

Fact Sheet

Seawater Use in a FSRU and the Geelong Refinery



Seawater intake in FSRU and refinery operations



Viva Energy Gas Terminal Project

In June 2020 Viva Energy shared its vision to create the Geelong Energy Hub at its refinery located in Corio Bay. Key to this vision is the plan to develop a gas terminal using a Floating Storage and Regasification Unit (FSRU) and a pipeline to get the gas to market to help meet the projected gas shortage in south-east Australia.

The Gas Terminal being adjacent to the Geelong Refinery would leverage our capability as an existing Major Hazard Facility (MHF) operator, be sympathetic to the existing industrial footprint of the site and offer potential synergies between the two facilities such as the ability to reuse the seawater discharge from the FSRU in the refinery's existing operations.

Liquefied Natural Gas (LNG) transported to the Gas Terminal in Geelong would need to be re-heated using seawater to convert it back to gas for delivery to end users.



Seawater Use in the Refinery and a FSRU*



3. Combined FSRU and refinery operation



Potential synergies between the two facilities

One of the unique aspects of our project is that we intend to take the cooled seawater (initially at ~5-7°C below ambient temperature) following the FSRU regasification process, and redirect it to the existing refinery seawater intake for reuse as cooling water within the refinery operations. The figure above (3) shows the proposed reuse of FSRU seawater discharge into existing refinery operations.

* Temperatures are average and indicative with further modelling and assessment to be undertaken.



Unique Project Advantages

Re-using the FSRU seawater discharge as a source for the refinery cooling water could have the following advantages:

- replaces the seawater volume currently used for refinery operations; and
- seawater that would have been discharged at a colder temperature at a single location (near the FSRU) would be discharged at a temperature closer to ambient levels across multiple refinery outlets in Corio Bay.

As seawater that is currently used in the refinery cooling process is also treated in a similar way, we are evaluating whether the eventual water discharge characteristics (temperature, residual chlorine) could be maintained at levels permissible under our existing EPA licence.

Assessments

We will be completing further modelling and assessments to determine potential impacts from the seawater discharge on the surrounding marine environment which will inform measures to mitigate and manage these.

These assessments will also involve various scenarios, including traditional FSRU operations, where seawater would be directly discharged into the bay in the event that discharging seawater into the refinery was interrupted or unavailable for a period of time.





If you have any questions about the Project, please contact Viva Energy's Project Team 1800 515 093 energyhub@vivaenergy.com.au vivaenergy.com.au

