

AUSTRALIAN DOMESTIC
GAS OUTLOOK 2021
24 MARCH 2021

Lee Marshall

Investing in the future of Australian domestic gas



Enterprise 1 – Otway Basin

Compliance statements



Disclaimer

This presentation contains forward looking statements that are subject to risk factors associated with oil, gas and related businesses. It is believed that the expectations reflected in these statements are reasonable but they may be affected by a variety of variables and changes in underlying assumptions which could cause actual results or trends to differ materially, including, but not limited to: COVID-19 risks, price fluctuations, actual demand, currency fluctuations, drilling and production results, reserve estimates, loss of market, industry competition, environmental risks, physical risks, legislative, fiscal and regulatory developments, economic and financial market conditions in various countries and regions, political risks, project delays or advancements, approvals and cost estimates. Please refer to the Directors' Report in the FY20 annual report for more details specifically relating to COVID-19 risks.

Underlying EBITDAX (earnings before interest, tax, depreciation, amortisation, evaluation, exploration expenses and impairment adjustments), Underlying EBITDA (earnings before interest, tax, depreciation, amortisation, evaluation and impairment adjustments), underlying EBIT (earnings before interest, tax, and impairment adjustments) and underlying profit are non-IFRS financial information provided to assist readers to better understand the financial performance of the underlying operating business. They have not been subject to audit or review by Beach's external auditors. The information has been extracted from the audited or reviewed financial statements.

Free cash flow in this presentation is defined as cash flows from operating activities plus cash flows from investing activities less cash flows from acquisitions and divestments less lease liability payments.

All references to dollars, cents or \$ in this presentation are to Australian currency, unless otherwise stated. References to "Beach" may be references to Beach Energy Limited or its applicable subsidiaries. Unless otherwise noted, all references to reserves and resources figures are as at 30 June 2020 and represent Beach's share.

References to planned activities in FY21 and beyond FY21 may be subject to finalisation of work programs, government approvals, joint venture approvals and board approvals.

Due to rounding, figures and ratios may not reconcile to totals throughout the presentation.

Authorisation

This release has been authorised for release by the Beach Energy Board.

Assumptions

The five-year outlook set out in this presentation is not guidance. The outlook is uncertain and subject to change. The outlook has been estimated on the basis of the following assumptions: 1. a US\$55.00/bbl Brent oil price in H2 FY21, a US\$52.50/bbl Brent oil price in FY22 and US\$60/bbl Brent oil price from FY23; 2. 0.70 AUD/USD exchange rate; 3. various other economic and corporate assumptions; 4. assumptions regarding drilling results; and 5. expected future development, appraisal and exploration projects being delivered in accordance with their current expected project schedules.

Remaining FY21 guidance is uncertain and subject to change. H2 FY21 guidance has been estimated on the basis of the following assumptions: 1. a US\$55.00/bbl Brent oil price; 2. 0.77 AUD/USD exchange rate; 3. various other economic and corporate assumptions; 4. assumptions regarding drilling results; and 5. expected future development, appraisal and exploration projects being delivered in accordance with their current expected project schedules.

These future development, appraisal and exploration projects are subject to approvals such as government approvals, joint venture approvals and board approvals. Beach expresses no view as to whether all required approvals will be obtained in accordance with current project schedules.

Reserves disclosure

Beach prepares its petroleum reserves and contingent resources estimates in accordance with the 2018 update to the Petroleum Resources Management System (PRMS) published by the Society of Petroleum Engineers.

The reserves and resources information in this report is based on, and fairly represents, information and supporting documentation prepared by, or under the supervision of, Mr David Capon (General Manager Development - Victoria, New Zealand and NT). Mr Capon is a full-time employee of Beach Energy Limited and has a BSc (Hons) degree from the University of Adelaide and is a member of the Society of Petroleum Engineers. He has in excess of 25 years of relevant experience. The reserves and resources information in this presentation has been issued with the prior written consent of Mr Capon as to the form and context in which it appears.

Beach most recently released reserves information in its 2020 Annual Report. Information about the contracted acquisition of Senex is contained in ASX announcement #037/20 from 3 November 2020: "Beach expands Cooper Basin Portfolio" and the contracted acquisition of Mitsui's interests in the Bass Basin are contained in ASX announcement #002/21 from 27 January 2021: "FY21 Second Quarter Activities Results". Information about the Enterprise 1 discovery reserve booking are included in the ASX announcement #004/21 from 15 February 2021: "Enterprise Exploration Success Delivers Material 2P Reserves Booking". Beach confirms that it is not aware of any other new information or data that materially affects the information included in this report and that all the material assumptions and technical parameters underpinning the estimates in the aforesaid market announcement continue to apply and have not materially changed.

Conversion factors used to evaluate oil equivalent quantities are sales gas and ethane: 5.816 TJ per kboe, LPG: 1.398 bbl per boe, condensate: 1.069 bbl per boe and oil: 1 bbl per boe. The reference point for reserves determination is the custody transfer point for the products. Reserves are stated net of fuel, flare & vent and third-party royalties.

Sourcing more supply for Australian markets

Beach's program goes up a gear after COVID slowdown



Beach and JVP is investing more than \$1billion in its Otway campaign to bring more gas into the East Coast Market

Enterprise nearshore discovery supports further upside potential for the Otway Basin

Otway offshore campaign underway, gas exploration discovery with Artisan-1.

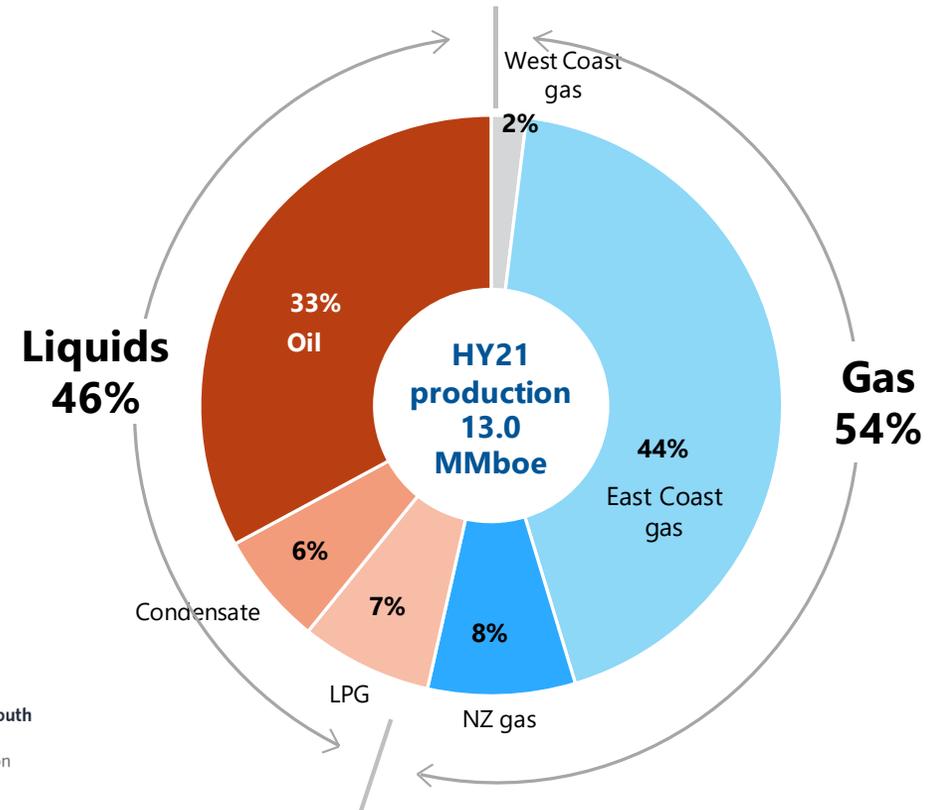
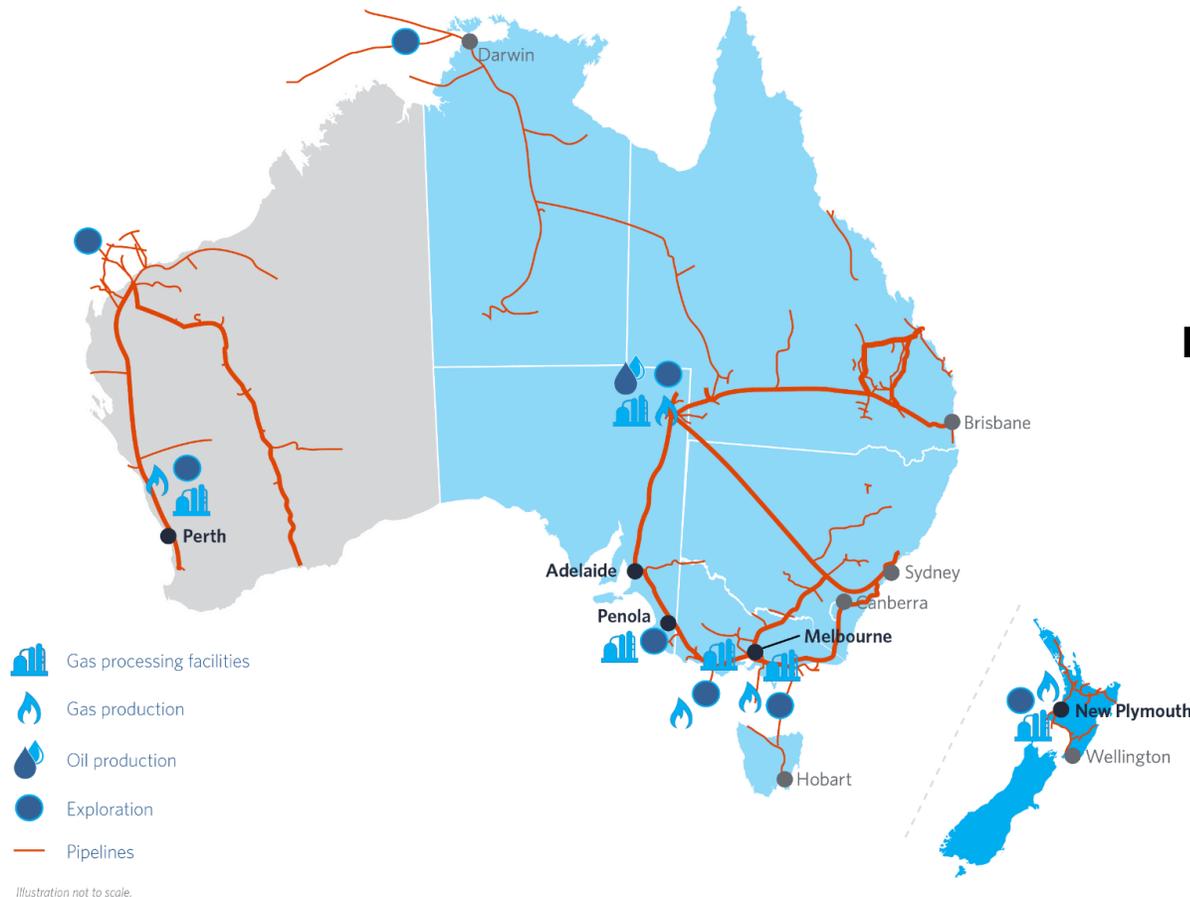
Trefoil to progress towards FEED, creating value from BassGas acquisition

Waitsia to provide new supply to WA domestic market and LNG



Beach Energy portfolio diversity

Six production hubs supplying three distinct gas markets



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East Coast Gas Market

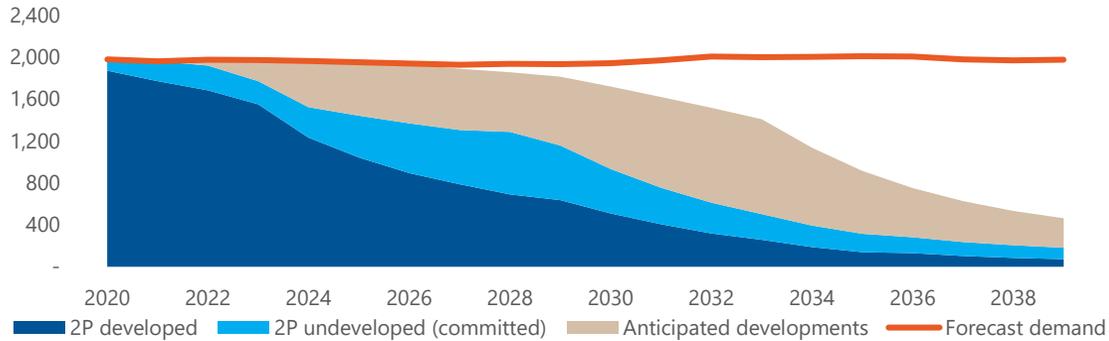


East Coast domestic gas market

Supportive of Beach's east coast gas strategy

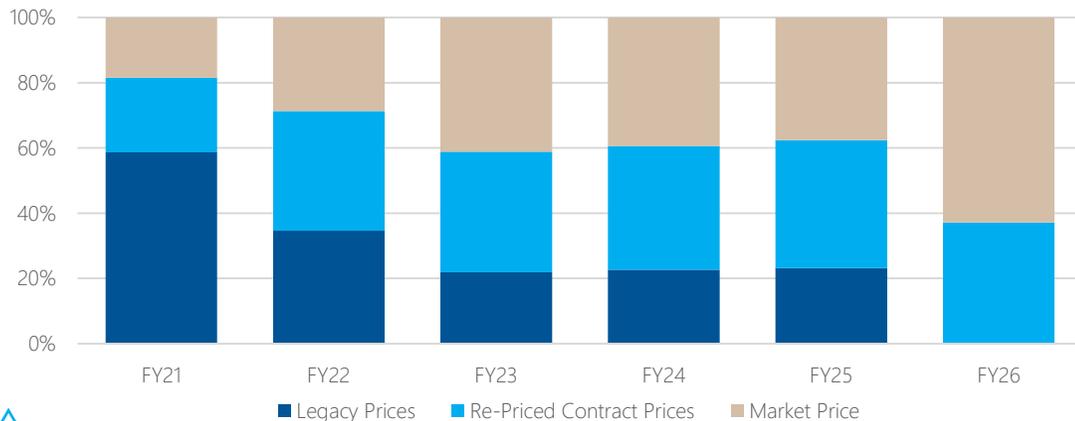


East coast gas supply/demand (TJ per day)



Source: AEMO 2020 Gas Statement of Opportunities – central scenario (March 2020)

Beach's forecast east coast gas sales (% of volume)



AEMO (2023/24)¹ and the ACCC² (2024) say a potential shortfall is looming in southern states

- Shortfalls could occur on peak-demand winter days as early as 2023 – restricting supply to gas-fired power plants and other users
- Current shortfall is met by Queensland LNG volumes being diverted to the major southern markets in Victoria and NSW
- AEMO continues to forecast insufficient reserves to meet domestic demand from 2026
- Market prices are required to underpin the next phase of gas developments across the east coast.

1. <https://aemo.com.au/en/newsroom/media-release/gsoo-vgpr-2020>
 2. <https://www.accc.gov.au/media-release/gas-prices-improve-for-customers-but-lower-prices-may-not-last>



Enterprise 1

Enterprise gas discovery

New nearshore gas discovery supports Otway Basin five-year production profile



- Discovered in November 2020 following extended reach exploration drilling from onshore Otway Basin (Beach: 60% interest)
- High relief, fault-bound structure with gross 2P reserves of 34 MMboe¹
- Gross sales gas of 161 PJ and 4 MMbbls condensate (97 PJ and 2 MMbbls net to Beach)
- 25 bbls/MMscf liquids yield, materially higher than pre-drill estimates
- Plans to commence FEED in H2 FY21
- Development to tie-in onshore wellhead via new pipeline in existing easement to Otway Gas Plant, currently ~140 TJ per day of spare capacity²
- Forecast gross development capex of \$60 – 70 million
- Gas uncontracted, allowing for offtake diversification and sales at East Coast gas market prices

1. Refer to ASX announcement #004/21 from 15 February 2021 "Enterprise Exploration Success Delivers Material 2P Reserves Booking". Evaluation date of reserves as at 15 February 2021.
2. Otway assets produced at ~65 TJ per day over H1 FY21, with Otway Gas Plant capacity of ~205 TJ per day.



Otway Offshore campaign

Targeting tripling in the utilisation of the Otway Gas Plant by mid-FY23



Campaign underway with Artisan 1

- Artisan 1 gas discovery announced on 22 March¹
- 69.5 metres gross column within the Upper Waarre Formation with net gas pay of 62.9 metres
- Additional 20.9 metre gross column with 4.6 metres of net pay in the overlying Flaxman Formation
- Operational success – good start to the campaign from the team on the Onyx
- Rig now moving to Geographe – with first gas targeted for FY22
- Six development wells across Thylacine and Geographe
- 15 years asset life, with the inclusion of Enterprise success
- Assessing additional well intervention opportunities

1. Refer to ASX announcement #0011/21 from 22 March 2021 "Artisan 1 Gas Discovery".

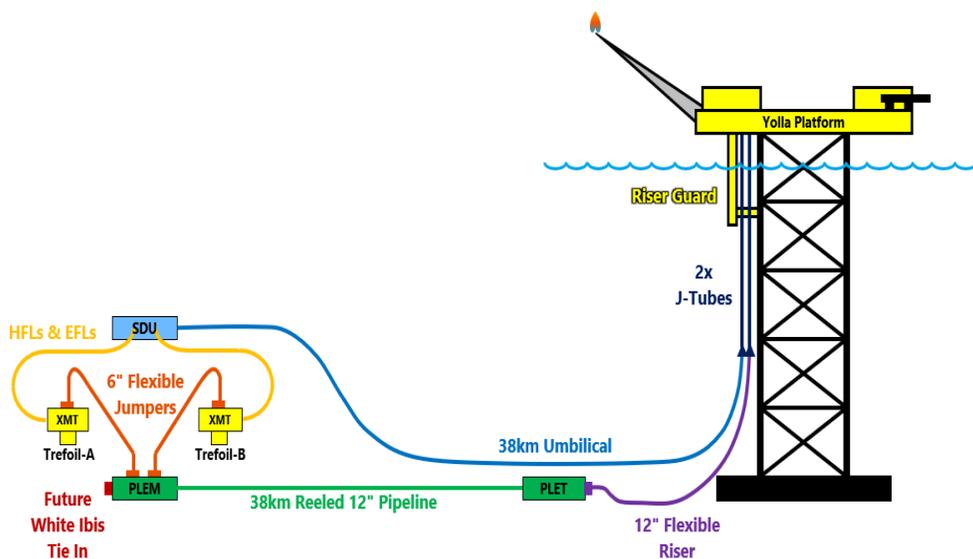


Bass Basin

Acquisition of Mitsui's Bass Basin assets showcases upside potential of Trefoil



Trefoil development schematic



Extending the life of BassGas

- Beach to purchase all Mitsui's interest in BassGas Project and Trefoil development project¹
 - Post-completion, Beach will hold 88.75% of BassGas and 90.25% of Trefoil
- Reviewing in-field drilling opportunities and wireline interventions in Yolla field to lift production ahead of Trefoil development
- Preparing for 3D seismic over White Ibis and Bass prospects
- Plans to commence FEED on Trefoil in FY21, with FID planned in H1 FY23
- Targeting first gas from FY25, subject to necessary approvals
- Trefoil investment will extend the life of the 70 TJ per day Lang Lang Gas Plant

1. Refer to ASX announcement #002/21 from 27 January 2021 "Fourth Quarter Activities Report".

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West Coast Gas Market

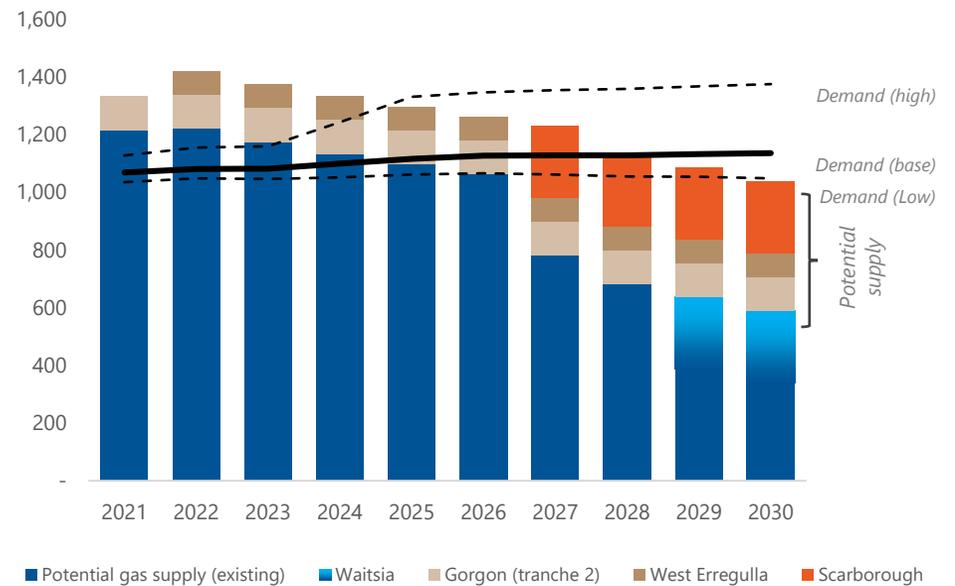


Western Australia domestic gas market

Well supplied in the near-term, uncertainty increasing from mid-2020s



Production guidance by product (TJ per day)



Source: AEMO 2020: WA Gas Statement of Opportunities (December 2020)
 Note: (1) AEMOs potential gas supply does not project how much gas will be produced, but how much could be produced if there was demand at the forecast price.
 (2) AEMOs base gas supply profile assumes the following potential supply sources Gorgon (2021), West Erregulla (2022), Scarborough (2027), and Waitsia (2029) at a reduced capacity

Domestic market expected to be well supplied until mid-2020s

- Existing supply expected to peak from 2022, in line with reserves depletion
- Uncertainty surrounding timing of new supply from large prospective LNG projects (with associated domgas commitments)
- Gas demand forecast to grow at a CAGR of 0.7% to 2030¹, supported by growth in the mining and minerals processing sectors

Waitsia and Beharra Springs important for keeping WA supplied

- Xyris (Waitsia Stage 1A) and Beharra Springs will continue to supply up to ~40 TJ per day to the domestic market
- Construction of new ~250 TJ per day Waitsia Stage 2 gas plant, with 7.5 MT (gross) (3.75 MT net to BPT) approved for LNG export until the end of 2028
- Remaining ~50% of Waitsia 2P reserves available to supply the domestic market from 2029
- Continue to assess gas processing capacity expansion opportunities at Beharra Springs



Xyris Facility (Waitsia Stage One)

Perth Basin

Waitsia Stage Two – LNG and WA domestic gas supply



Waitsia gas field to supply long life (>15 years) and high-quality reserves to global LNG and west coast gas markets

- Game-changing project for Beach with unconditional FID reached in February
- Remaining 2P reserves available to supply the domestic market from 2029
- Clough awarded EPC contract to construct ~250 TJ per day gas processing facility
- Delivering ~200 jobs for Western Australians during construction
- ~60% of total project GHG emissions to be reduced or offset
- Total gross capex to first production of \$700 – 800 million (\$350m - \$400m net to Beach), supporting wells, gathering and facilities
- Further exploration and development activities under consideration to unlock our greater Perth Basin acreage

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Emissions reduction



Gas is critical in lowering Australia's emissions footprint



AEMO 2020 Integrated System Plan – Step Change Scenario

	2021-22 GWh	Share	2041-42 GWh	Share	GWh Change	% Change
COAL	128883	61.2%	6458	2.2%	-122425	-95%
GAS	3253	1.5%	4338	1.5%	1085	33%
HYDRO	16429	7.8%	14884	5.1%	-1545	-9%
STORAGE	793	0.4%	28090	9.7%	27297	3442%
RENEWABLES	61168	29.1%	235421	81.4%	174253	285%
TOTAL	210526		289191		78665	37%



AEMO forecasts 33% more gas fired electricity generation in 20 years in most extreme emissions reduction scenario

- AEMO's ISP predicts higher levels of gas fired power generation in 2041-42, relative to 2021-22 levels, in all modelled scenarios.
- This includes the most ambitious (Step Change) scenario.
- The Step Change scenario achieves a 90% reduction in carbon emissions from power generation by 2041-42.
- Gas-fired generation increases by 33%, enabling renewables generation to increase by 285%.



Committed to reducing our emissions



Progressing delivery of 25% emission reduction

Initiatives include:

Flare and vent management

- Beach is implementing initiatives to reduce the need for flaring across operational sites
- Initiatives include flare minimisation during shutdown and start-up situations, as well as the optimisation of purge and pilot gas scenarios

Bauer Hybrid Renewable Project

- Beach is undertaking further preparatory work that will deliver energy supply to the field through a combination of wind, solar, battery and diesel generation

Leak Detection and Repair Program

- Program now in place for most of operated production. Remaining assets will be completed this financial year
- The program is delivered through the use of world-class imaging equipment

Committed to offsetting 100% of Waitisia reservoir CO₂ (~60% total project emissions) from first production

Committed to funding of Cooper Basin CCS project FEED study, in addition to “25by25” targets

Challenges for our industry

Making the gas market work for everybody



- **Gas market debate important – need for gas unquestioned.**
- **Price capping could result in gas staying in the ground. This is bad for everyone.**
- **Policies need to focus on encouraging development of resources.**
- **Could we be on the cusp of bipartisanship on gas policy?**



Sourcing more supply for Australian markets

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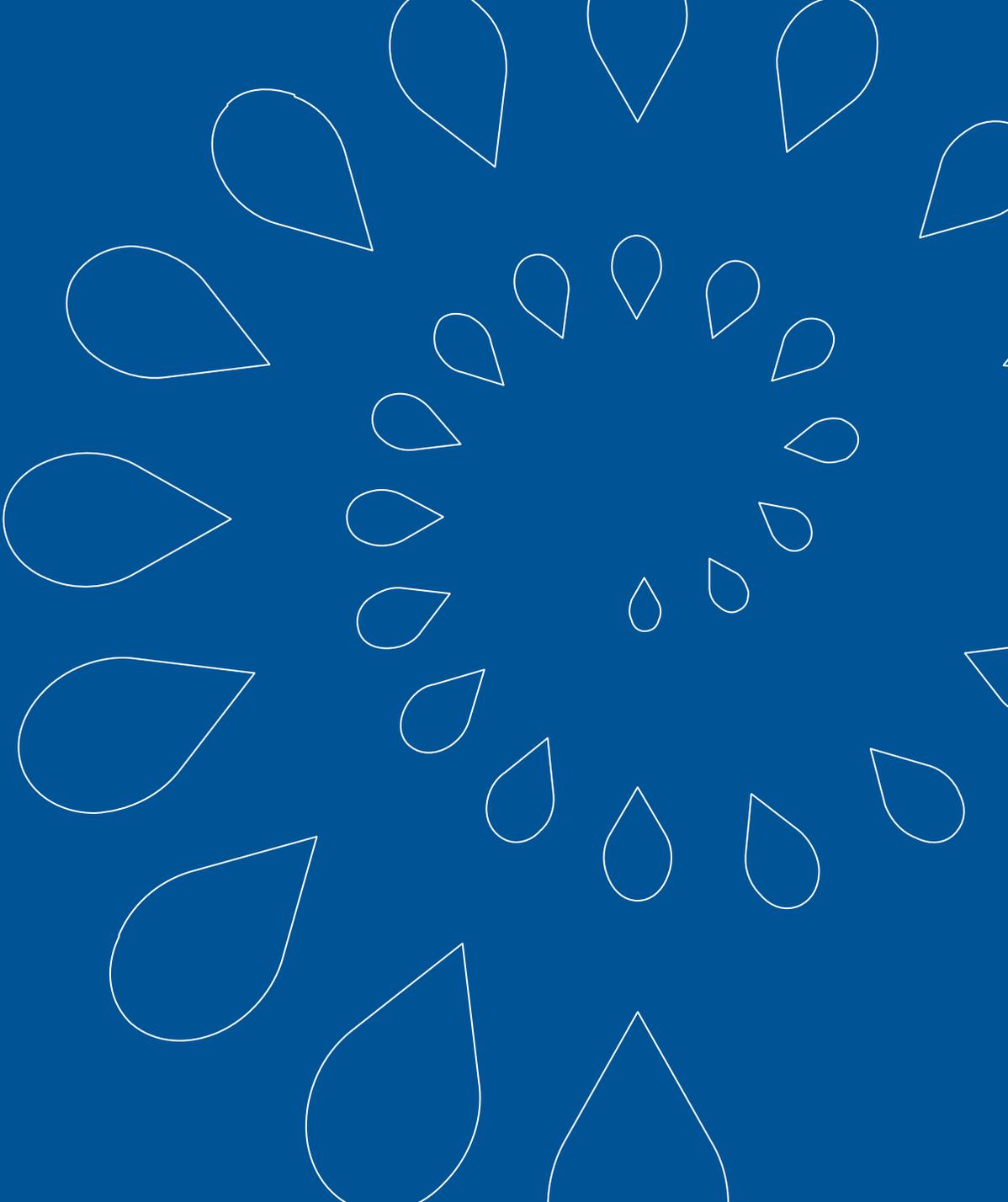
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Thank You



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