



23 March 2023

The Manager  
Company Announcements Office  
Australia Securities Exchange

Dear Manager,

**WESCEF INVESTOR BRIEFING AND SITE TOURS**

Following is a presentation that will be given as part of an investor briefing and operational site tours of the Wesfarmers Chemicals, Energy and Fertilisers business on Thursday 23 March 2023, at 11:30am AWST / 2:30pm AEDT.

This briefing will be webcast and is accessible via our website at [www.wesfarmers.com.au](http://www.wesfarmers.com.au).

Supporting videos that provide an operational overview of the WesCEF businesses are available at <https://www.wesfarmers.com.au/WesCEF-briefing-MAR23>.

Yours faithfully,

A handwritten signature in blue ink that reads "V. Robinson".

**Vicki Robinson**  
Executive General Manager  
Company Secretariat

This announcement was authorised to be given to the ASX by the Wesfarmers Disclosure Committee.

23 MARCH 2023

Wesfarmers Chemicals, Energy & Fertilisers

# Investor briefing and site tours



Wesfarmers Chemicals  
Energy & Fertilisers

# Introduction and Overview

Ian Hansen  
Managing Director WesCEF





## **ABORIGINAL ENGAGEMENT**

*Relationships, Respect & Opportunities*

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I acknowledge the traditional custodians of the land we are meeting on, the Whadjuk Noongar people.

I acknowledge and respect their continuing culture and the contribution they make to the life of this region.

# Schedule

Thursday 23 March 2023

## Presentation



- Overview of WesCEF businesses
  - Operations
  - Strategies and competitive advantages
  - Key performance drivers
- Climate opportunities
- Opportunities for growth
- **Question and answer sessions**

## Kwinana Site Tour



- Tour of Kwinana production facilities
  - Ammonia and Ammonium Nitrate (AN)
  - Fertilisers
  - Sodium Cyanide
  - Kleenheat LPG and LNG
  - Covalent Lithium refinery site

Friday 24 March 2023

## Mt Holland Site Tour



- Operational tour of Mt Holland site
  - Mine pit lookout
  - Concentrator construction site
  - Village walk through

# Presentation agenda

Item	Presenter	Role	Page
Introduction and Overview	Ian Hansen	Managing Director, WesCEF	2
Financial, HSEQ and People	Alex Willcocks	Chief Financial Officer, WesCEF	15
Decarbonisation	Mussaret Nagree	GM Climate Opportunities	23
Ammonia and Ammonium Nitrate	Leigh Meyers	GM Ammonia/Ammonium Nitrate	29
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Q&A – WesCEF			
Lithium	Ian Hansen	Managing Director, WesCEF	59
Covalent Lithium	Ryan Hair Ross Martelli	Chief Executive Officer, Covalent Project Director, Covalent	63
Q&A – Lithium/Covalent			

# WesCEF overview

- A portfolio of complementary businesses with clear competitive advantages
- Safe operations and sustainable management
- Market-leading operating performance driven by a focus on reliability and continuous productivity improvements
- A proven history of sensible, timely deployment of major capital to meet market needs and deliver shareholder value
- A track record of successful expansion through incremental investment with significant further opportunities providing a pipeline for growth
- Major project and chemical processing experience that can be leveraged into emerging sectors (e.g. lithium)
- Technically skilled workforce across a breadth of disciplines

# WesCEF Executive Leadership Team

Presenting today



**Ian Hansen**  
Managing Director



**Alex Willcocks**  
Chief Financial Officer



**Julie Watson**  
General Manager  
HSEQ &  
Technical Services



**Joe Perkins**  
General Manager  
Human Resources  
& Corporate Affairs



**Sheldon Renkema**  
General Manager  
Business  
Development



**David Zacher**  
General Manager  
Major Projects



**Mussaret Nagree**  
General Manager  
Climate  
Opportunities



**Leigh Meyers**  
General Manager  
Ammonia /  
Ammonium Nitrate



**Barney Jones**  
General Manager  
Chemical JVs &  
AV / ModWood



**Mark Scatena**  
General Manager  
Fertilisers



**Tanya Rybarczyk**  
General Manager  
Kleenheat



**Stephen Cowle**  
General Manager  
Minerals



## Covalent leadership – WesCEF secondees



Ryan Hair  
Chief Executive  
Officer



Ross Martelli  
Project Director



Ric Colgan  
Chief Financial  
Officer



Albert Romano  
General Manager  
Operations Refinery



Cameron Levitzke  
General Manager  
Commercial

Presenting today

Plus others in  
engineering,  
commercial and  
technical roles

## Wesfarmers representatives on the Covalent Management Committee



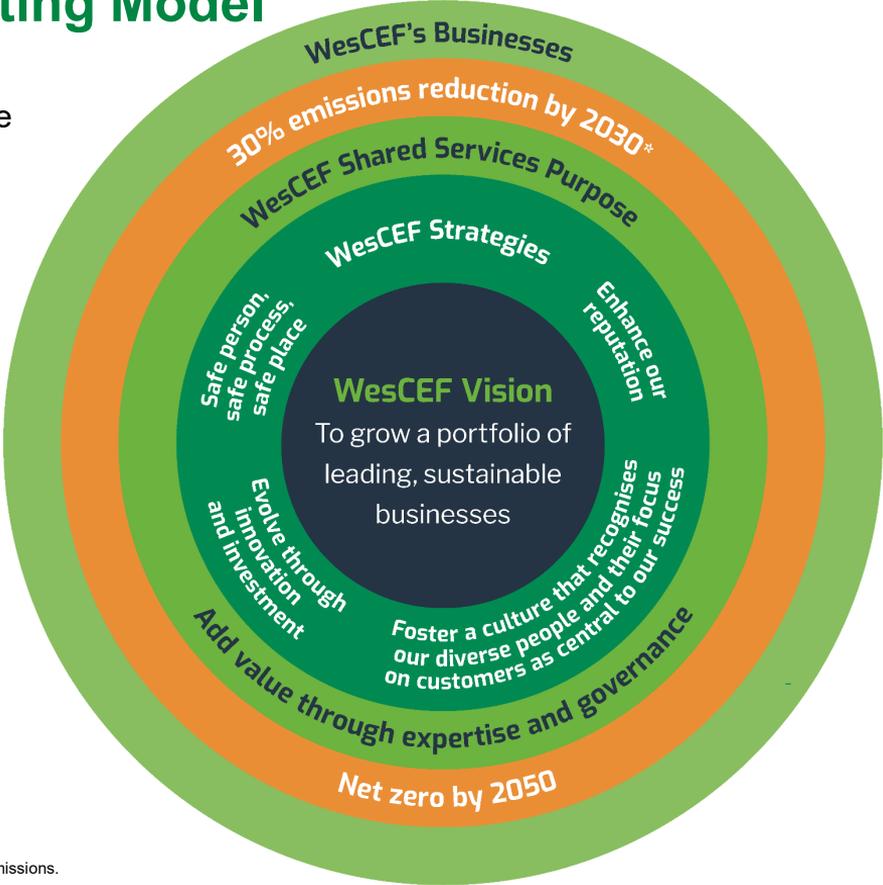
Ian Hansen  
WesCEF  
Managing Director



Aaron Hood  
Wesfarmers  
Executive General Manager  
Business Development

# WesCEF Operating Model

defines WesCEF’s vision and how it contributes to the overarching Wesfarmers objective.



\*30% is relative to 2020 baseline. Refers to Scope 1 and 2 emissions. See slide 24 for Net Zero 2050 assumptions.



# Strategic position and focus

	Chemicals	Energy	Fertilisers	Lithium
				
Description	Production, sales and distribution of Ammonia, AN, Sodium Cyanide and specialty products.	Production, sales and distribution of LPG and LNG, retailer of natural gas and electricity.	Import, production, sales and distribution of fertilisers and agricultural services.	Management company of JV with SQM (50:50). Developing an integrated battery grade lithium hydroxide project. Product marketed separately by JV partners.
Competitive position	<ul style="list-style-type: none"> <li>#1 WA AN</li> <li>#1 WA Sodium Cyanide</li> <li>#1 Australia PVC distribution</li> </ul>	<ul style="list-style-type: none"> <li>#1 WA LPG</li> <li>#1 WA LNG (domestic)</li> <li>#2 WA natural gas retail</li> </ul>	<ul style="list-style-type: none"> <li>#1 WA Fertiliser</li> </ul>	<ul style="list-style-type: none"> <li>Strong ESG credentials</li> <li>High quality product</li> <li>Security of supply</li> </ul>
Competitive advantage	<ul style="list-style-type: none"> <li>Operational excellence delivering reliable supply</li> <li>Suite of contracts with high quality customers with raw material pass through protection</li> </ul>	<ul style="list-style-type: none"> <li>Trusted local brand</li> <li>Customer service</li> <li>Local manufacturing capability</li> <li>Synergistically located and large scale key infrastructure</li> </ul>	<ul style="list-style-type: none"> <li>Expertise-based value add services</li> <li>High capacity infrastructure</li> <li>Local manufacturing</li> </ul>	<ul style="list-style-type: none"> <li>Globally significant, high-quality hard rock lithium deposit</li> <li>Partnered with experienced lithium hydroxide producer</li> </ul>
Customers	<ul style="list-style-type: none"> <li>Major mining customers</li> <li>Major explosives manufacturers</li> <li>Large global and domestic gold miners</li> </ul>	<ul style="list-style-type: none"> <li>Households</li> <li>Resources</li> <li>Commercial</li> <li>Industrial</li> <li>Leisure</li> <li>Power generation</li> </ul>	<ul style="list-style-type: none"> <li>WA growers</li> <li>Elders</li> <li>Independent retailers</li> </ul>	<ul style="list-style-type: none"> <li>Building long term customer relationships that value ESG credentials</li> <li>Global EV manufacturers</li> </ul>

NB: a glossary of terms and definitions of acronyms is included on page 79.

# WesCEF's national footprint<sup>1</sup>

**1. Murdoch**  
WesCEF Corporate Office,  
Kleenheat Corporate Office  
and Customer Service Centre

**2. Kwinana**  
CSBP, AGR, Kleenheat,  
Covalent lithium refinery

**3. Geraldton, Bunbury, Albany and Esperance**  
Fertiliser production and distribution centres at  
major WA ports, servicing the agricultural sector

**4. Mt Holland**  
Covalent lithium mine  
and concentrator

**5. Darwin**  
Kleenheat import  
and distribution

- 1,500+ employees
- 16 manufacturing plants
- 4 major hazard facilities
- 150+ chemical customers
- 4,000+ fertiliser customers
- 270,000+ energy customers
- Strong community engagement

**6. Moura**  
QNP joint venture

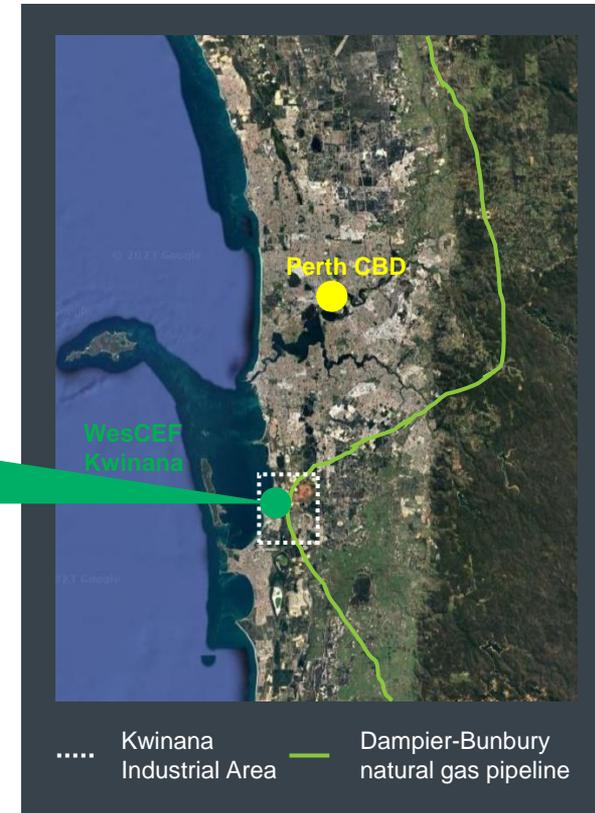
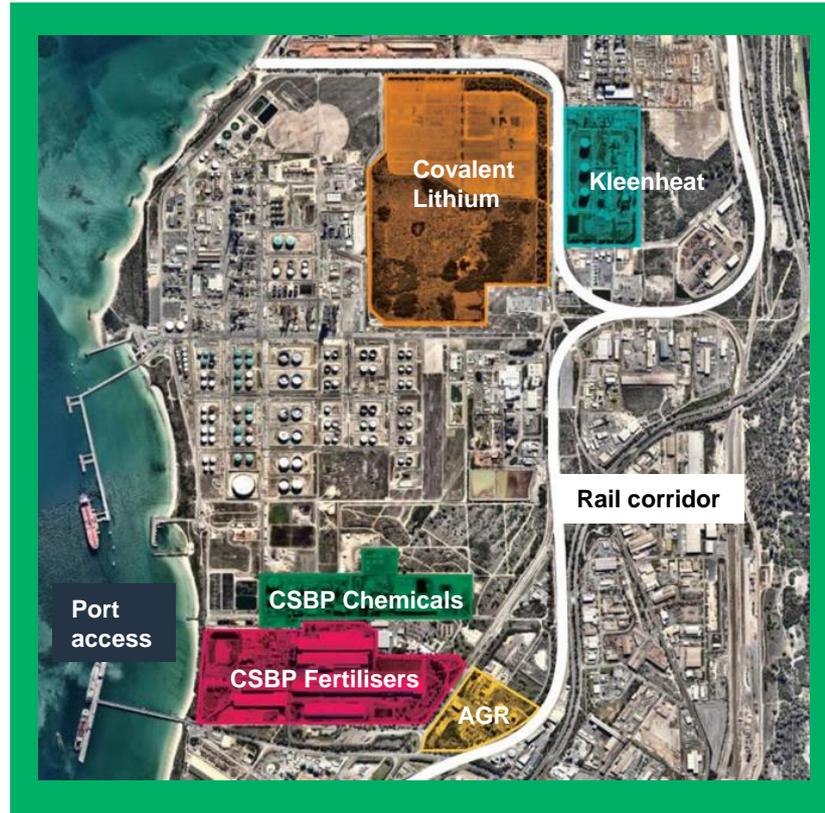
**7. Campbellfield**  
Australian Vinyls and  
Modwood

1. Statistics exclude non-controlled joint ventures (i.e. QNP and Covalent).

# Integrated Kwinana operations with access to key infrastructure

## Critical Kwinana infrastructure:

- Direct access to natural gas
- Priority port access
- Rail corridor connecting to eastern goldfields
- Major road connections
- Co-located facilities enabling sharing of talent and expertise

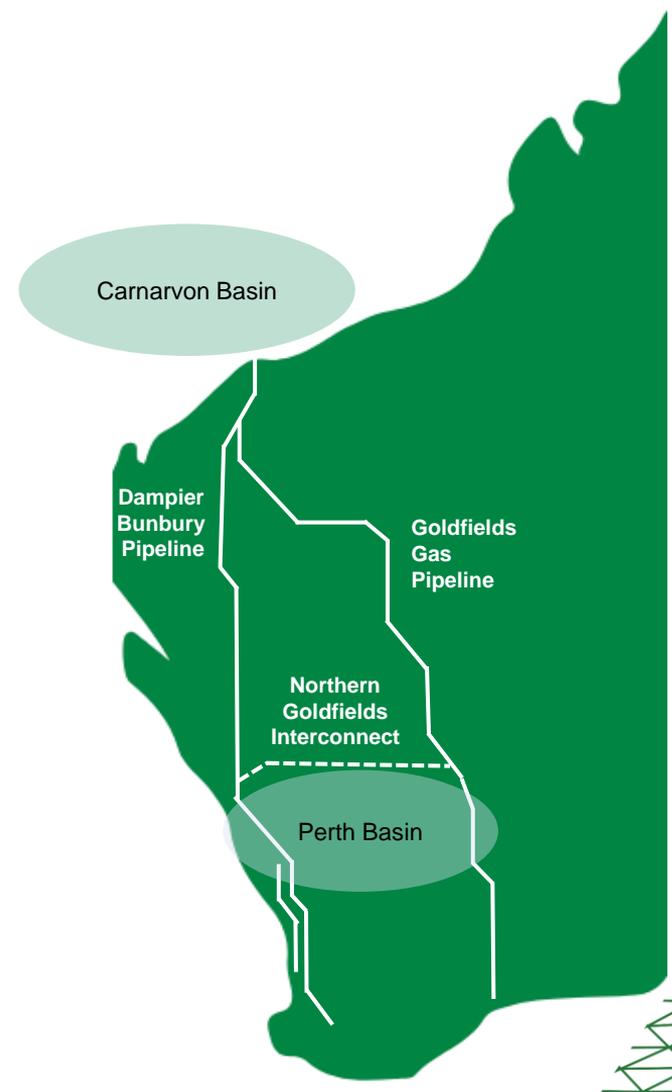


# Natural gas in Western Australia

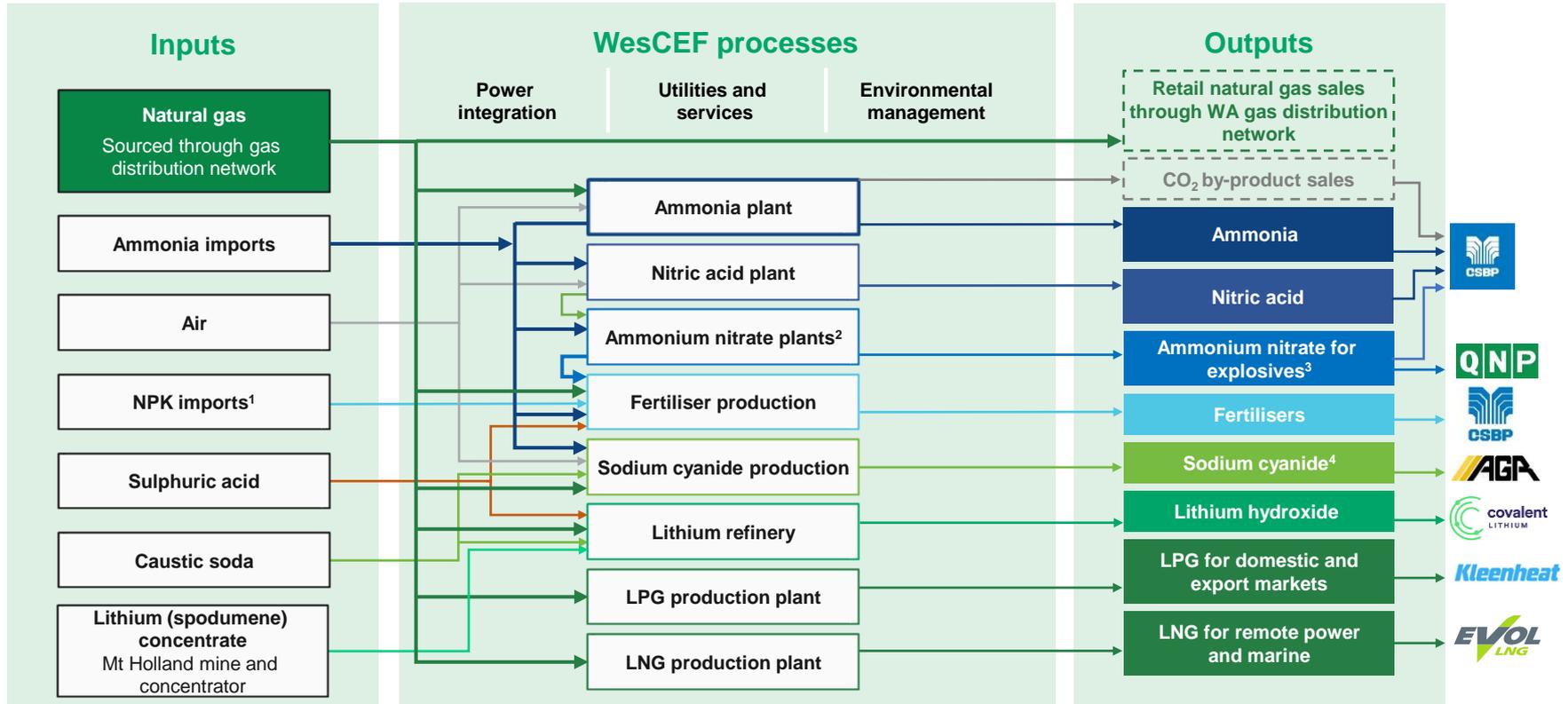
- The Western Australian gas market is disconnected from the east coast
  - The WA Domestic Gas Policy requires domestic sale equivalent to 15% of LNG production from each LNG export project over its life
- The WA market has traditionally been supplied from domestic and LNG export projects from the Carnarvon Basin
  - Recent exploration activity has been undertaken and several projects are under development in the Perth Basin
  - Gas demand in WA is expected to increase as coal power plants are retired and use of gas in electricity generation increases

## Natural gas at WesCEF

- WesCEF uses natural gas as a chemical feedstock for manufacturing, energy source for operations and retail product through Kleenheat
- Established relationships with all major WA gas producers, under gas supply contracts that are typically 1-5 years in length
- Storage capacity enables effective management of supply interruptions
- Through CSBP, WesCEF has an 11-year, 100 petajoule gas supply agreement with Strike Energy
  - The supply agreement is subject to development of the West Erregulla project in the Perth Basin and would provide 25 terajoules/day



# Divisional integration



1. Nitrogen, phosphorus and potassium imports.

2. Includes ammonium nitrate solution / emulsion plants and a prilling plant.

3. Includes Queensland Nitrates, 50% owned joint venture in Queensland. Distributes AN solution, emulsion and prill.

4. Sodium cyanide solution to WA markets and solids to export markets.

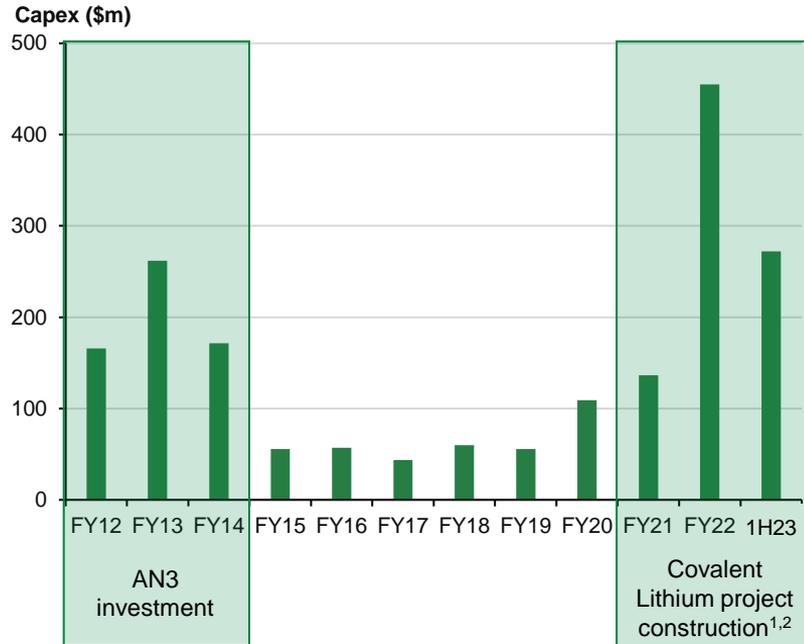
# Financial, HSEQ and People

**Alex Willcocks**  
Chief Financial Officer  
WesCEF

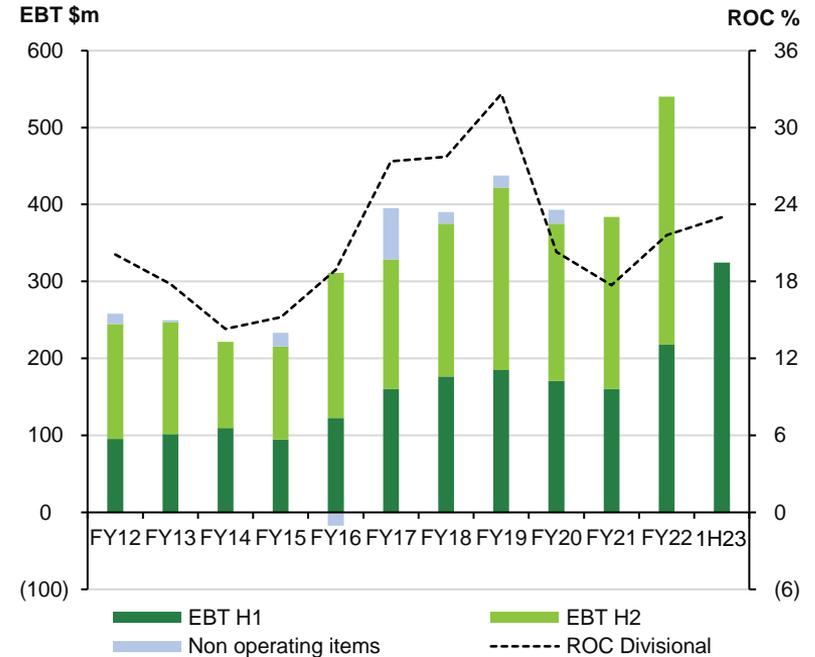


# Track record of capital deployment to meet market needs and deliver shareholder value

## Cash capital expenditure



## Divisional EBT and ROC<sup>3</sup>

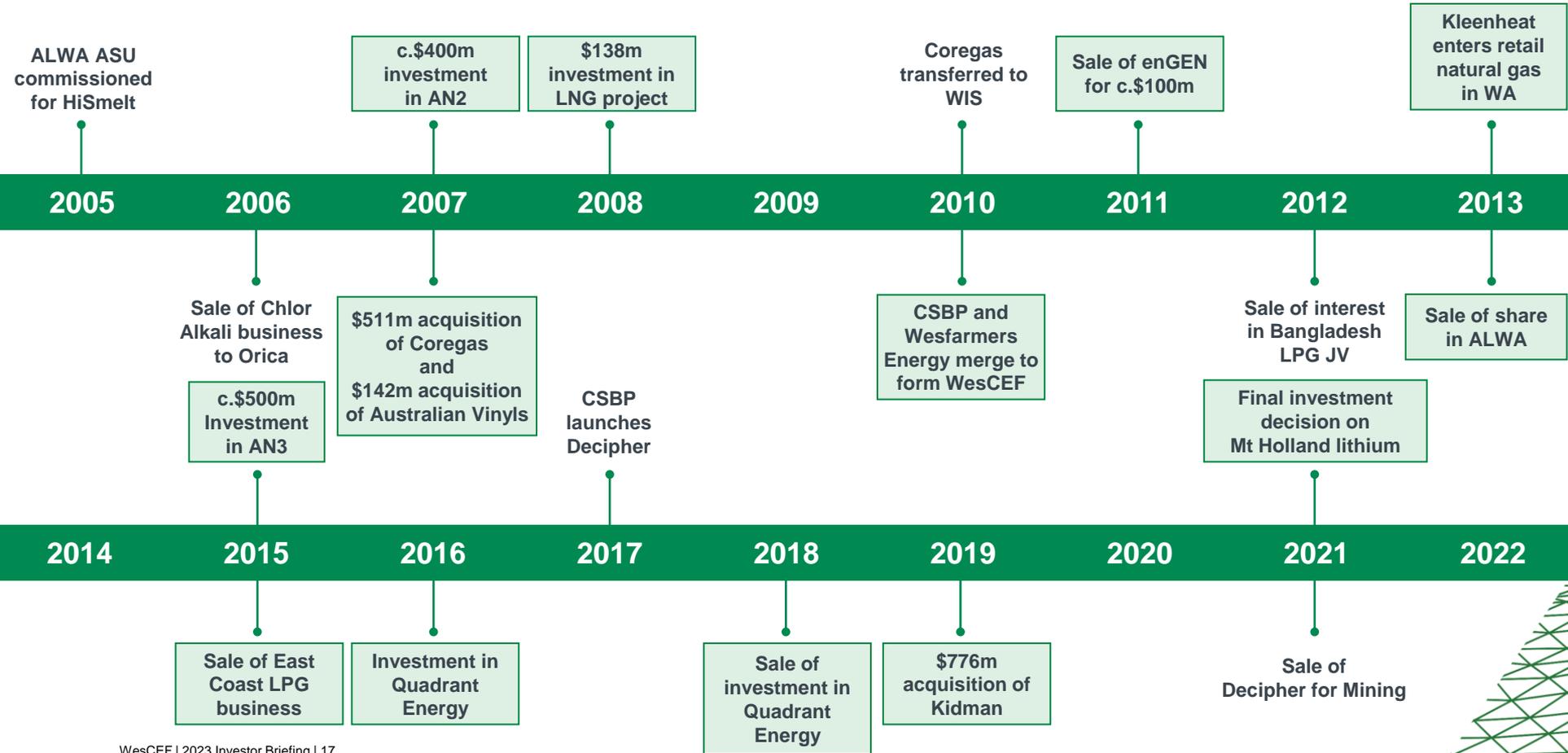


1. Includes capitalised interest related to the Covalent lithium project.

2. Excludes \$776m acquisition of Kidman Resources in FY20.

3. ROC is calculated as EBT / capital employed, where capital employed excludes right-of-use assets and lease liabilities.

# History of portfolio management and investment



# Opportunities for further investment support long-term growth

## Pipeline of major project opportunities

### Kwinana Ammonia expansion

- Increase ammonia production capacity at Kwinana from 270ktpa to c.570ktpa, displacing imported volume
- Currently with WA EPA for approval

### Sodium Cyanide expansion

- Increase production capacity from 95ktpa to c.130ktpa
- Provide additional volume for export
- Expansion study nearing completion

### Nitric Acid Ammonium Nitrate (NAAN) debottlenecking

- Increase production capacity from 825ktpa to c.945ktpa
- ~40ktpa opportunity in each of the three NAAN plants
- Engineering design underway

### Covalent Lithium project

- Mine and concentrator expansion study underway
- Consideration of refinery capacity expansion to be undertaken following completion of commissioning

### Dongara Carbon Capture and Storage and blue ammonia concept study

- Early-stage feasibility study in partnership with Mitsui & Co

## Supported by strong enablers



Culture of financial discipline



Business development and project evaluation capabilities



Focus on timeliness of projects to meet market needs (underwriting with feedstock/offtake as appropriate)



Engineering and project delivery expertise



Investment in new systems and processes

# Investing in our people

## Culture

A culture that supports diversity and inclusivity, with a focus on customers and the overarching Wesfarmers objective.

## Leadership

Investing in leadership development from frontline supervisors to the executive team.



## Training and development

Developing and maintaining key capabilities and competencies for operational and professional employees.

## Contractors

Onboarding over 2,000 contractors annually to safely undertake plant maintenance and shutdown.

## Talent pipeline

Investing in apprenticeships, traineeships, and programs for vacation, cadet, graduate and work experience students.

## Depth of capability

Key talent and skills bench-strength to facilitate major projects and M&A activities.



# Supporting Kwinana, Perth and regional communities



Clontarf Academy



Hockey WA regional partnership



Telethon Community Cinemas



Supporting STEM education



Rockingham Regional Environment Centre



Perth Fringe Festival

# Safe Person, Safe Process, Safe Place



**Occupational Health and Safety**  
Manages potential impact on workers

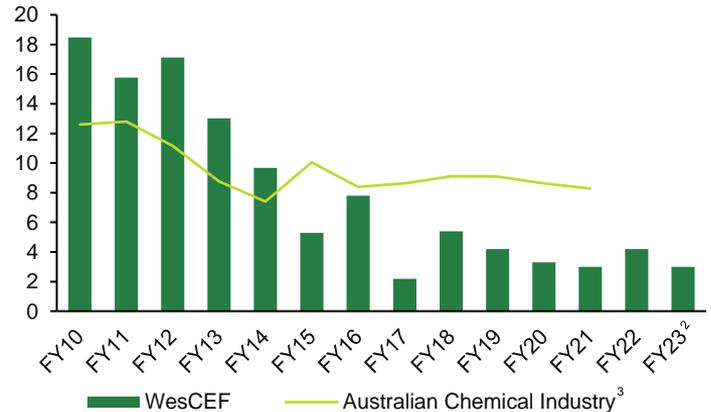


**Process Safety**  
Manages potential impact on workers, assets and the wider community

- Reduce serious injury risk through the implementation of a high potential (HiPo) risk management program, focusing on effective critical controls.
- Proactively identify and understand process safety hazards and work to eliminate or manage the risk appropriately.
- Embed psychosocial wellbeing as an accepted and sustainable health and safety principle.
- Provision of high-quality safety and operational training and education.
- Continue to focus on keeping people fit for work, through good job design, proactive ergonomic assessments, hygiene monitoring, and periodic health assessments.

## Ongoing improvements in safety performance

Total Recordable Injury Frequency Rate (TRIFR)<sup>1</sup>



1. TRIFR is the number of lost time injuries and medical treatment injuries per million hours worked.  
2. Rolling 12-month figures to December 2022.  
3. Chemical industry benchmark data latest publication is FY21.

# Environmental responsibility

## Focus on managing environmental responsibility by:

- Ongoing focus on greenhouse gas reductions
- Further increasing energy efficiency and heat recovery
- Monitoring and minimising emissions
- Addressing legacy waste management and land remediation
- Diversifying water sources and minimising water usage
- Ensuring effective wastewater management on site through optimising wetlands treatment
- Identifying and managing environmental risks within projects
- Implementing a data analytics and management strategy to streamline data collection and ensure accuracy
- Maximising recycling, minimising waste and identifying circular economy opportunities



# Decarbonisation

**Mussaret Nagree**  
General Manager  
Climate Opportunities



# WesCEF's 2050 Net Zero Roadmap

SCOPE 1 + 2 EMISSIONS



5.5MT cumulative abatement in Phase 1 (2012 – 2020)

**2020**  
**40%**  
Reduction

Relative to unabated 2020 baseline



Upgrade abatement technologies

**2030**  
**30%**  
Reduction

Relative to abated 2020 baseline



Renewable electricity



**SCOPE 3 PATHWAY AND ROADMAP EVOLUTION**



Pilot of carbon capture utilisation and storage and green hydrogen



Evaluate emerging decarbonisation solutions



**of WesCEF's**  
Scope 1 & 2 emissions have abatement potential

**2050**  
**NET ZERO**



Offset residual emissions



Large scale green hydrogen



Large scale carbon capture utilisation and storage

PHASE ONE

PHASE TWO

PHASE THREE <sup>1</sup>

ENABLERS

## CLIMATE GOVERNANCE

- Climate Opportunities Executive
- Creation of dedicated Climate Opportunities Team

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## PARTNERSHIPS

- Suppliers, customers, industry and researchers to deliver decarbonisation across value chains

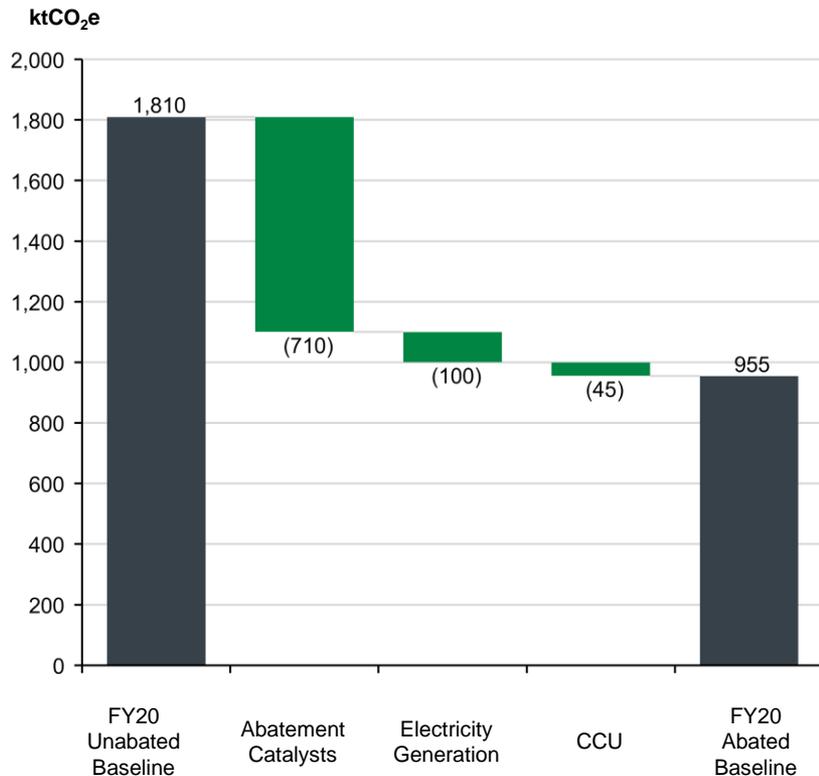
## TRANSPARENCY

- All material Scope 3 categories estimated
- Sharing data across value chains

1. Over the period to 2050, WesCEF assumes that new technologies (such as green ammonia and hydrogen) continue to advance and that they become commercially viable and capable of operating at scale well before 2050 and that Government policy is supportive of climate action while maintaining competitiveness of industry. Quality offsets may be used to offset any residual emissions in 2050.

# Phase 1: Nitrous oxide abatement, electricity generation and CCU

## FY20 Scope 1 and 2 emissions



## Ongoing emissions management initiatives

### Abatement catalysts in nitric acid plants



In 2012 WesCEF commenced the installation of secondary catalysts in its nitric acid plants. The catalysts turn nitrous oxide into oxygen and nitrogen

- Delivered a step shift reduction in AN emissions intensity from >1 to ~0.25 tCO<sub>2</sub>e/t AN
- Phase 1 cumulative abatement of 5.5 mtCO<sub>2</sub>e

### Electricity generation



- Long history of capturing heat produced by manufacturing plants to generate electricity
- CSBP Kwinana site currently generates 75% of its own electricity needs

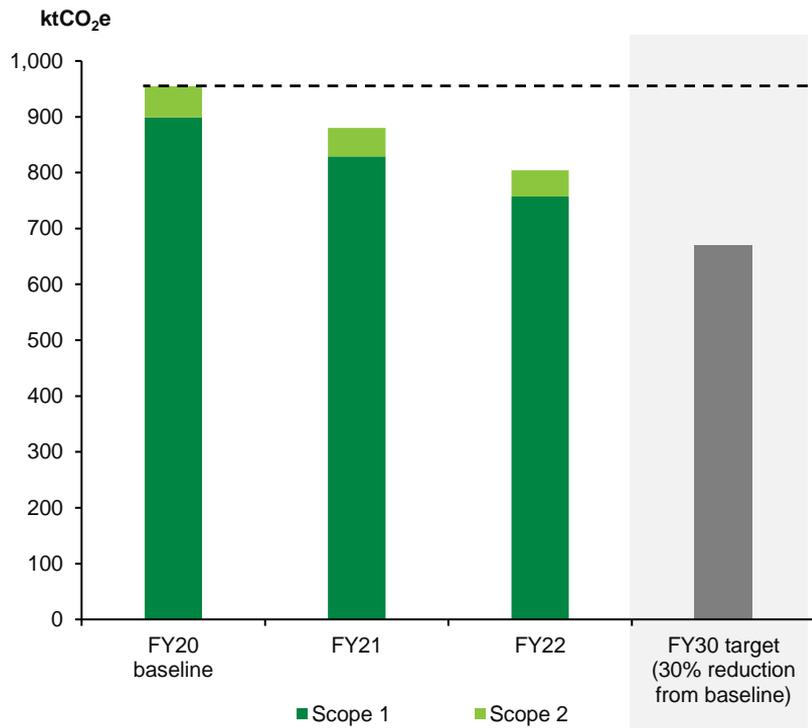
### Carbon capture and utilisation (CCU)



- Capture and sale of pure CO<sub>2</sub> that is a by-product of hydrogen production via steam methane reforming
- CO<sub>2</sub> is utilised in beverages, food preservation, water processing and metals refining

# Phase 2: 30% reduction by 2030 based on FY20 business mix

## Phase 2 progress vs target



## Phase 2 priorities

### Upgrade abatement catalysts in nitric acid plants



- Optimising performance of existing secondary abatement catalysts and evaluating additional nitrous oxide abatement technology
- Will support near complete elimination of nitrous oxide emissions from nitric acid production

### Residual Scope 2 emissions from electricity generation



- WesCEF already produces most of its own electricity requirements
- Exploring ways to eliminate residual Scope 2 emissions from electricity consumption

### Developing a pathway to reduce Scope 3 emissions



- Estimation of Scope 3 emissions for all material categories completed in FY22
- Focus now on developing a deeper understanding with the view to developing a pathway to reduce Scope 3 emissions

*Note: FY20 Baseline has been restated to current global warming potentials of relevant greenhouse gases. WesCEF's baseline emissions will be updated in the event of significant portfolio changes, such as material changes to production volumes and mergers, acquisitions and divestments. It will also be updated to reflect changes in greenhouse gas emission reporting protocols. Should changes to the baseline be made, the 2030 interim reduction target may also change.*

# Phase 3: Foundational work

## Working with the right partners to enable the third phase of WesCEF's decarbonisation journey



Working with APA to study the transportation of hydrogen along the southern portion of the Parmelia Gas Pipeline.



Partnership with Mitsui & Co to explore feasibility of building a low carbon ammonia plant including a carbon capture and storage solution.



Sponsor of CSIRO's CO<sub>2</sub> Utilisation Roadmap 2021.



Member of a consortium, led by Jupiter Ionics, to develop breakthrough green ammonia



Founding member of the Australian Industry Energy Transitions Initiative.



Member of the Australian Hydrogen Council.

# Decarbonisation summary and outlook

- Focus on greenhouse gas emissions performance relative to baseline and improvement in emissions intensity
- High degree of confidence in 30% reduction by 2030 and striving towards committed target of Net Zero by 2050
  - Achievement of target is expected to avoid safeguard liability in period to 2030
  - 2030 target is in addition to ~40% abatement already delivered
- Current decade is critical in terms of testing and proving technologies for the post 2030 period
- Growth guardrails:
  - Undertake major investments only if they have a clear and credible path to net zero by 2050
  - Proceed with product volume growth only if it reduces the emissions intensity of that product over the investment horizon
- Increasing focus on Scope 3 emissions and engagement across value chains



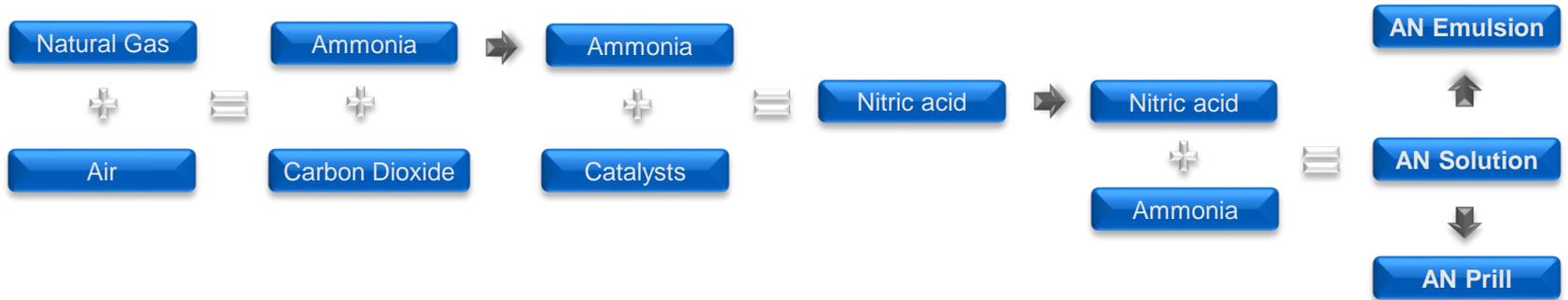


# Ammonia and Ammonium Nitrate

Leigh Meyers  
General Manager  
Ammonia / Ammonium Nitrate



# Ammonia/Ammonium Nitrate Production processes



# Plant capacities

Plant	Year commissioned	Initial nameplate capacity (ktpa)	Current capacity (ktpa)
Ammonia	2000	225	270
NAAN 1 (solution)	1996	200	275
NAAN 2 (solution)	2008	235	275
NAAN 3 (solution)	2014	260	275
Total AN		695	825
Prill Plant	2008	350	620
Emulsion	2017	>100	

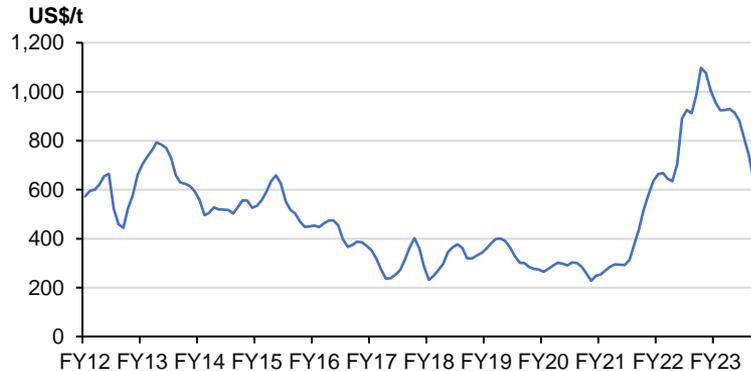
Over time, disciplined investment and operational improvement have delivered significant improvements in production and plant capacity



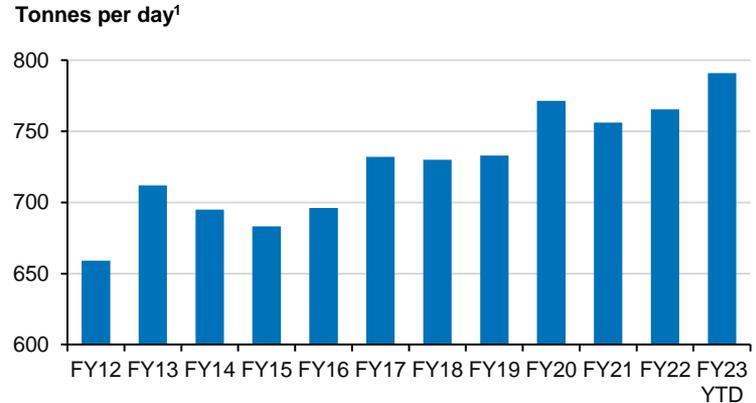
# Ammonia

- WesCEF's ammonia requirement is approximately 520ktpa, of which c.270ktpa is manufactured with the remainder imported
- Regulatory approvals for ammonia expansion project currently being assessed; FID expected late calendar year 2024, subject to approval timing
- Ongoing improvement in plant performance driven by incremental investment and robust asset maintenance program

## Ammonia price – CFR Far East



## Ammonia plant daily rate (net throughput)

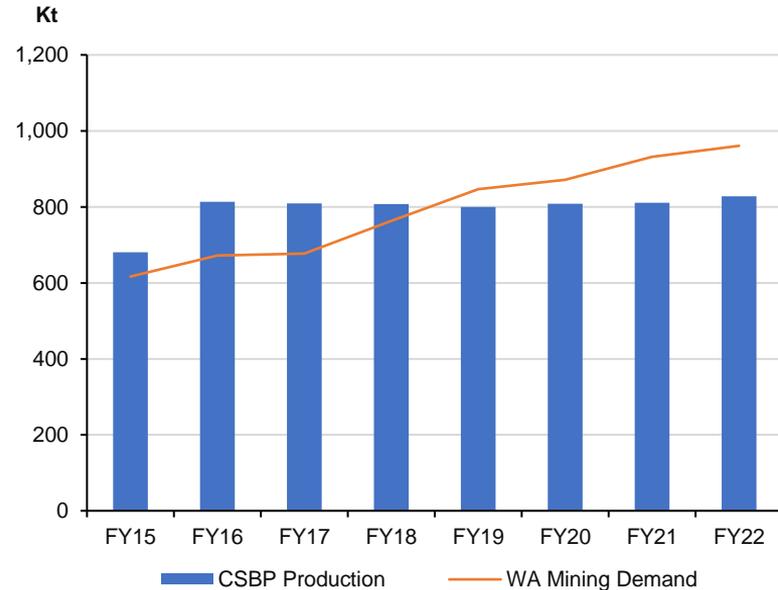


Majority of customer contracts (direct and downstream) linked to global ammonia price with a three-month lag

# Ammonium nitrate flexibility and optionality

- CSBP is a reliable supplier of ammonia and AN, and is the #1 supplier of AN in WA
- History of ongoing investment and continuous improvement
- Majority of CSBP AN is sold as Explosives Grade AN (EGAN) to customers in the WA mining sector
- Long-standing CSBP ability to switch AN production between EGAN and Fertiliser (UAN) manufacture, providing market depth and flexibility beyond core WA mining demand
- CSBP has identified an attractive debottlenecking opportunity to increase capacity of existing NAAN plants by c.15% (120ktpa) over the next five years to satisfy increasing demand

## CSBP AN supply and WA mining demand

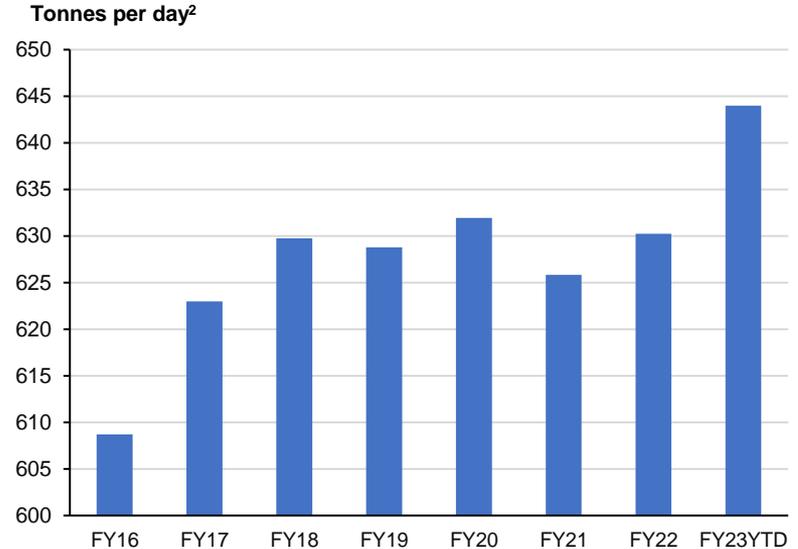


Source: CSBP internal analysis

# Nitric acid plant performance

- Record overall production achieved through continuous improvement and investment in data analytics
- Average online Nitric Acid Plant rates have improved 5.8% since FY16 through incremental investment and engineering developments
- Average nitric acid plant availability of 95.1% – in the top quartile of global nitric acid producers<sup>1</sup> due to robust asset maintenance and improvement processes

## Average plant rate

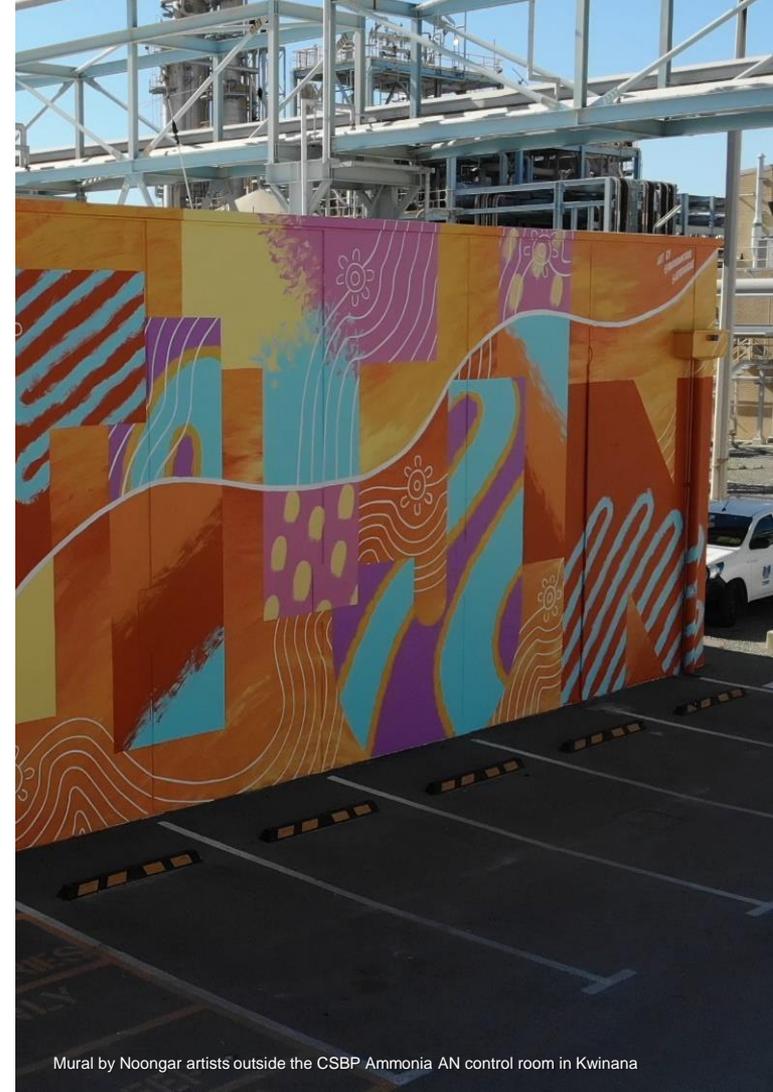


Nitric acid plant performance highlights continuous focus on delivering world-class performance

1. Independent benchmarking 2016.  
2. Tonnes per day while the plant is online.

# Ammonia and AN summary and outlook

- Strong long-term partnerships with large counterparties
- An unwavering focus on safe and sustainable management
- Market-leading operating performance driven by a culture of enhanced reliability and continuous productivity improvements
- Progressing ammonia production capacity expansion to displace current imports
  - Environmental approval submitted in December 2022
  - FID expected late calendar year 2024, subject to approval timelines
- Advancing study to debottleneck NAAN plants to increase total production by c.120ktpa



AGRA



# Sodium Cyanide

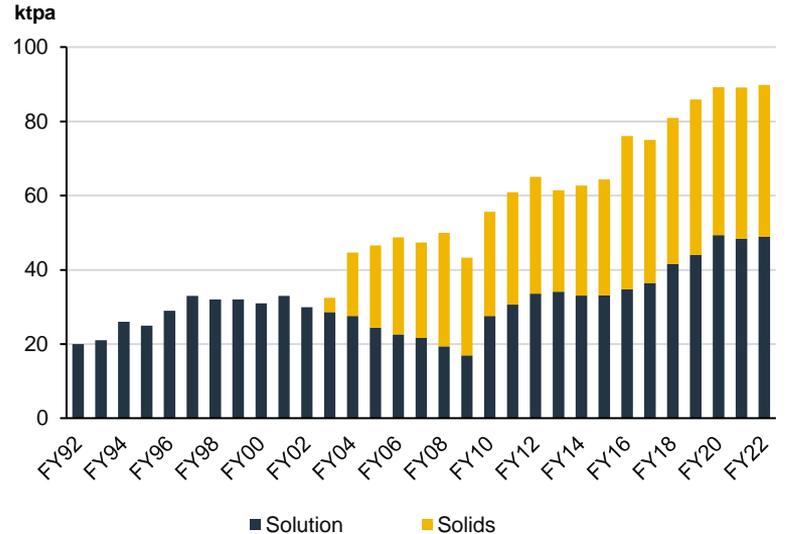
Barney Jones  
General Manager  
Chemicals Joint Ventures and  
AV/Modwood



# Overview of Sodium Cyanide business

- Australian Gold Reagents (AGR) is a joint venture between the operating and sales agent CSBP (75%) and Coogee Chemicals (25%)
- Sodium cyanide is used for recovery of gold in mining
- Australia is the second largest gold mining country, with two thirds of Australian gold mined in WA
- The technology to produce sodium cyanide is limited to a small number of global producers and AGR is the only producer of sodium cyanide in WA
- Expansion study currently underway, building on strong track record of incremental debottlenecking projects, which are far less capital intensive relative to development of new facilities

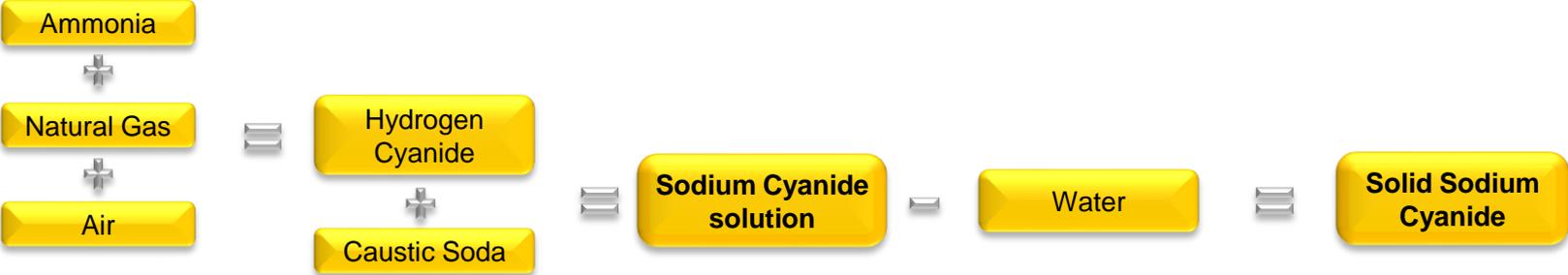
## AGR sodium cyanide production



## AGR sodium cyanide production facilities

Plant	Commissioned	Capacity (tpa)
Solution Plant No 1	1988	Combined total of ~95,000
Solution Plant No 2	1998	
Solids Plant	2002	>45,000

# Sodium cyanide production process



# Three different products are provided to meet customer needs

## Solution

- 30% sodium cyanide
- Delivered ready for use
- No onsite water needed
- No onsite handling
- No box destruction
- Lower inventory
- Increased freight cost

### Midwest / Goldfields WA



## Solid to Solution

- ~98% sodium cyanide
- Requires onsite mixing
- Requires water onsite
- No onsite handling
- No box destruction
- Lower inventory
- Minimises freight costs

### Remote WA, interstate, overseas



## Solids

- ~98% sodium cyanide
- Requires onsite mixing
- Requires water onsite
- Onsite handling
- Box destruction required
- Boxes easy to store
- Minimises freight costs

### Interstate and overseas



**AGR**  
**Global**  
**Customer Base**



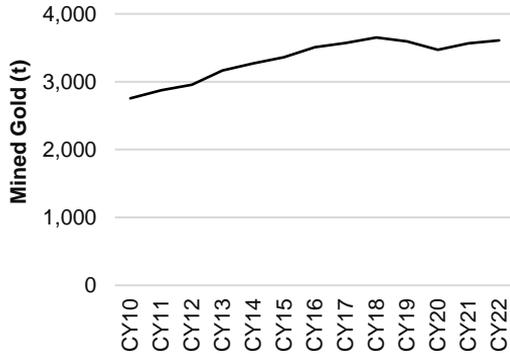
# Value-added services represents a key part of the product offering

- **Transport**
  - Audits of logistics providers
  - Route reviews for transport
- **Training**
  - Training of customers' teams in safe handling of sodium cyanide
- **International Cyanide Management Institute (ICMI) compliance**
  - Assistance for customers and transporters to obtain and maintain ICMI code compliance
- **Sodium cyanide usage**
  - Assistance with efficiency of sodium cyanide use through Australian Minerals Industries Research Australia program

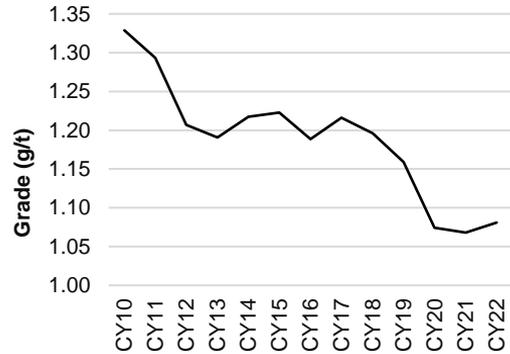


# Global gold production, grade and demand for sodium cyanide

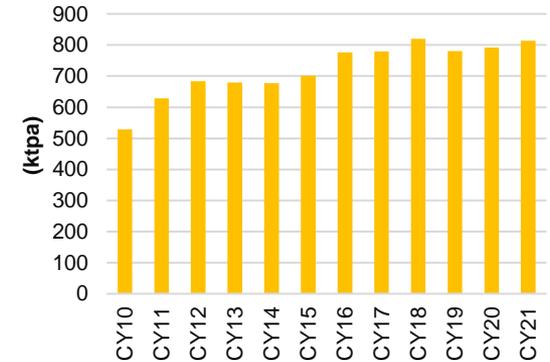
## Global gold production



## Global gold grade



## Sodium cyanide – global demand<sup>1,2</sup>



Sodium cyanide demand is supported by increasing gold production and decreasing gold grades, requiring more ore to be processed to extract a given amount of gold

1. CY22 data not yet available.

2. Excludes China domestic usage; includes China exports to importing countries

Sources: World Gold Council, Wood Mackenzie, IHS, CSBP analysis

# Sodium cyanide summary and outlook

- Over 30 years of operation without a significant safety or environmental incident
- Facilitated the growth in Western Australian gold production, and a key partner for tier one mining companies both domestically and overseas
- Market-leading operating performance driven by a focus on reliability and continuous productivity improvements
- A track record of successful expansion through incremental investment
- Sodium cyanide production expansion study nearing completion to increase production capacity from 95ktpa to c.130ktpa
  - FID expected second half calendar year 2023



# Kleenheat

Tanya Rybarczyk  
General Manager  
Kleenheat

*Kleenheat*

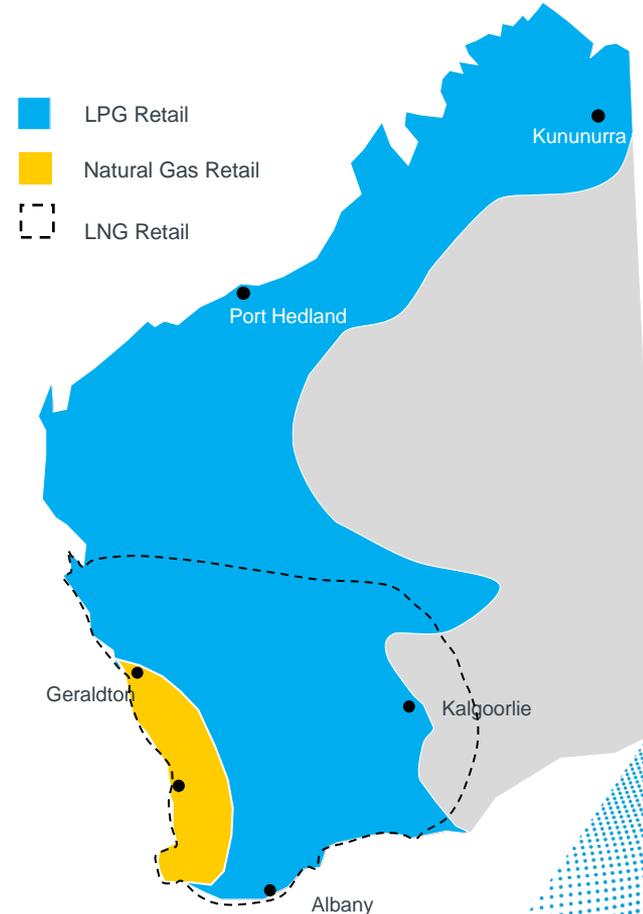


# Kleenheat is a WA-focused energy solutions provider

## Market overview

	LPG		LNG	Natural gas
	Wholesale	Distribution		
Competitive position	#1 ~95% share	#1 ~42% share	#1 ~52% share	#2 ~28% share
Market dynamic	Mature, declining domestic market	Mature, declining domestic market	Growth market	Active competition, maturing market
Competitive advantage	Only current WA-focused LPG producer	Established infrastructure, trusted brand	Production facility, transport economics, expertise	Trusted / strong local brand, customer service

Upstream gas availability underpins these segments



# LPG production and distribution

- Established over 65 years ago and the only current WA-focused LPG producer
- Supply from own production (WA) and import facility (NT)
- Servicing all LPG markets (bulk, forklift, residential, autogas and leisure)
- Bulk uses include industrial heating, food production, minerals processing and fabrication

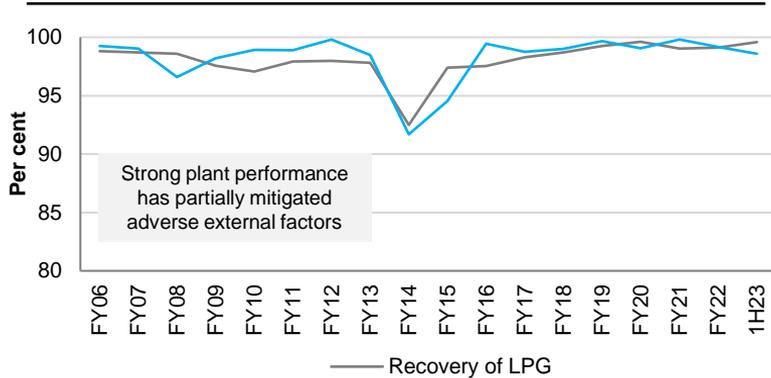
## LPG facilities

Commissioned	1988 (train 1) 2000 (train 2)
Products	Propane, butane and condensate
Capacity	350 ktpa
Availability	~98%
Propane storage	13kt
Butane storage	13kt
Condensate storage	13kt

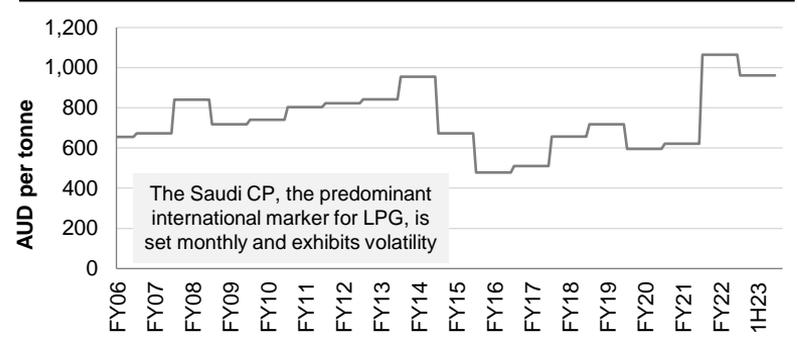


# Key drivers of LPG business

## Plant performance

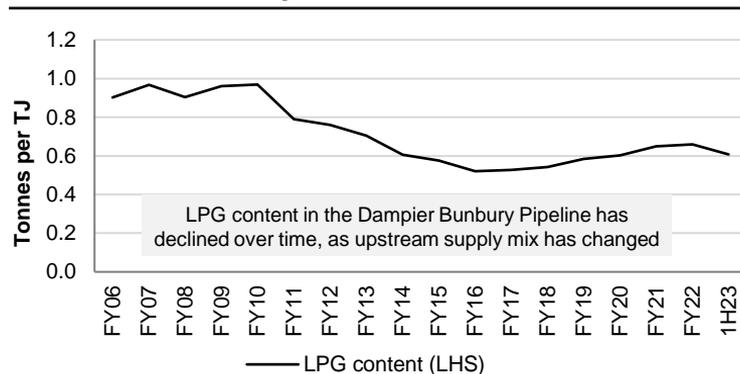


## Saudi Contract Price

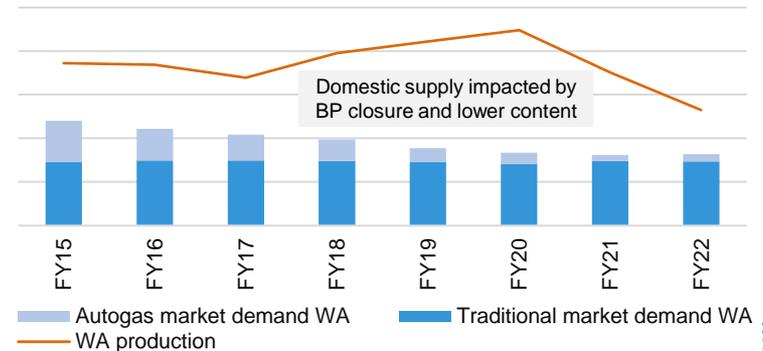


Source: Gas Energy Australia. Prices shown as a financial year annualised average.

## Pipeline LPG content



## Domestic demand and supply for LPG

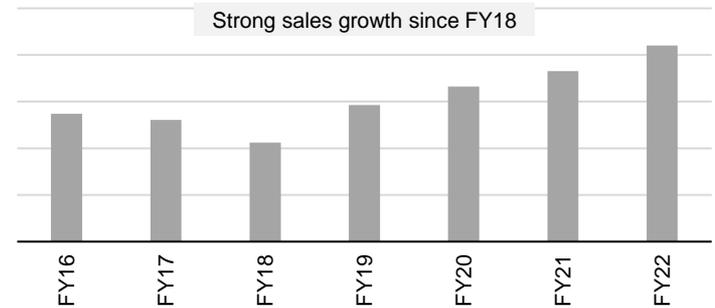


Source: internal estimates, Gas Energy Australia

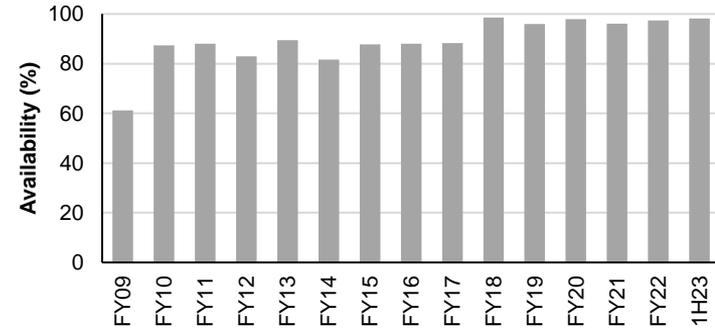
# LNG

- Plant commissioned in 2008 with a capacity of 86 ktpa
- EVOL LNG business services remote power generation by offering a cleaner alternative to diesel
- Over 391,000 tCO<sub>2</sub>e avoided<sup>1</sup> using LNG instead of diesel as an energy source
- Value drivers:
  - LNG production (plant availability)
  - Complementing renewables
  - Strong mining activity

## LNG sales volume



## LNG plant availability<sup>2</sup>



1. Customer Scope 1 emissions since 2008, internal estimates.

2. Plant availability excludes planned periods of suspended production.

# Retailing natural gas and electricity

## Natural gas

- Commenced retailing to the WA market in March 2013
- Around 220,000 customers (~ 28% share, #2 position)
- No physical assets: account management and marketing business
- Serving residential, small to medium enterprise (SME), commercial and industrial markets
- Competitive market – five retailers now competing in WA
- Awarded Canstar's Most Satisfied Customers - Natural Gas 2022

## Electricity

- No generation infrastructure
- Services contestable business and industrial markets in SWIS
- Residential market not yet contestable

### Brand strengths



WA born and bred



Local customer service



Ongoing value



Spontaneous awareness

**65%**

(Market research, July 2022)



KLEENHEAT

# Kleenheat summary and outlook

- Kleenheat Production Facility and storage are key strategic assets
- Strong brand awareness; Canstar's award for Most Satisfied Customers - Natural Gas 2022
- Strong market positions in LPG, LNG and natural gas with capability to leverage growing WA mining sector
- Strong reputation for safety and regulatory compliance in highly regulated markets
- Actively working towards a Net Zero 20250 roadmap alongside our customers
  - Recent launch of carbon offset offer for natural gas residential customers
  - Development of a similar offer for our LPG customers underway





# CSBP Fertilisers

Mark Scatena  
General Manager  
Fertilisers



# Fertiliser business overview

## *Industry Context*

- Demand for food and fibre continues to grow, underpinned by rising global incomes and population
- Australia has a comparative advantage in agriculture, with WA the largest grain-producing region
- WA fertiliser market structure benefits from direct distribution to customers, which differs to the East Coast market where there is a greater reliance on intermediary fertiliser distributors
- Fertilisers are essential for profitable and sustainable agricultural production

## *Competitive Position*

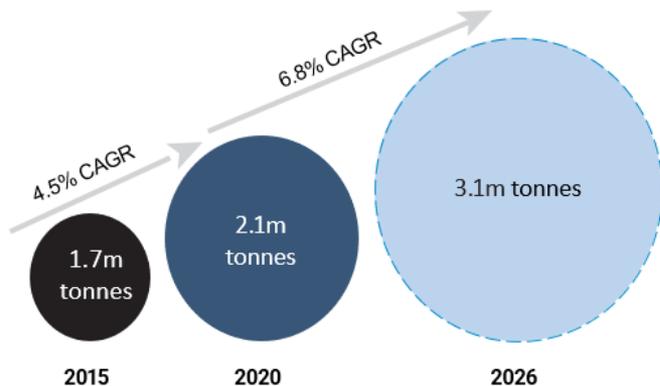
- Market-leading position and well established, difficult to replicate assets in a growing and attractive addressable market
- Agronomic capability and nutrition tool development leveraging data and analytics
- Range innovation leveraging research and manufacturing tailored for local conditions
- Long-term outlook focused on sustainability, nutrient use efficiency and carbon emissions intensity
- Ability to leverage CSBP Kwinana manufacturing infrastructure



# Strong long-term fertiliser demand outlook and improving yields

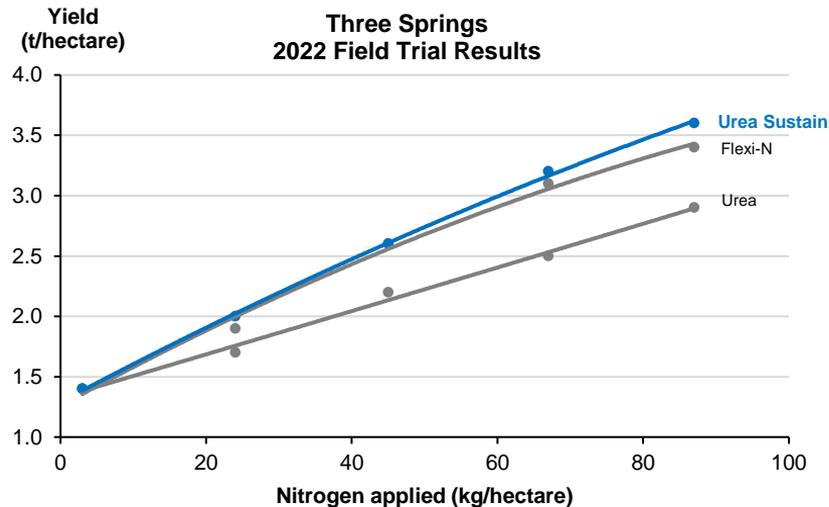


## WA projected fertiliser demand



Source: CSBP Fertilisers internal estimates

## Improved yield – trials research and range innovation



# Market-leading proposition and difficult to replicate assets



## Strong CSBP offer

- High efficiency solids import at Kwinana; priority port berth access
- Import, storage and despatch capacity in all WA port zones
- Liquid import and storage infrastructure of scale
- Direct agronomy-focused sales relationship with grower customers
- Industry accredited nutrition recommendation system
- Soil and plant analysis laboratory

## Exclusive CSBP capabilities and offer in WA

- Solids fertiliser manufacture (compounds and superphosphate)
- Access to ammonium nitrate for domestic Flexi-N manufacture
- Locally developed and tailored product range
- Proprietary geospatial nutrition management system
- In-season nitrogen recommendation tool
- Dedicated nutrition-focused sustainable agriculture team



SOIL AND PLANT ANALYSIS LABORATORY

CSBP DECIPHERAG

CSBP NULOGIC

CSBP DETECT

FLEXI-N<sup>®</sup>

UREA SUSTAIN

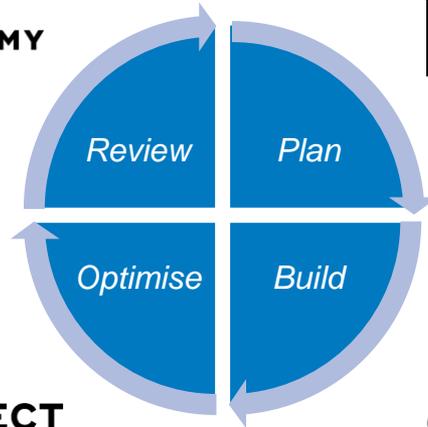
# Differentiated offer leveraging agronomic and digital capabilities to grow the overall market and CSBP's share

Qualified and experienced CSBP sales account managers and agronomists to support nutrition decisions

Leading-edge nutritional research into products, placements, timings and rates to provide the best advice to improve nutrient use efficiency

Real-time nitrogen status and recommendations for cereal crops (applying machine-learned algorithms via hand-held spectrometer)

RESEARCH+  
AGRONOMY



CSBP DETECT

CSBP DECIPHERAG



SOIL AND PLANT  
ANALYSIS LABORATORY

CSBP NULOGIC

Soil and plant nutrition hub to plan, implement and review season via farm mapping, satellite imagery, zone, variable rate technology and nutrient trends

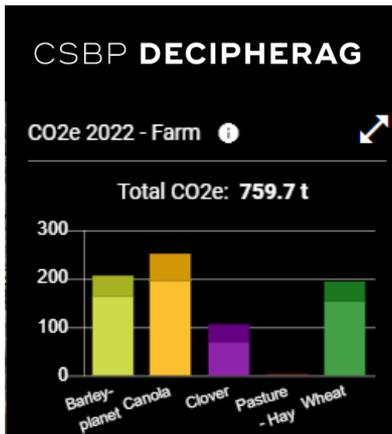
Expert in soil, plant and water testing, offering a comprehensive range of nutritional tests

Fertiliser recommendations based on soil and plant analysis factoring in agronomics and economics

# Supporting growers' decarbonisation and sustainability



## Understanding and measuring



## Educating and advocating



## Developing and deploying solutions



## Researching and partnering



# Fertilisers summary and outlook

- Leadership position in growing and attractive addressable market
- Differentiated and difficult to replicate customer proposition
- Focus on continuous improvement to offer the best nutrition advice, supply reliability and customer experience
- Vertically integrated leader in nutrient procurement, import, manufacture, storage and despatch, with differentiated range of products tailored to local market
- 100-year history of trials and research-based agronomic and nutrition science, coupled with market leading digital tools to grow the market and CSBP's share
- Leveraging CSBP manufacturing, storage and despatch infrastructure at Kwinana



Questions?



**Wesfarmers Chemicals**  
**Energy & Fertilisers**

# Lithium

**Ian Hansen**  
Managing Director WesCEF



# Joint Venture proponents and structure

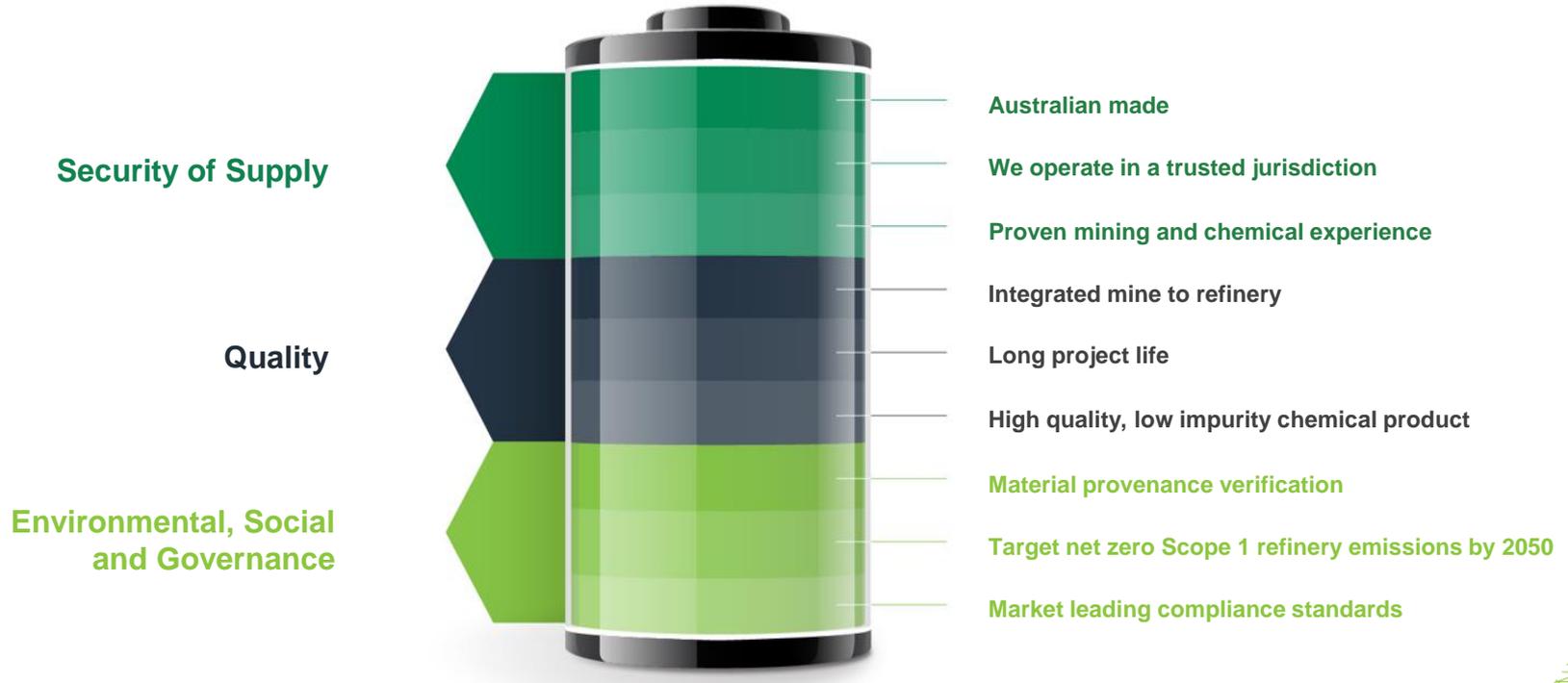


- 50+ year history of chemical operations in Kwinana, 100+ year history of operating in Australia
- Local expertise in managing the design, construction, commissioning and ramp-up of chemical processing plants
- Strong relationships with regulators and government



- Global expertise in the development, production, marketing and sale of chemical products, including lithium hydroxide and lithium carbonate
- Technical experience in the development of lithium chemical refining processes
- International trading network in more than 110 countries

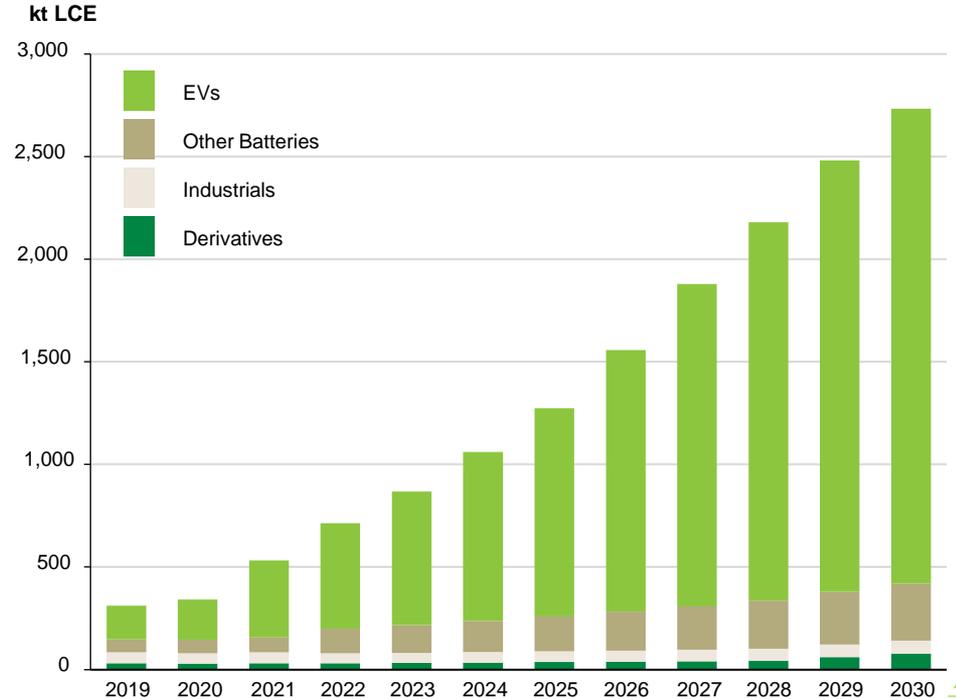
# WesCEF lithium value proposition



# Lithium market

- Strong demand outlook for battery grade lithium
- Driven by increasing penetration of battery electric vehicles (BEV) and battery energy storage systems (BESS)
  - Forecast BEV and BESS demand growth of 18% per annum between 2022 and 2030
  - Significant investment in BEV and lithium-based battery infrastructure
  - Major government requirements for BEV technology in new cars
- Lithium supply response impacted by significant lead time to bring new capacity online

## Lithium demand outlook



Source: Benchmark Minerals



Western Australian  
Mining & Refining

# Covalent Lithium

## Investor Briefing

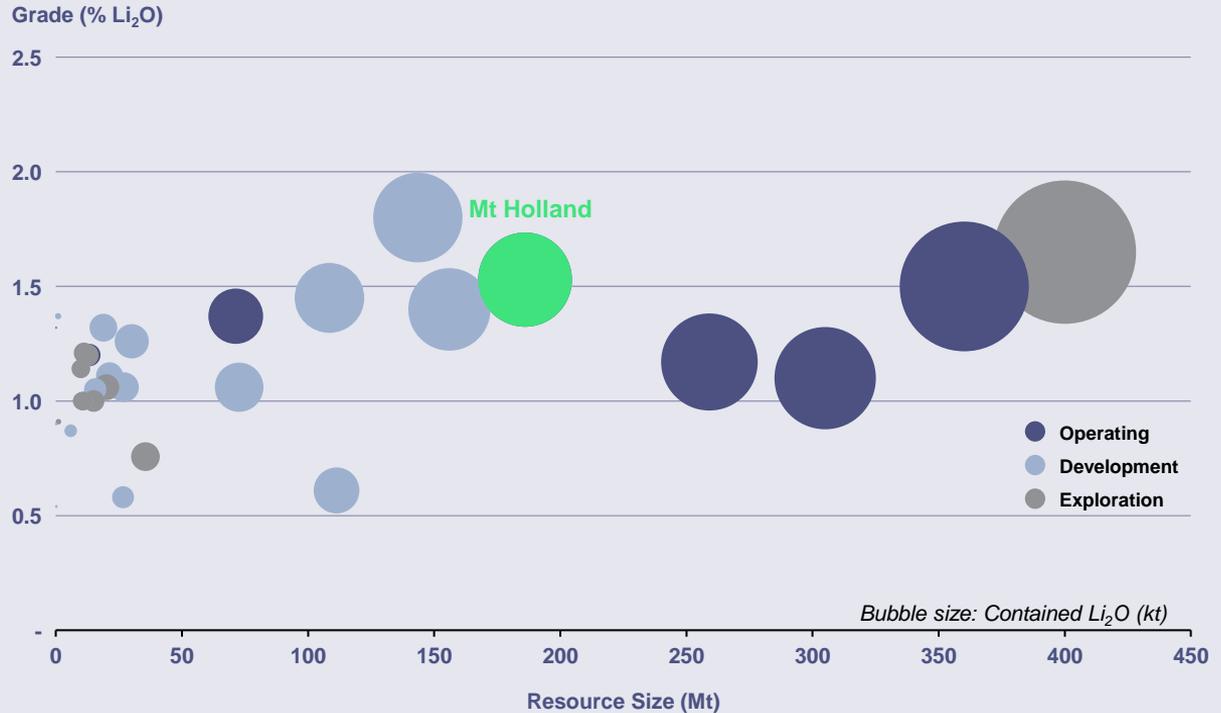
MARCH 2023



# World class hard rock resource



High quality Mt Holland resource enables a low-cost, long-term lithium production business

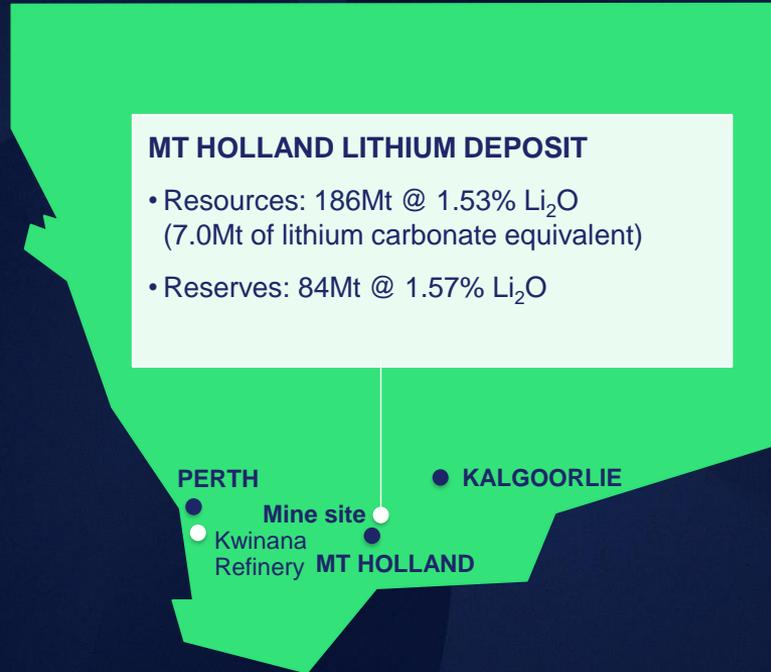


Source: WesCEF analysis based on public filings

# Project overview • Mt Holland and Kwinana



Upon project completion, Covalent Lithium will be a Western Australia-based integrated producer of premium, battery-grade lithium hydroxide for the electric vehicle market.



## The Project Comprises

- Mine and Concentrator: Located at Mt Holland in WA's Goldfield's region. Will produce ~380ktpa of spodumene concentrate.
- Refinery: Located in Kwinana. Spodumene to be transported to Kwinana for refining to 50,000tpa of battery-grade lithium hydroxide.

## Mt Holland Lithium Deposit

- Globally significant, high-grade hard rock deposit.
- Size of deposit and ore body characteristics are favourable; expected to support a long-life, low-cost operation.

## Sustainability

- Focus on safety, the environment and embracing a diverse and inclusive workforce.

## Traditional Owners – Mt Holland

- The Kalamaia Kalarku Kapurn people of the country of the Marliny and Ghoorlie trees.

## Status

- First ore was mined in December 2022
- Concentrator >85% complete, early commissioning has commenced
- Refinery civil works complete
- Majority of the long-lead items have arrived at the refinery

### ***Continue to manage challenges including:***

- Supply chain disruptions
- Availability of skilled labour
- Inflationary environment

## Current timetable

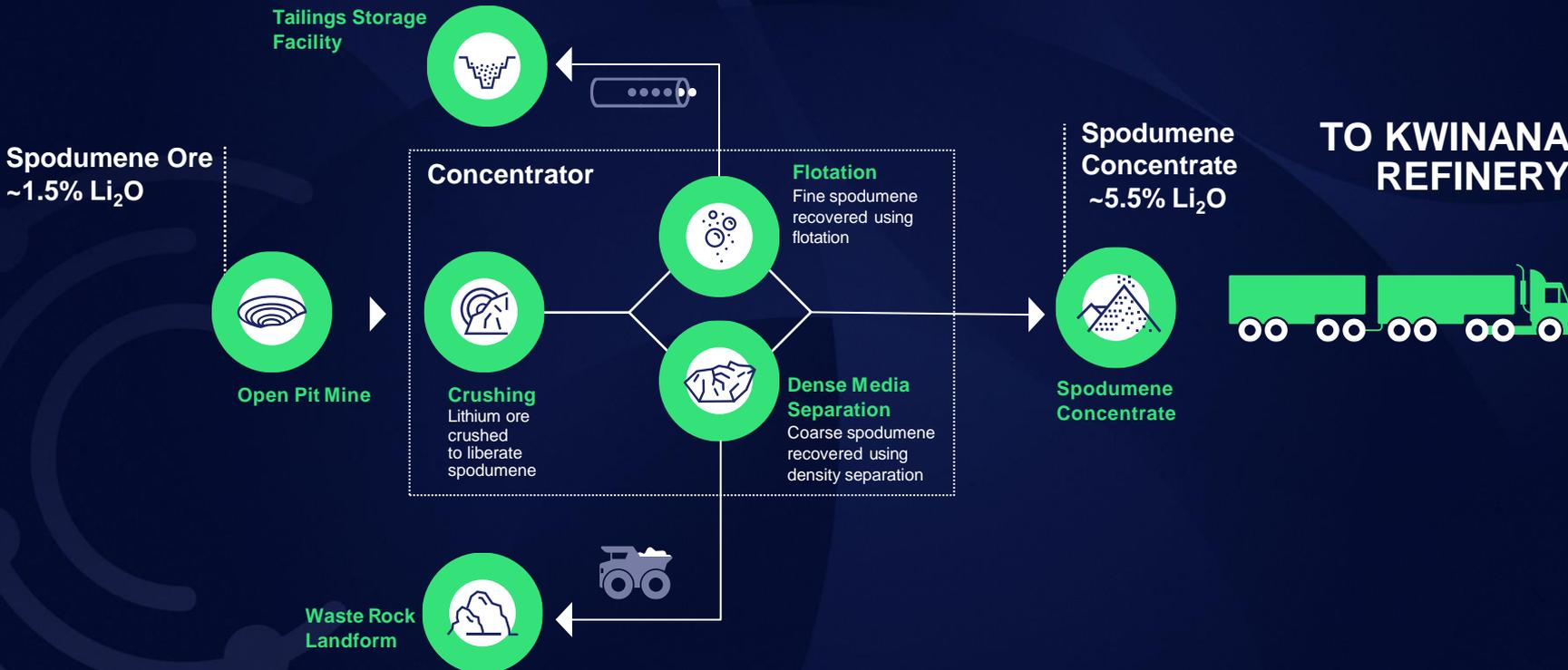
- Project construction commenced: July 2021
- First production from Mt Holland concentrator expected: late calendar year 2023
- First production from Kwinana refinery expected: first half calendar year 2025

## Capital Costs

- Capital costs impacted by COVID-19 delays and WA labour costs
- The project benefitted from long lead time items being secured pre-COVID
- Additional investment in operational readiness to minimise commissioning and operational risks
  - Commissioning labour
  - Plant modifications

The Mt Holland project has followed a multi-pronged approach to ensure that industry best practice design and operability strategies are included in the concentrator design.

# MT HOLLAND CONCENTRATOR: PROCESS DESIGN



# MT HOLLAND

28 FEB 2023



RUN OF MINE PAD

SERVICES

CRUSHING

CRUSHED ORE STOCKPILE

DENSE MEDIA SEPARATION

FLOTATION

REAGENTS

WORKSHOP/WAREHOUSE

CONCENTRATE STORAGE

ADMINISTRATION

LABORATORY

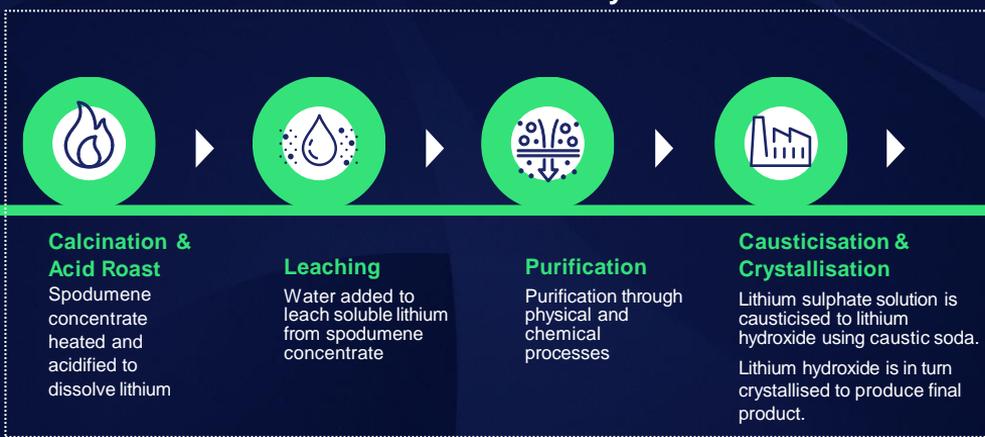
# KWINANA REFINERY: PROCESS DESIGN

Designed to produce tier one battery-grade lithium hydroxide.

**SPODUMENE  
CONCENTRATE  
FROM  
MT HOLLAND**

## Kwinana Refinery

**Battery Grade  
Lithium Hydroxide**



**Calcination & Acid Roast**

Spodumene concentrate heated and acidified to dissolve lithium

**Leaching**

Water added to leach soluble lithium from spodumene concentrate

**Purification**

Purification through physical and chemical processes

**Causticisation & Crystallisation**

Lithium sulphate solution is causticised to lithium hydroxide using caustic soda. Lithium hydroxide is in turn crystallised to produce final product.

**Lithium Hydroxide**

Each shareholder to sell its share of production to customers worldwide for use in batteries in electric vehicles



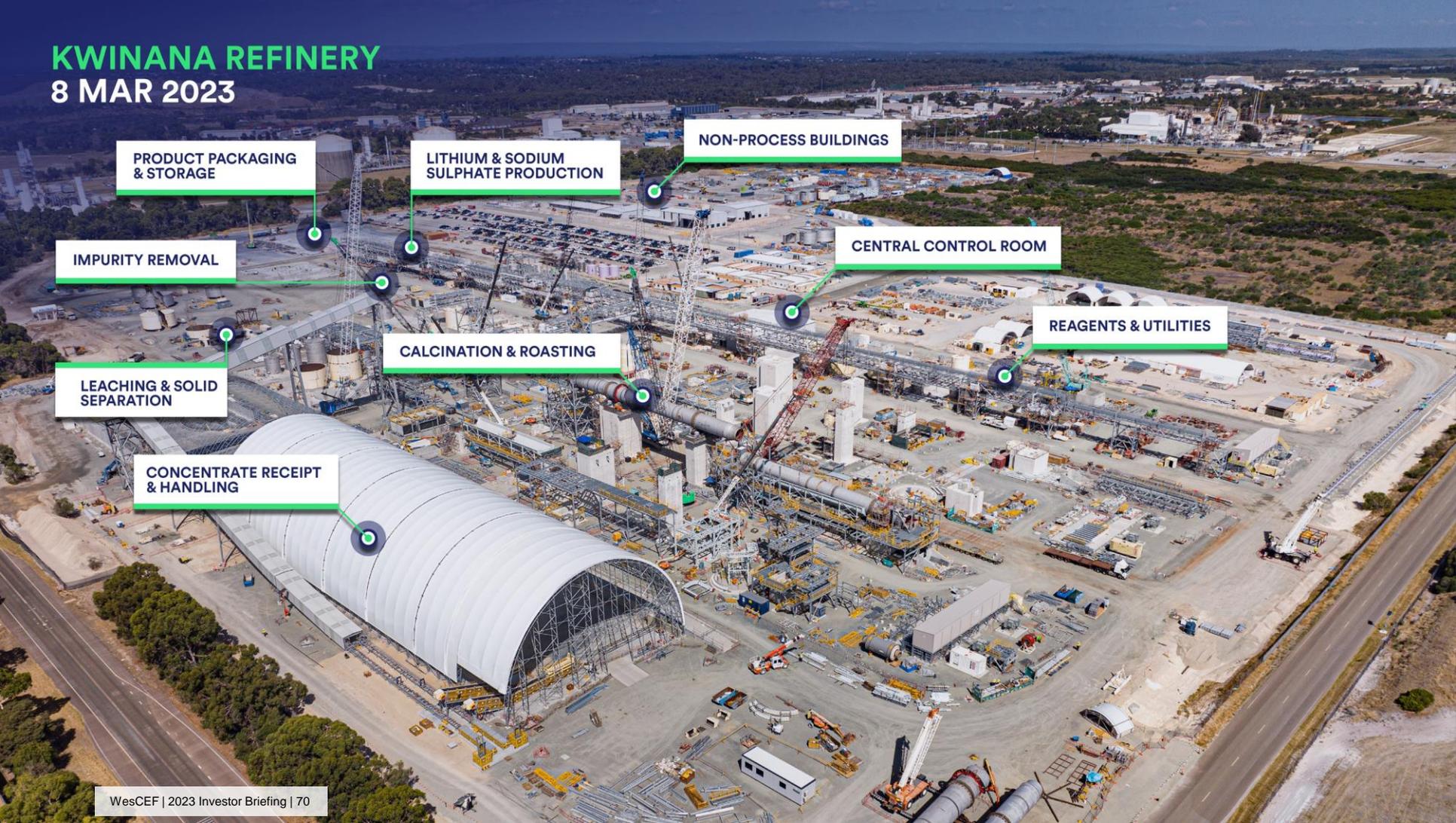
De-lithiated spodumene returned to Mt Holland or to an approved reuse option

Sodium Sulphate is produced and sold as a co-product



# KWINANA REFINERY

8 MAR 2023



PRODUCT PACKAGING  
& STORAGE

LITHIUM & SODIUM  
SULPHATE PRODUCTION

NON-PROCESS BUILDINGS

IMPURITY REMOVAL

CENTRAL CONTROL ROOM

REAGENTS & UTILITIES

CALCINATION & ROASTING

LEACHING & SOLID  
SEPARATION

CONCENTRATE RECEIPT  
& HANDLING

# KWINANA REFINERY

8 MAR 2023



CONCENTRATE STORAGE

LEACHING & SOLID SEPARATION

LITHIUM & SODIUM SULPHATE PRODUCTION

PRODUCT PACKAGING & STORAGE

CALCINATION AND ROASTING

IMPURITY REMOVAL

HEAD OFFICE

REAGENTS & UTILITIES

LABORATORY

WORKSHOP / WAREHOUSE

# Project economics



## Spodumene concentrate economics

- Focus on maximising production prior to the commissioning of the refinery
- R&D underway to maximise resource recovery and reduce the cost of production
- Operating costs over the life of the project impacted by:
  - WA labour costs
  - Reagent usage and cost
  - Utilities costs
  - Spares and consumables
- Additional cost of sales from WA government royalties of 5% on the spodumene concentrate price<sup>1</sup>

## Lithium hydroxide economics

- Focus on minimising the time to achieve nameplate quality production
- Commercialisation options for co-product sales well advanced
- Operating costs over the life of the project impacted by:
  - Reagent costs, most notably sodium hydroxide and sulfuric acid
  - Utilities costs
  - WA labour costs



<sup>1</sup>. Calculated at an ad valorem rate of 5% on the mine gate spodumene concentrate price.  
WesCEF | 2023 Investor Briefing | 72

# Summary



- Mt Holland mine and concentrator:
  - A globally significant hard rock lithium deposit: high grade with a c.50-year mine life at 380ktpa concentrator capacity or c.25-year mine life if expanded to 760ktpa concentrator capacity
  - The concentrator is based on well-understood mineral processing technology, with a flowsheet developed following extensive test work
- Kwinana refinery:
  - The refinery has been designed to produce high-quality battery-grade lithium hydroxide with the flexibility to adjust to the evolving needs of the market
  - The design has been developed from extensive test work and with SQM's process knowledge
- Covalent is using both joint venture partners' unique and complementary skills extensively while building a standalone team with extensive mining and processing experience



# Lithium growth opportunities

## *Expansion of the Mt Holland mine and concentrator*

- Covalent is undertaking a feasibility study to evaluate doubling the production capacity of the mine and concentrator
  - Capitalise on forecast market demand and accelerate free cash flows
  - Primary crushers and most non-process infrastructure already sized for possible expansion
  - FID subject to the outcome of the feasibility study and approval timelines

## *Expansion of the Kwinana refinery*

- Following commissioning of the refinery, examine the opportunity to double lithium hydroxide production capacity using spodumene concentrate feedstock from the expanded concentrator

## *Exploration opportunities*

- Continue to evaluate Mt Holland tenements for additional resources
- Progress critical minerals exploration outside of Mt Holland



# Lithium sales strategy

## *Spodumene concentrate*

- Strong interest from tier one customers seeking to secure spodumene concentrate volumes
- First earnings from sale of spodumene concentrate expected in 1HCY24, with WesCEF's share of sales volume expected to be approximately 50kt in 1HCY24
- Concentrator expected to reach nameplate capacity in 2HCY24, with total spodumene concentrate sales subject to refinery commissioning timing and stockpile requirements
- Spodumene pricing model likely to reflect a lithium hydroxide market index with various adjustments

## *Lithium hydroxide*

- Multi-year contractual arrangements with customers
- Discussions progressing with key counterparties with strong interest from battery producers and OEMs
- Increasing adoption of market-linked pricing using a variety of indices and pricing mechanisms
- Expect to retain some capacity uncontracted for spot sales



Questions?



**Wesfarmers Chemicals**  
**Energy & Fertilisers**

- Continue to provide high-quality and reliable supply of products and services to our customers
- Progress timely opportunities to leverage existing infrastructure and assets to expand production capacity with a disciplined returns focus
- Optimise business processes by investing in divisional technology platforms and systems
- Continued core focus on occupational health and process safety
- Drive divisional decarbonisation strategy and evaluate medium and long-term abatement and low carbon growth opportunities
- Fostering a work environment that supports diversity and inclusivity with a focus on our customers and developing our technically skilled workforce
- Retain a sizeable business development and exploration team that evaluates greenfield opportunities and M&A activity in adjacent sectors to our existing operations



**Wesfarmers Chemicals  
Energy & Fertilisers**

# Glossary of terms

Acronym	Term/Definition
ASU	Air separation unit
AN	Ammonium nitrate
AN1, AN2, AN3	CSBP Ammonium nitrate plants 1, 2 and 3
AV	Australian Vinyls
BESS	Battery energy storage system
BEV	Battery electric vehicle
CAGR	Compound annual growth rate
CCU	Carbon capture and utilisation
CO <sub>2</sub>	Carbon dioxide
EBT	Earnings before tax
EGAN	Explosives grade ammonium nitrate
EPA	Environmental Protection Authority
ERP	Enterprise resource planning
ESG	Environmental, social and governance
EV	Electric vehicle
FID	Final investment decision
HSEQ	Health, safety, environment and quality
JV	Joint venture
kt	Kilo tonnes
tCO <sub>2</sub> e	Tonnes of carbon dioxide equivalent

Acronym	Term/Definition
ktpa	Kilo tonnes per annum
LCE	Lithium carbonate equivalent
Li <sub>2</sub> O	Lithium oxide
LNG	Liquefied natural gas
LPG	Liquefied petroleum gas
Mt	Mega tonnes
N <sub>2</sub> O	Nitrous oxide
NPK	Nitrogen, phosphorus and potassium
NAAN	Nitric acid ammonium nitrate
NG	Natural gas
OEM	Original equipment manufacturer
ROC	Return on capital
PVC	Polyvinyl chloride
SWIS	South West Interconnected System
TJ	Terajoule
tpd	Tonnes per day
TRIFR	Total recordable injury frequency rate
UAN	Urea ammonium nitrate
WesCEF	Wesfarmers Chemicals, Energy and Fertilisers
WIS	Wesfarmers Industrial and Safety