# **Pilot Energy Limited**

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Announcement to ASX

4 September 2020

# PILOT TO PURSUE DEVELOPMENT OF OFFSHORE WIND PROJECT

Pilot Energy Limited (ASX: PGY) ("Pilot" or the "Company") is pleased to announce that it is commencing a detailed feasibility study to pursue the development of an offshore wind and onshore wind and solar power project to be located along the offshore/onshore coast of the Mid West Region of Western Australia (the "Mid West Wind and Solar Project" or the "Project").

# **Highlights**

- Project aimed at taking advantage of well-recognized, world-class wind and solar resources of and the large new onshore gas discoveries in the North Perth Basin and Mid West Region of Western Australia
- Focus is on the potential development in the area of Offshore Exploration Permit WA-481-P (60%-owned and Operated by Pilot) and connecting into the electricity transmission facilities of the South West Integrated System
- Geoscience Australia has also consistently rated the Mid West Region as being highly suitable for the production of both green and blue hydrogen across multiple scenarios
- The study will also assess the viability of supplying energy for hydrogen production for domestic use and/or for export taking advantage of existing nearby gas supply and infrastructure
- Study to also focus on looking for opportunities to utilize existing facilities, easements both offshore and onshore to simplify the overall development and reduce footprint of the Project
- Globally, investment in off-shore wind power projects has boomed, with a particular emphasis on accessing existing offshore and onshore gas infrastructure in the overall development in order to deliver enhanced project returns.
- While Pilot intends to own 100% of the Project at the feasibility stage, Pilot regards the Project as having the potential to attract strategic co-investors, should the feasibility study demonstrate its economic potential.

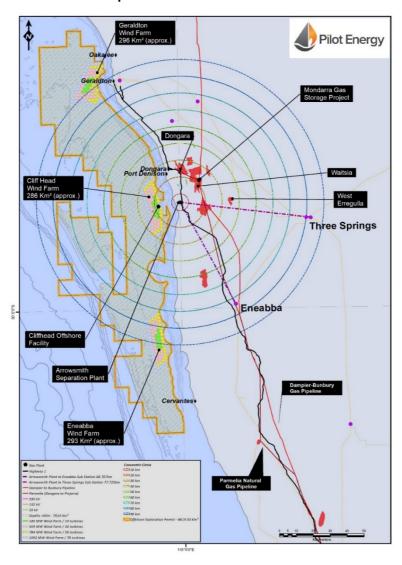
# Mid West Wind and Solar Project

In pursuing the corporate strategy previously announced by the Company in May 2020, the Company will undertake a detailed assessment of the feasibility and pursue the development of the Mid West Wind and Solar Project, an offshore wind power farm and onshore wind and solar power farm to be located along the offshore/onshore coast of the Mid West Region of Western Australia.

**Pilot's Chairman, Brad Lingo**, said "The Mid West Wind and Solar Project is directly aligned with the strategic plan that the company announced in the ASX release of 13 May 2020 and with our existing position as the operator of the Offshore Exploration Permit WA-481-P. We see this as a perfect opportunity to develop a major renewable energy transition project in the Mid West Coast Region of Western Australia."

Mr. Lingo continued "This is exactly the type of development that demonstrates the ability to substantially redefine how the Australian offshore oil and gas industry can, in parallel with existing operations, participate in a low carbon future through offshore renewable energy projects delivering substantial low cost energy to Western Australia. The substantial nature of the offshore opportunity in Western Australian also presents the option to supply renewable hydrogen for domestic residential and industrial consumption as well as the potential to supply international markets."

Mid West Wind & Solar Project Focus Area
WA-481-P Offshore Exploration License & Potential Wind Farm Locations



Mr. Lingo said "This is only the beginning of the process to establish the overall feasibility of the Project but it is a very good first step and Pilot's existing footprint and management experience provides a unique opportunity to participate in the energy transition as a dedicated energy solutions provider."

"Pilot strongly believes that focussing on the energy transition provides the opportunity to deliver strong growth and significant shareholder value", Mr. Lingo added.

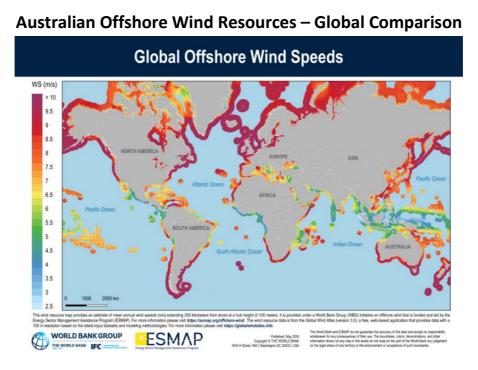
# Focus on Offshore Exploration Permit WA-481-P

Pilot Energy is the majority owner (60%) and operator of WA-481-P (see attached map) which covers 130 graticular blocks and is one of the largest offshore exploration permits in Australian Commonwealth waters covering most of the offshore portion of the North Perth Basin extending from North of Oakajee, Western Australia to south of Cervantes, Western Australia covering over 8600 km² along approximately 250 km of the offshore Western Australian coast.

The offshore wind resource within the area covered by WA-481-P has been measured to have an annual mean wind speed greater than 9 m/s at a hub height 100 meters. The eastern boundary of WA-481-P is approximately 10 km offshore in relatively shallow water depths ranging between 20 to 40-meter water depth along the entire eastern portion of the permit from 10 km to 30 km offshore. Out of the 8600 km<sup>2</sup> area of the permit over 7600 km<sup>2</sup> (88%) of the permit area is in water depths of 60 meters or less. (see map above).

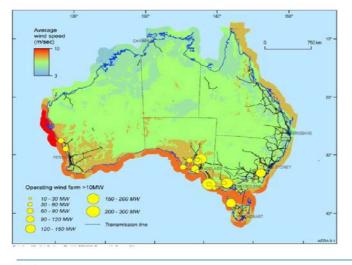
# World-Class Wind and Solar Resources of Mid West Coastal Region

Pilot considers that the Mid West Coastal region of Western Australia contains both world-class offshore and onshore wind resources and onshore solar resources. The renewable energy resource potential of the Mid West Region has been well documented by the World Bank, CSIRO, ABARE, Geoscience Australia and ARENA (see maps below).



Meso-scale maps show that Australia's greatest wind potential lies in the coastal regions of western, south-western, southern and south-eastern Australia and the coastal regions with high wind resources (wind speeds above 7.5 m/s) include the coast of Western Australia south of Shark Bay to Cape Leeuwin which cover the area of WA-481-P (areas shown in orange to red colours in the map below).

# Australia's Renewable Resources: Wind



Map of Australia showing the location of operating wind farms. The map indicates areas of wind speeds (m/second) as well as transmission lines. Some of the world's best wind resources are along the southwestern, southern and southeastern margins.

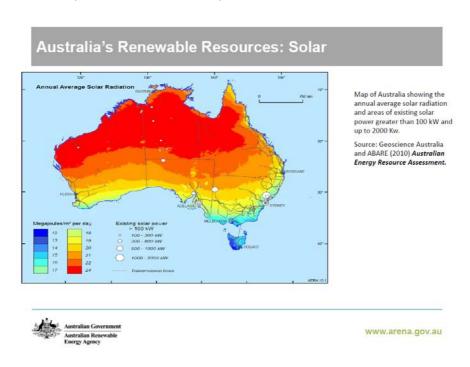
Source: Geoscience Australia and ABARE (2010) Australian Energy Resource Assessment.



www.arena.gov.au

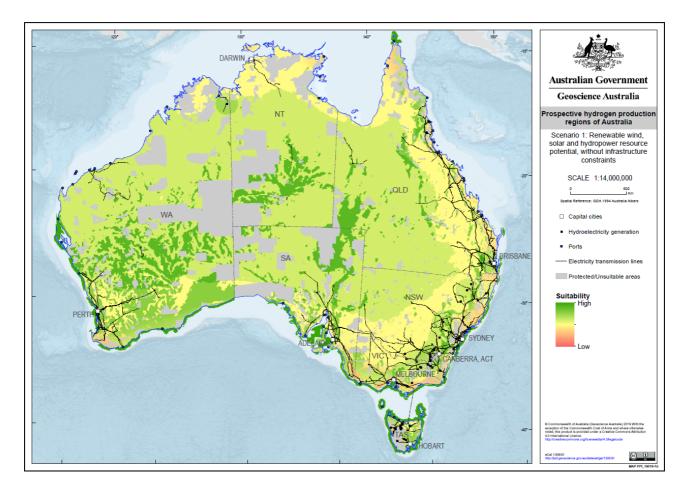
Geoscience Australia has estimated that when areas with good offshore wind resources (7 m/s and greater) otherwise suitable for offshore wind power is constrained to areas within 100 km of the existing electricity transmission grid (66 kV and greater) the overall wind resource areas suitable for offshore wind farm development significantly reduces from about 600,000 km2 to about 3,300 km2. WA-481-P sits entirely within 100 km of existing high voltage transmission lines – 330kV and 132kV transmission lines of Western Power's South West Integrated System and over 88% of this area sits in water depths less than 60 meters.

In the study <u>Potential Sites for Off-Shore Wind Power in Australia</u> published in Wind Engineering (Volume 44, No. 4, 2009), the offshore region of Geraldton has been rated the No. 1 location in Australia for the potential successful development of offshore wind power.



# **Recognized Hydrogen Potential of Mid West Region**

In 2019, Geoscience Australia completed a detailed study and published its report on the <u>Prospective hydrogen regions of Australia</u> (Record 2019/15) - (see map below). In that study, Geoscience Australia analysed three scenarios to identify the areas in Australia most prospective for hydrogen production, being: Scenario 1 – Renewable resource potential, without infrastructure constraints; Scenario 2 – Coastal production and constrained by existing infrastructure; and Scenario 3 – Coastal or inland generation, hydrogen transported via pipeline, and constrained by existing infrastructure.



In all three scenarios the Mid West Coastal Region was determined to be highly suitable and prospective for hydrogen production either on a purely renewables basis (referred to as "green hydrogen") or hydrogen production using natural gas as a feed stock through steam methane reformation (the most widely used method and lowest cost method of hydrogen production globally) combined with carbon capture and storage (referred to as "blue hydrogen"). Overall, Geoscience rated the coastal region of the Mid West Region of Western Australia in the top 20 percent of the most prospective areas for hydrogen production.

The Mid West Region is rated as highly suitable in all three scenarios and has significant advantages especially in Scenario 3 with the large low cost gas discoveries in the North Perth Basin and the existence of existing large depleted gas fields as well as existing gas storage operations that could support carbon capture and storage on an industrial scale as well as having abundant, readily accessible aquifer water supplies.

# Offshore Wind Farm / Onshore Solar Development Concept

The concept for the Project is to develop a major offshore wind farm located in the area of Offshore Exploration Permit WA-481-P and to combine this development with an onshore solar farm to deliver a combined wind and solar project capable of delivering a large scale source of low cost green energy on a sustainable basis. The graphic below shows the potential development concept suitable to one or more locations along the Mid West Region coast.

### A transmission network Wind turbines and transfers energy to the offshore substations in **Western Power South West** the ocean **Integrated System** (see locator map for license area) Subsea Cables transport energy to Generators the coast Mid West Wind & create Solar Project electricity from the wind that **Existing Infrastructure** Power to turbines Existing Western Terminal Australia Stations business and Offshore residential Onshore customers Substation Solar Farm 20-40m deep Cables and power **Export Cables** Cables

# Mid-West Wind & Solar Project

For the purposes of undertaking the feasibility studies, Pilot Energy has developed a conceptual development layout for a 4-stage development for up to 1.1 GW of offshore wind power generation that maximises the overall potential of the offshore wind farm development. This is comprised of up to seventy-eight (78) 14MW wind turbines (based on current turbine models and generation capacities). Under this development concept, the offshore wind turbines can be located at least 14 kms offshore and in water depths of between 20-40 metres and located in the area covered by the Offshore Exploration Permit WA-481-P. The conceptual development plan layout is set out in Annexures 1A, 1B and 1C to this ASX release.

# Project focus on co-existing with oil & gas facilities and operations

Diagram not to scale

The development of the Mid West Wind and Solar Project and the location of the offshore wind farm facilities is intended to be developed in such a way to assess the feasibility of accessing and utilizing existing offshore and onshore gas infrastructure in the overall development with a view of delivering a significant multi-tasking of the existing facilities.

Many of the offshore wind farm facilities developed offshore Europe in the North Sea and the Baltic are developed cooperatively around existing oil and gas production facilities. An example of this is the Dudgeon Offshore Wind Farm developed and operated by Equinor which is located off 20 miles the NE Coast of Cromer in North Norfolk in the UK and has an installed capacity of 402 MW and began operation in 2017.

The Dudgeon Offshore Wind Farm is comprised of 67 offshore wind turbines and offshore substation. The operator of the Dudgeon Offshore Wind Project is currently evaluating the potential to expand the project in conjunction with the adjacent Sheringham Shoal Wind Farm with another 61 turbines to increase the overall generating capacity of the combined projects by up to another 719 MW. (www.dudgeonoffshorewind.co.uk)



# Offshore wind shows "colossal growth" despite pandemic

A new report by Wood MacKenzie states that \$211 billion will be invested in offshore wind over the next five years and reports that offshore wind is something that is well-suited for oil and gas companies. The Wood MacKenzie Report concludes that is because they have an implicit understanding of the waters where the infrastructure would be placed. Several global oil and gas companies are also seeking to diversify their portfolios, with Equinor, Total and Shell pursuing the development of large-scale offshore wind farm projects. (Bloomberg New Energy Finance Article- <a href="https://about.bnef.com/blog/colossal-six-months-for-offshore-wind-support-renewable-energy-investment-in-first-half-of-2020">https://about.bnef.com/blog/colossal-six-months-for-offshore-wind-support-renewable-energy-investment-in-first-half-of-2020</a>)

Offshore wind financing for the first half of 2020 totalled US\$35 billion, an uptick of 319% year-on-year, according to data from Bloomberg New Energy Finance, despite the global economic downturn brought on by the COVID-19 pandemic.

According to the Offshore Wind Outlook 2019 Report, the IEA reports that up to 40% of the costs of offshore wind, including construction and maintenance of massive structures, overlap with offshore oil industry costs. (IEA Offshore Wind Outlook 2019 Report).

# Beginning the Transition into Integrated Energy & Renewables Business

As previously outlined in the corporate strategy announced by the Company in May 2020, Pilot is looking to transition the focus of the Company from pure oil & gas exploration to an energy transition strategy based on gas supply, energy storage and renewables and leveraging its existing assets in transitioning to this focus. In making this transition, the Company anticipates spending approximately \$1,200,000 of the Mid West Wind and Solar Project feasibility study (the "budgeted feasibility expenditure").

In proceeding with undertaking the Mid West Wind and Solar Project feasibility study, the Company has conferred with the ASX on whether the Company's transition into pursuing the Project constitutes a change in nature and scale of the Company's activities. The ASX has advised the Company that assessing the feasibility of the Project does not constitute a change in nature and scale of the Company's activities in terms of Listing Rule 11.1 subject to the conditions set out in Annexure 2.

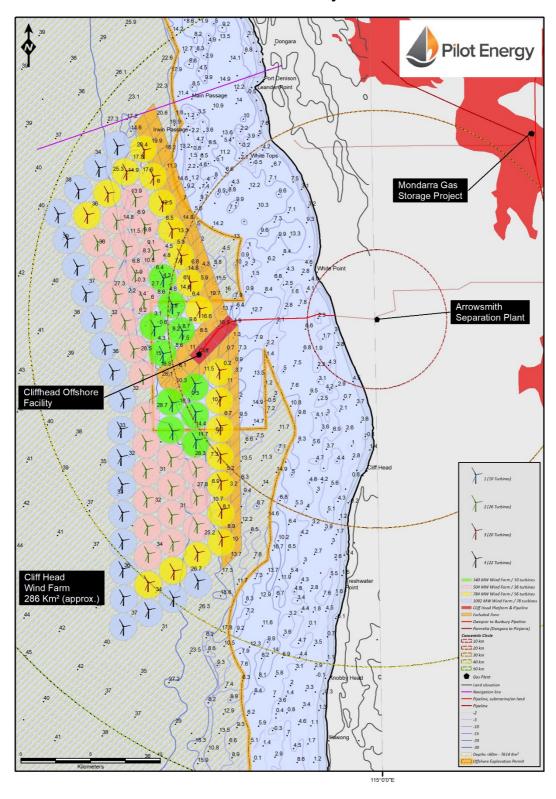
This announcement has been authorised for release to ASX by the Board of Directors of Pilot Energy.

## **Enquiries**

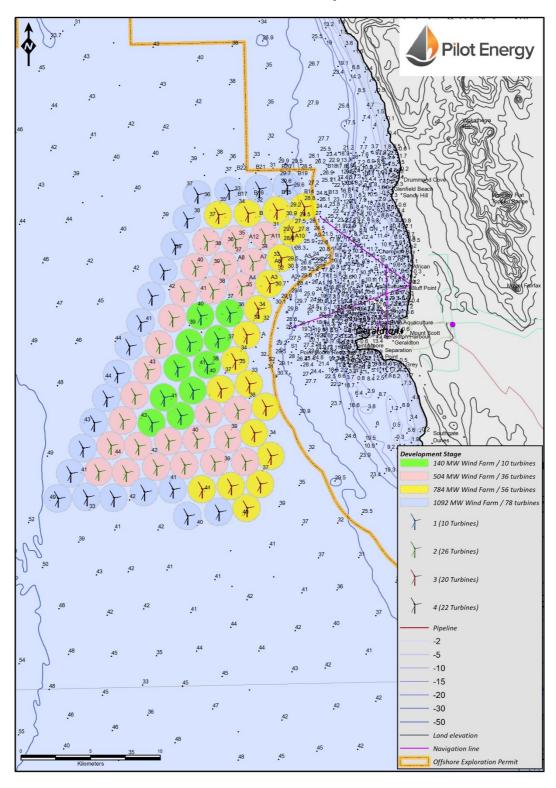
Lisa Dadswell, Company Secretary, email: <a href="mailto:lisa.dadswell@boardroomlimited.com.au">lisa.dadswell@boardroomlimited.com.au</a>

**About Pilot Energy**: Pilot Energy Ltd is an emerging junior oil and gas exploration company that is implementing a low-cost, counter-cyclical strategy to develop a portfolio of high quality oil, gas and energy assets. The Company's aggressive new ventures program has rapidly resulted in acquisition of material working interests in the WA-481-P, WA-503-P and EP416/480 exploration permits, located offshore and onshore Western Australia, in addition to a minor working interest in the EP437 permit.

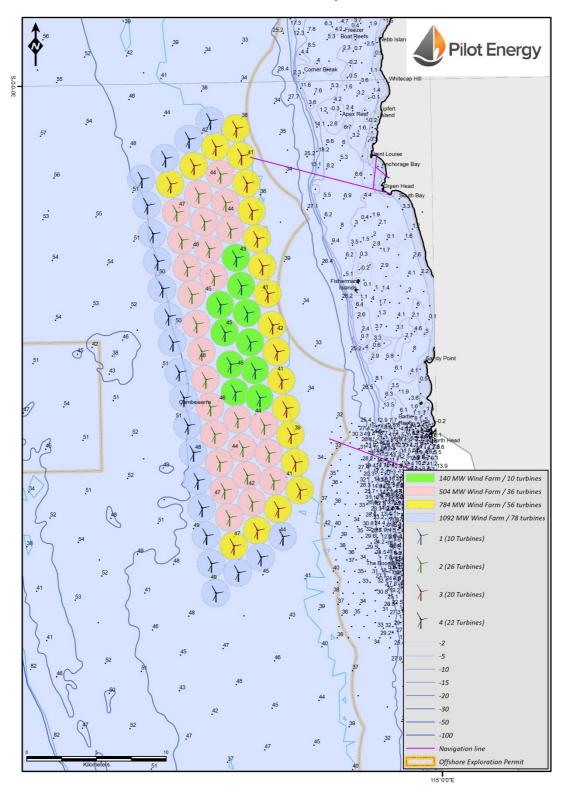
# Annexure 1A Mid West Wind and Solar Project Offshore 1.1 GW Wind Farm Conceptual Layout Notional Cliff Head Project Area



Annexure 1B
Mid West Wind and Solar Project
Offshore 1.1 GW Wind Farm Conceptual Layout
Notional Geraldton Project Area



Annexure 1C
Mid West Wind and Solar Project
Offshore 1.1 GW Wind Farm Conceptual Layout
Notional Eneabba Project Area



# Annexure 2 Feasibility Study Reporting Conditions

- 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.