

#### **ASX** Announcement

Wednesday, 11 November 2020

ASX: WPL OTC: WOPEY

Woodside Petroleum Ltd.

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#### **INVESTOR BRIEFING DAY 2020**

Woodside has risen to the challenges of 2020, delivering exceptional operating performance and demonstrating prudent financial decision-making to protect value for shareholders, CEO Peter Coleman said at the company's annual Investor Briefing Day.

"Despite the constraints imposed by the pandemic, throughout this year our teams have met the highest standards of safety, reliability and production, allowing us to narrow our full-year output guidance to 99 to 101 million barrels of oil equivalent.

"We've made excellent progress at Sangomar Field Development Phase 1 offshore Senegal and expect to complete our acquisition of Cairn's interest in the joint venture before year-end. Sangomar is an attractive, de-risked asset and, as previously flagged, we are looking to sell down our equity to the right partner at the right price over the course of 2021.

"The deferral in March this year of final investment decisions on Scarborough and Pluto Train 2 allowed the project teams to seize the day, extracting additional value by potentially increasing the offshore capacity and optimising the development schedule.

"Scarborough is a globally competitive development which has the potential to be a game-changer for Woodside, producing net cash flow of around \$35 billion over its field life.

"We estimate the targeted 20% increase in Scarborough's upstream capacity can be achieved at a very modest capex, with virtually no cost impact on the downstream.

"In terms of both contractor availability and the external LNG market, we expect the timing to be right for final investment decisions on Scarborough and Pluto Train 2 in the second half of 2021. The Scarborough Joint Venture is aligned on this schedule, which would put us on track for first LNG in 2026.

"We also remain aligned with our joint venture partners on the development of Browse as backfill to the North West Shelf. Work is continuing to move Browse towards the front-end engineering design phase, with a final investment decision targeted from 2023.

"This year we are also setting new targets for direct carbon emission reductions in support of our goal to be net zero by 2050. We are now aiming for reductions of 15% by 2025 and 30% by 2030 in our net equity Scope 1 and 2 emissions compared with the 2016-2020 period.

"We plan to achieve these targets using a range of levers: designing out emissions in new and existing facilities, potentially including carbon capture and storage; limiting emissions through efficient operations; and using high-quality offsets.

"Woodside is a resilient hydrocarbon business and our investments in technology and offsets, along with our early-mover activities in hydrogen, build on our existing capabilities in LNG and position us to provide value through the energy transition.

"We continue to provide enhanced transparency into our business, and have recently published a review of the policy positions of industry associations we belong to for alignment with our climate change policy positions," he said.

To access the live webcast of the Investor Briefing Day, please follow the link at <a href="www.woodside.com.au">www.woodside.com.au</a>. The webcast will commence at 0930 AWST/1230 AEDT.

A copy of Woodside's Investor Briefing Day 2020 slide pack is attached.

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This ASX announcement was approved and authorised for release by Woodside's Disclosure Committee.



# INVESTOR BRIEFING DAY 2020

11 November 2020

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# INTRODUCTION Welcome



Overview	Peter Coleman, CEO and Managing Director
Climate	Dr Tom Ridsdill-Smith, Senior Vice President Climate
Developments	Meg O'Neill, Executive Vice President Development and Marketing
<b>Operations</b>	Fiona Hick, Senior Vice President Operations
New energy	Shaun Gregory, Executive Vice President Sustainability
Capital management	Sherry Duhe, CFO and Executive Vice President
Summary and Q&A	Peter Coleman, CEO and Managing Director

#### **INTRODUCTION**

### Disclaimer, risk and assumptions



#### Disclaimer and risks

- Our investors and potential investors have requested that Woodside continues to provide further detail and information in respect of Woodside's overall strategic approach and its potential implications for the company. This presentation is a response to those requests. It is in summary form and does not purport to be complete. It should be read in conjunction with Woodside's periodic reporting and other announcements made to the Australian Securities Exchange.
- 🕟 Given that this presentation is focused on Woodside's strategy, it is necessarily oriented towards future events. Neither the strategy, nor this presentation more generally, is a statement that future events will or are likely to occur.
- The discussion of Woodside's strategy provides some level of insight into how Woodside currently intends to direct the management of its assets and to deploy its capital, in order to achieve certain strategic outcomes. The matters disclosed in this presentation are a 'point in time' disclosure of Woodside's strategic focus. Woodside operates in a dynamic market and external environment. Many of the strategies discussed in this presentation involve assets held by and operated through joint ventures, and decisions in relation to these assets will require joint venture approval. Joint venture participants may have different strategic objectives and may not agree with or support Woodside's views in relation to these assets. As such, strategies can and must adapt in response to dynamic market conditions, joint venture decisions, new opportunities that might arise or other changing circumstances. Investors should not assume that the strategy and targets discussed in this presentation are locked in.
- In addition, a number of Woodside's proposed developments are complex and may be delayed, more costly than anticipated or unsuccessful for many reasons. This includes the fact that commercial agreements will need to be agreed with third parties, including other joint ventures. Some examples of such commercial agreements may include gas processing or infrastructure use agreements. A number of the required agreements may be complicated, have limited precedent and may require significant time and resources to negotiate and finalise. Joint venture decisions, or the conduct of third parties in relation to contractual negotiations, can have a material impact on a range of factors relevant to Woodside's strategies and targets set out in this presentation, including whether or not particular strategic initiatives can be implemented at all, or in the manner preferred by Woodside, and/or the timetable or costs involved in implementing these initiatives. Further, Woodside's developments and operations are subject to extensive governmental regulation and approvals and there can be no guarantee that Woodside will obtain all applicable government and regulatory approvals necessary to proceed with the proposed developments described in this presentation within any particular timeframe, or at all.
- The information and statements in this presentation about Woodside's future strategy are not guidance (except for the 2020 production guidance on slide 57, 'Full-year 2020 guidance'), forecasts, guarantees or predictions of future events or performance, but are in the nature of aspirational targets that Woodside has set for itself and its management of the business. Actual performance against these targets (including all timelines that are described as a 'Woodside target', and more particularly defined in the Glossary) may be affected by various risks associated with the Woodside business. Further detail on each of these risks can be found in the "Key Risks" section of the presentation associated with the Woodside entitlement offer which was released to the Australian Securities Exchange on 14 February 2018 (available online at https://www.woodside.com.au/investors/reports-publications). Investors and prospective investors should review and have regard to these Key Risks when considering the information contained in this presentation. The reader is cautioned not to place undue reliance on any forward looking statements contained in this presentation.
- Without limiting the Key Risks referenced above, the implementation of Woodside's strategies and the outcomes from the implementation of these strategies are subject to risk factors associated with oil and gas businesses. It is believed that the targets reflected in these statements are reasonable but they may be affected by a range of variables and changes in underlying assumptions which could cause actual results or trends to differ materially, including but not limited to: price fluctuations, actual demand, currency fluctuations, drilling and production results, reserve estimates, loss of market, industry competition, environmental risks, physical risks, legislative and legal risks, fiscal and regulatory developments, changes in accounting standards, economic and financial market conditions in various countries and regions, political risks, project delay or advancement, approvals and cost estimates. The targets and opportunities described in this presentation might also change materially if Woodside changes its strategy.
- Woodside does not undertake to provide ongoing market updates on, or otherwise report against, performance in relation to the information in this presentation, or in relation to any change in the company's strategy, except to the extent it has a legal obligation to do

#### **Assumptions**

• Unless otherwise indicated, the targets set out in this presentation have been estimated on the basis of a variety of economic assumptions including: (1) a US\$65/bbl Brent oil price (2020 real terms, inflated at 2.0%); (2) currently sanctioned projects being delivered in accordance with the target schedules provided in this presentation. These growth opportunities are subject to relevant joint venture participant approvals being obtained. Woodside expresses no view as to whether its joint venture participants will agree with and support Woodside's current position in relation to these opportunities. Additional assumptions relevant to particular targets or other statements in this presentation may be set out in the relevant slides. Any such additional assumptions are in addition to the assumptions and qualifications applicable to the presentation as a whole.

#### Other important information

- All references to dollars, cents or \$ in this presentation are to US currency, unless otherwise stated.
- References to "Woodside" may be references to Woodside Petroleum Ltd or its applicable subsidiaries.
  - All references are to Woodside equity share, unless otherwise stated.







# **OVERVIEW**

**Peter Coleman**CEO and Managing Director

# **Delivering value through unprecedented times**



#### **STRONG FOUNDATIONS**

**PROACTIVE RESPONSE** 

**PROTECTING VALUE** 

- Delivering record production
- Preparing for major investment decisions
- Strong balance sheet
- Energy demand destruction
- Price volatility
- Impact of pandemic to supply chain and people
- Ongoing high LNG reliability
- Increasing value of Scarborough
- Protecting Scarborough FID readiness
- Sangomar progressing on schedule

#### **OVERVIEW**

## Robust hydrocarbon business to drive value



LNG is required in a decarbonising world

**Cost-competitive LNG producer** 

**Operating and developing world-class assets** 

**Prudent capital management** 

**Pursuing value accretive inorganic growth** 

**Targeting** H2 2021

**Scarborough and Pluto Train 2** 

#### **OVERVIEW**

# **Providing value through the energy transition**



Resilient hydrocarbon business

2

Develop large scale carbon offsets

3

Assess **CCS** opportunities

4

Demonstrate and develop **hydrogen** opportunity

Hydrocarbons

New energy

# A value-creating culture



**Refreshed leadership team** 

**Sector leading diversity and inclusivity** 

**Engaged workforce** 







**Dr Tom Ridsdill-Smith**Senior Vice President Climate

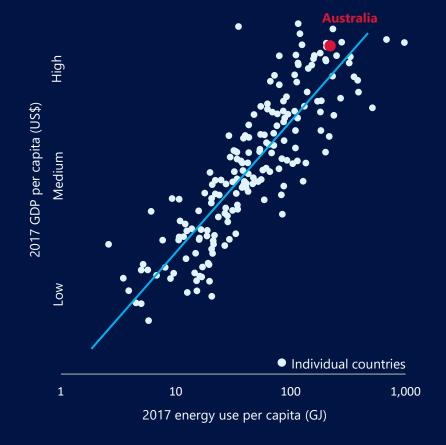
# The world needs affordable and clean energy



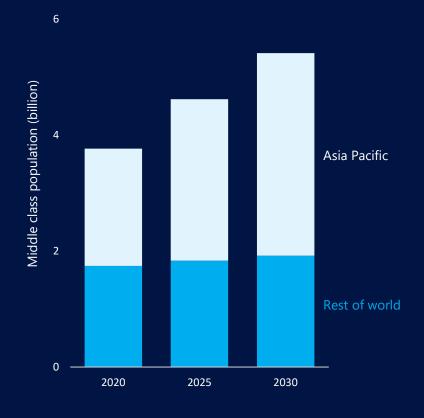
#### Human and economic development requires clean and affordable energy

- Increased energy is required as living standards improve
- 770 million people still lack access to electricity
- The Asia Pacific (APAC) middle class to increase by ■1.5 billion (75%) by 2030

#### **Energy and global economic development**<sup>1</sup>



#### **APAC** middle class growth<sup>2</sup>

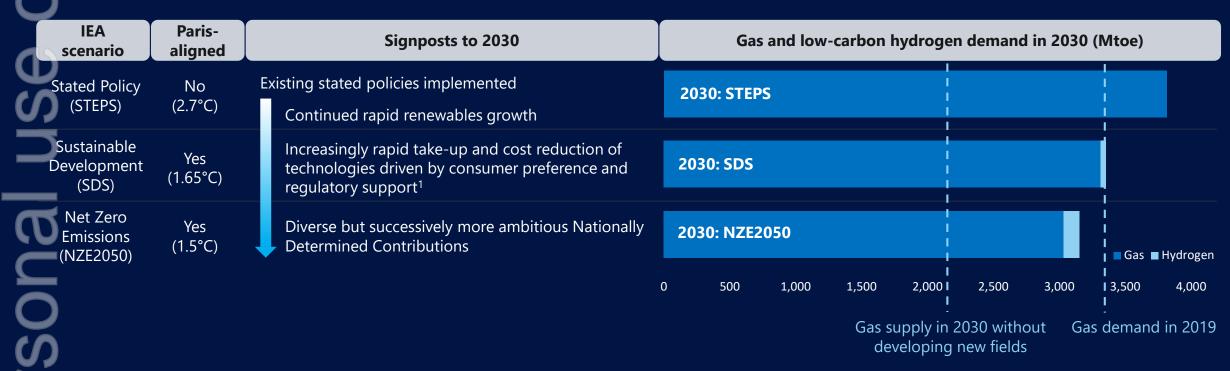


\_2017 GDP per capita at constant 2015 prices, US dollars. United Nations Department of Economic and Social Affairs. Homi Khara, Brookings Institute, 2017.

# Affordable energy and Paris Agreement goals



- The Paris Agreement requires contributing countries to aim for net zero emissions in the second half of the century
  - The policies to achieve this goal are nominated through Nationally Determined Contributions
  - Woodside considers a range of credible policy scenarios in our planning, such as those published by the IEA



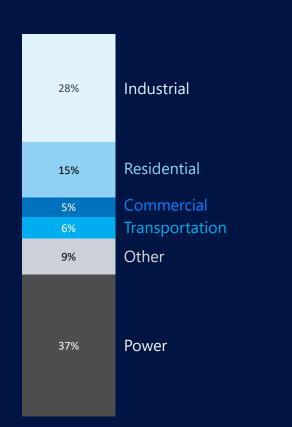
# Gas will remain a key part of the global energy mix



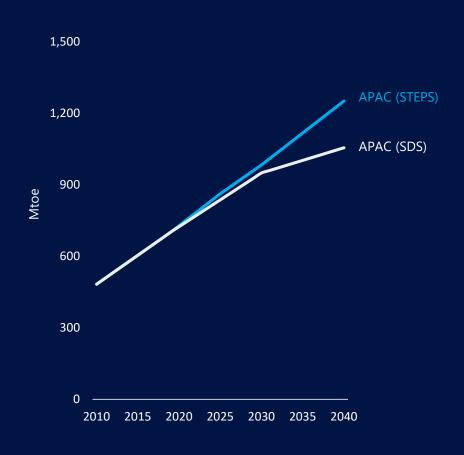
#### Natural gas is used in a wide range of sectors, including many hard-to-abate sectors

Natural gas demand is projected to expand in Asia Pacific driven by the need for clean industrial expansion

#### **2019 APAC natural gas demand**



#### **Strong APAC natural gas** demand in SDS and STEPS

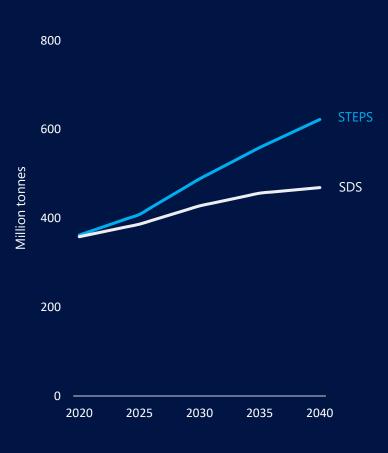


## LNG demand grows in a Paris-compliant world





#### **Global LNG demand**



#### **LNG** advantages

**Relatively low carbon** with CCS potential to lower further

Sustained demand under **Paris-compliant scenarios** 

**Destination flexible** 

Secure

**Delivers improved air** quality

**Enables stability in** renewable dominated power generation

**Enables customers to deliver affordable energy and climate action** 

## LNG is aligned with customer decarbonisation







Net zero CO<sub>2</sub> emissions ~2050



Zero CO<sub>2</sub> emissions 2050

"Combine renewable energies with clean natural gas to achieve a stable and inexpensive supply of energy"

"Strengthen the resilience of the natural gas infrastructure towards 2030..."

"Maintain and improve the thermal efficiency of thermal power plants and further increase natural gas use"

"Phase-out of inefficient coal-fired power plants; strengthen domestic power source portfolio through LNG thermal power generation"

#### **Active in industry**

Working with our customers to meet their lower-carbon goals

Partnering with JERA to supply low-carbon ammonia

Signatory to the Methane Guiding Principles

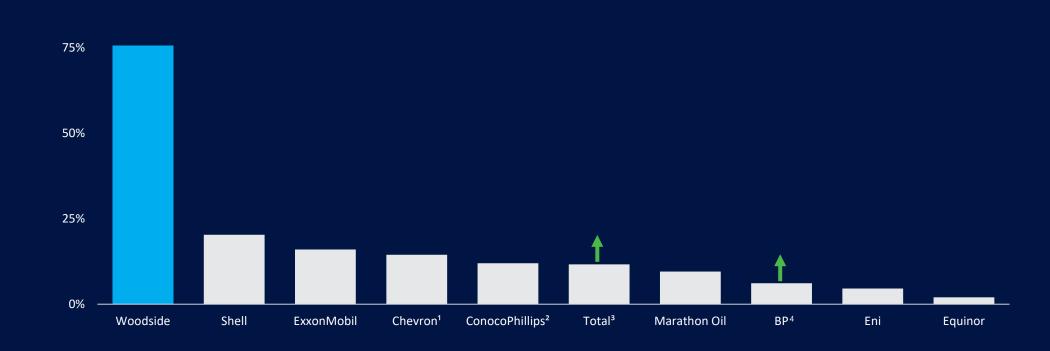
# **Leading LNG portfolio mix**

100%





#### LNG proportion of total hydrocarbon production (2019)



Source: IHS Markit

Does not include Noble acquisition.

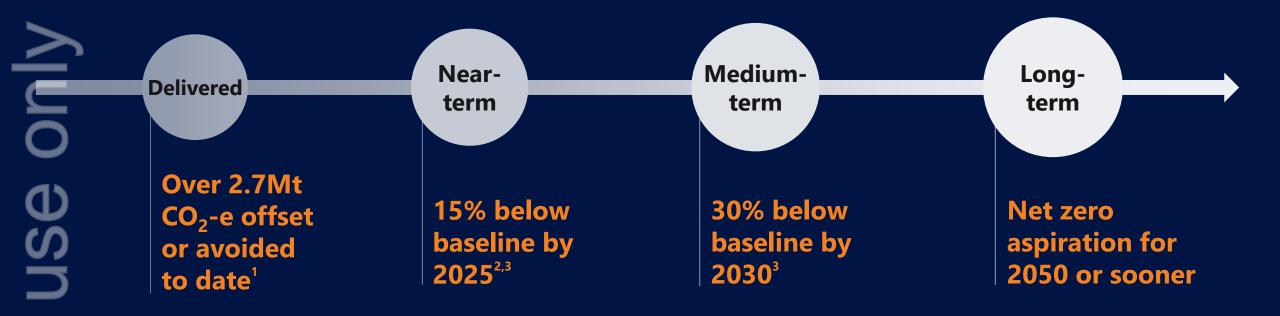
Prior to Concho acquisition.

3. Proposing to increase LNG sales to 50 Mtpa by 2025.

Including Rosneft. Proposing to increase LNG portfolio to 30 Mtpa by 2030.

## Clear targets for decarbonising our production





**Decarbonising production** 

Avoid in design • Reduce through efficient operations • Offset

Woodside operated. Avoided through energy efficiencies, voluntary offsets acquired and surrendered and ACCUs generated and retained/surrendered. Equivalent to previously disclosed equity reservoir offset target.

3. Baseline is set as the average equity Scope 1 and 2 emissions over 2016-2020 and may be adjusted (up or down) for potential equity changes in producing or sanctioned assets, with an FID prior to 2021.

# **Decarbonisation strategy is working**



# **Avoid** emissions

Case study: Goodwyn-A battery saves over 3,000 tonnes of fuel gas and 7,000 tonnes of CO<sub>2</sub>-e emissions each year



#### **Offset** emissions

Case study: 44 million trees planted since 2008, sequestering approximately 700,000 tonnes of CO<sub>2</sub>-e to date

#### **Reduce** emissions

**Case study:** Increased efficiency through Pluto LNG automated process control reduces emissions by 10,000 tonnes of CO<sub>2</sub>-e each year





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# **DEVELOPMENTS**

Meg O'Neill
Executive Vice President
Development and Marketing

# SCARBOROUGH AND PLUTO TRAIN 2 Unlocking significant value



Large, world-class resource

- 11.1 Tcf of dry gas<sup>1</sup>
- Well appraised reservoir

Capital efficient concept

- Leveraging existing infrastructure
- Increasing capacity
- Low unit development and operating costs

Advantaged timing

- Contractor market
- LNG demand increasing

FID on track for H2 2021

- Joint venture aligned
- First cargo 2026

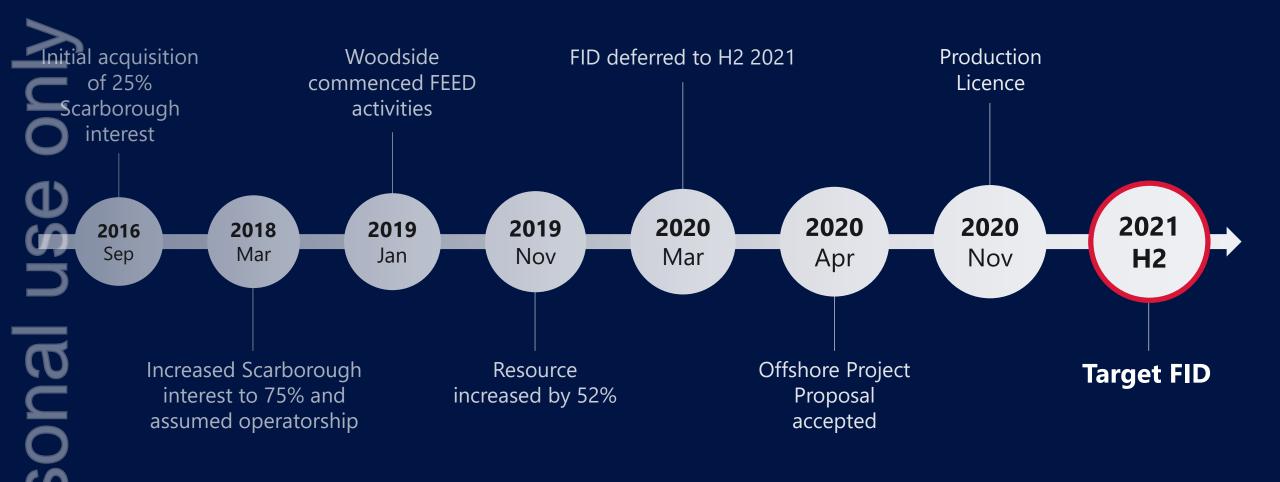


Conceptual image, not to scale. All dates are Woodside targets (unless otherwise indicated). Developments and dates are subject to joint venture approvals, regulatory approvals, appropriate market conditions and relevant commercial arrangements.

1. Scarborough field, 2C, 100%.

## **SCARBOROUGH AND PLUTO TRAIN 2 Journey to FID**



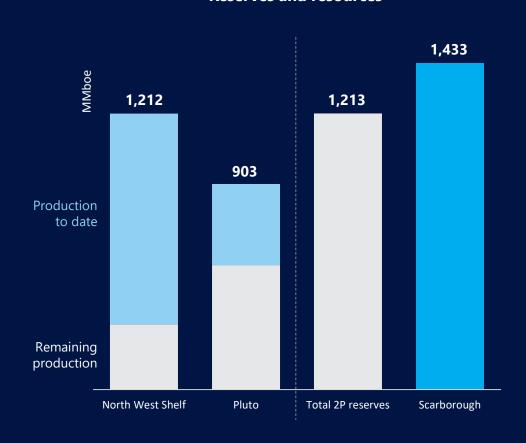


FID date is a Woodside target. Developments and dates are subject to joint venture approvals, regulatory approvals, appropriate market conditions and relevant commercial arrangements.

# **Transformative impact**



#### Reserves and resources<sup>1</sup>



~\$35 billion expected net cash flow<sup>2</sup>

>12% internal rate of return<sup>3</sup>

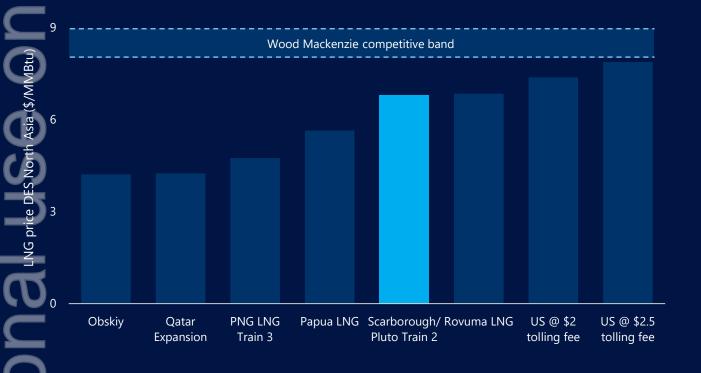
Woodside equity. Includes Pluto, Xena and Pyxis, excludes WA-404-P. "Remaining production" (includes 2P reserves and 2C resources), "Production to date" and "Total 2P reserves" are as of 31 December 2019. "Scarborough" comprises 2C resources for the Scarborough field.

2. Cumulative, post-tax, undiscounted net cash flow. Woodside share at current participating interest. Integrated Scarborough and Pluto.

## **Competitive and value accretive**







~ \$6.7 per boe unit development cost<sup>2</sup>

<\$6.8 per MMBtu cost of supply<sup>3</sup>

Analysis based on 6.5 Mtpa upstream capacity development concept.

Source: Wood Mackenzie. Woodside estimates for Scarborough/Pluto Train 2. At 10% discount rate.

The sum of all estimated capital expenditure over the life of the development (excluding abandonment) in 2020 real terms, divided by the estimated ultimate recovery. Integrated Scarborough and Pluto.

Integrated LNG DES North Asia. At 10% discount rate.

## **Scarborough LNG supports decarbonisation**



# enly (

**Negligible CO<sub>2</sub> in reservoir** 

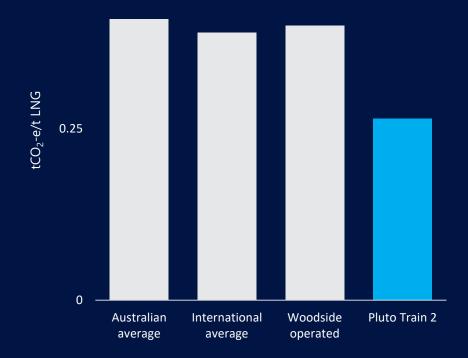
Adopting best available proven technology

**Low emissions intensity from Pluto Train 2** 

**Aligned with decarbonisation strategy** 

#### Pluto Train 2 greenhouse gas intensity<sup>1</sup>

0.5



# **Maximising value**



#### **Offshore**

#### Reservoir

- 11.1 Tcf dry gas (2C, 100%)
- 1.4 billion boe (2C, Woodside share)

52%

#### Floating production unit

- **Increasing** capacity from 6.5 Mtpa to 8 Mtpa + domestic gas
- Topside weight reduced

increase in upstream revenue for first 10 years<sup>1</sup>

#### Subsea, umbilicals, risers and flowlines

- 13 wells; 7-9 initially
- Execution schedule de-risked

#### **Trunkline**

**Increasing** shallowwater diameter

**Pluto LNG** 

- Initially 1.5 Mtpa of Scarborough gas
- Option: future increase to 3 Mtpa

#### **Pluto Train 2**

**Pluto Train 1** 

- 5 Mtpa
- Execution de-risked

# **Domestic gas**

• Increasing capacity to 250 TJ/d

#### **Pluto-KGP interconnector**

• Option: 1.5 Mtpa

#### **Karratha Gas Plant**

## **Robust contracting strategy**



**Strong contractor relationships** 

**High confidence contracting model** 

**De-risking cost and schedule** 

Total project contractor scope targeted breakdown<sup>1</sup>



Subsea, umbilicals, risers and flowlines



**Floating** production unit

MCDERMOTT

**Export trunkline** installation



**Pluto Train 2** 



# SCARBOROUGH AND PLUTO TRAIN 2 Pluto Train 2 increases value



Pluto Train 2 has lower overall cost

- NWS is not designed for large volumes of Scarborough gas
- A new train is more cost efficient than modifications to NWS
- Extends economic life of Pluto LNG at minimal cost

Shortest development time

- Scarborough to NWS commercial negotiations would delay FID
- Delays would risk current contracts, HOAs and SPAs
- Scarborough JV aligned on FID target in H2 2021

Maximised value capture

- 90% of toll from Train 1 and common user facilities, approximately 50% of toll from Train 2<sup>1</sup>
- Only 16.67% share of toll from NWS
- Higher Woodside equity interest in Pluto de-risks onshore execution

~30%

capital saving

by developing
Pluto Train 2²

1. Woodside share of toll revenue. Assuming successful sell-down of Pluto Train 2 to approximately 50%.

2. Comparison of total capital expenditure over field life for Pluto versus NWS, real terms 2020.

## **Readying for FID**



**Stronger approvals position** 

**Advantageous contractor market** 

**Unchanged LNG market fundamentals** 

**Aligned joint venture** 

**Increased value proposition** 

**Targeting** FID H2 2021

**Targeting** first cargo 2026

All dates are Woodside targets (unless otherwise indicated). Developments and dates are subject to joint venture approvals, regulatory approvals, appropriate market conditions and relevant commercial arrangements.

#### **SANGOMAR FIELD DEVELOPMENT PHASE 1**

### Sangomar schedule on track; COVID-19 impacts mitigated



# **Execution progressing**

- VLCC tanker delivered
- Tank cleaning nearing completion
- Tanker due to arrive at shipyard in November
- Detailed design of the FPSO well advanced
- Subsea fabrication on schedule
- Preparing for 2021 drilling campaign

**Contractors** 

- Experienced contractor team
- Resilient global supply chain management
- Developing operational footprint in Senegal

Targeting first oil 2023

Robust economics >15% IRR<sup>1</sup>

**FPSO** 



Subsea, umbilicals, risers and flowlines



**Drilling rigs** 

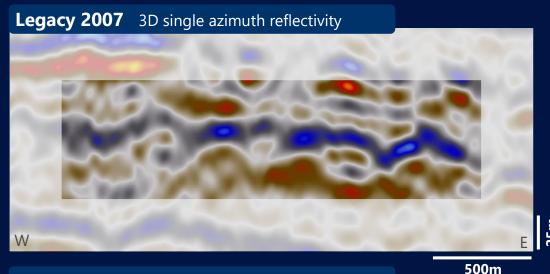


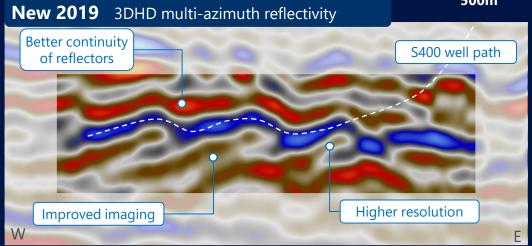
## **SANGOMAR FIELD DEVELOPMENT PHASE 1** Significantly increased seismic quality



# Value added

- Completed processing of high definition seismic data
- Supports simplification and de-risking of Phase 1 drilling program
- Better understanding of the S400 sands
- Greater confidence for Phase 2+ development planning



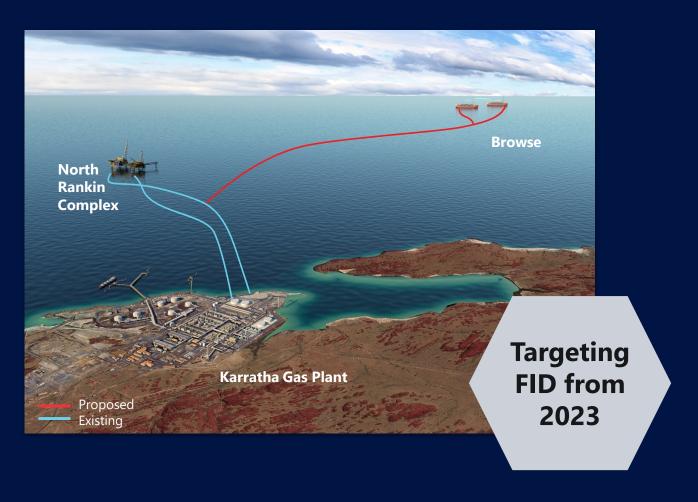


#### **BROWSE**

## **Preparing for FEED**



- Browse Joint Venture aligned on development through the North West Shelf
- **Production Licence and Retention Lease** applications under assessment by regulators
- Environmental approval processes well advanced
- Assessing feasibility of potential carbon capture and storage (CCS)
- Progressing value optimisation opportunities







# **OPERATIONS**

**Fiona Hick**Senior Vice President Operations

#### **OPERATIONS**

# **Outstanding operational performance**

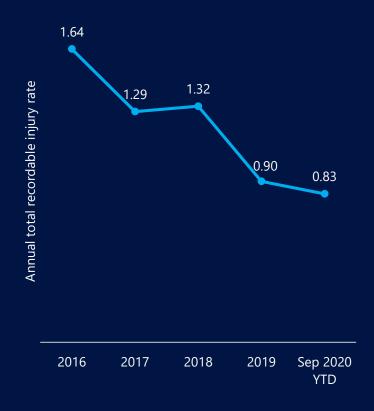


# 18% increase in year-on-year production year to date<sup>1</sup>

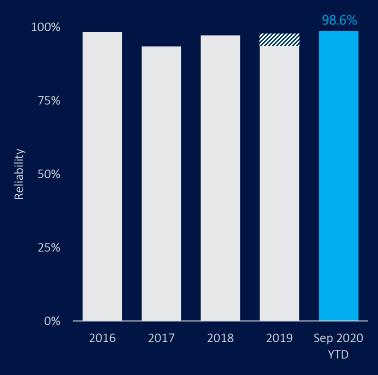
- Uncompromising safety performance
- Immediate and proactive response to COVID-19
- Skilled planning and disciplined execution of major activities

  High operational reliability

#### **Strong safety performance**



#### **High LNG reliability**



■ LNG (weighted average) 

✓ Pluto 2019 turnaround impact

# **Learning from COVID-19**



#### **Proactive response**

- Immediate workforce reorganisation
  - Temporary rosters in front-line locations
  - Segregation of onsite and offsite staff
- Collaboration with government and regulators
- Restructured delivery of critical maintenance
- Smooth transition back to 100% occupancy for frontline locations

# **Embedded actions**

- Digital capability enhancement
- Remote subsea and pipeline inspection
- Resilient staffing philosophy for turnarounds
- Temporary and permanent relocation
- Community support

Health and wellbeing of staff and safe operations maintained

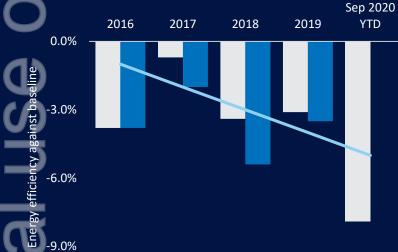
#### **OPERATIONS**

## **Delivering our climate commitments**



#### **Current commitments**

On track to deliver 5% improvement against energy efficiency baseline in 2020<sup>1</sup>



- Performance against baseline
- Performance against baseline excluding impacts<sup>2</sup>
- Target performance

#### **Enablers**

- Increased governance and communication of emissions performance
- Rethinking operational philosophies, such as saving fuel gas through startup procedures
- Minimising power generation spinning reserve across operational facilities
- Flare reduction activities at Pluto LNG

### **Targets**

Near-

term







Net zero aspiration for 2050 or sooner

The energy efficiency improvement target against baseline performance is measured relative to product energy efficiency prior to 2016. Impacts include one-off production interruptions such as maintenance turnarounds.

Saseline is set as the average equity Scope 1 and 2 emissions over 2016-2020 and may be adjusted (up or down) for potential equity changes in producing or sanctioned assets, with an FID prior to 2021.



#### **OPERATIONS**

### **Continual focus on cost**

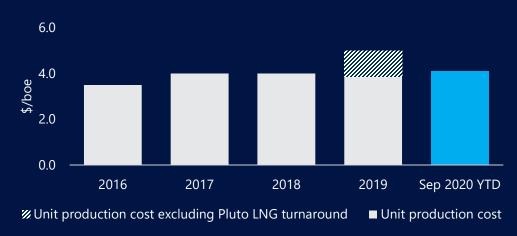


 Low-cost and high reliability is a key driver of value

#### In 2020:

- Maintenance efficiency
- Safely modifying turnaround schedule





## **2021 priorities**

Targeting ~15% reduction in NWS cash operating cost<sup>2</sup>

Targeting no increase in Pluto unit production cost

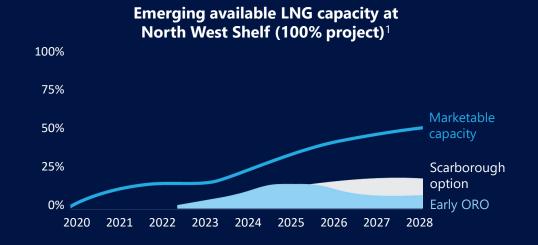
Maintenance and brownfield reprioritisation

**Reduced external spend** 

## NWS is forecast to be offshore constrained in 2021

- Opportunity to process gas from other resource owners (ORO)
- Targeting finalisation in Q4 2020 of early ORO agreements

Indicative representation only, not guidance.
 Excludes shipping and marketing costs.



## **Transforming operations to maintain low cost**



### Targeting 30% efficiency improvement for operated assets over 3 years



- **Enabled** workforce
- Organisational redesign



#### **Process**

- **Automated workflows**
- Agile, adaptive and scalable operating model
- Transition from producer to tolling business model



#### **Technology**

- Increasing productivity through technology
- Data driven decision making and artificial intelligence
- Remote operation of assets







**Shaun Gregory**Executive Vice President
Sustainability

## A future business in new energy



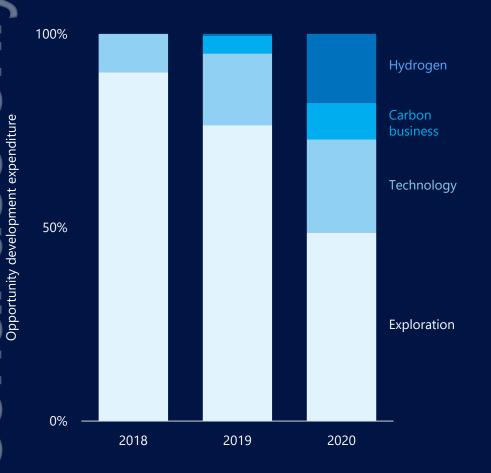


Scalable to match the pace of the energy transition

## Rebalanced expenditure is creating new opportunities



### Increased investment in new energy



### Hydrogen

- Green H<sub>2</sub> projects shortlisted for ARENA funding
- Partnering with Hyundai and KOGAS to develop refuelling stations in South Korea
- H<sub>2</sub> value chain feasibility with JERA and KOGAS

## **Technology**

- Capture and utilisation of carbon
- Partnerships with Monash University, UWA, Curtin University and Pusan National University
- Enabling base business and growth

# **Carbon business**

- Approximately 3.7 million native trees planted on three Woodside properties in 2020
- Building a diverse carbon offset portfolio
- Dedicated carbon capture and storage (CCS) team

## Competitive CCS is a scale play; supports a sustainable future



Identify
geographical
formations

Locating suitable reservoir sinks for carbon removal

Aggregate for scale

Potential to source carbon from multiple projects

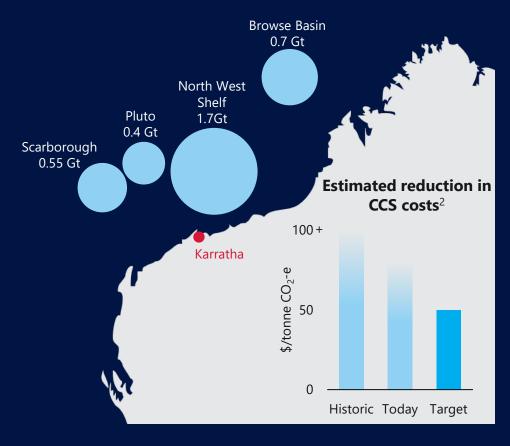
Create sequestration hub

Reduce cost by combining multiple transport methods

Unlock potential

~3.4Gt of storage potential across Woodside operated titles<sup>1</sup>

#### Potential geo-sequestration basins for carbon storage<sup>1</sup>



1. Estimates are 100% project, relate to carbon storage potential and are not resource estimates.

2. Woodside estimates and target.

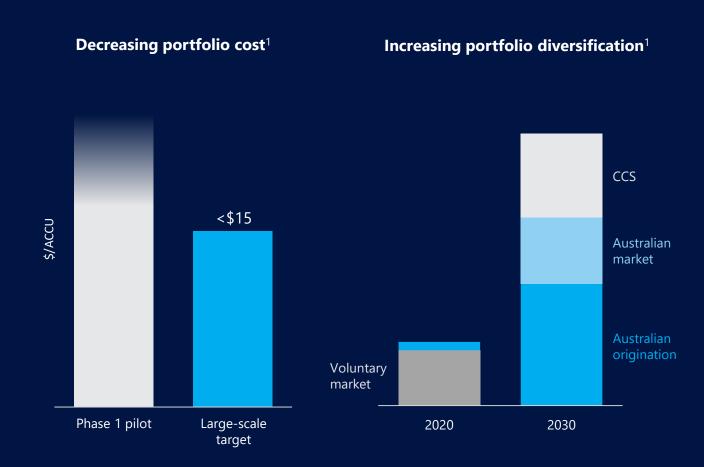
## **Building a carbon offsets portfolio**



Building a diverse, cost competitive portfolio comprising origination projects and market-based offsets

Established planting program with CO2 Australia Building carbon projects with Greening Australia:

- Delivering quality offsets
- Competitive cost of supply
- Provides carbon management certainty to sanction major projects



## Positioning to succeed in a growing hydrogen market



## **Woodside advantages**

Ability to leverage existing infrastructure

Experienced in processing and storage of cryogenic gases

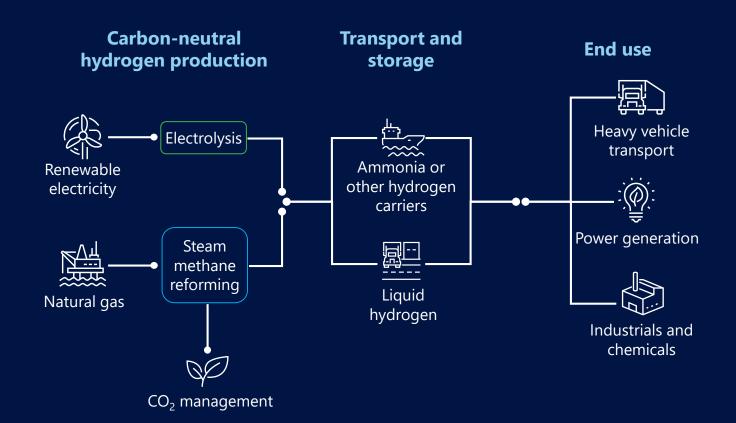
Established relationships with customers and technology providers

Access to abundant renewables

### **Woodside partnerships**

Japanese consortia trialling use of ammonia in power generation

Exploring green hydrogen export project with KOGAS

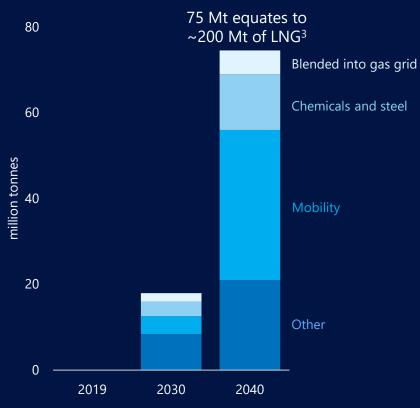


## **Governments are stimulating hydrogen in key markets**





#### Blue and green hydrogen demand<sup>2</sup>



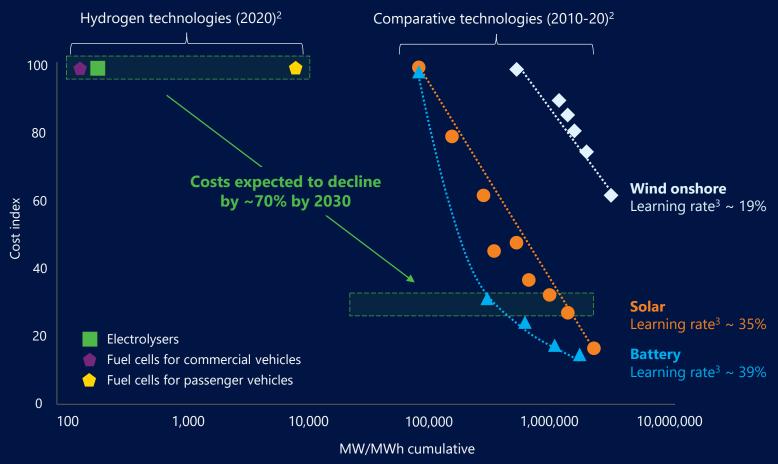
Expanding the supply of electric and hydrogen vehicles; by 2025, targeting 200,000 vehicles and 450 refueling stations. 2. IEA World Energy Outlook 2020. Demand for hydrogen from electrolysis and fossil fuels with CCUS based on IEA SDS scenario. On an energy basis. Converted under the following assumptions: Energy density of hydrogen = 142 MJ/kg, and energy density of LNG = 54 MJ/kg.



## Technology improvements and scale will reduce the cost of hydrogen

### **Technology cost reduction trajectories**<sup>1</sup>

Renewable power costs have reduced with scale
Lower renewable power costs reduce hydrogen generation cost
Hydrogen cost is expected to further decrease with increased scale and market penetration

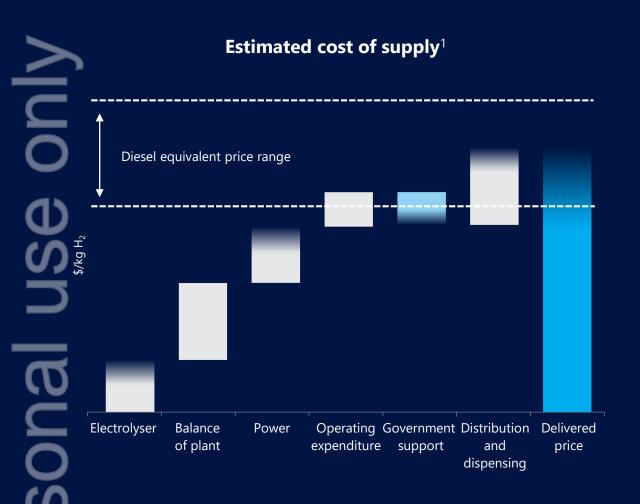


Sourced from the Hydrogen Council, McKinsey, IRENA, BNEF, Ruffini & Wei (2018) (learning rates), DoE.
Installed base: assuming 50/50 split of electrolysers volume with 50-75% utilisation; assuming 115 kW for PV, 250 kW for buses and 300 kW for trucks; LCOE used for solar cost; batteries in MWh.

Learning rate corresponds to the percentage cost reduction per unit for every doubling in cumulative volume.

## Green hydrogen can be competitive with diesel





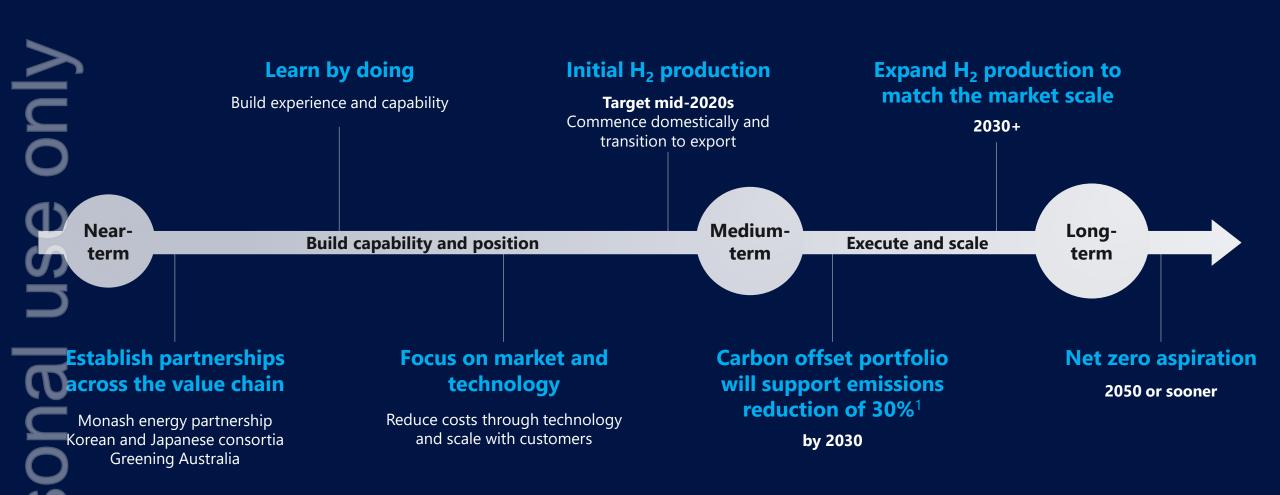
#### **Proposed H2TAS project**

10 MW (4.5 tonnes H<sub>2</sub> per day) green hydrogen production facility



## Right steps to a profitable future business





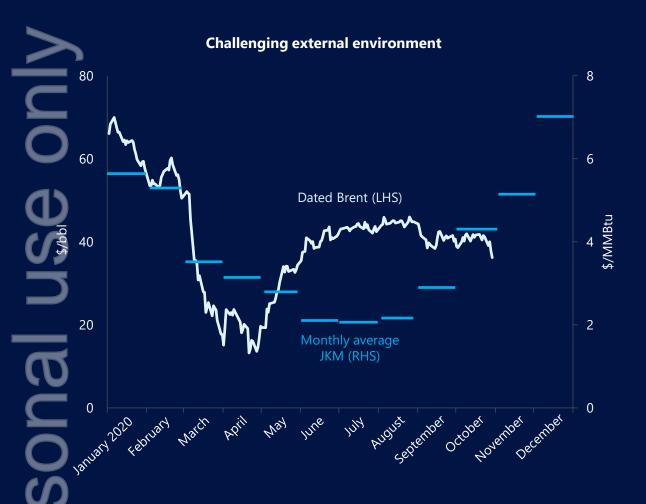


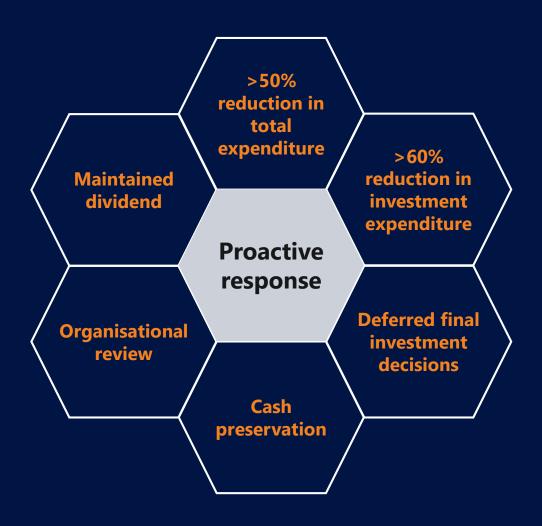


**Sherry Duhe**CFO and Executive Vice President

## **Demonstrating resilience**







## **CAPITAL MANAGEMENT Clear priorities**



- **Cash and value preservation in current environment**
- **Sell-down Pluto Train 2 and Sangomar equity**
- **Scarborough FID commercial and financial readiness**
- Identify and assess value-accretive opportunities
- 5 Release value from existing infrastructure
- **Protect key financial metrics and strong balance sheet** 6

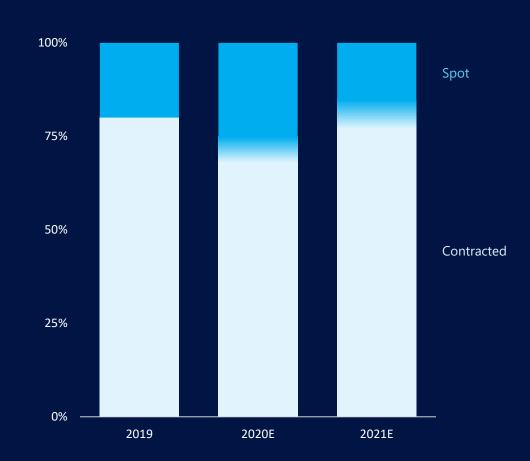
## **Revenue effectiveness**



### Balanced portfolio of long-term LNG contracts and spot sales

- Portfolio provides flexibility to meet customer demand and to capture upside
- High quality customer base
- Targeting approximately 15-20% spot sales in 2021
- Active optimisation of sales portfolio
- Price reviews central to managing risk

#### **Produced LNG cargo mix**



# Sustained cash margin

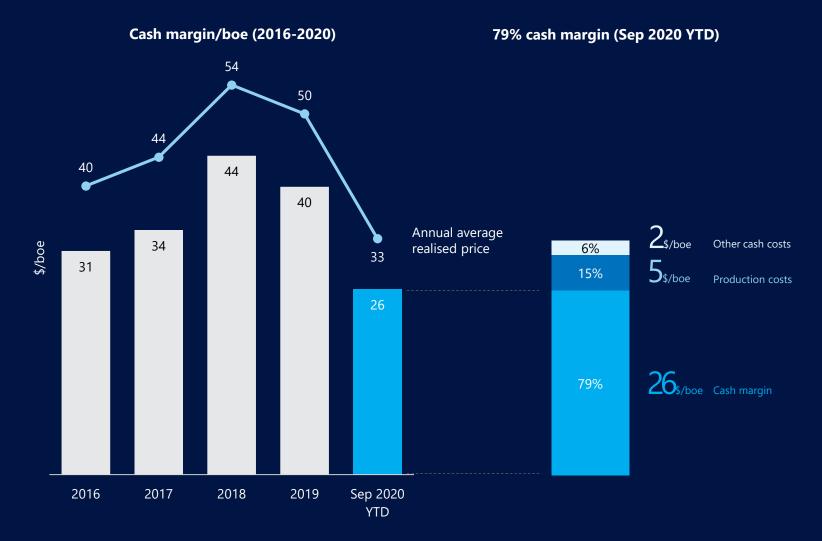


ıl use only

High reliability, low cost base business delivering cash

**Disciplined cost focus** 

**Sustained strong cash** margin above 75%

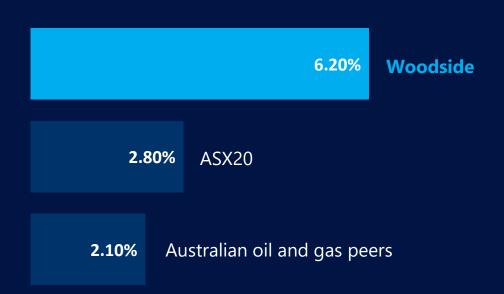


## **Returning value to shareholders**



- Dividend policy of 50% of underlying NPAT
- Recent dividends have represented payout ratio of approximately 80%
- Maintained 2020 interim dividend payout ratio through challenging market conditions
- Peer leading dividend yield
- Active dividend reinvestment plan
- Franking credit balance of A\$2.3B

#### Dividend yield, 12 months ending 30 June 2020<sup>1</sup>



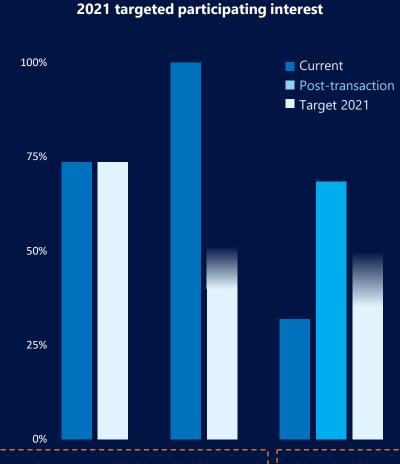
## Managing participating interest to support growth



#### Pluto Train 2 sell-down

Key capital management lever

- Reduces capital spend by approximately \$3 billion<sup>1</sup>
- Exploring opportunity to monetise infrastructure assets
- Strong interest from infrastructure investors
- Ongoing engagement with interested parties



### Sangomar sell-down

- Completion of acquisition of additional 36.44% targeted for Q4 2020
- Approvals received from:
  - Cairn PLC shareholders
  - Senegal Minister of Petroleum
     & Energies
- Targeting subsequent sell-down of interest in 2021
- Reducing interest to ~40% reduces capital spend by approximately \$1.2 billion<sup>1</sup>
- De-risked asset in execute phase with near-term production

Capital reduction of ~\$3B

Scarborough Plut

**Pluto Train 2** 

Sangomar

**Capital reduction of ~\$1.2B** 

Excludes proceeds of sell-down.

Investor Briefing Day 2020

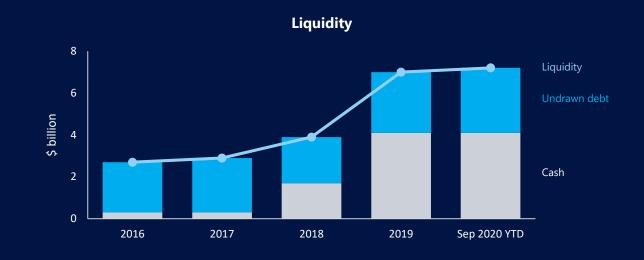
## **Depth for Scarborough FID and emerging opportunities**



Maintaining liquidity

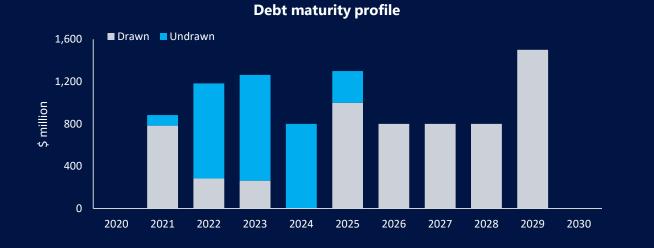
Optionality for valueaccretive inorganic opportunities

Support for creation of future business in a lower-carbon world



Financial capability and balance sheet strength to take Scarborough FID

Debt portfolio remains low cost and long tenor



# Multiple capital management levers



## **Comprehensive and objective evaluation of opportunities**



## **Strategic priorities**

Quality, tier one assets

0

**Asset and** geographical synergies

**Immediate** or near-term production

**Portfolio** balance

Carbon management

Sustainability

### **Commercial considerations**

**Balance sheet** and key financial metrics

> Fiscal and regulatory regime

**Operatorship** 

Lower oil price resilience

> **Partner** alignment

**Upside potential** 

### Investment targets<sup>1</sup>

>12% IRR

>0.25 VIR<sup>2</sup>

<8 years Payback<sup>3</sup>

Typical target investment hurdles for Woodside investments. Not an exhaustive list of hurdles. 2. Value investment ratio (VIR) = NPV (project)/NPV (total capital expenditure less abandonment expenditure). From start-up.

## Full-year 2020 guidance



Item		Full-year guidance	Remarks
Production range		99 – 101 MMboe	
Investment expenditure guidance		\$2,100 – 2,300 million	Increase primarily resulting from additional Sangomar interest (~\$600m)
Total expenditure guidance <sup>1</sup>		~\$2,900 million	Increase primarily resulting from additional Sangomar interest
Net finance costs		\$200 – 300 million	
Depreciation and amortisation	Oil and gas properties	\$1,650 – 1,750 million	
	Lease assets	\$80 – 100 million	
	Other property and equipment, and exploration and evaluation amortisation	\$30 – 50 million	
Unit production cost		Increase of ~\$0.4/boe	Attributable to COVID-19 and related events





# **BREAK**





# QUESTION AND ANSWER

**Peter Coleman**CEO and Managing Director





## **REMEMBRANCE DAY**





# QUESTION AND ANSWER

**Peter Coleman**CEO and Managing Director





## **SUMMARY**

**Peter Coleman**CEO and Managing Director

## **Clear priorities**



- **Achieve Scarborough FID in H2 2021**
- 2 **Sell-down Pluto Train 2 and Sangomar**
- 3 **Deliver Sangomar Phase 1**
- 4 Maintain a robust and resilient hydrocarbon business
- 5 **Deliver value through the energy transition**



# INVESTOR BRIEFING DAY 2020

11 November 2020

www.woodside.com.au investor@woodside.com.au





# **APPENDIX**

#### **APPENDIX**

## Notes to petroleum resources estimates



- 1. Unless otherwise stated, all petroleum resource estimates are quoted as at the balance date (i.e. 31 December) of the Reserves Statement in Woodside's most recent Annual Report released to the Australian Securities Exchange (ASX) and available at <a href="https://www.woodside.com.au/news-and-media/announcements">https://www.woodside.com.au/news-and-media/announcements</a>, net Woodside share at standard oilfield conditions of 14.696 psi (101.325 kPa) and 60 degrees Fahrenheit (15.56 degrees Celsius). Woodside is not aware of any new information or data that materially affects the information included in the Reserves Statement. All the material assumptions and technical parameters underpinning the estimates in the Reserves Statement continue to apply and have not materially changed.
- 2. The Reserves Statement dated 31 December 2019 has been subsequently updated by ASX announcements dated 26 February 2020 and 14 July 2020.
- 3. Woodside reports reserves net of the fuel and flare required for production, processing and transportation up to a reference point. For offshore oil projects, the reference point is defined as the outlet of the floating production storage and offloading facility (FPSO), while for the onshore gas projects the reference point is defined as the inlet to the downstream (onshore) processing facility.
- 4. Woodside uses both deterministic and probabilistic methods for estimation of petroleum resources at the field and project levels. Unless otherwise stated, all petroleum estimates reported at the company or region level are aggregated by arithmetic summation by category. Note that the aggregated Proved level may be a very conservative estimate due to the portfolio effects of arithmetic summation.
  - 'MMboe' means millions (106) of barrels of oil equivalent. Dry gas volumes, defined as 'C4 minus' hydrocarbon components and non-hydrocarbon volumes that are present in sales product, are converted to oil equivalent volumes via a constant conversion factor, which for Woodside is 5.7 Bcf of dry gas per 1 MMboe. Volumes of oil and condensate, defined as 'C5 plus' petroleum components, are converted from MMbbl to MMboe on a 1:1 ratio.
- 6. The estimates of petroleum resources are based on and fairly represent information and supporting documentation prepared under the supervision of Mr Jason Greenwald, Woodside's Vice President Reservoir Management, who is a full-time employee of the company and a member of the Society of Petroleum Engineers. Mr Greenwald's qualifications include a Bachelor of Science (Chemical Engineering) from Rice University, Houston, Texas, and more than 20 years of relevant experience. The estimates have been approved by Mr. Ian Sylvester, Woodside's Vice President Corporate Reserves.

### **APPENDIX**

## Glossary



\$, \$m, \$B	US dollar unless otherwise stated, millions of dollars, billions of dollars
A\$	Australian dollar
2P	Proved plus Probable reserves
2C	Best Estimate of Contingent resources
boe, MMboe, Bboe	Barrel of oil equivalent, million barrels of oil equivalent, billion barrels of oil equivalent
Cash margin/boe	Revenue from the sale of produced hydrocarbons less production costs, royalties and excise, insurance and shipping and direct sales cost; divided by produced hydrocarbon sales volumes (MMboe)
ccs	Carbon capture and storage
CCUS	Carbon capture, utilisation and storage
FEED	Front-end engineering design
FID	Final investment decision
FPSO	Floating production storage and offloading
FPU	Floating production unit
Free cash flow	Cash flow from operating activities less cash flow from investing activities
Gearing	Net debt divided by net debt and equity attributable to the equity holders of the parent
НОА	Heads of agreement
H <sub>2</sub>	Hydrogen
IRR	Internal rate of return
JV	Joint venture
kbpd	Thousand barrels per day
KGP	Karratha Gas Plant

kt	Kilotonnes (metric)
LNG	Liquefied natural gas
LPG	Liquefied petroleum gas
MMbbl	Million barrels
MMBtu	Million British thermal units
mmscf/d	Million standard cubic feet per day
Mtpa	Million tonnes per annum
NPAT	Net profit after tax
NWS	North West Shelf
PRRT	Petroleum Resource Rent Tax
RFSU	Ready for start-up
SPA	Sale and purchase agreement
PSC	Production sharing contract
Tcf	Trillion cubic feet
TRIR	Total recordable injury rate. The number of recordable injuries (fatalities plus lost workday cases plus medical treatment cases) per million hours worked
Ullage	Available capacity
Unit production cost	Production cost divided by production volume
VIR	Value investment ratio
Woodside target schedule	Woodside schedule subject to all necessary joint venture approvals, regulatory approvals, and/or appropriate commercial arrangements being finalised. See further detail set out in slide 3, "Disclaimer, risks and assumptions" for more information.
YTD	Year to date



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