

BassGas



The Yolla-A platform

October 2018

Environment Plan Revision

Beach Energy is revising the Environment Plan for its BassGas offshore operations in Victoria.

This information sheet provides an overview of the offshore operations, the regulatory framework for safety and environment requirements, potential impacts and risks in continuing these operations, and measures to reduce and manage these in accordance with State and Commonwealth regulations.

About Beach

Beach Energy (Beach) is an ASX listed oil and gas, exploration and production company headquartered in Adelaide. It has operated and non-operated, onshore and offshore, oil and gas production from five production basins across Australia and New Zealand and is a key supplier to the Australian east coast gas market. Beach is the operator of BassGas, including the Lang Lang Gas Plant, Yolla offshore platform, subsea pipeline, raw gas and sales gas pipelines.

For more information, visit:

 beachenergy.com.au



BassGas overview

Construction of BassGas began in 2001, with gas production commencing in 2006. The Yolla gas field is located in Bass Strait, approximately 145km south of Kilcunda in Victoria and 135km north of Burnie in Tasmania.

Gas and liquids within the Yolla field are extracted from a sandstone reservoir over 3km in depth through four wells via the Yolla offshore platform which is located in 80 metres of water. Once extracted, over 147km of subsea pipeline transports the gas and liquids from the Yolla field to shore, intersecting land near Kilcunda beach. There, it joins the 32km-long raw gas pipeline to the processing plant.

Beach Energy (Beach) is the operating partner of the BassGas joint venture which also includes AWE Limited and Prize Petroleum International Pte Ltd¹.

Beach operates in compliance with the NOSPEMA accepted safety cases (for more information see: www.nopsema.gov.au/safety/safety-case/what-is-a-safety-case/).

The risk of a loss of containment of hydrocarbons or chemicals is managed through the equipment design process and the implementation of asset integrity and maintenance programs. In addition, process parameters are monitored 24 hours per day by trained and competent personnel who must follow documented procedures.

Contractors utilised by Beach are subject to a pre-qualification process and assurance over their activities to ensure compliance with the accepted Environment Plan and Safety Case.

¹ Lattice Energy Limited (37.5%), Lattice Energy Resources (BassGas) Ltd (5%), Beach Energy Limited (11.25%) AWE Petroleum Pty Ltd (22.5%), AWE (BassGas) Pty Ltd (12.5%), Prize Petroleum International Pte.Ltd (11.25%).

BassGas has been developed over several stages:

Stage 1:

The installation of an offshore platform (referred to as Yolla-A), drilling of Yolla-3 and Yolla-4 development wells, and the construction of an export pipeline and onshore processing facility was completed in 2004.

Yolla Mid-Life Enhancement (MLE):

A mid-life enhancement project involving the installation of a new accommodation unit and associated safety facilities was completed in 2012.

Stage 2:

Two additional production wells, Yolla-5 and Yolla-6, were drilled in 2015 and commenced production in August of that year.

Our Traditional Custodians

Beach would like to respectfully acknowledge the Bunurong people, the Traditional Custodians of the land on which BassGas operates. Beach respects their historical and ongoing connection to country through cultural and spiritual sites, language and ceremony, and would like to pay our respect to their Elders past, present and future.

BassGas Facilities

BassGas consists of the following elements:

Offshore

- Yolla-A offshore production platform (Yolla platform) in 80m water depth at the Yolla Field located in Bass Strait, which supports the wellheads and topsides facilities required to cool and dehydrate the well fluids prior to export to shore
- Four gas production wells
- 147km subsea section of the Raw Gas Pipeline from the Platform to the shore crossing near Kilcunda.

Onshore

- 32.4 km section of the Raw Gas Pipeline running from the shore crossing to the gas plant
- Gas plant located near the township of Lang Lang – a continuously manned facility which processes the raw gas and liquids to produce sales gas and hydrocarbon liquids - LPG and condensate - and provides the overall control for the onshore and offshore facilities
- 35.1km onshore Sales Gas Pipeline, to carry sales gas from the gas plant to connect with the existing Longford to Dandenong gas transmission pipeline near Pakenham
- Multinet tie in for distribution of sales gas to local consumers via the South Gippsland Natural Gas Pipeline
- Road transport of condensate from the gas plant to refining and road transport of LPG products to local distribution centres
- Carbon dioxide rich off-gas stream to adjacent Air Liquide Australia (ALA/Air Liquide) facility.

Yolla-A is a steel gravity-based, self-installing platform, with a cantilevered helideck and flare boom. The platform was originally designed for unmanned operation, however, it has now been converted to enable manned operations with the installation of permanent accommodation modules and upgrade of the safety systems.

The Lang Lang Gas Plant is designed as a single train and separates the two phase stream into gas and liquid streams. Liquids storage and truck loading facilities are provided for export of these hydrocarbon liquid products by road tankers to markets.

Sales gas is exported via the Sales Gas Pipeline to the south eastern Australian gas market.

A carbon dioxide rich off-gas stream is piped to the adjacent Air Liquide facility for recovery of carbon dioxide.

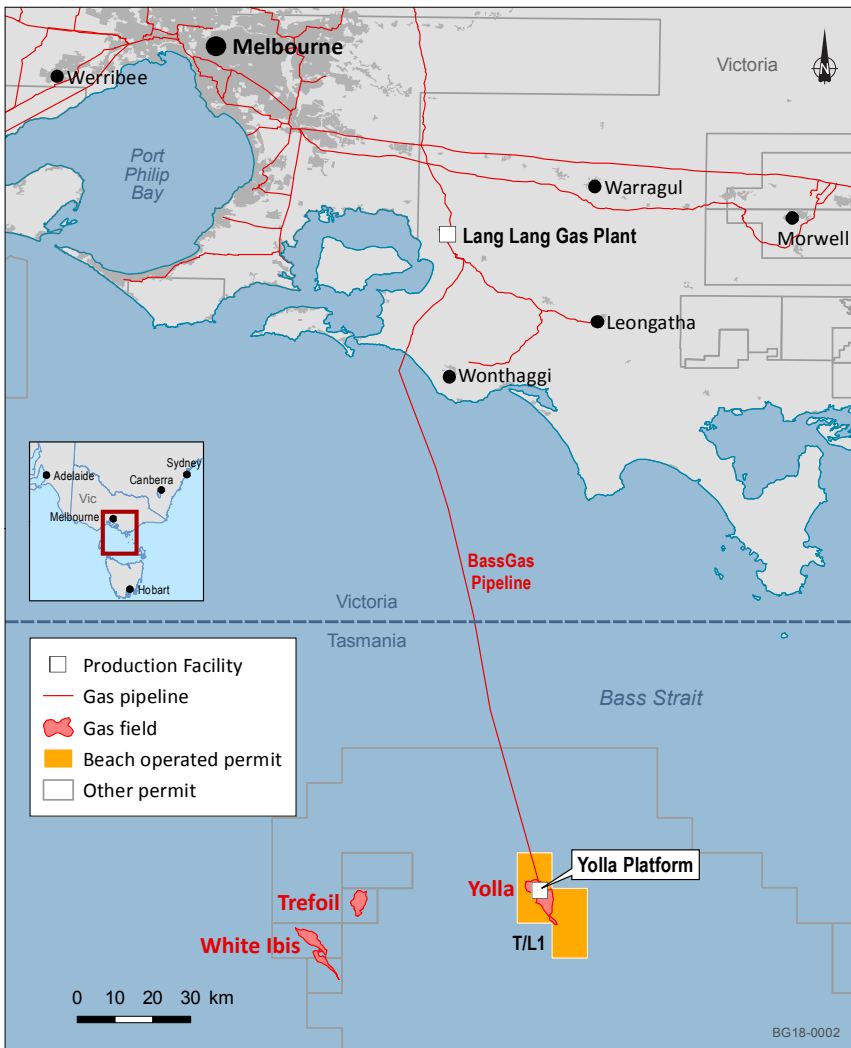
As a continuation of the MLE Project, the Platform has been further modified with the following:

- Installation of export gas compression and condensate pumping systems to assist maximising recovery of the reservoir fluids and extending production life at plateau production rates
- Drilling of additional wells.

The Yolla-A facility has been designed such that it can be fully operated from either the onshore gas plant Central Control Room at Lang Lang or the offshore control panel on the platform. Post-MLE Project, the platform has continued to be primarily operated from the onshore Central Control Room which is continuously manned.

Maintenance of the platform is generally undertaken by work crews accommodated on the Yolla platform. The types of activities undertaken are routine operational checks and maintenance including instrument and mechanical maintenance, shutdown resets, corrosion monitoring and chemical replenishment. The platform is also visited approximately once per month by a supply vessel for the provision of fuel, chemicals, maintenance consumables, accommodation consumables and equipment. Vessels are also required for specific activities such as subsea inspection work using Remotely Operated Vehicles (ROVs) and/or divers.





The Yolla gas field is located in the Bass Strait approximately 145 km from Kilcunda on Victoria's south coast and 120 km from the north coast of Tasmania.



Regulatory Framework

Beach's BassGas offshore operations are regulated by the Commonwealth *Offshore Petroleum and Greenhouse Gas Storage Act 2006* and the Commonwealth *Offshore Petroleum and Greenhouse Gas Storage (Environment) Regulations 2009* (the Regulations), which are administered by the National Offshore Petroleum Safety and Environmental Management Authority (NOPSEMA).

Operations in Victorian state waters (from the high water mark out to three nautical miles), which are limited to the asset's pipeline, are regulated by the Victorian *Offshore Petroleum and Greenhouse Gas Storage Regulations 2011* (the Victorian Regulations) and are administered by the Department of Economic Development, Jobs, Transport and Resources (DEDJTR).

The Environment Plan was previously updated and accepted by NOPSEMA on October 2014 for a period of five years, in line with the provisions in the Regulations. A revision of the Environment Plan is required now that the five-year period is drawing closer. Beach has completed an environmental risk review and no new significant risks have been identified since the current EP was accepted.

The revised Environment Plan will be submitted to both NOPSEMA and DEDJTR for acceptance.

Safety

Safety on the Yolla-A platform is managed in line with its associated Safety Case. A Safety Case is a document that describes the Yolla-A facility, the associated hazards and risks, and the safety management system in place to control and manage these risks. The Safety Case is revised every five years and is submitted to NOPSEMA for acceptance. The purpose of the Safety Case is to demonstrate that the facility complies with the relevant requirements of the Commonwealth *Offshore Petroleum and Greenhouse Gas Storage (Safety) Regulations 2009*.

Environment Plan

The Environment Plan describes the operations of BassGas, the existing marine and shoreline environments and identifies environmental and socio-economic impacts. The Environment Plan also identifies risks and details a range of mitigation and management measures to reduce impacts and risks to As Low As Reasonably Practicable (ALARP) and to acceptable levels. These include:

- The Yolla platform and offshore pipeline are marked on navigational charts and the platform has a 500-metre safety exclusion zone
- Vessels servicing the platform comply with all applicable marine regulations and observe the minimum approach distances to whales and dolphins set out in national guidelines
- Gas venting is limited to the minimum required for safe operations
- The platform, pipeline and support vessels are maintained in good working condition in accordance with a suite of management system procedures, with regular inspections and audits undertaken to ensure these procedures are being effectively implemented.

Key changes and updates for the revised Environment Plan include:

- A description of Beach as the new asset owner
- A description of Beach's health, safety and environment management system (HSEMS)
- A revised impact and risk assessment that meets NOPSEMA's various guidelines released since acceptance of the current Environment Plan to demonstrate that the environmental impacts and risks are ALARP and acceptable
- A revised Oil Pollution Emergency Plan (OPEP) detailing the potential impacts of a hydrocarbon spill and Beach's response strategy to minimise environmental impact, in light of revised oil spill modelling
- Revised environmental performance outcomes and environmental performance standards that reflect current best practice and will allow Beach to measure and report on its environmental performance.

Questions and Answers

What is an Environment Plan and who assesses it?

An Environment Plan must be prepared by an operator and accepted by the regulator prior to conducting petroleum exploration, production or decommissioning activities.

- In Commonwealth waters, this is regulated under the *Commonwealth Offshore Petroleum and Greenhouse Gas Storage (Environment) Regulations 2009* and is administered by NOPSEMA.
- In Victorian state waters this is regulated under the *Victorian Offshore Petroleum and Greenhouse Gas Storage Regulations 2011* and administered by DEDJTR.

The contents of an Environment Plan are prescribed by the respective Commonwealth and Victorian regulations, and broadly include the requirement for a description of the activity and the existing environment, an evaluation of the impacts and risks associated with the activities, environmental performance outcomes and standards, implementation strategy and reporting requirements.

An Environment Plan must also include an OPEP, which describes how Beach will respond in the event of an oil spill.

Why is the Environment Plan being revised?

Environment Plans must be revised and re-submitted to the regulator every five years and this is scheduled to happen in 2019.

What is ALARP?

ALARP stands for "As Low As Reasonably Practicable". It is a safety assessment principle commonly used in the oil and gas industry to assess and reduce potential risks and impacts that cannot be eliminated. For information on how NOPSEMA assesses ALARP, see: <https://www.nopsema.gov.au/assets/Guidelines/A524696.pdf>

What does the Oil Pollution Emergency Plan (OPEP) cover?

An OPEP describes the arrangements for responding to and monitoring an oil spill and includes:

- An identification of environmental protection priorities;
- The suitability of various response measures for the two key hydrocarbon types (gas condensate and marine diesel);

Continued overleaf...

- A description of the arrangements and capabilities to ensure timely implementation of response measures and how these measures are maintained operationally ready at all times; and
- A description of the arrangements and capabilities to monitor the effects of oil pollution.

These arrangements are based on the results of scientific modelling of oil spill scenarios from a loss of control from a well, the pipeline and vessel.

Can I fish or scuba dive near the platform?

No. There is a 500m safety exclusion zone around the platform that vessels and divers cannot enter. This is to ensure the safety of the public and the platform.

Have potential impacts on marine life been considered?

Yes. The Environment Plan is a comprehensive document that identifies and assesses all impacts (known events) and risks (unplanned events) from platform, pipeline and vessel operations.

An Environment Plan summary is available at the NOPSEMA website at <https://www.nopsema.gov.au/environmental-management/activity-status-and-summaries/details/248>.

Do the offshore activities impact commercial fisheries?

There is limited impact to commercial fishing operations during routine operations. The platform has a 500m safety exclusion zone which is a relatively small area compared to the jurisdictions of the State- and Commonwealth-managed fisheries that are licensed to operate this area. In general, there is limited fishing activity near the platform.

Have potential impacts on whales been considered?

The current Environment Plan includes a description of whale populations and distribution in the Bass Strait and Beach has assessed the potential impacts of its activities on whales. Vessels and helicopters utilised by Beach are required to comply with the separation distances in the Australian National Guidelines for Whale and Dolphin Watching (DEH 2005) to minimise the impacts of noise and the risk of a vessel collision.

Contact us

Beach values stakeholder feedback as it is an important part of the process of revising the Environment Plan. Beach has prepared this information sheet to inform stakeholders and invite feedback from those who may be affected by Beach's offshore operations or who have an interest in the environmental performance of its offshore operations.

If you are seeking further information about the offshore operations of BassGas and the revision of the Environment Plan specific to your functions, interests or activities, or you wish to provide feedback, or meet with Beach to discuss, please contact us. Beach welcomes consultation with stakeholders potentially affected by these operations, including those stakeholders with specific local knowledge or an interest in the environmental performance of this asset. Feedback and consultation will inform the revision of the Environment Plan.

For further information please contact:

 **1800 797 011**

 **community@beachenergy.com.au**

Please be advised that all stakeholder feedback, records of consultation, copies of correspondence, including emails, will be provided to NOPSEMA and DEDJTR in the preparation of the Environment Plan as required by the OPGGS regulations.

