



# Gorgon Project Overview - Producing Liquefied Natural Gas in Australia

## Narrator

Situated off the northwest coast of Australia lies the greater Gorgon area, a world class resource of untapped, clean energy containing more than forty trillion cubic feet of gas. It's the reason why Chevron and its joined venture participants, Exxon Mobil and Shell have embarked on Australia's single greatest resource development, The Gorgon Project. The Gorgon Project will tap into the Jans field, approximately one hundred and forty kilometers from Barrow Island and more than thirteen hundred metres below sea level. Australia's first mega project will use sub-sea infrastructure for the production, gathering and transport of reservoir fluids from the fields to Barrow Island. Deep sea pipe lines will traverse the ocean floor, at one point crossing an escarpment that rises several hundred metres on the way to Barrow Island. Once complete, there'll be more than one hundred and eighty kilometres of carbon steel pipeline laid and another one hundred and eighty kilometers of parallel, umbilical and service pipelines.

The Gorgon field is one of the largest gas fields ever discovered in Australia. Situated seventy kilometres from Barrow Island and about two hundred and fifty metres below sea level, it is the world's premier undeveloped hydrocarbon reserves. Like Jans, Gorgon will extend the envelope in sub-sea development by breaking new ground in the application of technology. Raw gas from the Gorgon field will then flow 70 kilometres to Barrow Island, the site of the Gorgon LNG plant.

The Chevron operated Gorgon project is a story of energy and the environment as well as technology and expertise. The LNG plant will be located on a small area of Barrow Island, a class A nature reserve managed for the conservation of flora and fauna. It's also where Chevron has successfully operated Australia's largest on shore oil field for forty years. The Gorgon project will see construction of a three train, fifteen million ton per annum liquefied natural gas plant and a domestic gas plant with capacity of up to three hundred terajoules. Domestic gas will be piped to the mainland to help secure the state's future energy needs.

Gorgon will provide employment for thousands of people throughout the life of the project. That's employment for today's generation and our children. A specially designed accommodation village will be home to around three thousand workers.

The LNG process starts with the extracted gas entering the pipelines where the gas is cleaned and caught. The natural occurring carbon dioxide is removed, compressed and safely injected deep below Barrow Island before the gas is ready to be liquefied.

Liquefied natural gas is natural gas that has been cooled to the point that it condenses to a liquid. This occurs at a temperature of approximately one hundred and sixty one degrees Celsius. Liquefaction reduces the volume by approximately six hundred times, making it more economical to transport between continents in specially designed ocean vessels. The liquid-faction process involves a number of different extraction methods. Firstly, water is extracted from the gas to prevent ice and hydrate forming. All traces of mercury are then removed and high pressure propane coolant is used to control the temperature of the gas. Each LNG train has a liquefaction and refrigeration unit to produce the final liquefied product.

After the cooling process, the LNG flows along the central pipe rack to the LNG storage tanks and is offloaded via a two point two kilometre jetty onto dedicated tankers and transported to markets around the world. LNG is colourless, odorless, non-corrosive and non-toxic and can be safely transported by ship. It's this resource that has the potential to secure Australia's future as a global player in energy markets around the world. Gorgon is fortunate to be located in the region with the largest and fastest growing LNG demand in the world and the world is crying out for LNG, the cleanest of the fossil fuels. Gorgon size, scale and technical complexity is unprecedented. Gorgon's economic benefits will cross generations and will be an important pillar of the

Australian economy.  
Gorgon, fueling the future.

### **Text**

Australia's single largest resources project 15 million tons per annum LNG 300 terajoules per day domestic gas.