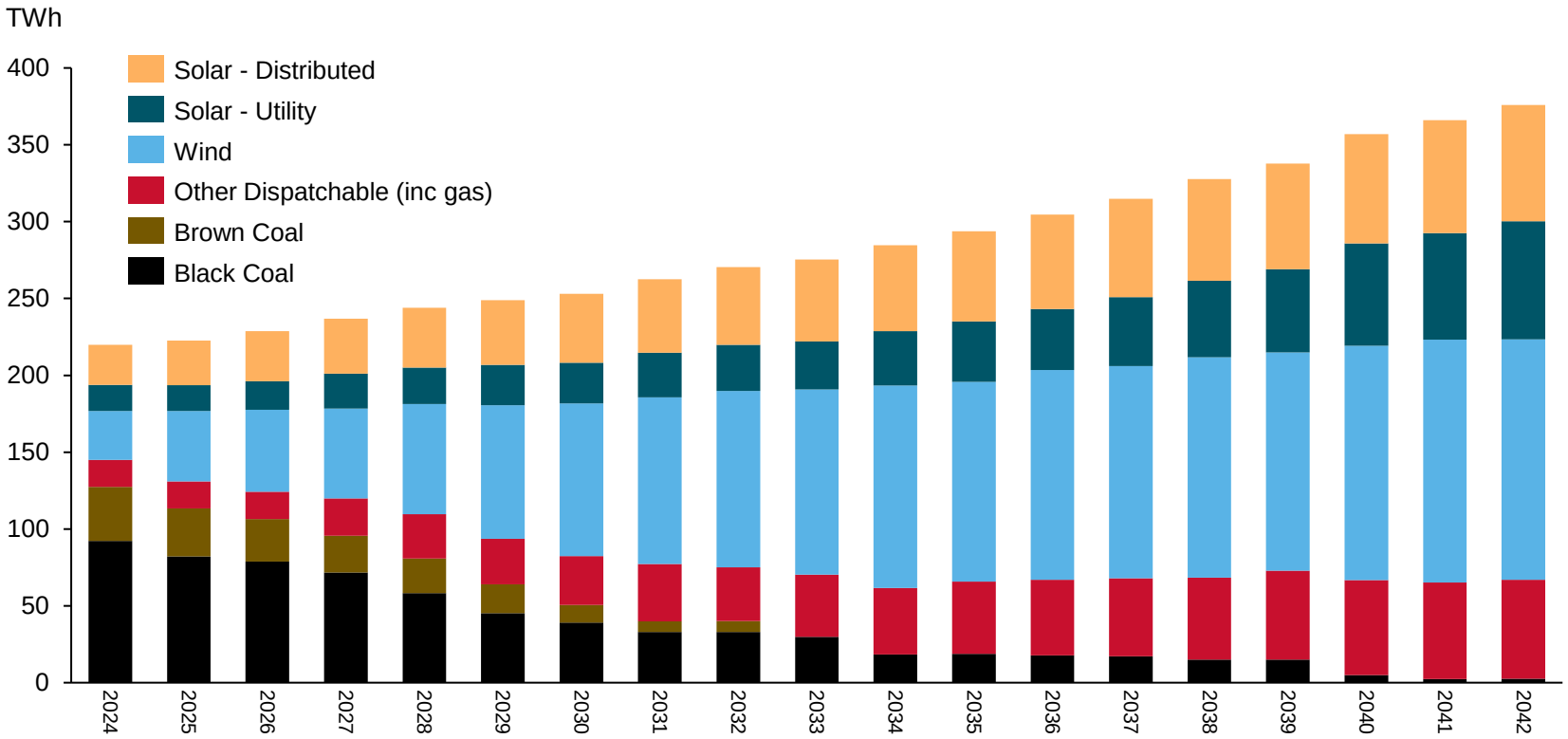
Consequences

- Wholesale electricity and gas prices have increased by ~3x and ~4x respectively over the last 12 months(1)
- Wholesale electricity prices more than doubled in the 12 months prior to the European energy crisis
- Suppliers under significant pressure; 29 suppliers servicing 4.3m households have exited the market or been put in administration since January 2021(2)
- Households experiencing ‘fuel stress’ could triple(3)
- The UK is now looking to become more self sufficient in gas(4)

1. ofgem.gov.uk, Energy and Data Research, Data Portal, Wholesale market indicators. 2. ofgem.gov.uk, News and Views, Press releases, "Price cap to increase by £693 from April", 3 February 2022. 3. Resolution Foundation. "Higher and Higher, Averting a looming energy bill crisis." 17 Jan 2022. 4. Policy Paper, British energy security strategy, 7 April 2022, GOV.UK.

Australia's energy transition is underway: coal exiting; renewable generation growing; developing gas resources to ensure affordable security of supply

National Energy Market Generation mix – ISP Step Change(1)



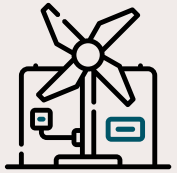
1. Source: AEMO, Draft ISP, Step Change CDP8 (dispatchable excludes DSP)

Australia is well positioned for an orderly transition given our excellent resource base



Gas resources

25+ years of resource at current production levels



Wind resources

Attractive resources for both onshore and offshore wind

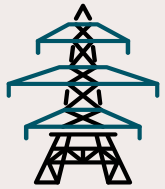


Solar resources

Highest solar radiation per m^2 of any continent

Source: https://www.industry.gov.au/sites/default/files/October%202021/document/australias_emissions_projections_2021_0.pdf and https://www.cleanenergycouncil.org.au/resources/project-tracker

The energy transition presents multiple opportunities for APA given our expertise and experience in operating and developing energy infrastructure

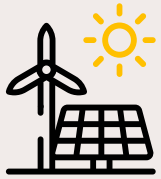


Regulated/contracted electricity Infrastructure

Electrification

NSW Renewable Energy Zones (REZ)

Basslink



Renewables & Firming

Renewables

Mica Creek Solar Farm

Gruyere Solar Farm and Battery Storage



Hydrogen

Hydrogen

Parmelia Gas Pipeline

Hydrogen feasibility for VTS

Central Qld Hydrogen Project

Mid-West Blue Hydrogen



Regulated/contracted gas infrastructure

Gas Infrastructure

East Coast Grid expansion

Kurri Kurri Lateral (hydrogen ready)

Electricity transmission opportunities arising with the decarbonisation of Australia's economy via renewable energy zones

~122 GW
additional VRE capacity by 2050(1)

35 REZs
shortlisted across eastern Australia(2)

$30+ B
New transmission investment(3)

Renewable Energy Zones (REZ)

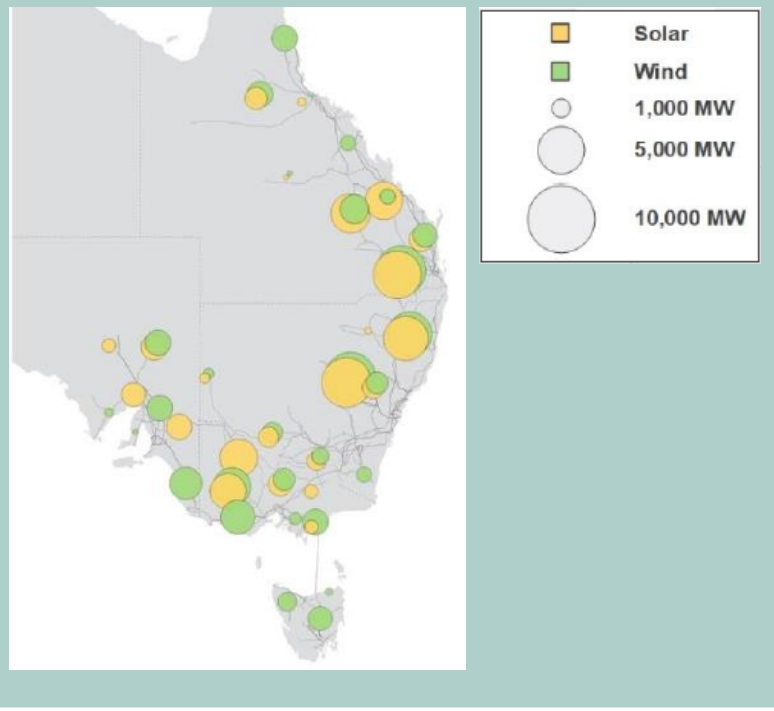
REZ are resource areas for clusters of large-scale renewable energy projects

REZ combine generation, transmission, storage, and system strength services to ensure a secure, affordable and reliable energy system

Total REZ and renewables opportunity across the NEM currently estimated at ~$90B(5)

NSW Government has committed to develop five REZs in Central-West Orana, New England, South-West, Hunter-Central Coast and Illawarra regions

REZ development 2049-50 – Step Change scenario(4)



1. VRE = Variable Renewable Capacity; Source: AEMO 2022 Draft ISP Step Change Scenario. 2. Source: AEMO 2022 Draft ISP Appendix 3. Source: AEMO 2022 Draft ISP Appendix 5. 4. Source: AEMO 2022 Draft ISP, Appendix 3, Step Change Scenario.
5. APA estimate based on 2022 LCOE estimates and total potential REZ AEMO Option 1 capacities

APA consortium shortlisted to tender for Central-West Orana REZ (case study)

$5.2B
investment[1]

3GW
capacity[1]

1st REZ
in NSW

Central West Orana - NSW first REZ

The Central West-Orana (CWO) Renewable Energy Zone is New South Wales's first REZ

Stage 1 of the REZ is targeting 3GW of capacity by the mid 2020s, enough to power 1.4 million homes. The ambition is to achieve 12GW over the long term

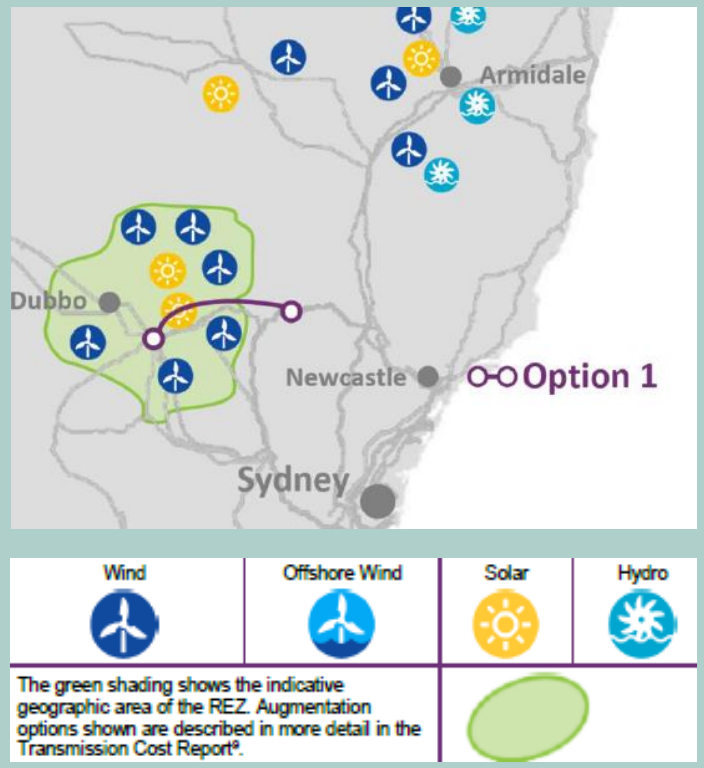
CWO is expected to attract $5.2B of private investment by 2030

APA consortium shortlisted to tender for CWO REZ

Network REZolution has been shortlisted to tender for the CWO REZ development. This strong consortium includes APA and CIMIC Group companies (Pacific Partnerships, UGL and CPB Contractors)

This follows an Energy Corporation of NSW (EnergyCo) competitive process to appoint a network operator to design, construct, commission, maintain and operate and finance the new transmission infrastructure

Central West Orana REZ[4]



1. https://www.energy.nsw.gov.au/renewables/renewable-energy-zones

Supporting our customers with their decarbonisation efforts via renewable energy microgrids

Energy solutions that support the North West Minerals Province (case study)

APA is developing a $150m 88MW solar farm at Mica Creek; will be operational by mid CY23

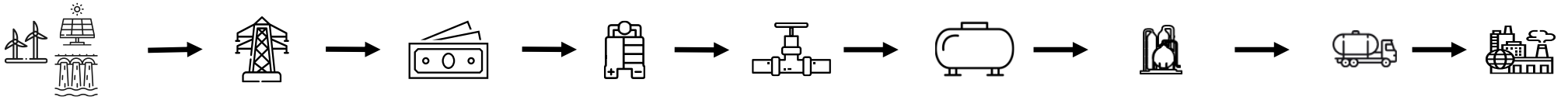
Fully contracted for 15 years with two foundation customers

Direct response to enthusiasm of our customers for integrated energy solutions that meet their energy needs (affordability and security of supply) and reduce operational emissions

The carbon intensity of APA's Mt Isa power system is expected to be less than half of the current Queensland grid average once Mica Creek solar is fully commissioned



Participating in hydrogen feasibility projects via our Pathfinder program

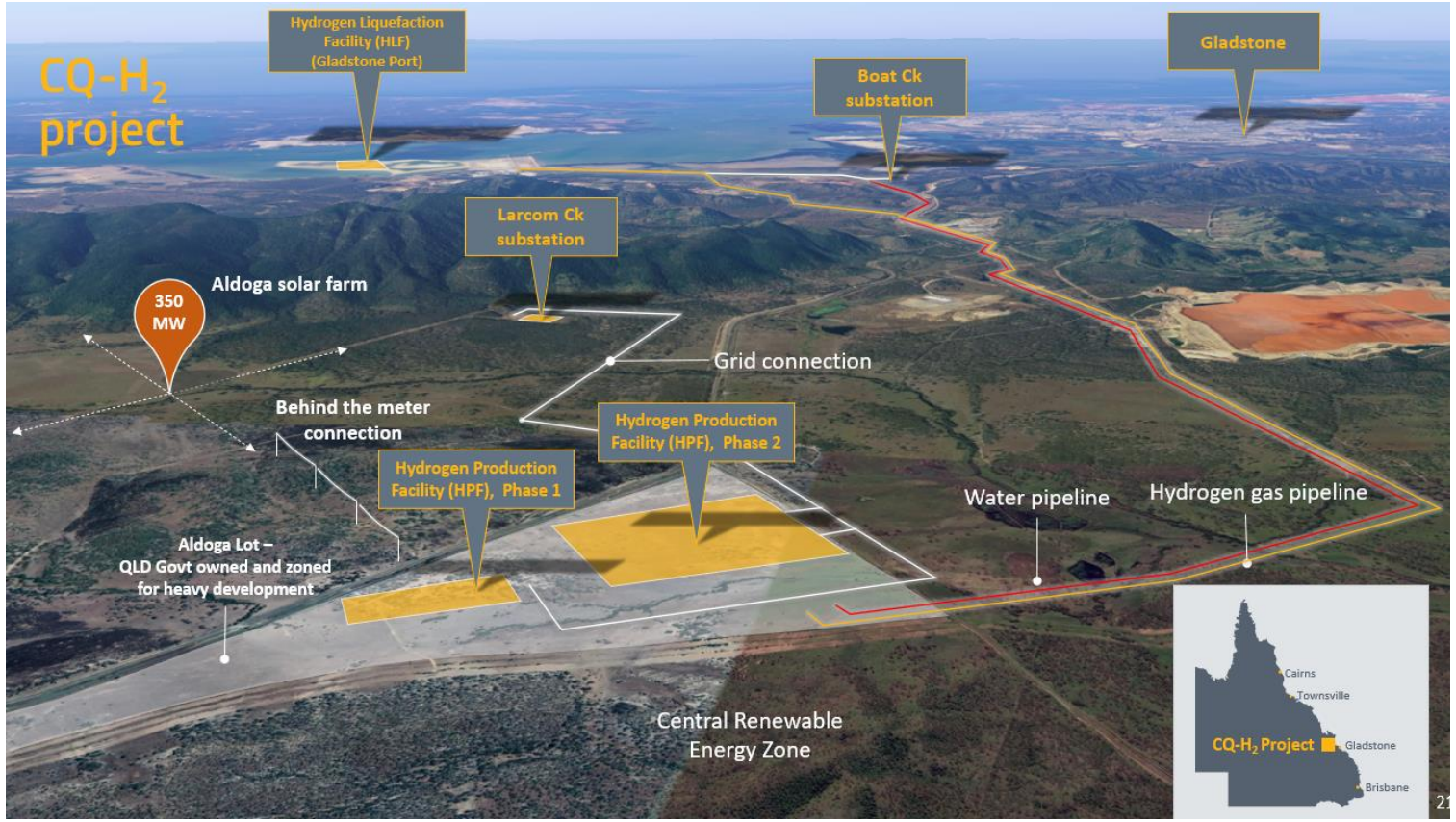


	Renewable Energy	Transmission	Energy Trading	H_2 Production	H_2 Pipeline Inc. CO_2 pipeline	H_2 Storage Inc. CCS	Liquefaction / Chemical production	H_2 Transport (Shipping / Tanker)	End User
APA areas of interest	✓	✓	✗	✓	✓	✓	✗	✗	✗

APA actively participating in hydrogen feasibility projects as the commercialisation of hydrogen evolves

Creating strategic partnerships with complementary capabilities

Partnering to assess green hydrogen opportunities via the Central Queensland Hydrogen Consortium (case study)



Development of hydrogen hub in central Queensland for domestic and export supply

Highly credentialed consortium: APA; Stanwell; Iwatani Corporation; Kawasaki Heavy Industries; Kansai Electric Power Company; and Marubeni

In addition to local supply, ambition for export supply to Japan's industrial market

APA is proudly one of the two domestic consortium partners with significant experience working with communities on greenfield projects to develop energy infrastructure

Different drivers of gas demand and supply between the east coast and west coast of Australia

Key themes in the east coast gas market

Gas demand

- Stable near term outlook but gas usage becoming ‘peakier’ given transition to renewables (variable supply) to replace coal (secure supply)
- Longer term driven by affordability and reliability of broader energy system with a key factor being heating load requirements in colder southern states

Gas supply

- Southern production declining as Gippsland basin matures (forecast to decline from 312 PJ in 2022 to 200 PJ in 2026[(1)])
- Extensive gas resources in Queensland

Implications for APA

- Transportation of gas from northern supply markets (e.g. Queensland) to southern demand markets (e.g. Victoria)
- Flexible services for customers managing volatile demand

Key themes in the west coast gas market

Gas demand

- Strong demand from resources sector, both new and expansions
- Driven by demand for commodities including new economy minerals required to grow renewable energy sector

Gas supply

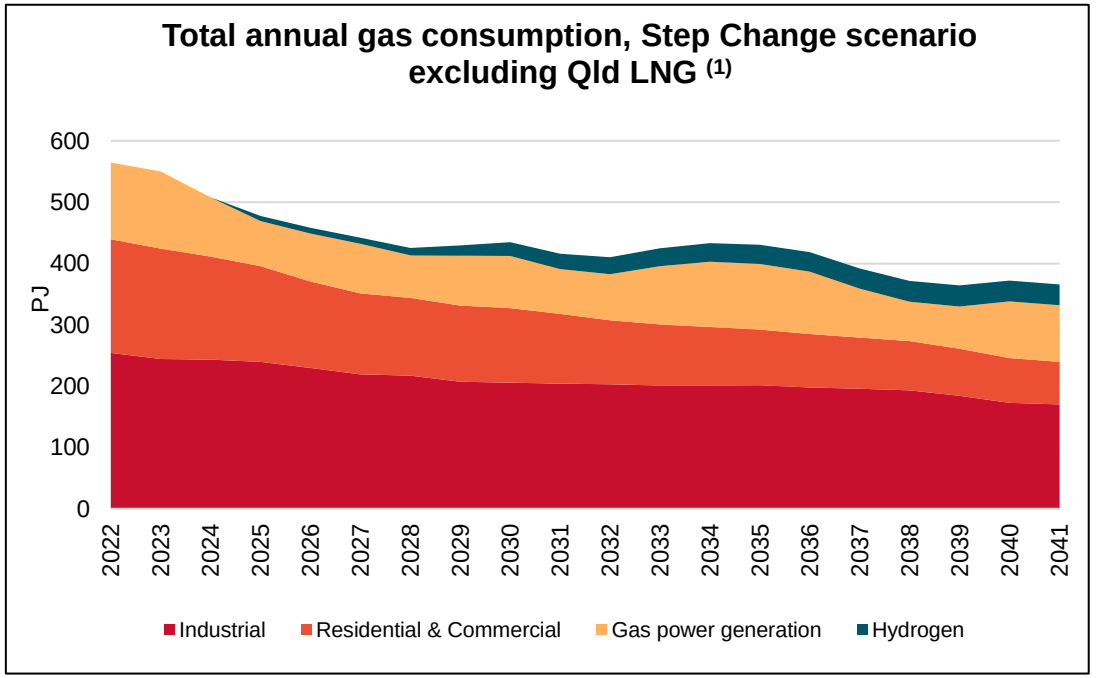
- Extensive gas resources across Carnarvon and Perth Basins
- Requires transportation to demand centres

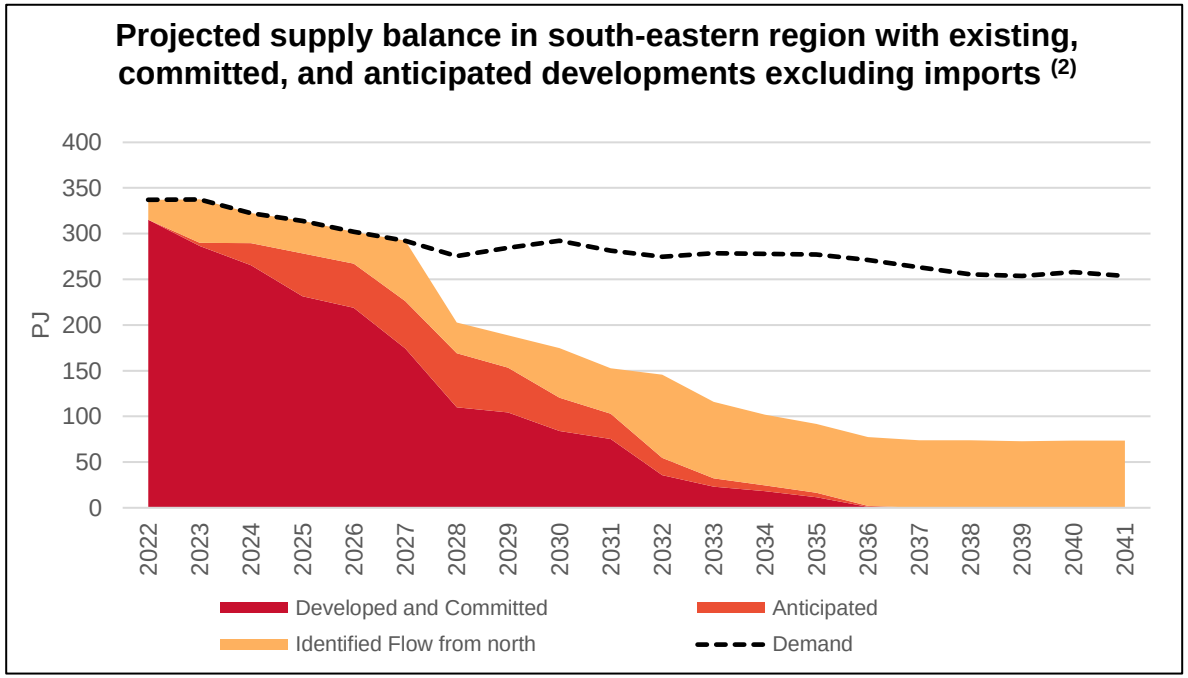
Implications for APA

- Opportunity to support resources development by providing resource rich areas with reliable gas

1. Source: Victorian gas planning report update, March 2022.

APA's east coast energy infrastructure responding to growing supply from northern Australia





East coast grid expansion case study - linking Queensland with southern markets

- Maturation of local supply in southern markets resulting in gas shortfalls under extreme weather conditions (current expectation winter 2023 shortfall) (1)
- Expansion of APA's East Coast Grid will increase winter capacity by 25% through additional compression and associated works on the SWQP and MSP
- Total investment of $270m across two stages with Stage 2 subject to customer demand and final investment decision

1. Source: Gas statement of opportunities March 2022 excluding Qld LNG; 2. Source: Gas statement of opportunities March 2022 excluding LNG imports.

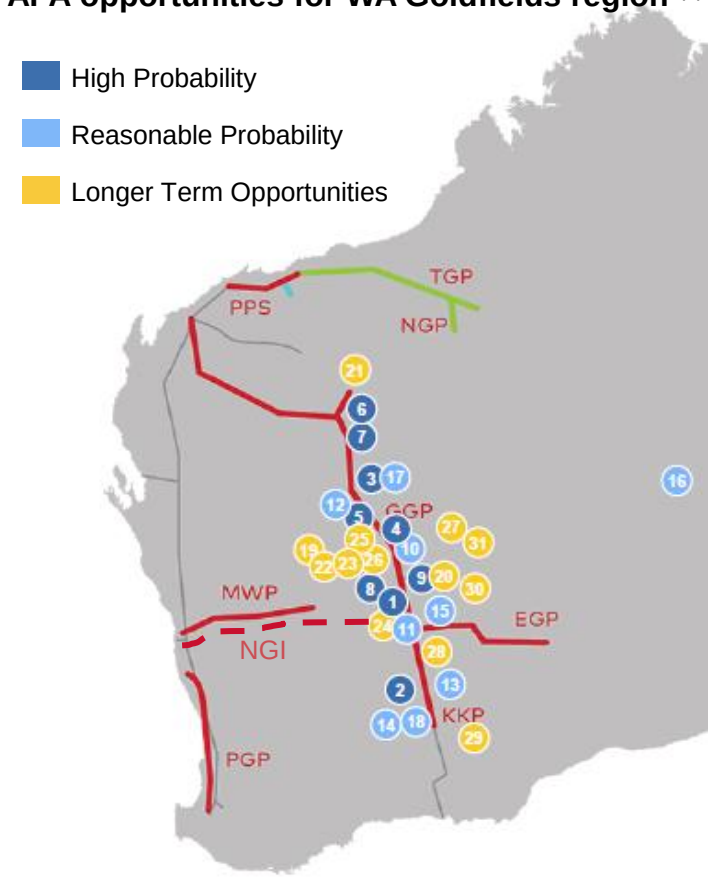
Growth in demand for Australia's resources driving demand for new energy infrastructure along the west coast

Demand drivers

Growth in global demand 2019 to 2030[1]

+8% Iron ore	**+12%** Zinc	**+25%** Uranium
+32% Copper	**+45%** Alumina	**+67%** Nickel
+368% Lithium		

APA opportunities for WA Goldfields region [2]



West coast case study – providing reliable energy to support resource development in the WA Goldfields region

- APA's existing Goldfields Gas Pipeline (GGP) is fully contracted
- Resources companies are seeking secure energy solutions in the Goldfields region
- APA is investing ~$460m to build a 580km pipeline to connect the Perth Basin to the Goldfields region
- Will provide an alternative source of secure energy and double the capacity compared to the same cost of expanding the GGP
- Creates a platform for additional growth as more resources customers seek new energy solutions replacing traditional energy sources (e.g. diesel) with new technologies (e.g. renewables and battery storage underpinned by natural gas)

1. Source: Commodities demand outlook 2030; Minerals Council of Australia; 2. APA analysis

Gas is critical to ensure secure, reliable and affordable energy for Australia's energy users

Power Generation – 98 PJ

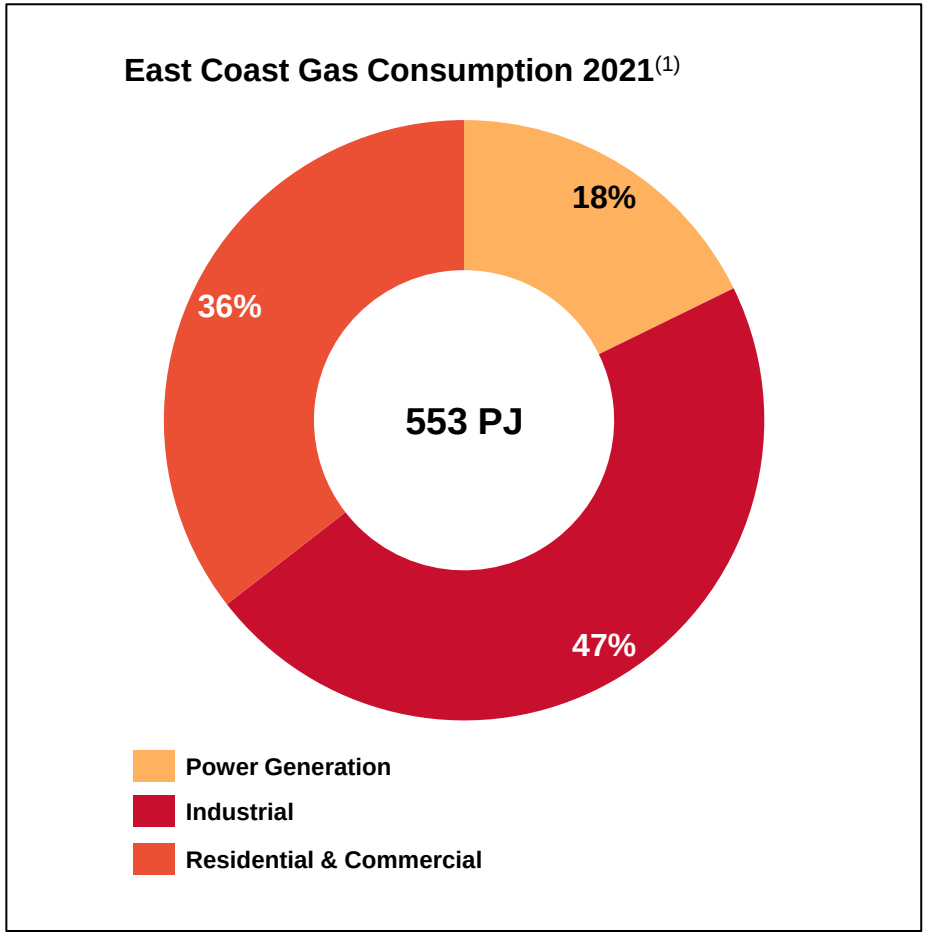
- Gas is critical for firming renewable electricity
- Supporting the transition away from coal fired power generation (eg Kurri Kurri)
- Capacity is the key

Industrial – 259 PJ

- Currently no alternatives to most industrial processes given requirements for high heat
- High dependency from critical industry sectors such as steel, alumina, cement and ammonia production

Residential & Commercial – 196 PJ

- Dominated by colder climates such as Victoria who use gas for space heating, as well as cooking and hot water
- Victorian winter load is up to three times higher than summer



Source: AEMO GSOO 2022; excludes gas consumed for LNG exports

Hugo Batten

Managing Director, Aurora Energy Research

AURORA
ENERGY RESEARCH

Aurora analysis of a net-zero NEM

APA presentation

May 2022



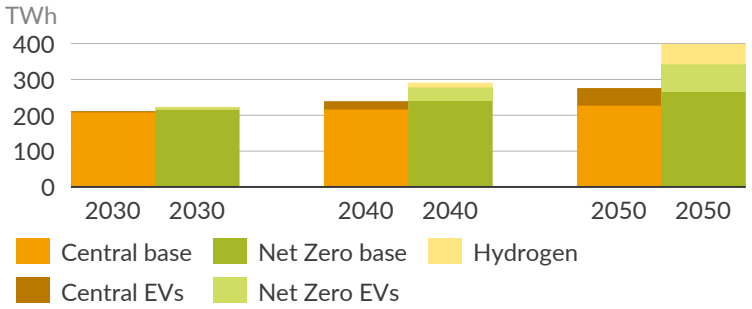
Introducing our Net Zero scenarios: built with rapid electrification, hydrogen uptake, and grid upgrades to achieve a net zero emissions target

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Detailed input changes (continued overleaf)

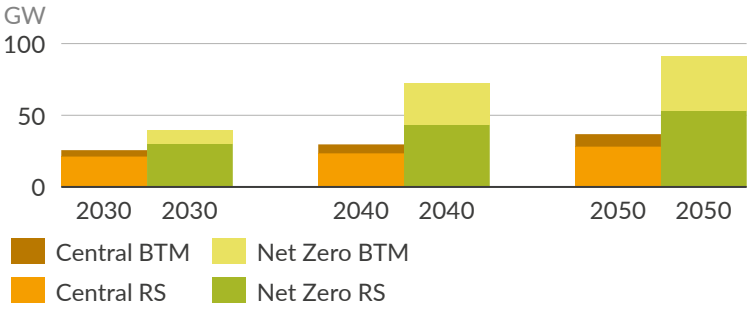
Rapid electrification
This scenario assumes an acceleration in electric vehicle adoption, deeper electrification of industry, and emergence of a hydrogen industry in Australia. In this instance, we follow the AEMO 2022 ISP Step Change underlying demand forecast.

Underlying demand



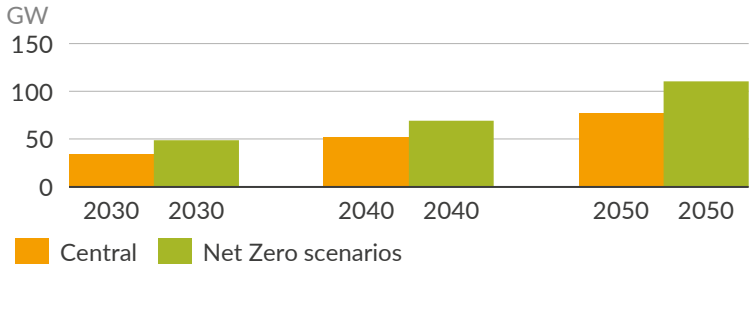
Behind the meter capacity
Net Zero also incorporates significantly higher behind the meter capacity (BTM) uptake to shift rooftop solar (RS) generation out of the middle of the day. Both rooftop PV and battery capacity assumptions are taken from the AEMO 2022 ISP step change.

Capacity



Additional grid upgrades
It is estimated that ~$14-23b of additional spending[4] on REZ grid upgrades is needed on top of AEMO's 2022 ISP Optimal Development Pathway spending in order to facilitate the renewable penetration required to achieve the net zero objectives.

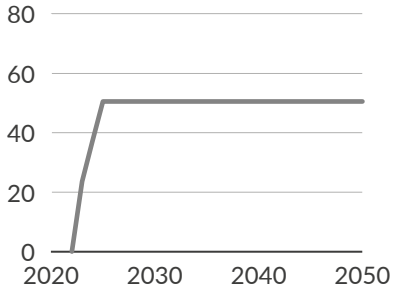
Utility scale renewable capacity[5]



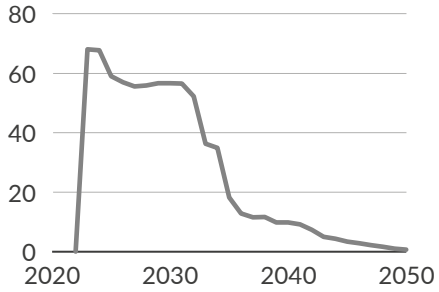
Detailed input changes

Net Zero with carbon price

Carbon price modelled



CfD mechanism– cost to government[6]



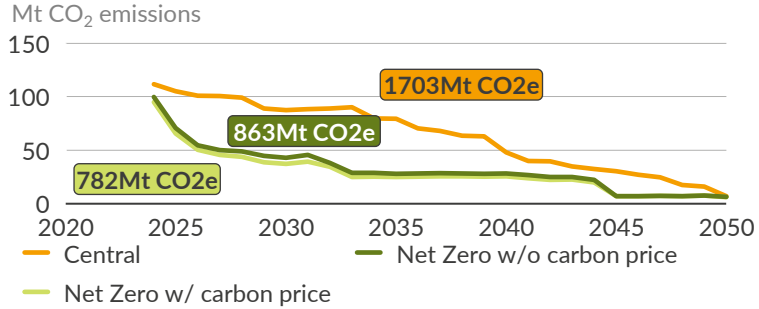
Aurora's Net Zero scenarios:

- The 2022 ISP Step Change scenario requires a carbon budget of 891 Mt for NEM-wide emissions to achieve a net zero world, and limit temperature rises to meet the Paris Agreement. Aurora has assumed a $50/t carbon price to achieve these objectives
- Aurora has assumed that capacity expansion in both Net Zero scenarios are equivalent
- As such, the CfD paid to new renewable projects for the first 10 years of the projects' lifetime is calculated based on the additional value renewable projects would need to build endogenously in the model
- Key contract assumptions:
  - Flat 10-year contract
  - Does not cover negative prices
  - Asset lifetime: 30 years for solar and 25 years for wind
  - Discount rate of 9%
  - Contract value varies by state, technology type and year constructed of the project

Total emissions

The 2022 ISP suggests NEM emissions between 2024-2050 need to be under 891 Mt to limit end-of-century temperature rise to <2°C in line with the Paris Agreement. Unlike the Aurora Central, both the Aurora Net Zero scenarios achieve this target

NEM-wide emissions



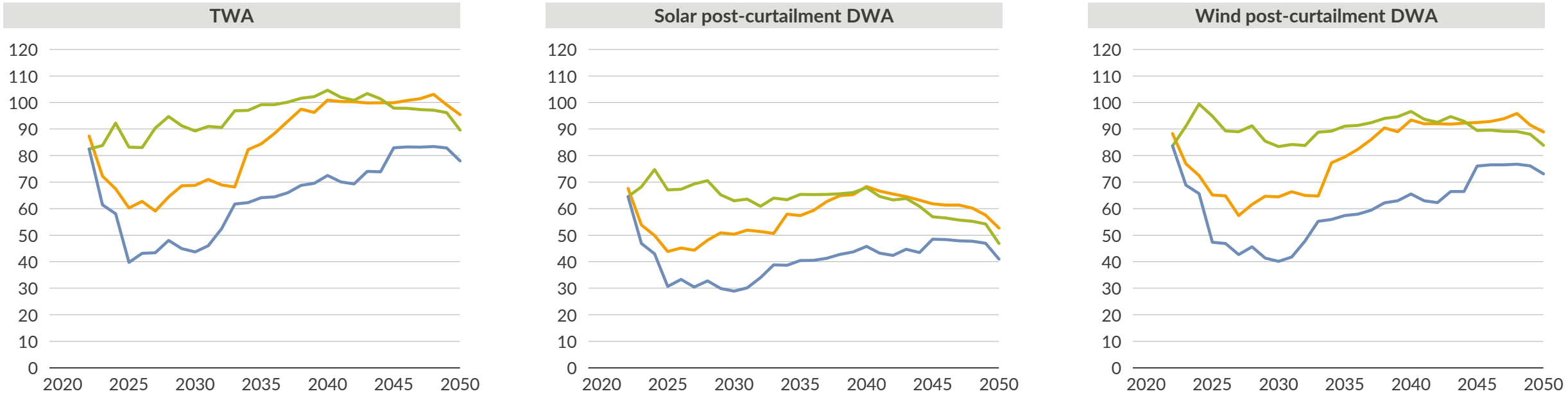
1) Assumes that remaining power sector emissions can be offset elsewhere, aligning with AEMO ISP and Liberal Party "the Plan" modelling; 2) Carbon budget outlined by AEMO for the 2022 ISP Step Change scenario to achieve an end-of-century global mean temperature increase of ~1.8oC; 3) Trend in hydrogen consumption as modelled by AEMO in the 2022 ISP Step Change scenario; 4) Additional spend calculated from AEMO ISP input assumptions for indicative transmission expansion costs by REZ; 5) Capacity build out is assumed to be the same across both Net Zero scenarios; 6) This is not the strike price of the CfD contracts – as these are anticipated to vary by state and technology type. Rather this is an indicative value of the cost to governments of financing the generation of new renewable projects via the simplified CfD contract outlined.

Sources: Aurora Energy Research, AEMO Draft 2022 ISP report, Department of Industry, Science, Energy and Resources - Australia's Long-Term Emissions Reduction Plan

The policy pathway to net zero has a material impact on wholesale electricity prices

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NSW wholesale prices[1]
$/MWh, real 2021



- There are multiple ways to achieve a Net Zero scenario, either through a carbon price or driving in renewables through Government styled auctions
- The policy pathway chosen dictates wholesale prices in the NEM throughout the forecast
  - A carbon price lowers emissions quickly through making thermal assets largely uneconomical, however prices rise immediately as the carbon price as added to the short-run marginal cost of thermal assets
  - CfD style auctions are an effective way of driving in new renewable and storage capacity onto the system (NSW EIR & VRET1/2). The associated cost of bringing in additional renewable capacity is seen in energy bills via levies and taxes (and additional transmission spending to unlock spare network capacity)

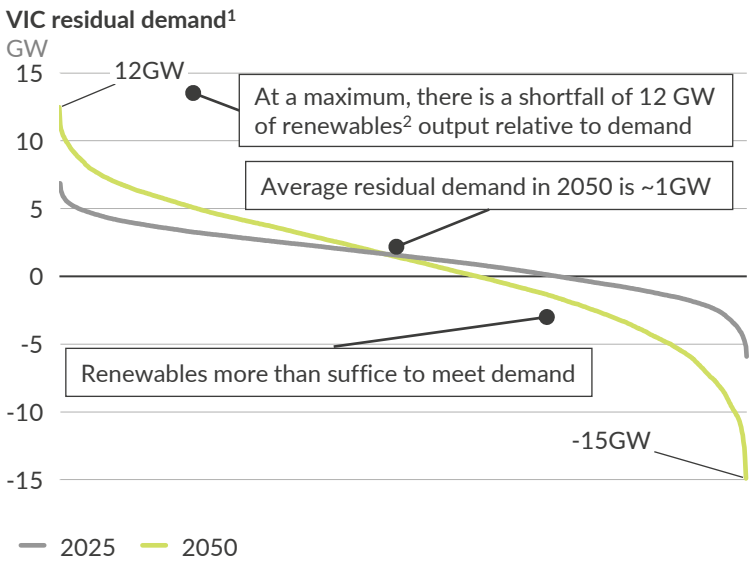
2022 Q1 Aurora Central — 2022 Q1 Aurora NetZero with carbon price — 2022 Q1 Aurora NetZero without carbon price

1) Prices shown are pre MLF and, where relevant, post-curtailment. Post-curtailment refers to economic curtailment, where assets are economically curtailed when prices drop below $0/MWh.

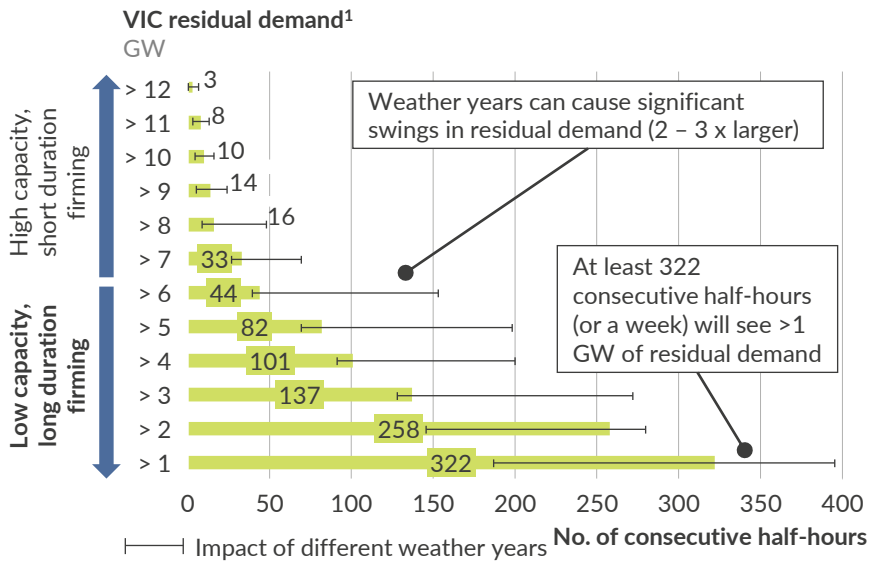
Under net-zero, VIC will see many instances where demand cannot be fully met by renewables; both short and long duration firming is required

Example of VIC in 2050 under Aurora 2021 Q1 Net-zero scenario (with carbon price)

Residual demand "duration" curve - FY2016 weather year

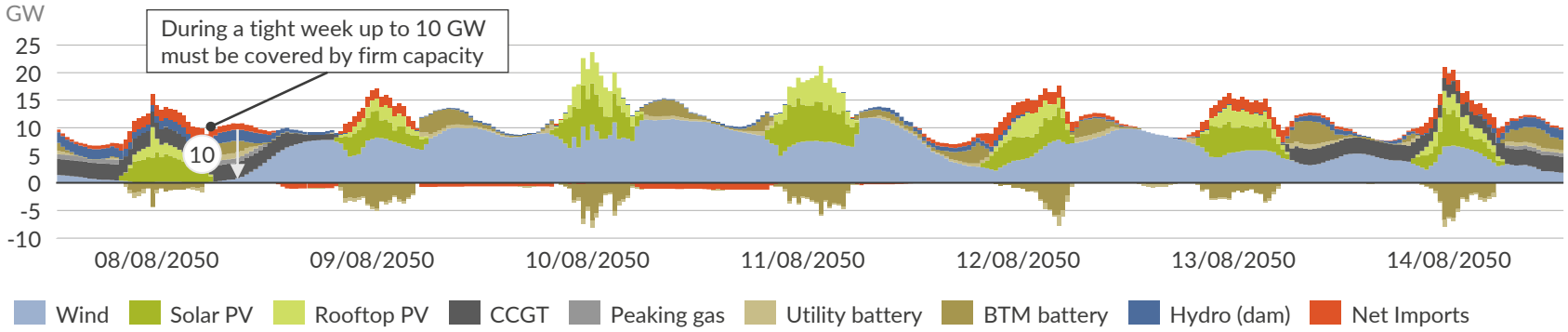


Residual demand by consecutive HH - FY2016 weather year



- In 2050 in a net zero system, VIC is still expected to see many periods where renewables do not suffice in meeting total demand, particularly in cold winter periods (more of this on later slides)
- On average, VIC will see insufficient renewables fulfilling demand for a majority of periods (the average residual demand is 1 GW), even though there will be increasingly instances where renewables more than exceed demand
- Ensuring system security will require a mix of technologies:
  - Shorter-duration batteries could be well-suited to meet system needs where a residual demand is large, but only for short-durations
  - Longer-duration storage/ gas peakers will also be required to cater for prolonged lulls in renewables output relative to demand.
- Firming solutions will also need to take into account weather risks – as different weather outturns could lead to notable differences in duration/ GW required for firming[3]

VIC half-hourly generation over a sample tight week in winter 2050, Net Zero with carbon price scenario



- VIC is likely to experience its peak demand periods in winter, where demand for heating is higher. In these colder periods, solar output is likely to be low (alongside variable wind)
- On the other hand, QLD is likely to experience its peak demand in summer, where cooling demand is higher. These periods typically coincide with higher solar irradiance/output

1) Residual demand is defined as operational demand not met by renewables or flows from external sources, i.e., interconnectors; 2) Interconnector flows are also included; 3) See previous analysis on weather years

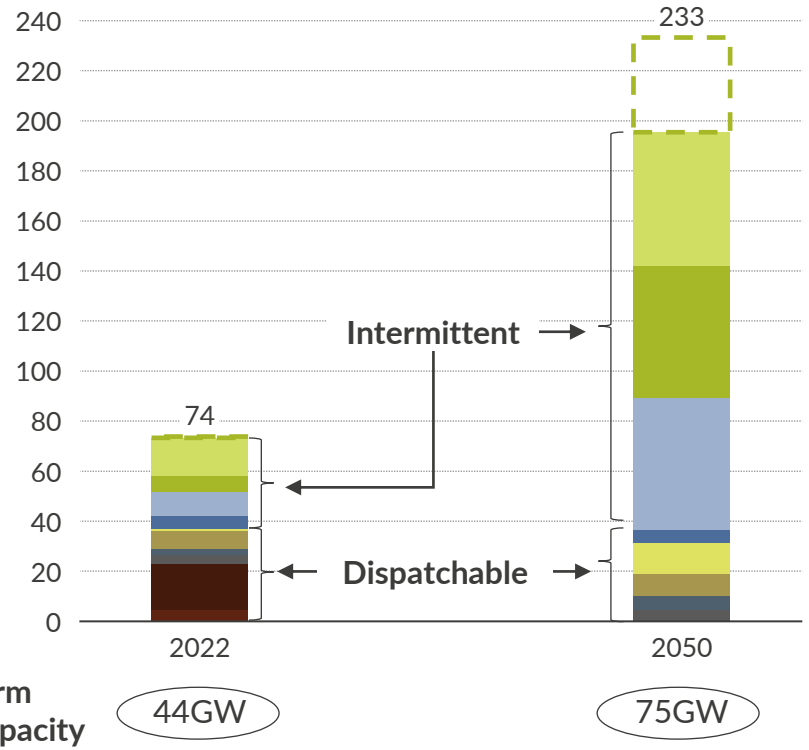
Source: Aurora Energy Research

Name-plate capacity increases materially in Aurora Net Zero scenarios, with firming coming from a variety of sources

3 Capacity mix

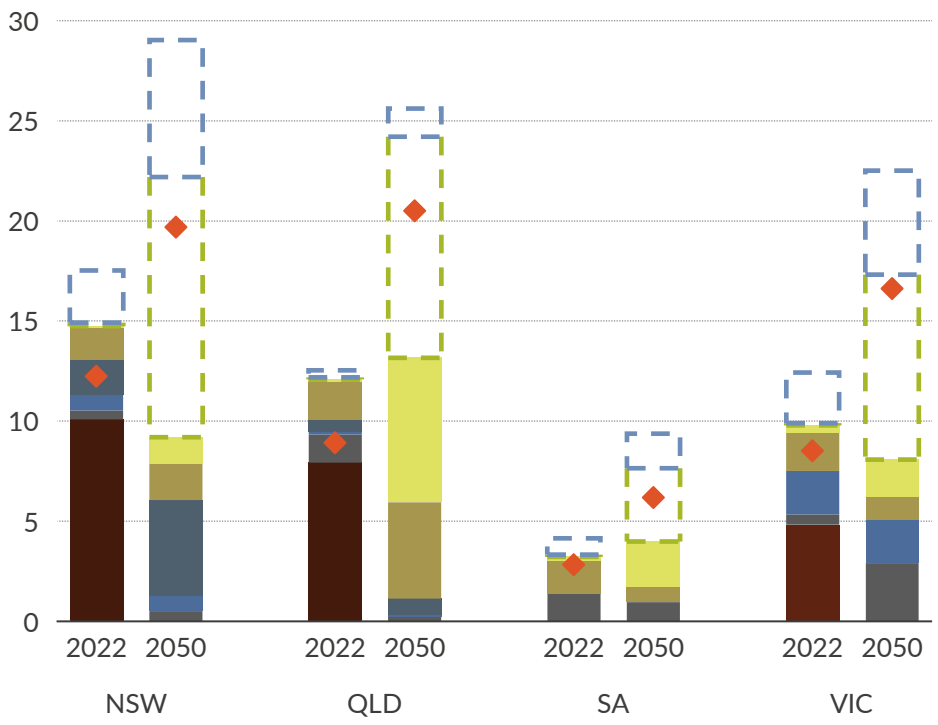
NEM-wide capacity, Net Zero scenario

GW



State-wide firming capacity, Net Zero scenario[1]

GW



Interconnector capacity | BTM Battery Storage | Solar | Wind onshore | Battery Storage | Pumped Storage | Coal

Peak demand | Rooftop solar | Wind offshore | Hydro | Peaking | CCGT | Lignite

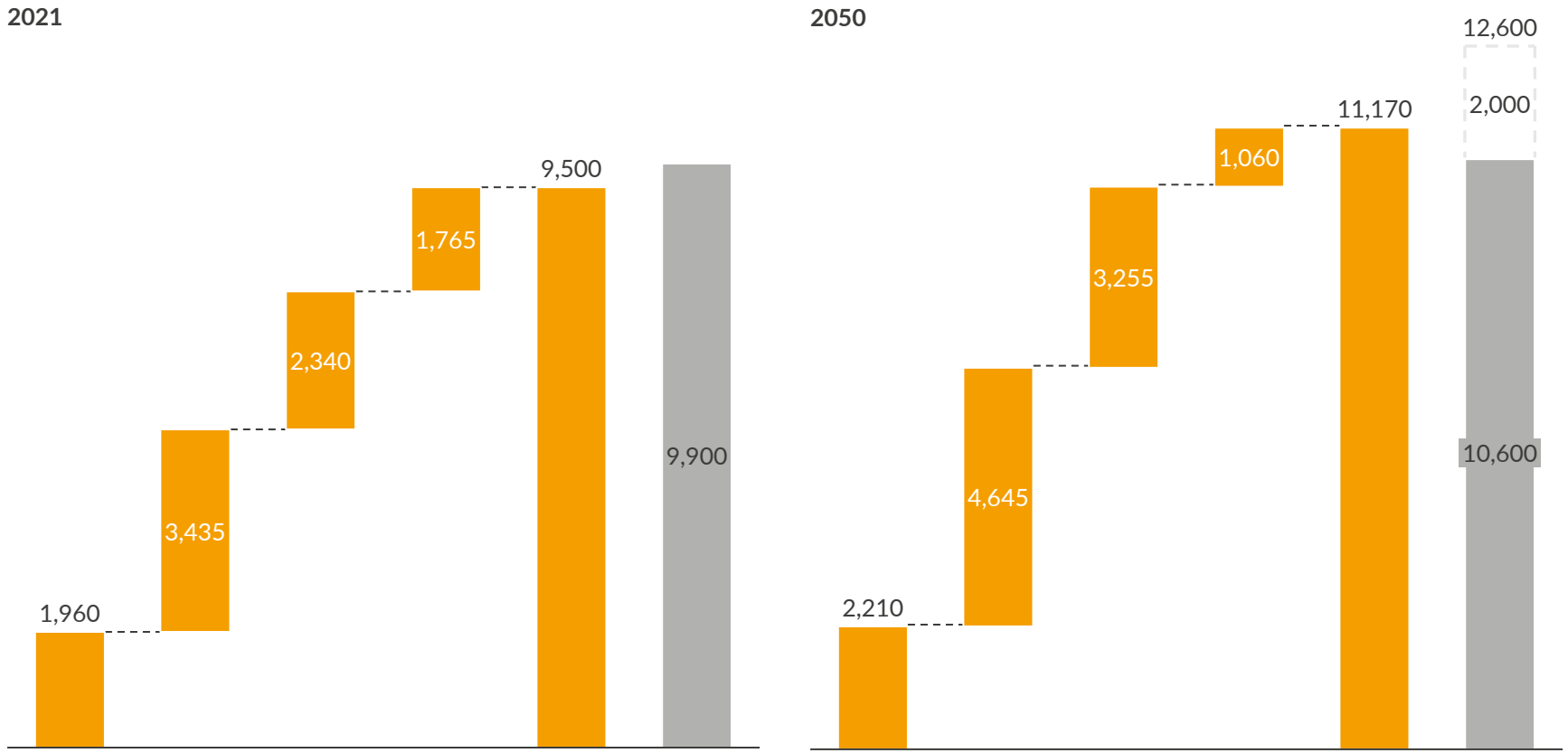
1) The depth of storage assets varies across each state, with utility scale battery assets ranging from 0.5-8.0 hours of duration and pumped hydro assets ranging from 6-175 hours

Source: Aurora Energy Research

- As thermal assets exit, firming is forecast to come from a variety of sources: pumped hydro, peaking assets, grid-scale and BTM battery (coordinated via VPPs), and interconnection to other states
- Aggregation of BTM storage (both community and household level) is forecast to become an increasingly important part of the firming generation mix
- Non-correlated renewable output between states (with additional accompanying transmission) is also a feature of a net zero NEM
- The duration of storage is forecast to increase over time as ancillary markets are saturated, policy signals change to support longer duration storage (e.g., 8hrs min duration for NSW storage LTESAs), and as retailers need longer duration assets to manage their demand profiles

Thermal assets are likely to be required in each state to ensure security of supply in 2050 in a net-zero scenario

Maximum half-hour gas output in a net-zero scenario for 2021 and 2050 (in central weather year)
MW



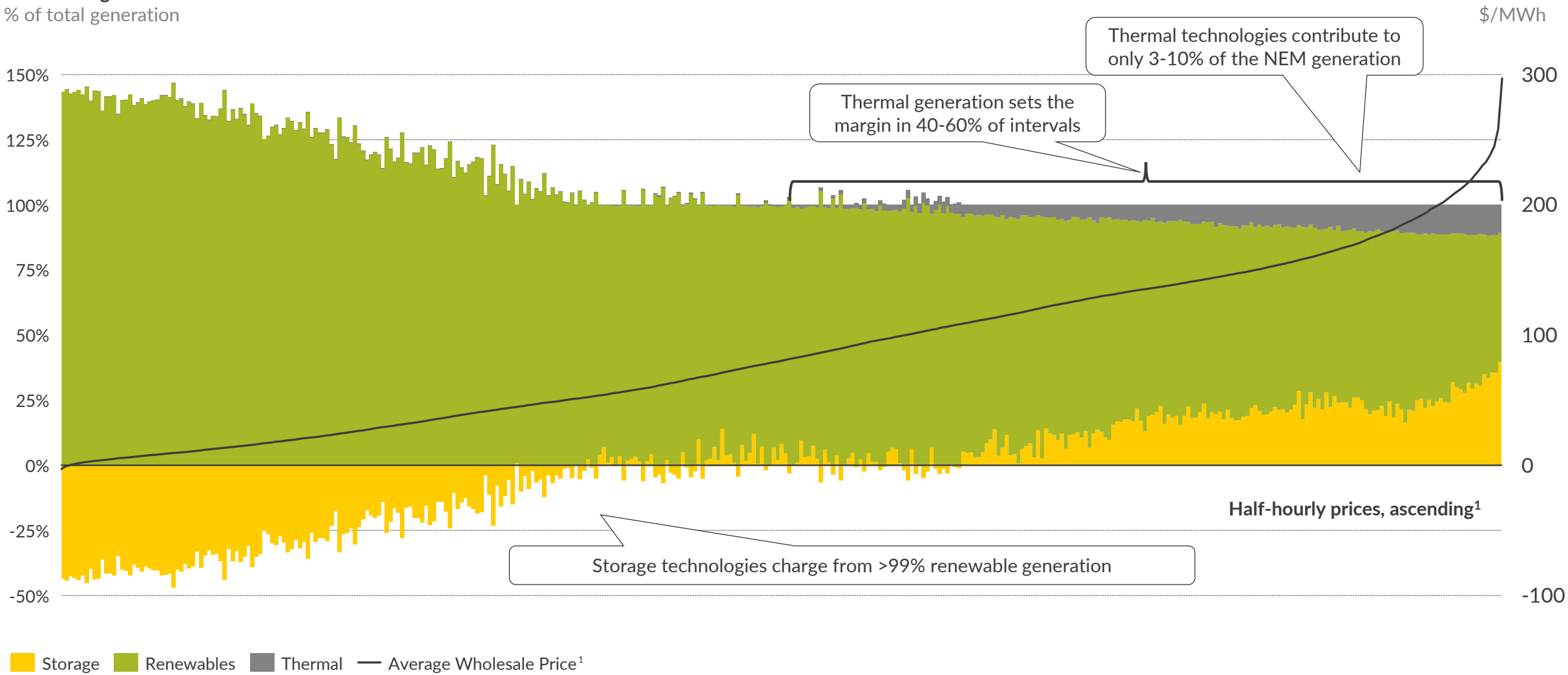
Annual generation, TWh	NSW	QLD	VIC	SA	Total
Low	1.5	2.6	2.5	2.0	8.6
High	3.9	8.8	6.9	3.3	23

- Aurora's long-term modelling indicates that there will be a role for longer-duration thermal assets that can meet demand in periods of extended low solar and wind output
- Overtime, average gas fleet capacity factors fall (from 15-20% in 2021 to 10-15% in 2050) ever as peak half-hour output remains at similar levels in average weather years. Average fleet capacity factors may be as high as 25% in low renewable output years
- Total capacity forecasts vary by scenario and weather years, but typically flexible peaking capacity is between 10.6 and 12.6 GW across all mainland NEM states

Thermal generators contribute to 3-10% of NEM generation in 2050, but are the marginal generation source 40-60% of the time in a net zero system

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NEM-wide generation in 2050
% of total generation



1) For presentation purposes the sorted half-hourly model outputs have been grouped into 48 intervals (i.e. 24 hours).

Source: Aurora Energy Research, AEMO Draft 2022 ISP report, Liberal Party - Australia's Long-Term Emissions Reduction Plan

Details and disclaimer

Australia's NEM outlook: 2022 ISP and trajectories to a net zero power system

24 March 2022

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Moderated Panel

Moderated panel members

Hugo Batten, Managing Director Aurora Energy Research

AURORA ENERGY RESEARCH

David Ogilvy, Partner L.E.K. Consulting

LEK

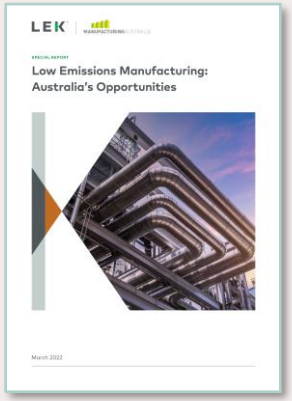
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Low Emissions Manufacturing – Australia's Opportunities

L.E.K. and *Manufacturing Australia* have examined the opportunities and hurdles facing Australian manufacturing in the global transition to a low emissions economy.



The full special report is available at:
www.lek.com/insights/sr/low-emissions-manufacturing-australias-opportunities

BREAK

always powering ahead

apa

Session 2



Agenda
Responsibly transitioning energy

Session 2

4. APA's investment considerations (20 mins)
Adam Watson, Chief Financial Officer

- Capital allocation framework
- Investing for sustainable growth

5. ESG – Video (10 mins)

- Introduction by Rob Wheals
- Video showcasing APA's progress with its ESG ambitions

6. Moderated Panel (40 mins)
Ben Pratt, General Manager Corporate Affairs

- Panel discussion – APA Senior Leaders

7. Wrap up – (5 mins)
Rob Wheals, Chief Executive Officer



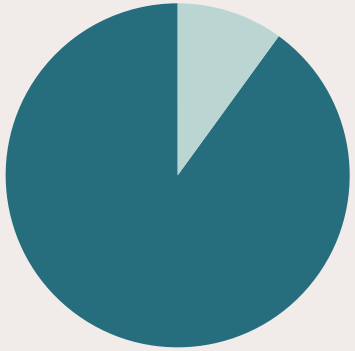
Adam Watson

Chief Financial Officer

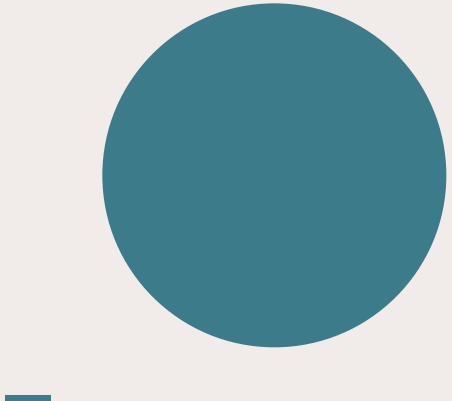
APA's Investment Considerations

APA is positively leveraged to rising inflation

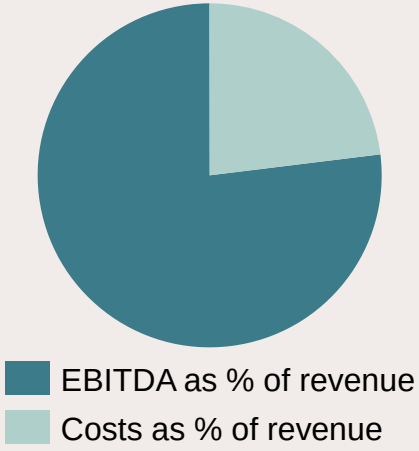
Majority of APA's revenue is indexed to inflation[1]



Drawn debt fully hedged with average maturity of 7 yrs[2]



High EBITDA margins[3]



1. Contracts within Australia that contain inflation linked escalations typically apply a formula based on either quarterly, bi annual or annual Australian Consumer Price Index (CPI). The Wallumbilla Gladstone Pipeline contract escalates annually, on 1 January each year, based on November US inflation. For the CY22 the increase due to US inflation will be 7.5%. 2. As at 31 December 2021. 3. For 1H22 excluding passthrough revenue and significant items.

A strong balance sheet to support future growth

$1.8b of liquidity

BBB / Baa2 ratings with stable outlook

FFO : Debt of 11.5% providing headroom to fund growth and support capital management (1)

No material debt refinancing obligations until FY25

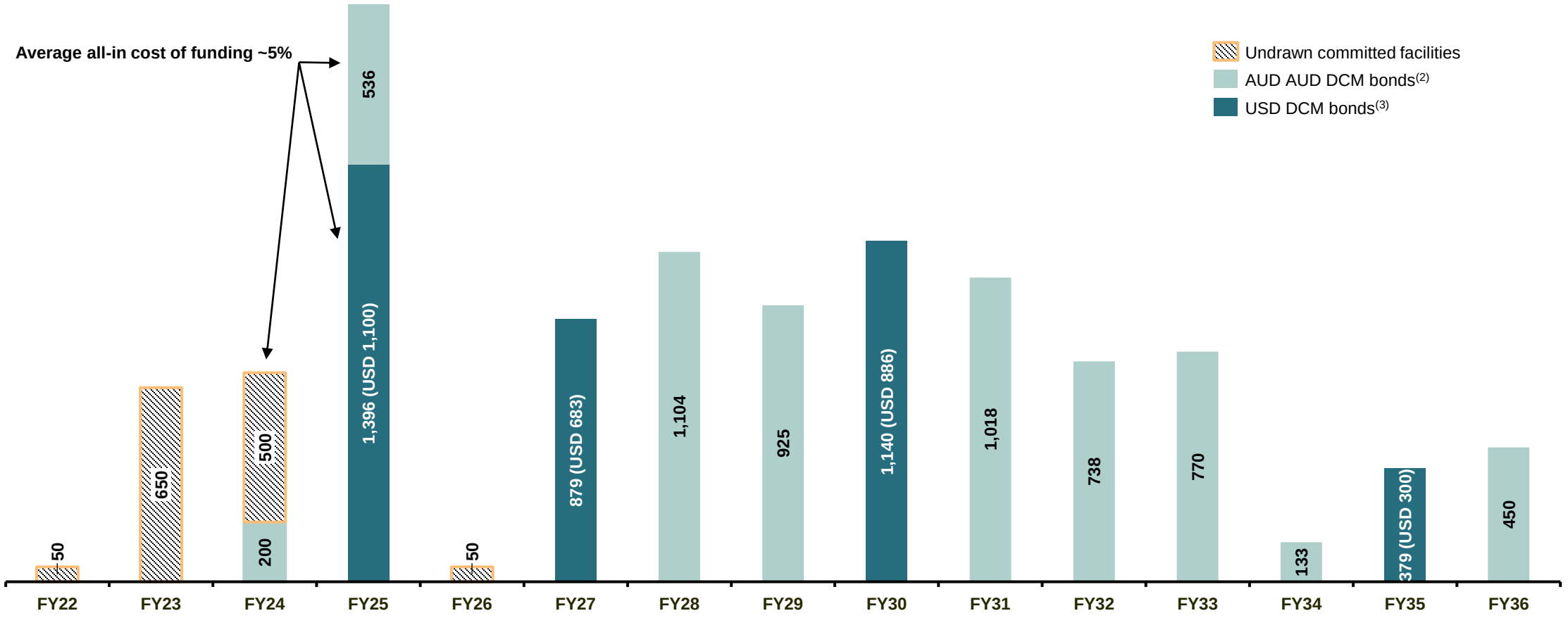
Average cost of debt 4.6% (1H21 5.2%)

Average maturity 7 years (1H21 6 years)

Drawn debt is 100% hedged

Note: All figures at 31 December 2021 unless otherwise specified.
We are in the process of amending our constitution to facilitate buy backs. Any assessment regarding the implementation of a buyback will be done with reference to our ability to create securityholder value.

Attractive debt maturity profile with no material refinancing obligations until FY25



Note: APA debt maturity profile as at 31 December 2021. AUD denominated obligations debt capital market (DCM) notes. USD denominated obligations translated to AUD at the prevailing rate at inception (US144A - AUD/USD=0.7879, Euro and Sterling - AUD/USD=0.7772).

Capital allocation framework ensures the ongoing focus on maximising securityholder value

Sources	Uses	Approach

Operating cash flow
Liquidity
Debt & Equity funding
$1.8b of liquidity(1)
Significant credit metric headroom
Baa2/BBB credit ratings
FFO : Net Debt 11.5%
	Stay In Business Capex	• SIB capex to ensure safe reliable operations
		• Consistently growing distributions; targeting 60-70% of free cash flow
		• Enhancement of systems and processes to drive long term operational efficiency and sustainability
		• Growth funding considerations:
		  • Creation of long-term value
		  • Hurdle rates (IRR's) to accommodate through the cycle views on cost of funding
		  • Risk adjusted hurdle rates (IRR's) for different asset classes
		  • Risk adjusted cash payback (years) requirements for limited or defined life investments
		  • Net Zero ambition
		  • Commitment to credit ratings (FFO : Net Debt)
		  • Balancing growth and the desire to consistently grow distributions
		• Various capital management tools to respond to changing market conditions and enhance securityholder value
		  • Liability Management (early refinancing of debt)
		  • Distribution Reinvestment Plan
		  • Security Buy Backs

	Distributions	
	Technology Investments	
	Growth Capex	
	M&A	
	Capital Management	

1. At 31 Dec 2021

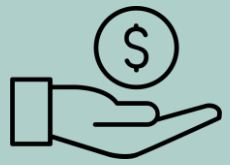
Investing in capability to ensure growth is responsible and sustainable

Organic growth opportunities



- Pipelines – new and expansion
- Contracted and regulated electricity transmission
- Contracted renewable power generation
- Microgrids
- Hydrogen

Investing in our business



- Business development
- Community and customer engagement
- Systems and processes
- Talent and leadership capability
- Risk management and governance

Rob Wheals

CEO & Managing Director

ESG at APA

Our ESG framework

Build



Priority issues to be built into strengths

- Climate Change Transition & Risk
- Community & Social Performance
- First Nations People

Accelerate



Fundamental issues which require strengthening

- Environmental management
- Heritage management

Maintain & Evolve



Existing plans and processes to evolve via ESG lens

- Safety, Health & Wellbeing
- Diversity & Inclusion
- People & Culture
- Governance & Risk Management

ESG Video

Moderated Panel

Moderated panel members



Ben Pratt (Moderator)
Corporate Affairs



Julian Peck
Commercial and Strategy



Caroline Beattie
Hydrogen and Future Fuels



Darren Rogers
Operations and Asset Management



Amanda Cheney
Legal and Company Secretariat



Megan Saussey
Net Zero and Climate



Ross Gersbach
North American Development



Jane Thomas
People Safety and Culture



Kevin Lester
Infrastructure Development



Adam Watson
Finance

Rob Wheals

CEO & Managing Director

Wrap-up

APA is playing a key role in the transition of Australia's energy system

Infrastructure in place to deliver reliable, secure and affordable energy

- Reliable delivery of gas to residential and commercial users, gas generators and industrial customers
- Expanding the East Coast Grid to bring gas into southern markets and alleviate risk of supply shortages
- Building energy solutions such as the NGI to support resources and industrial growth along the west coast

Agnostic to the energy transition pathways given exposure to major new energy technologies

- Supporting electrification by investing in electricity transmission
- Decarbonising the economy with renewable energy zones
- Supporting customers with their decarbonisation ambitions with renewable energy and battery storage microgrids
- Participating in hydrogen projects via our Pathfinder program

Australia's leading Australian owned energy infrastructure business

Strong balance sheet, investment grade credit metrics and low cost of capital

Deep experience in developing, building and operating energy infrastructure

Proven capabilities in environmental management and community engagement

Delivering our purpose to strengthen communities through responsible energy

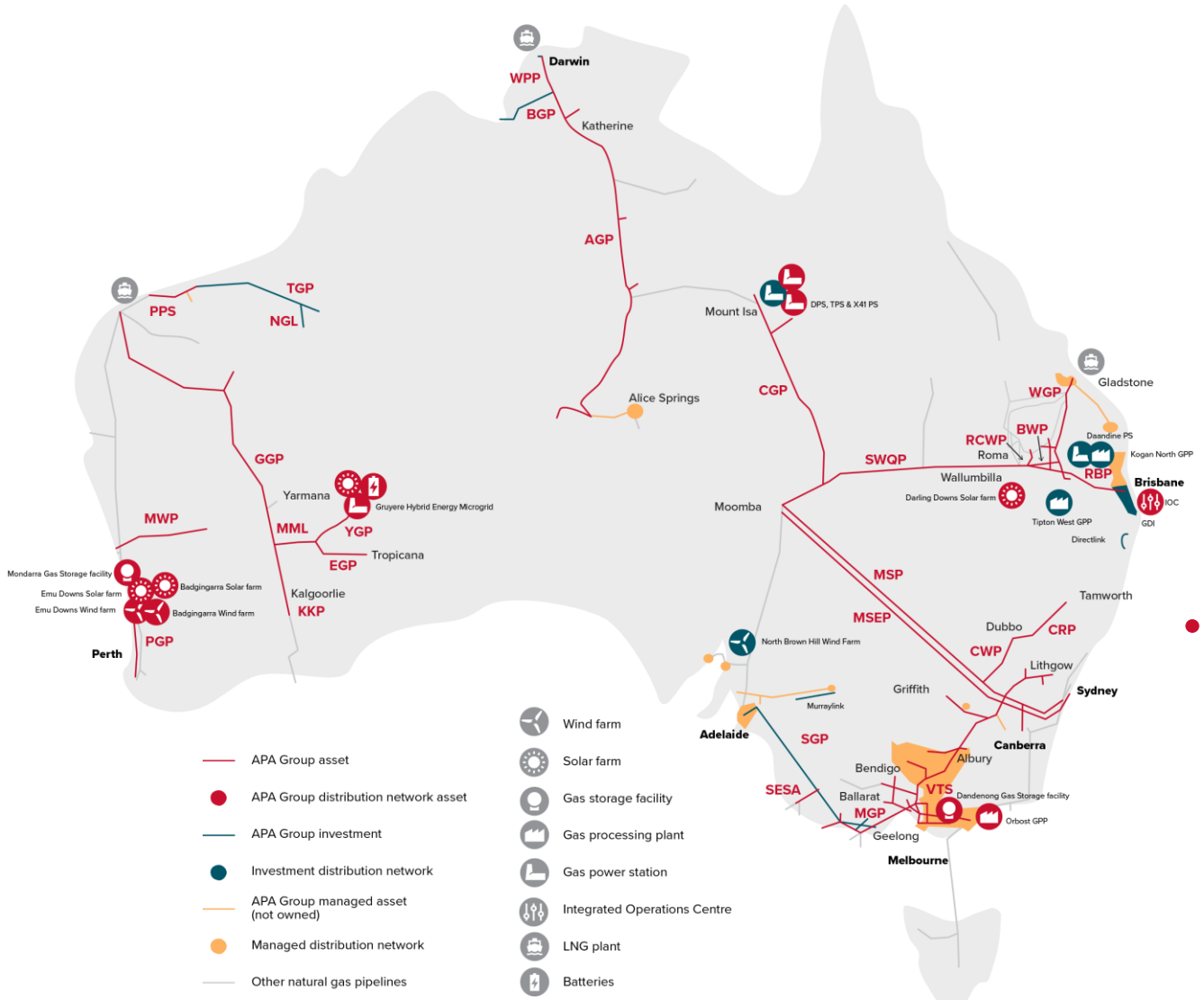
Appendix

Existing APA operational footprint diversified across a range of energy infrastructure assets

Assets and Investments Glossary

AGP	Amadeus Gas Pipeline
BGP	Bonaparte Gas Pipeline
BWSF	Badgingarra Wind and Solar Farms
BWP	Berwyndale Wallumbilla Pipeline
CGP	Carpentaria Gas Pipeline
CRP	Central Ranges Pipeline and network
CWP	Central West Pipeline
DDSF	Darling Downs Solar Farm
DPS & LPS	Diamantina & Leichhardt Power Stations
EGP	Eastern Goldfields Pipeline
EDWSF	Emu Downs Wind and Solar Farms
EP	Ethane Pipeline
GGP	Goldfields Gas Pipeline
GHEM	Gruyere Hybrid Energy Microgrid (Microgrid under construction)
IOC	Integrated Operations Centre
KKP	Kalgoorlie Kambalda Pipeline
MWP	Mid West Pipeline
MGP	Mortlake Gas Pipeline
MGPSF	Mondarra Gas Storage and Processing Facility
MSP	Moomba Sydney Pipeline
NGP	Nifty Gas Pipeline
NGI	Northern Goldfields Interconnect
OGPP	Orbost Gas Processing Plant (under commissioning)
PGP	Parmelia Gas Pipeline
PPS	Pilbara Pipeline System
RBP	Roma Brisbane Pipeline
RCWP	Reedy Creek Wallumbilla Pipeline
SESA	South East South Australia Pipeline
SGP	SEA Gas Pipeline
SWQP	South West Queensland Pipeline
TGP	Telfer Gas Pipeline
VTS	Victorian Transmission System
WGP	Wallumbilla Gladstone Pipeline
WPP	Wickham Point Pipeline
X41	X41 Power Station
YGP	Yamarna Gas Pipeline

Note: Agreement in place to sell MWP



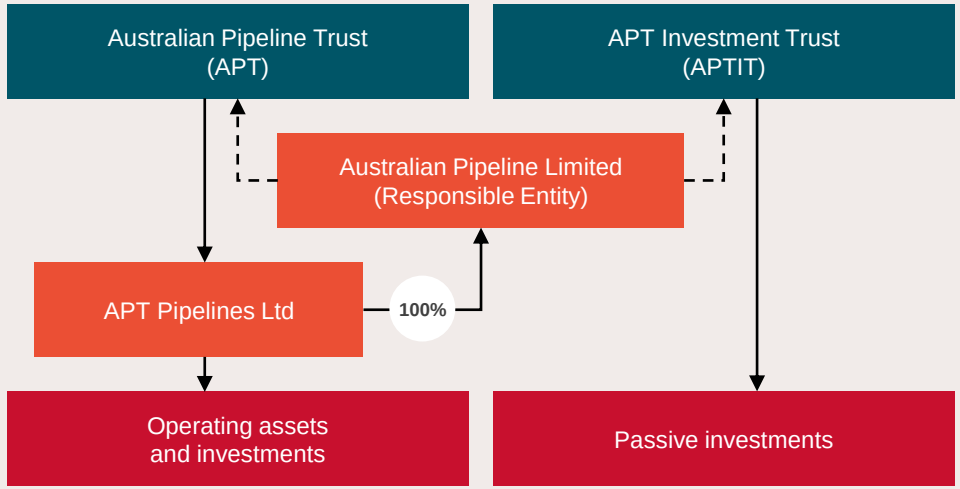
Group structure

- APA Group is **listed** as a **stapled structure** on the **Australian Securities Exchange** (ASX:APA)
- APA is comprised of two registered managed investment schemes:
  - Australian Pipeline Trust (ARSN 091 678 778)
  - APT Investment Trust (ARSN 115 585 441) is a pass-through trust
- Australian Pipeline Limited (ACN 091 344 704) is the responsible entity of APT and APTIT
- The units of APT and APTIT are stapled and must trade and otherwise be dealt with together
- APT Pipelines Limited (ABN 89 009 666 700), a company wholly owned by APT, is APA's borrowing entity and the owner of the majority of APA's operating assets and investments

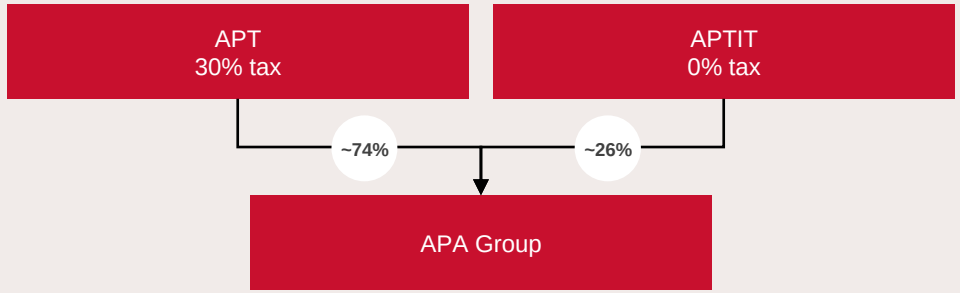
Financial reporting segments within APT

- Energy Infrastructure: APA's wholly or majority owned energy infrastructure assets
- Asset Management: provision of asset management and operating services for the majority of APA's investments
- Energy Investments: interests in energy infrastructure investments

Group Structure



Tax Structure



always powering ahead

apa

Thank you



For further information

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