Planning for pipeline decommissioning in Bass Strait

August 2023

Participating in the consultation process
Esso’s Bass Strait operations

Esso Australia Resources Pty Ltd (Esso) is a wholly owned subsidiary of ExxonMobil Australia Pty Ltd. Esso is the operator of the assets in Bass Strait that are part of the Gippsland Basin Joint Venture between Esso and Woodside Energy (Bass Strait) Pty Ltd (Woodside Energy) and the Kipper Unit Joint Venture (Esso, Woodside Energy, and MEPAU A Pty Ltd). These assets comprise 19 platforms with approximately 400 wells, six subsea facilities and more than 800 kilometres of subsea pipelines.

After having delivered energy to Australia for over 50 years, some of Esso’s Bass Strait facilities have reached the end of their economic oil or gas production. As such, Esso is planning for the safe decommissioning of the Bass Strait pipeline network. This involves working together with government, communities, non-government organisations and all relevant stakeholders to determine options for decommissioning infrastructure that balance environmental impacts and benefits with the needs of the community and is in accordance with regulatory requirements.

The purpose of consultation is to allow stakeholders to make an informed assessment of the possible consequences of pipeline decommissioning activities on their functions, interests and activities.

We are seeking your involvement as we assess potential options for decommissioning the Bass Strait pipeline network. Whether you’re an individual, business, or organisation, your involvement will assist Esso to better understand the impacts and risks that may arise from the various decommissioning options being considered, in order to inform the identification of preferred option(s).
About our offshore pipeline network

Most of Esso’s offshore pipeline network is in Commonwealth waters, with eight pipelines extending to the shore through State waters, that is within 3 nautical miles from shore. This equates to around 790 kilometres of pipelines in Commonwealth waters and some 50 kilometres in State waters.

Esso’s offshore pipeline network consists of:
- 34 primary pipelines (~650 kilometres total length)
- 11 secondary pipelines (~190 kilometres total length).

The pipelines vary in size from 65 millimetres up to 600 millimetres nominal diameter. The pipelines also vary in age with the oldest pipelines installed in 1968 and the most recent installed in 2021.

Within Commonwealth waters, the offshore pipeline network is in water depths ranging from approximately 25 to 30 metres where it meets State waters. The deepest point is approximately 400 metres for pipelines located almost 90 kilometres from the Victorian coastline.

Esso’s Bass Strait network also includes 13 umbilicals, totalling approximately 105 kilometres in length. Umbilicals generally run alongside the oil and gas pipelines.

Associated with the pipeline decommissioning work is ancillary subsea property, which is used to support, protect and connect the pipeline network.
WHAT PRODUCTS DOES ESSO TRANSPORT IN THE PIPELINES?

Esso’s operations in Bass Strait produce a variety of hydrocarbon products ranging from gas, condensate (‘gas liquids’) to oil.

Different reservoirs produce hydrocarbon products with different properties. The pipeline network mostly transports crude oil and gas that is produced offshore to the Longford Plants for processing.

WHAT IS A PRIMARY PIPELINE?

Primary pipelines are licenced pipelines that carry hydrocarbon products. Esso’s network uses 34 primary pipelines.

WHAT IS A SECONDARY PIPELINE?

Essos network includes 11 secondary pipelines. These pipelines carry fuel gas from one platform to another for use in power generation or carry gas to assist with producing hydrocarbons from a well (via gas lift). Some secondary lines have also been used to carry petroleum products from a subsea well to a platform. Secondary pipelines are not required to be licenced.
In the oil and gas industry, the term ‘umbilical’ refers to the lines used offshore between remotely operated/subsea equipment and a host platform, to enable control from the surface.

Umbilicals can be supplied in various configurations and are often designed to suit the exact service. For instance, for the Kipper subsea production facility there are two umbilicals, being an electrical umbilical and a fluids umbilical.

The electrical umbilical is used to control equipment, like subsea valves, while the fluids umbilical is used to transport fluids needed to operate the equipment, such as hydraulic fluid.

Ancillary subsea property refers to equipment including:
- anode sleds
- tie-in assemblies
- subsea isolation valves (SSIVs)
- flanged subsea tie-in spools
- Umbilical Termination Assemblies (UTAs)
- Pipeline End Manifolds (PLEMs)
- Pipeline End Terminations (PLETs)
- pipeline tow sleds
- pipeline crossings
- miscellaneous clamps
- concrete blocks
- concrete and grout mattresses and bags.
ARE THE PIPELINES SITTING ON THE SEABED OR ARE THEY BURIED?

It varies. Most of the offshore pipelines were laid on the seabed, but some were buried (“trenched”) as part of the installation process. However, over time, some of the pipelines originally laid on the seabed have become either fully or partially buried due to sediment movement and pipeline weight. When pipelines are no longer in use, they are filled with water, making them heavier than they were during their operational lifetime. This tends to result in further burying in sections where seabed sediments shift. Some sections of pipelines have been stabilised with concrete mattresses or concrete blocks to enhance stability on the seabed.

WHICH REGULATOR OVERSEES OFFSHORE PETROLEUM PIPELINES?

The National Offshore Petroleum Safety and Environmental Management Authority (NOPSEMA) is Australia’s independent expert regulator for health and safety, structural (well) integrity and environmental management for offshore petroleum and greenhouse gas storage activities in Commonwealth waters.

Petroleum pipelines in State waters, that is within 3 nautical miles of the shoreline, fall under the authority of the Victorian Department of Energy, Environment and Climate Action (DEECA).

WHAT ARE THE DECOMMISSIONING OPTIONS?

Under the Offshore Petroleum and Greenhouse Gas Storage Act 2006, Esso is required to remove all structures, equipment and other property no longer used for oil and gas operations.

However, there is provision in the legislation for decommissioning options other than full removal to be accepted, provided it can be demonstrated that various criteria relating to environmental impacts and risks can be met.

Therefore, Esso will evaluate a range of decommissioning options with respect to environmental impacts and risks that may arise, as well as technical, safety and socio-economic aspects.

Decommissioning options that may be considered include:

- full removal (as required by the Act)
- partial removal
- leave in-situ (either buried or unburied)
- reuse for other operations
- combinations of the above.
Esso is engaging with NOPSEMA to seek early regulatory advice on the proposed approach for decommissioning of all pipelines, umbilicals and associated ancillary subsea property. This includes the proposed scope and timing to achieve the target of commencing decommissioning activities potentially as early as 2027.

Esso is also planning a range of technical and environmental studies to comprehensively assess the issues, benefits and options associated with decommissioning of the Bass Strait offshore pipeline network.

To meet the target timeframe, Esso is now actively seeking stakeholder involvement in our planning process to help identify the best option(s) for decommissioning of the pipeline network.

WHAT ARE THE NEXT STEPS?

To register your interest and help us better understand how you would like to be consulted throughout the decommissioning process, please complete the Esso Consultation Questionnaire.
Acknowledgement of traditional owners

Esso Australia acknowledges the Traditional Custodians of Country, the Gunaikurnai Peoples, and the land and sea upon which our operations are located. We recognise the Gunaikurnai Peoples’ continuing connection to land, sea, culture and community, and pay our respects to Elders past and present.

How to contact us

For more information, visit our Consultation Hub using the QR Code below, or contact our Consultation team at:

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Scan to access the Consultation Hub and Esso Consultation Questionnaire