



# Leading the Clean Energy Transition

AGM Presentation

28 February 2022

PILOT ENERGY LIMITED  
ASX:PGY



# Pilot – Leading the Clean Energy Transition

Leveraging existing oil and gas assets along with established infrastructure to develop competitive clean energy projects

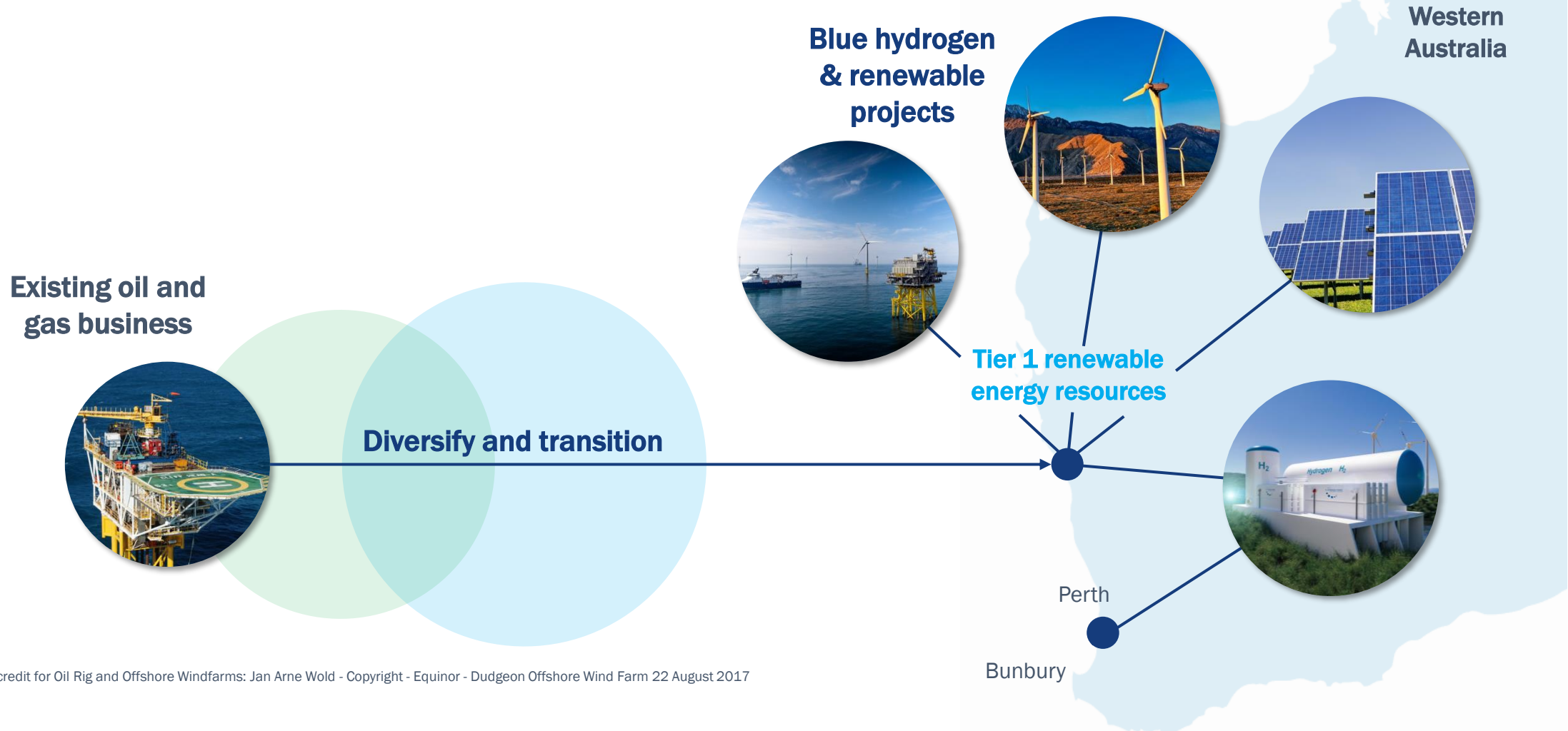


Image credit for Oil Rig and Offshore Windfarms: Jan Arne Wold - Copyright - Equinor - Dudgeon Offshore Wind Farm 22 August 2017

# Pilot at a Glance

## ASX Code: PGY

### Capital Structure

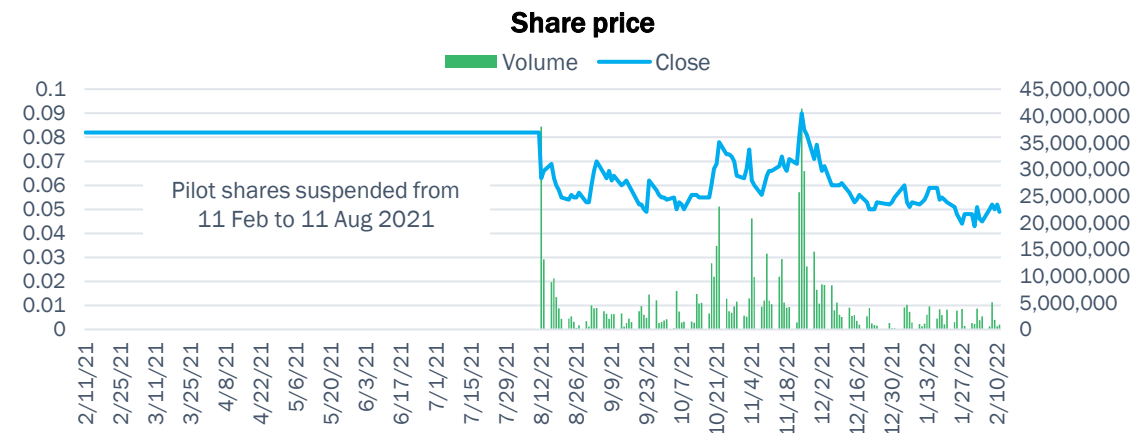
• Issued shares	504.4 million
• PGY share price (14.02.22)	~\$0.056
• Market Capitalisation	~\$28 million

### Oil & Gas Reserves & Resources (Existing)

• Proved & Probable Reserves <sup>1</sup>	-
• 2C Contingent Resources <sup>1,2</sup>	~3,800,000 BOE

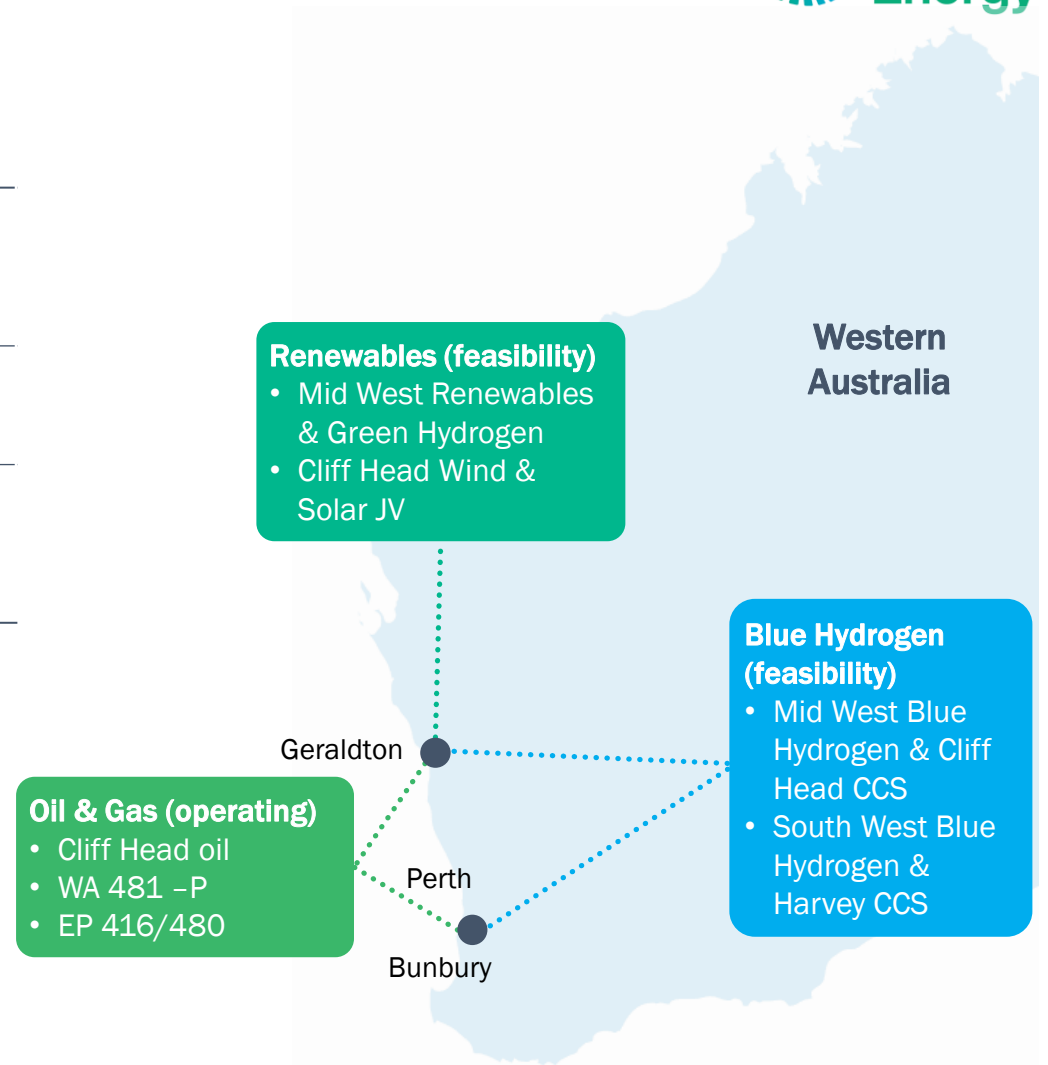
### Blue Hydrogen & Renewables Projects (Under feasibility evaluation)

• Wind/Solar Power (MW)	1,300+
• Hydrogen (kg/day)	Up to 250,000
• CCS/CCUS (tonnes per annum)	Up to 1.3 million



1. Approximately 300,000boe associated with the Cliff Head project remains under review and may be reclassified as reserves subject to the finalisation of new oil offtake arrangements

2. Refer to PGY ASX announcement 23 April 2021 titled "Resources Update" and refer to Independent Technical Specialist Report Pilot Energy Ltd – Australian Exploration Assets January 2021 (28 May 2021 General meeting Notice of Meeting: Independent Expert Report



# Proven, Experienced Board



**Brad Lingo**

## Executive Chairman

30+ years international senior executive experience

Upstream/midstream energy, energy infrastructure, finance

Proven track record of creating & growing shareholder value



**Tony Strasser**

## Managing Director

Extensive oil & gas experience including project and financial management, corporate finance and M&A 25+ years

Proven record in oil & gas with shareholder backing through multiple ventures



**Daniel Chen**

## Non Executive Director

17+ years of international business, project management and leadership experience in large scale transport and logistics

Corporate advisor to private Australian oil & gas companies since 2018



**Bruce Gordon**

## Non Executive Director

Corporate Finance and Corporate Audit Specialist in the Natural Resources Sector

25+ years acting for, and advising, ASX and International oil and gas companies.

Extensive public company accounting, financial reporting and corporate governance knowledge



# The Senior Management Team



**Cate Friedlander**

**Company Secretary & General Counsel**

Experienced corporate / commercial lawyer in upstream & midstream energy - ASX and international.

Chartered Governance Professional.

Member of Governance Institute of Australia.



**Nick Watson**

**Head of Renewables & Commercial**

20 years energy industry experience

Corporate/strategic development and operational experience across hydrogen, energy and oil & gas



**Mike Lonergan**

**Head of Upstream**

Michael is a petroleum geophysicist with 35 years of domestic and international oil and gas experience across a wide range of E and P assets. He has held senior technical and project management roles during his career, having worked for Delhi Petroleum, Oil Company of Australia, Origin Energy, Rohol-Aufsuchungs Aktiengesellschaft, Mosaic Oil, AGL, Pangaea Resources and Denison Gas.





# Pilot's Competitive Advantage



**Material holdings with recognised world-class natural resources (oil & gas, blue hydrogen and renewables)**



**Ownership in key energy licenses & infrastructure**



**Leveraging existing oil & gas assets into potential world-class competitive clean energy projects**



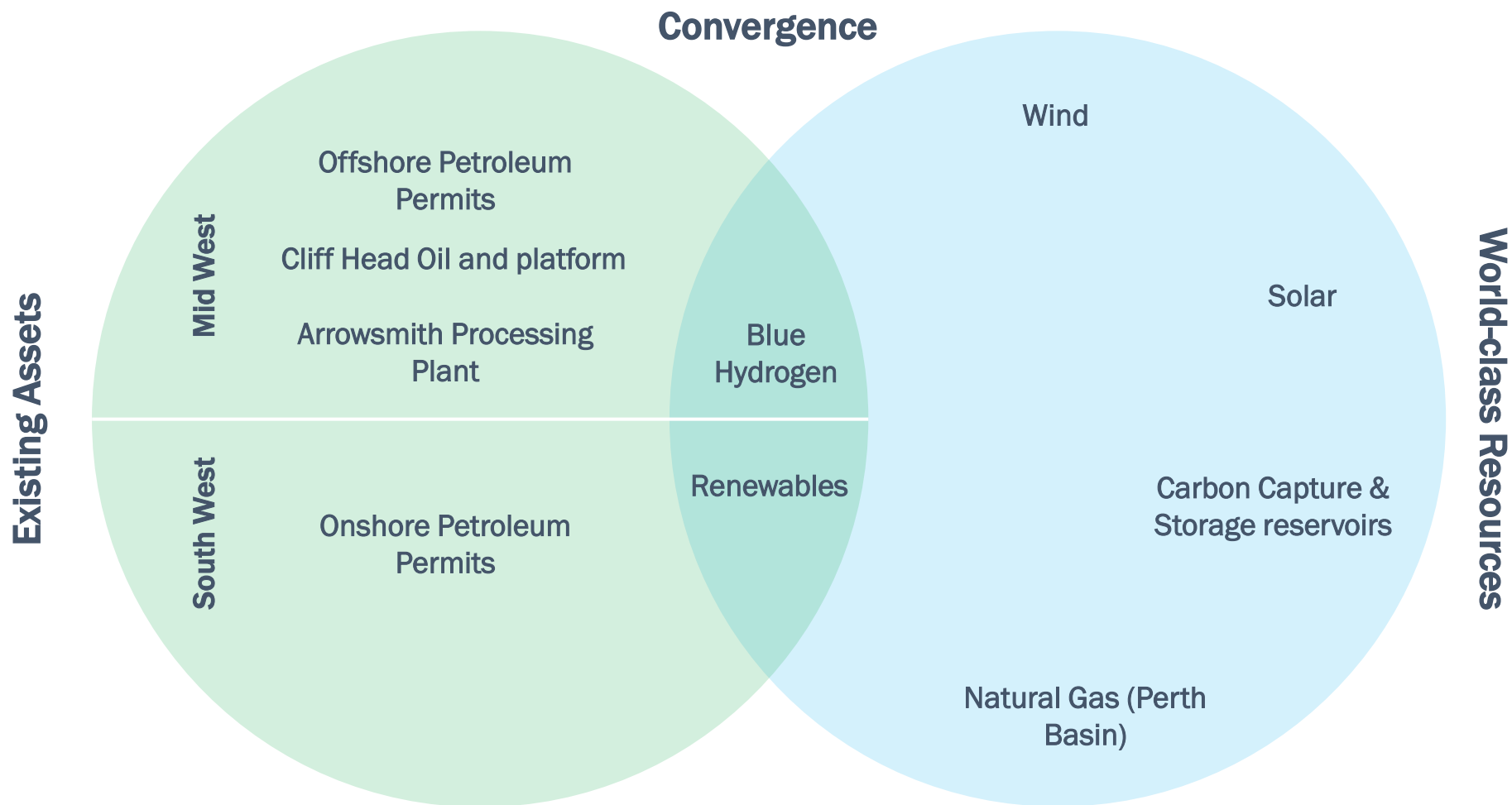
**Draft feasibility study results support significant Mid West renewable energy and CCS opportunity**



**Proven and experienced Board and Management team**

# Strategy and Opportunity

Existing infrastructure, abundant renewable and gas resources and ability to provide carbon management are Pilot’s key enablers for the production of competitive clean energy and hydrogen



# The Energy Transition is Accelerating – Recent Events

## FINANCIAL REVIEW PLATINUM 70 YEAR

### WA ideal for large-scale green hydrogen: BP

BP has found WA's mid-west would be ideal for large-scale green hydrogen or ammonia production, while Origin and Mitsui OSK will cooperate to examine shipping options for the fuel.



**Angela Macdonald-Smith**  
Senior resources writer

Updated Aug 11, 2021 – 5:30pm,  
first published at 11:21am

BP has found that Western Australia's mid-west is "ideally positioned" for the large-scale production of green hydrogen and green ammonia, but that development will require huge investment in ports, energy and water networks.

The results from a \$4.42 million feasibility study by the British energy major came as Origin Energy announced a collaboration with shipping giant Mitsui OSK Lines to develop a supply chain for the export of green ammonia, including from a proposed plant in Tasmania's Bell Bay.



**The Hon Angus Taylor MP**

Minister for Industry, Energy and Emissions Reduction

### Hydrogen industry marks milestone with first shipment of liquid hydrogen to Japan

21 January 2022

Joint media release with Prime Minister the Hon Scott Morrison MP, Minister for Resources and Water the Hon Keith Pitt MP, and Assistant Minister to the Minister for Industry, Energy and Emissions Reduction the Hon Tim Wilson MP.

Australia is exporting the world's first shipment of liquefied hydrogen, heralding the start of a major new energy export industry.

### Forrest says green hydrogen market could be worth \$16 trillion by 2050

[Giles Parkinson](#)

18 August 2021

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## Business Chief.

Article • Sustainability

## Goldman Sachs – Clean hydrogen transformational for net zero

By Kate Birch

February 13, 2022 • 4 mins

Goldman Sachs Global Investment Research's latest report – [Carbonomics: The clean hydrogen revolution](#) – takes a deep dive into the technologies and potential markets for decarbonisation via hydrogen.

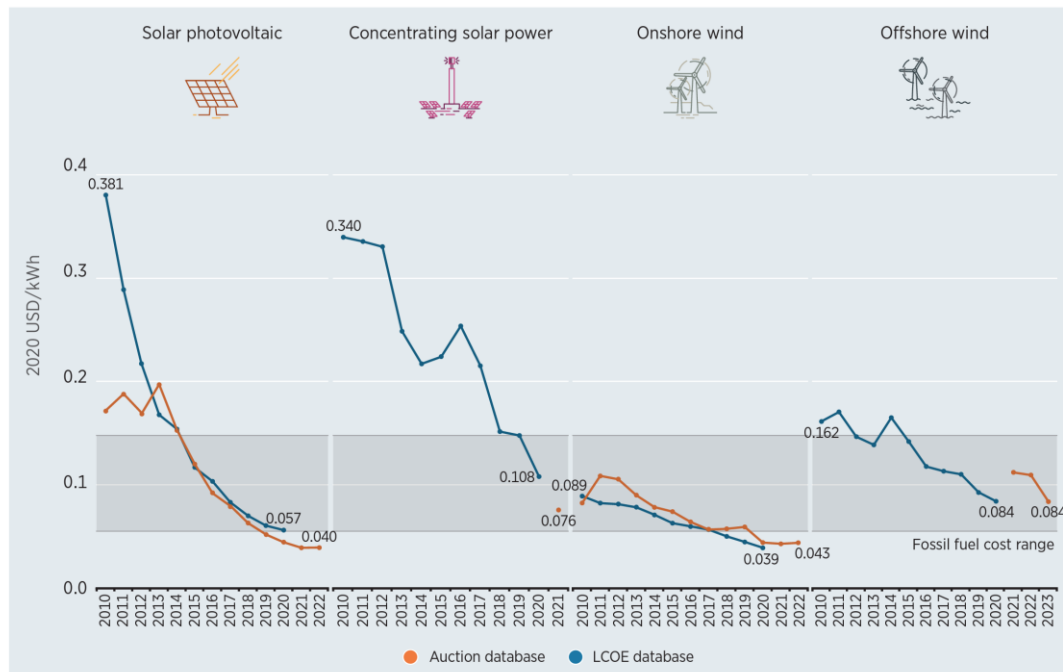
The report states clean hydrogen has emerged as a critical pillar to any aspiring net-zero path, with policy, affordability, and scalability converging to create momentum for the global clean hydrogen economy.



# The Case for Renewables

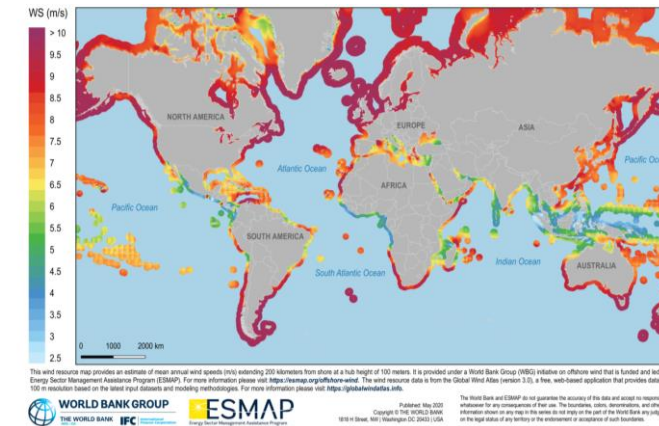
Technology has dramatically reduced solar & wind power costs in last decade below fossil fuel alternatives

The global weighted-average LCOE and PPA/auction prices for solar PV, onshore wind, offshore wind and CSP, 2010-2023



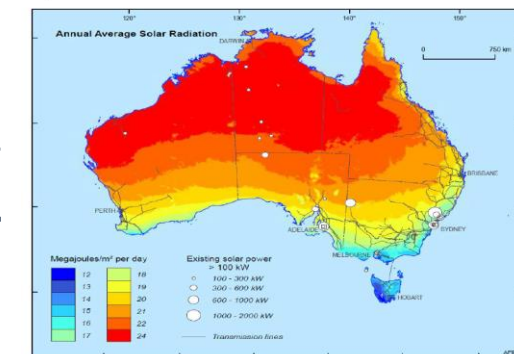
**Note:** the thick lines are the global weighted average LCOE, or auction values, by year. The band that crosses the entire chart represents the fossil fuel-fired power generation cost range.  
Source: IRENA – “Renewable Cost Database”

Mid West Region - one of the world's best renewable energy jurisdictions



Global Offshore Wind Speeds

Australia's Renewable Resources: Solar

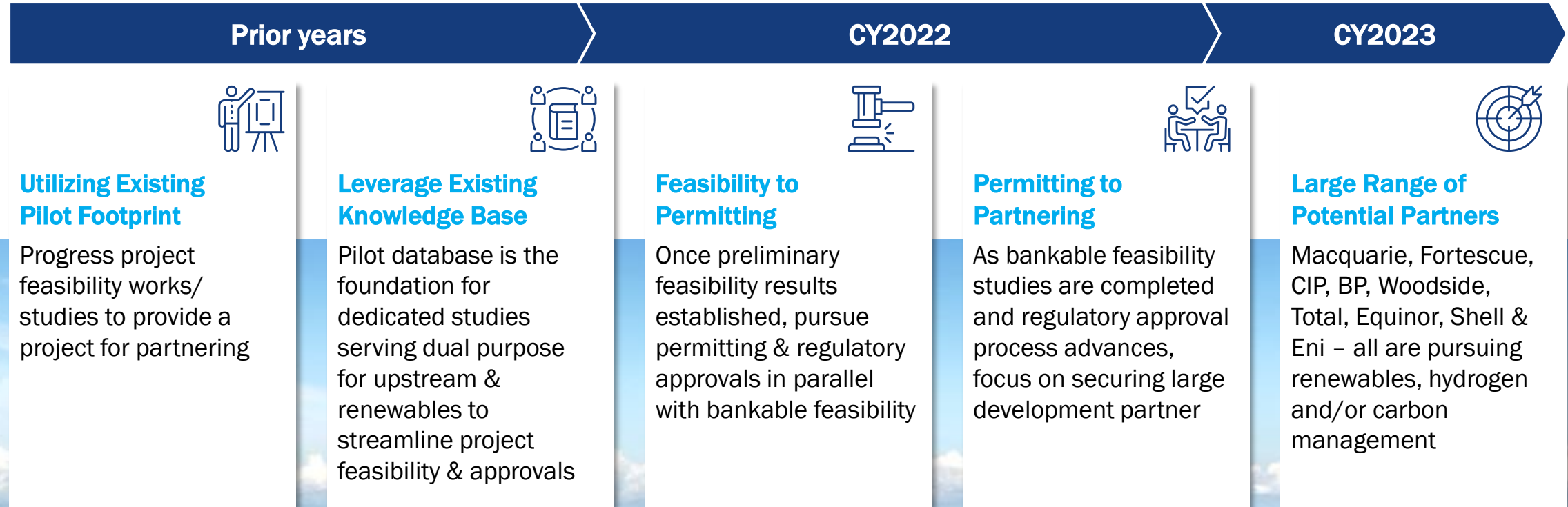


Map of Australia showing the annual average solar radiation and areas of existing solar power greater than 100 kW and up to 2000 kW.

Source: Geoscience Australia and ABARE (2010) *Australian Energy Resource Assessment*.

# Energy Transition Development Strategy

Project implementation from 2023 - Subject to feasibility and ASX Compliance



# Mid West Renewable Resource Zone – All the Right Stuff

## Premium Renewable Resource Precinct



**Renewable resources** – Coastal Mid West is one of Australia's highest rated renewable energy resource regions for both wind & solar as assessed by Geoscience Australia

**Government strategic focus** – WA Government committed to developing the Mid West major industrial area and renewable resource zone into a global renewable energy and hydrogen hub

**Renewable energy demand** – Mid West renewables resource and hydrogen resource potential attracting interest of major international and local companies pursuing renewable energy projects. Pilot uniquely placed with existing assets and infrastructure

## Established Infrastructure



**Grid connected** – Served by Western Power's South West Integrated System 330 kV transmission lines

**Pipeline connected** – Access to DBNGP & Parmelia Gas Pipelines provide potential pathways to market for hydrogen

**Ports, road & rail** – Mid West region endowed with established infrastructure

## Clear Hydrogen Development Pathway



**Blue hydrogen** – Combination of existing Perth Basin gas supplies, low cost renewable energy and existing suitable CCS/CCUS assets can support first-mover, lowest cost blue hydrogen supply chain

**Green hydrogen** – Abundant low cost renewable energy & abundant H<sub>2</sub>O in combination with blue hydrogen provides foundation for development of competitive & clean hydrogen supply chain

**Green iron & steel** – Combine low cost blue/green hydrogen supply with World-class Mid West magnetite iron production provides opportunity for globally cost-competitive green iron & steel



# Integrating Infrastructure, Renewables and Carbon Management to Deliver Competitive Clean Energy

## Mid-West Region has multiple potential CCS and offshore wind development sites

Pilot has interests in existing permits in the Mid West and is assessing feasibility of renewable energy , CCS and clean hydrogen projects at these locations

### Cliff Head opportunity

- Facilities provide potential anchor point for **offshore wind farm** and an accelerated path for regional **CCS project**. Potential to share/reduce costs and defer abandonment liabilities
- Only offshore oil & gas infrastructure along the Mid West Region coastline
- Maximize use of existing infrastructure, easements, operations, studies & data

### WA 481P Opportunity

- Oil and Gas work program can be optimised to develop understanding of **offshore wind** and **CCS** opportunity
- Potential conjunctive development of existing gas discoveries with **CCS**
- Entire Mid West offshore region highly rated for Offshore wind

Both WA-481P and Cliff Head have the characteristics to support the production of cost competitive **clean energy**



Source: [www.iconeng.com.au](http://www.iconeng.com.au)

# Pilot Energy's Development Plan



Pilot has feasibility studies underway with global expertise

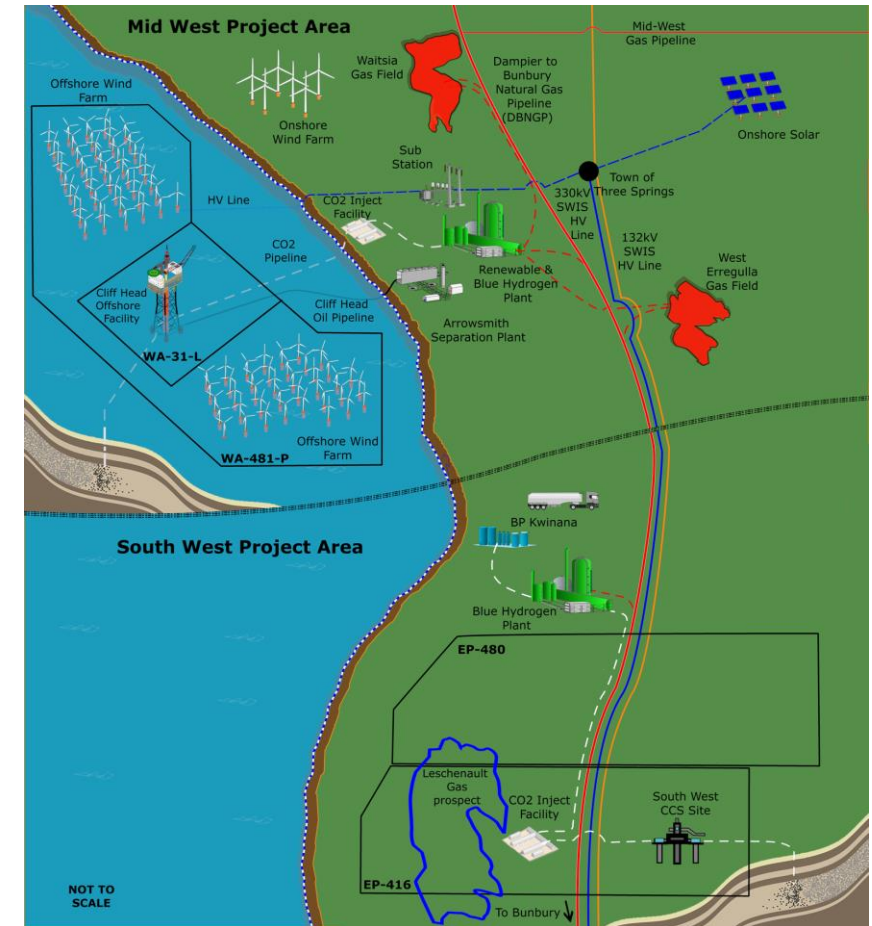


Based on feasibility results, Pilot will leverage existing assets to develop world class clean energy projects in Mid West and South West regions. **Feasibility studies considering first to market, mid scale and large scale development strategies**

Key commercial and financial partners will be introduced over time to maximise value for Pilot shareholders



Partner in the Cliff Head Oil Field and infrastructure



Note: map depicts Pilot's projects and facilities together with infrastructure that Pilot proposes to develop subject to the results of the feasibility studies may include, as shown above, a CO2 pipeline and injection facility, blue hydrogen plants, CCS sites, offshore and onshore wind, solar, renewable hydrogen plant, substation, transmission lines and hydrogen pipelines



# Mid West Wind and Solar Feasibility Study



LAUTEC

**Preliminary feasibility study objective:** Genesis and Technip Energies, Lautec and Green Fuel Development engaged to assess the feasibility of developing and commercialising the Mid West region's world class renewable energy resources and the associated production and sale of green hydrogen

**Offshore Wind survey:** Fixed LiDAR<sup>1</sup> survey to provide initial data on the wind resource adjacent to the Cliff Head platform and adds significant value to the planning process of future metocean survey campaigns

**Objective:** Assess commercial feasibility, markets and identify project development concepts to progress into FEED stakeholder engagement and partnering.

***“The early results of the study continue to support pre-study expectations that the region's renewable energy resource is sufficient to support large scale onshore and offshore projects”***



1. Light detection and ranging (LiDAR) technology is alternative option to a Met mast for surveying wind resources. <https://www.windpowerengineering.com/unlocking-the-potential-of-offshore-wind-with-lidar-technology/>.

# Blue Hydrogen and CCS Feasibility Study

Consortium formed to progress feasibility study with key consultants



**Blue Hydrogen projects:** require expertise and collaboration from across the energy industry with the following consortium established to represent the key components for the project.

**Objective:** Consortium members provide sector expertise and will participate and jointly fund the feasibility study to assess potential Blue Hydrogen and CCS projects that can integrate with existing upstream, midstream and downstream assets to deliver competitive clean energy. Feasibility study to be complete H1 CY22.

## Key components

## Consortium

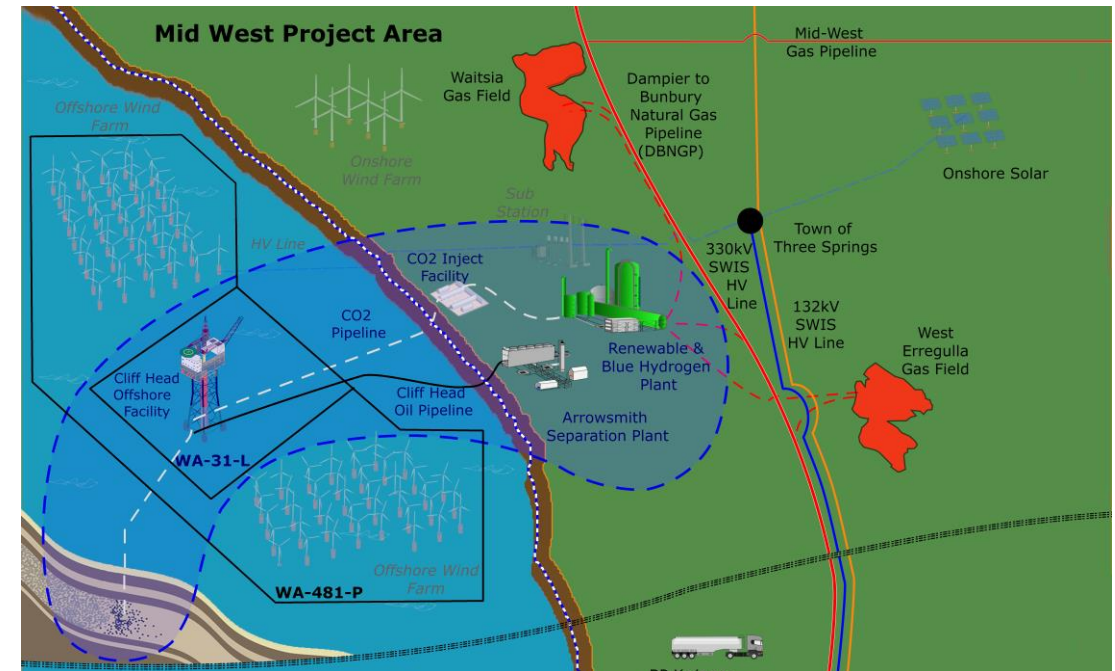
Infrastructure



Natural Gas Supply



Carbon Management



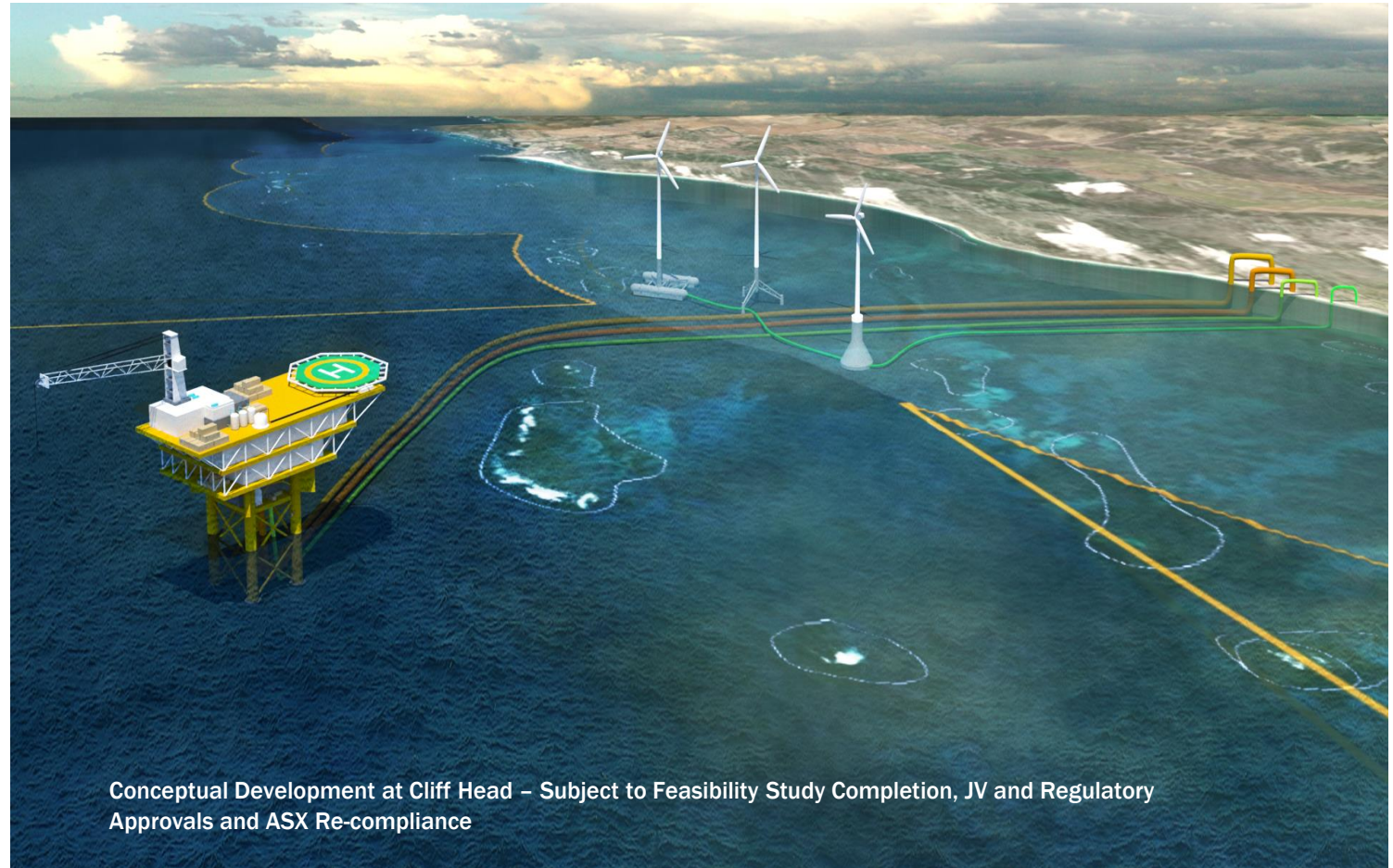
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# Offshore Wind “Demonstrator” Project

Following completion of feasibility studies initial development concept may involve a demonstrator wind farm project in WA State Waters

- Conceptual mid west offshore wind farm development
- Based on successful Beatrice Demonstrator Wind Farm development
- Connect 3-6 wind turbines generating up to 60 MW
- Wind turbines installation in WA State Waters
- Utilize patented gravity base structures development by Perth-based marine design & construction firm
- Potential deployment by 2025
- Conceptual development is subject to:
  - Feasibility study completion,
  - Joint venture and regulatory approvals and
  - ASX re-compliance\*



Conceptual Development at Cliff Head – Subject to Feasibility Study Completion, JV and Regulatory Approvals and ASX Re-compliance

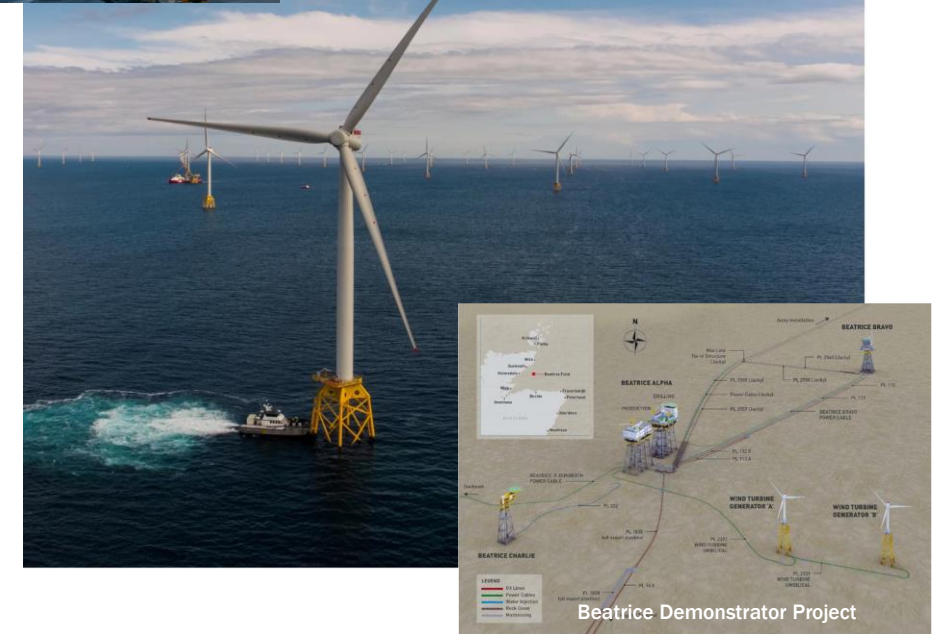
\* For further details see Compliance slide 21

# The Beatrice Offshore Wind Farm

## A case study for an Offshore Wind Project

### From offshore wind farm demonstrator project to Scotland's largest operational wind farm

- 1980 - Beatrice Oil Field started production, producing about 8,000 BOPD  
Located 13 km offshore in ~45 metre water depth
- 2007 - to assess feasibility of building commercial scale wind farm two 5MW “demonstrator” wind turbines installed linked back to Beatrice Alpha Platform
- Wind turbines provided all power requirements for the oil field and also connected to onshore grid via subsea power cable providing for power export
- 2009 - deployment and operation of demonstrator wind turbines was successful and development began on new commercial scale Beatrice wind farm
- 2012 - applications for development approval submitted for full scale wind farm development submitted
- 2014 - UK Government development approvals received
- 2016 - financial close achieved and construction begins for installation of 84 Siemens Gamesa wind turbines
- 2018 – first power exported to National Grid
- 2019 – 588 MW wind farm construction completed



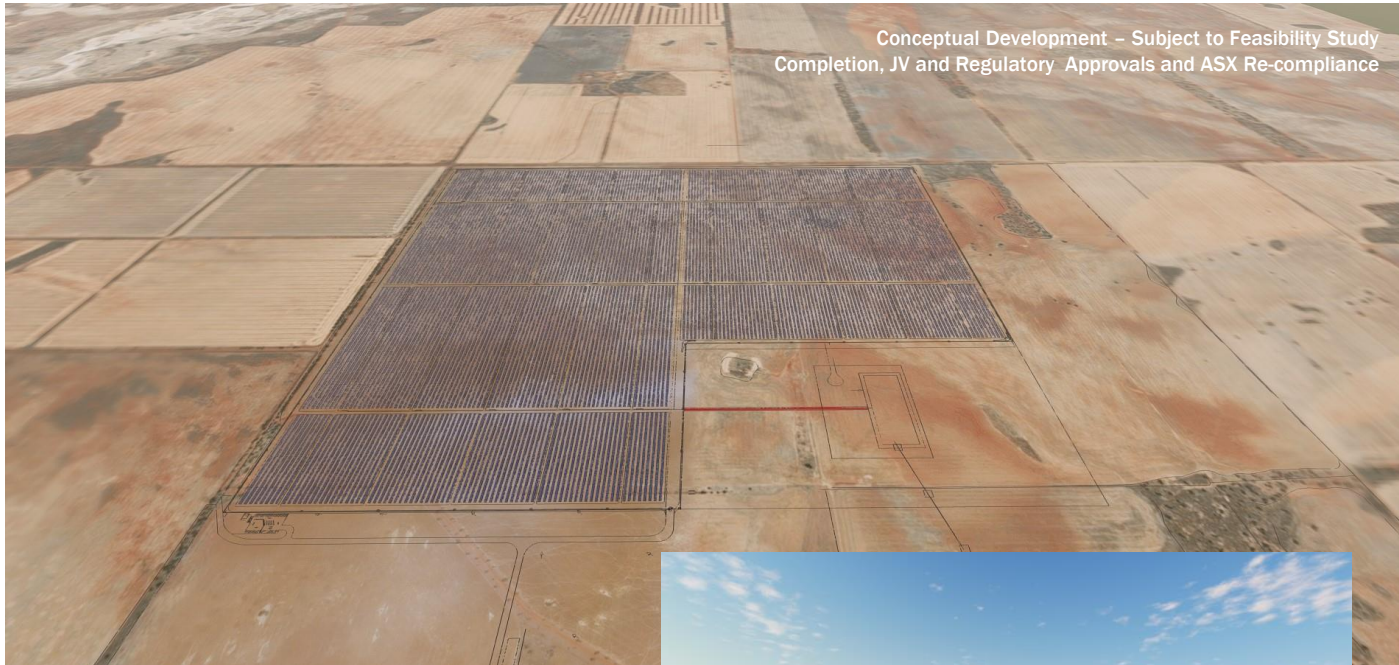
[www.beatricewind.com](http://www.beatricewind.com)



# Mid West Solar Project –complementary solar & wind resources



Onshore operational footprint also provides opportunity for integrated wind and solar development



Conceptual Development – Subject to Feasibility Study  
Completion, JV and Regulatory Approvals and ASX Re-compliance



307,200 solar modules  
184 MWp solar park

## Onshore solar as a key component of the Mid West Integrated Renewables Project

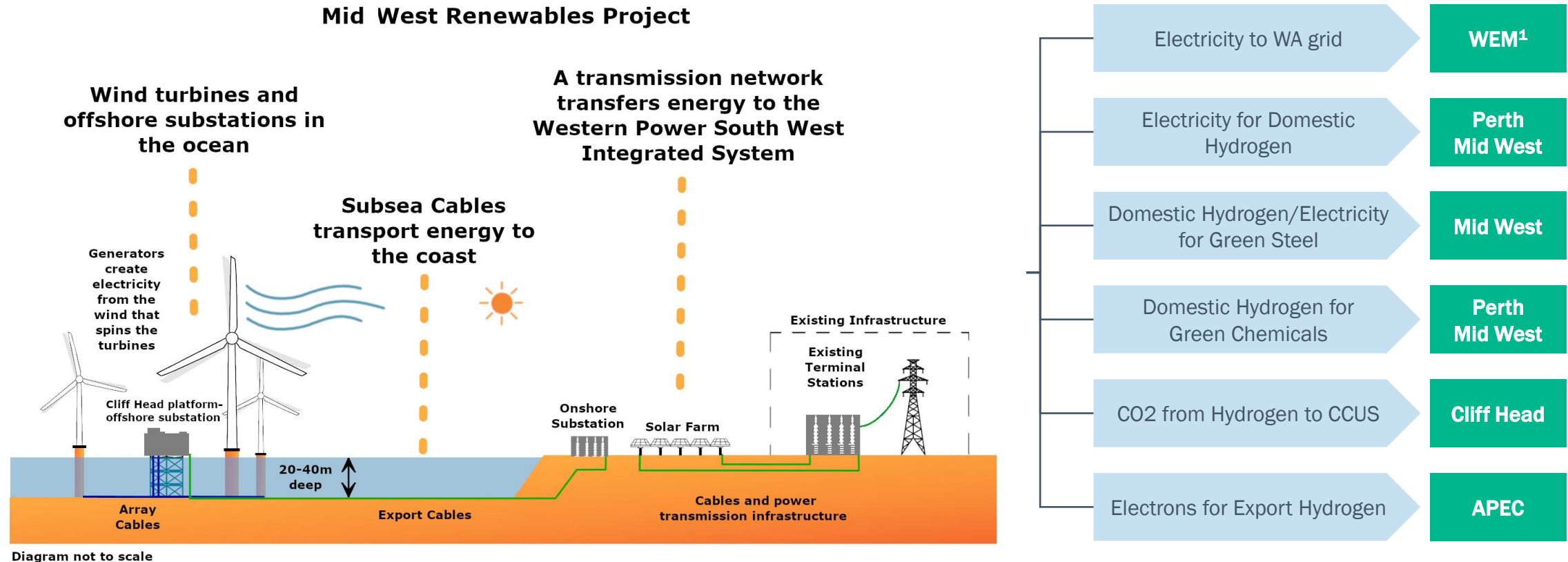
- Mid West Region also has rich World-class solar resource
- PV solar is now becoming one of the lowest cost renewable energy sources
- Complementary diurnal nature of offshore wind and onshore solar
- Combining both renewable resources aims to deliver lowest cost clean energy
- Subject to feasibility study results, onshore solar could be executed in next 24-36 months
- Conceptual solar development project is subject to:
  - Feasibility study completion
  - Joint venture and regulatory approvals and
  - ASX re-compliance\*

\* For further details see Compliance slide 21



# Multiple Commercialisation Pathways

The Cliff Head infrastructure may enable the fast-track development and commercialisation pathway for the development of the Mid West Integrated Renewables Project



1. <https://aemo.com.au/en/energy-systems/electricity/wholesale-electricity-market-wem>: The Wholesale Electricity Market (WEM) supplies electricity to the south-west of Western Australia via the South West Interconnected System (SWIS)

2. Pilot owns (via its 100% subsidiary Royal Energy P/L) a 50% interest in Triangle Energy (Operations) Pty Ltd, which is the operator of the Cliff Head joint venture. Triangle Energy (Operations) Pty Ltd holds a 42.5% registered interest in the Cliff Head project tenements and infrastructure, therefore providing Pilot with an effective 21.25% interest.

# Key Next Steps



## Corporate

- Complete and analyse feasibility studies
- Funding strategies
- Partnering arrangements

## Project implementation (subject to feasibility and ASX compliance)

- Offshore CCS (with conjunctive repurpose of Cliff Head and or WA 481 P gas developments) leading blue hydrogen
- Renewable energy developments into existing market opportunities leading green hydrogen production
- Activities include FEED, environmental studies, stakeholder engagement and regulatory approvals leading into FID

**To make the transition to focussing on clean energy Pilot has specific ASX undertakings\*. In relation to the Mid West Wind & Solar Project, while undertaking the feasibility study Pilot is required to:**

- Continue to spend funds on its existing and proposed oil and gas projects;
- Report Quarterly separate line items and proportion of expenditure incurred in Oil and Gas and the Mid West Wind and Solar Projects; and
- Re-comply with Chapters 1 and 2 of the ASX Listing Rules before it proceeds beyond the feasibility study.

**Undertakings do not apply to Pilot's blue hydrogen or carbon management projects.**

\* For further details see Compliance slide 21

# Compliance Statements



## Disclaimer

This investor presentation has been prepared by Pilot Energy Limited ABN 86 115 229 984 (Pilot or the Company). Any material used in this presentation is only an overview and summary of certain data selected by the management of Pilot. The presentation does not purport to contain all the information that a prospective investor may require in evaluating a possible investment in Pilot nor does it contain all the information which would be required in a disclosure document prepared in accordance with the requirements of the Corporations Act and should not be used in isolation as a basis to invest in Pilot. Recipients of this presentation must make their own independent investigations, consideration and evaluation of Pilot. Pilot recommends that potential investors consult their professional advisor/s as an investment in Pilot is considered to be speculative in nature.

This presentation contains “forward looking statements” concerning the financial condition, results of operations and business of Pilot. All statements other than statements of fact or aspirational statements, are or may be deemed to be “forward looking statements”. Often, but not always, forward looking statements can generally be identified by the use of forward looking words such as “may”, “will”, “expect”, “intend”, “plan”, “estimate”, “anticipate”, “continue”, “outlook”, and “guidance”, or other similar words & may include, without limitation, statements regarding plans, strategies and objectives of management, future or anticipated production or construction commencement dates and expected costs, resources or reserves, exploration results or production outputs.

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## Competent Persons Statement

This announcement contains information on conventional petroleum resources which is based on and fairly represents information and supporting documentation reviewed by Dr Xingjin Wang, a Petroleum Engineer with over 30 years’ experience and a Master in Petroleum Engineering from the University of New South Wales and a PhD in applied Geology from the University of New South Wales. Dr Wang is an active member of the SPE and PESA and is qualified in accordance with ASX listing rule 5.1. He is a former Director of Pilot Energy Ltd and has consented to the inclusion of this information in the form and context to which it appears.

## Authorisation

This presentation has been authorized by the Chairman and Managing Director on behalf of the Board of Directors of Pilot Energy Limited

## Mid West WSP Feasibility Study Reporting Conditions

Pilot has agreed the following conditions with the ASX in relation to the Mid West WSP feasibility study:

1. The Company must continue to spend funds on its existing and proposed oil and gas projects.
2. The Company must disclose in each quarterly activities report until September 2022, the proportion of expenditure incurred in relation to exploration and evaluation on the oil and gas projects and the Mid West Wind and Solar Project.
3. The Company must disclose as separate line items in each quarterly activities report until September 2022, expenditure incurred in relation to exploration and evaluation on the oil and gas projects and the Mid West Wind and Solar Project.
4. Proceeding beyond the feasibility study stage of the Project (or incurring expenditure in excess of the budgeted feasibility expenditure in relation to the Project) constitutes a change in the nature and scale of the Company’s activities in terms of Listing Rule 11.1 and as such the Company will be required to comply with all of the requirements of Chapters 1 and 2 of the Listing Rules before it proceeds beyond the feasibility study or incurs expenditures in excess of the budgeted feasibility expenditure on the Project.

## Contact Details

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