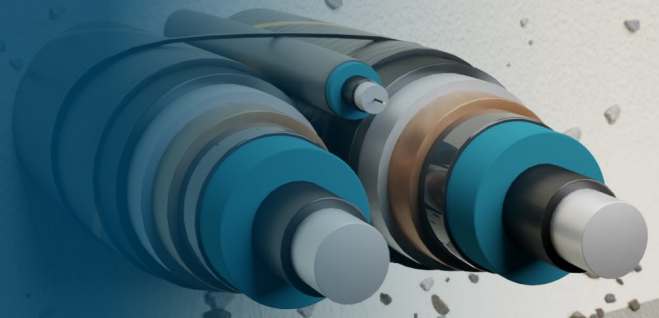


Electromagnetic Fields and Electromagnetic Interference



What are Electromagnetic Fields?

Electromagnetic Fields (EMF) are invisible, physical fields that surround electrical charges and exert forces on all charged particles and objects in the field.

EMF occur both naturally in the environment and wherever electricity is used or transported. It is possible to reduce or modify the extent of the fields, but impossible to remove their production entirely.



More information

For more information on how EMF will be managed by the project, view Chapter 10: Electromagnetic Fields in Volume 1 of the Environmental Impact Statement/ Environment Effects Statement (EIS/ EES) via Marinius Link's website at marinuslink.com.au/assessment/eis-ees.

What is Electromagnetic Interference?

Electromagnetic Interference (EMI) occurs when something in an electric or magnetic field stops working or works incorrectly, because of the field that it is being exposed to.

Our independent assessments revealed EMF levels during construction and operation of Marinius Link are below international guidelines recommended by the International Commission of Non-Ionizing Radiation Protection, which have been adopted by the Australian Radiation Protection and Nuclear Safety Agency (ARPANSA). As a result, the EMF levels are not expected to be harmful to humans, farming operations or natural ecosystems.

About ARPANSA

The Australian Radiation Protection and Nuclear Safety Agency (ARPANSA) is the Australian Government's independent regulator and primary authority on radiation protection.

ARPANSA reviews emerging scientific research into the potential health effects of EMF exposure on an on-going basis and publishes guidelines for EMF exposure to ensure community safety. Marinus Link has completed independent assessments of EMF/EMI in accordance with ARPANSA's guidelines.

For more information on ARPANSA's advice regarding EMF, visit arpansa.gov.au

Assessing EMF and EMI

As part of the EIS/EES, we completed an independent assessment to look at EMF and EMI associated with Marinus Link.

These studies mostly focused on magnetic fields, as the electric fields are contained within the cables.

The assessments considered worst-case impacts to people, plants, animals and electrical equipment (known as sensitive receptors) from the subsea and landcables, as well as at the converter station sites in Tasmania and Victoria.

EMF during construction

Marinus Link's EMF levels are proposed to be below the international guidelines recommended ARPANSA.

Construction activities likely to produce EMF, such as using radios and heavy machinery, are not anticipated to cause harm to human health or impact the operation of electronic equipment, as they are expected to take place at a sufficient distance from residential areas and electrical devices.

EMF after construction

Studies found the operation of the land cables will not impact human health, livestock, wildlife, or the normal functioning of radio-frequency identification (RFID) tags and other farming equipment or machinery along the cable route.

Our studies indicated the cables have the potential to impact the behaviour of honeybees within 5 m of the cable trench, so we will work with landholders to relocate apiaries away from the cables.

The subsea cables may have some impact on the behaviour of species that live on the sea floor at the two shore crossings, but impacts will be comparable with that of the existing Basslink cables. The 2016 operational impact assessment of Basslink identified no negative impacts on species that live on or near the seafloor.

For fisheries in Bass Strait, the key impact during the operation of the project are potential disruptions to the accuracy of magnetic compass within 10 m of the subsea cable.

How we will minimise EMF/EMI impacts

While modelled EMF levels are below recommended guidelines, we will adopt a precautionary approach to the management of EMF through the design of the project.

Magnetic fields from individual conductors of electricity can either increase generated field strength, or cause a cancellation effect.

By designing the underground cable trench with two cables in each circuit as close together as possible, the magnetic fields generated by Marinus Link are reduced along the alignment.

In Bass Strait, the cables in each circuit will be bundled together to reduce EMF.

In addition to the design of the cables, we also will notify marine and fishery stakeholders of the location of the cable to avoid potential disruptions to their operations.

More information



Australian Radiation Protection and Nuclear Safety Agency

visit www.arpansa.gov.au

World Health Organisation

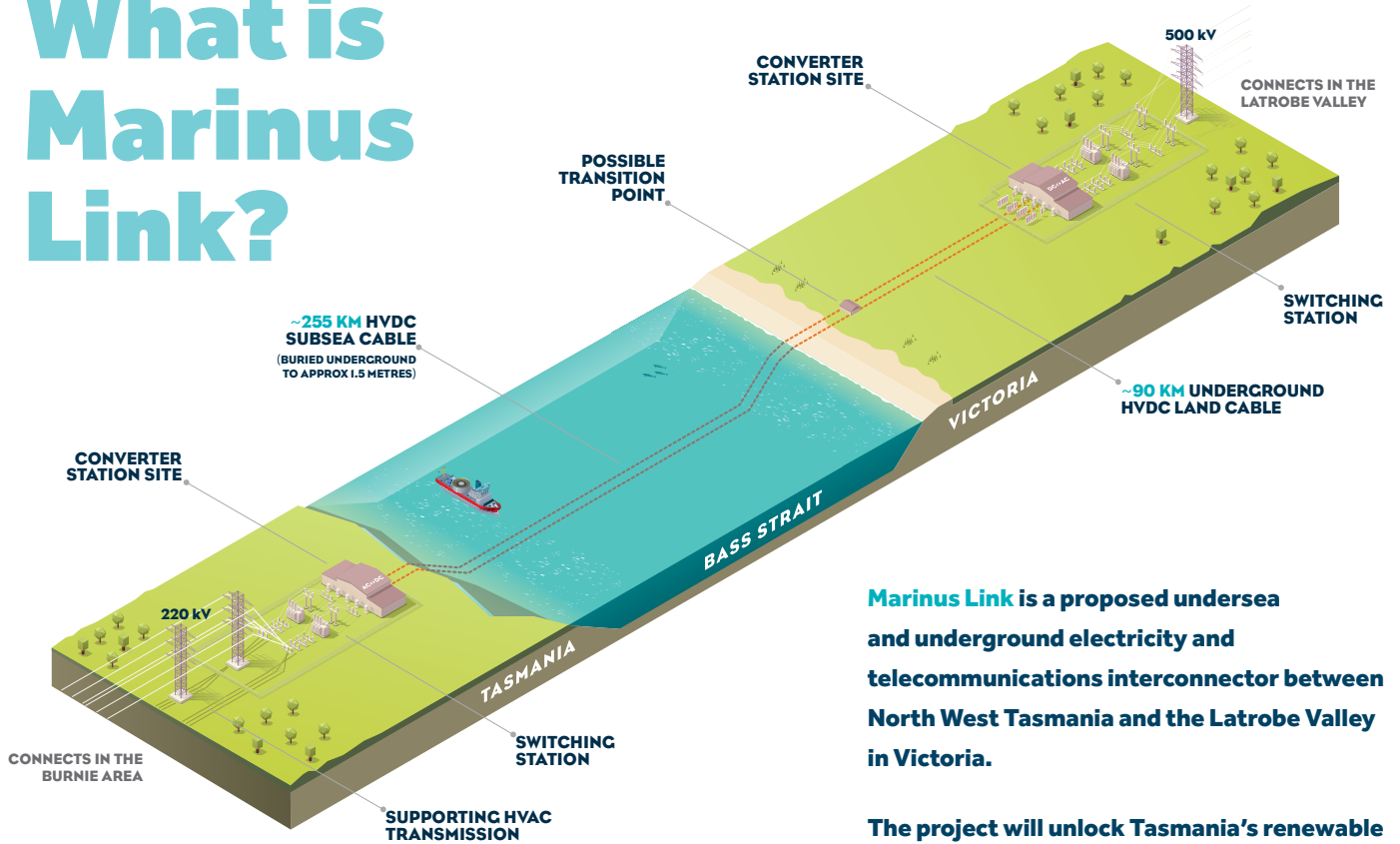
visit www.who.int

Energy Networks Australia

visit www.energynetworks.com.au



What is Marinus Link?



Marinus Link is a proposed undersea and underground electricity and telecommunications interconnector between North West Tasmania and the Latrobe Valley in Victoria.

The project will unlock Tasmania's renewable energy and storage resources to deliver reliable and clean energy for customers in the National Electricity Market.



MARINUS LINK

More information

- visit marinuslink.com.au
- email team@marinuslink.com.au
- call 1300 765 27