

Natural Gas

SOUTH AUSTRALIAN CONTEXT

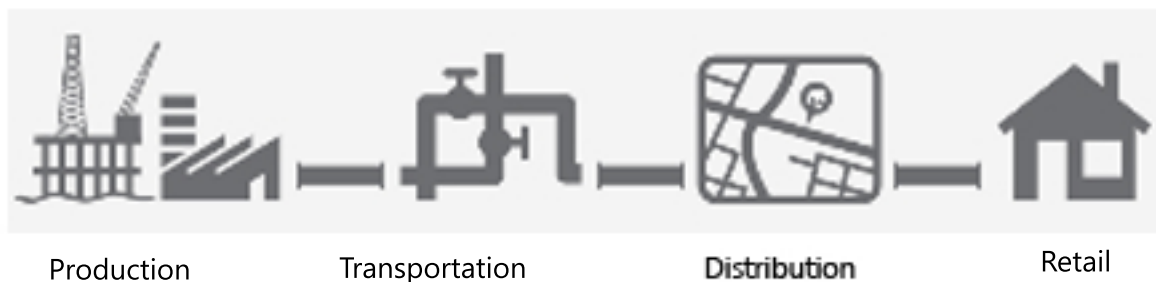
The use of gas has been synonymous with the history of South Australia since 1861 when the South Australian Gas Company was incorporated by legislation. The company pioneered coal-gas manufacture and gas was produced in a coal-fired gas works at Brompton – leading to its initial use in 1865 to light Adelaide’s streets.

Major gas discoveries were made at Gidgealpa in 1963 and at Moomba in 1966 - at the time, these fields expected to contain sufficient reserves to satisfy Adelaide’s future demands until 1991 but were later amended to 1987. The generation of the bulk of South Australia’s electricity from natural gas ensured the economics of the construction and operation of the Moomba-Adelaide pipeline and gas was subsequently supplied to Adelaide in 1969.

The Katnook gas field was discovered in 1987 and was the first commercial discovery in the South Australia part of the Otway Basin. Raw gas production commenced from the Cooper Basin in 1969 with commercial gas supply starting in 2004.

South Australia is not currently meeting its own gas needs with 20% now being sourced from Victoria. With the Gippsland Basin in decline, this position is set to worsen.

THE HOW



The South Australian gas industry comprises production, transmission, distribution and retailing sectors. These sectors take natural gas from the point of extraction – the well head – to the point of consumption – the burner tip.

Gas is transported from the production fields by means of 39,000 kilometres of transmission pipelines. These transmission pipelines transport large volumes of gas under high-pressure.

Today, there are two major transmission pipelines in South Australia: the Moomba-Adelaide pipeline, which transports gas from the Cooper Basin to Adelaide and the SEAGas pipeline, which transports gas from the Otway and Bass basins to Adelaide.

Gas is transported - at lower pressures and smaller volumes - by the transmission pipeline feeds into the distribution pipe network. This network transports the gas to residential and business customers at which point the gas is metered and the pressure reduced as appropriate at entry to premises.

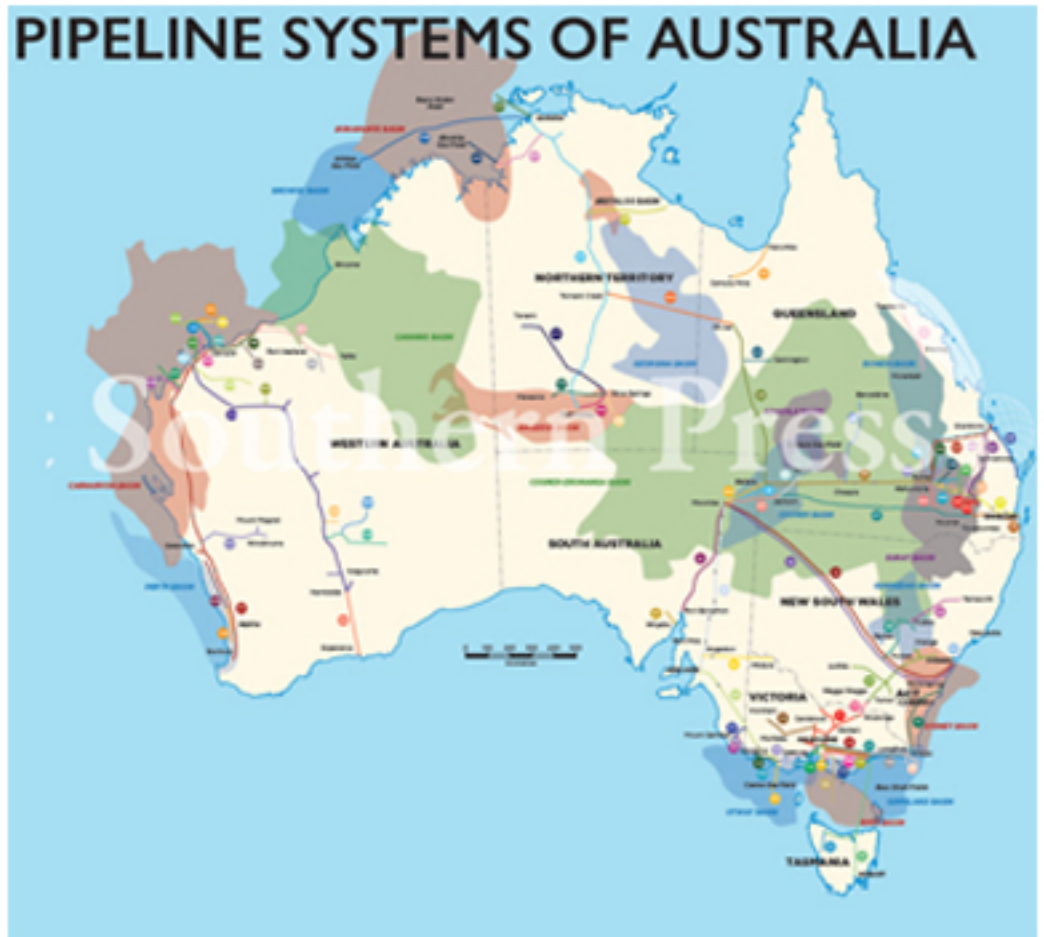
END PRODUCT

60 per cent of Australia's natural gas is used for transportation.

Energy retailers sell natural gas differently to 'end user' customers.

Unlike electricity retailers who buy electricity through the National Electricity Market, gas retailers operate in a "contract carriage market" where they must have contractual arrangements in place for purchase with gas producers (e.g. Santos), transmission (e.g. Epic Energy) and distribution (e.g. Envestra).

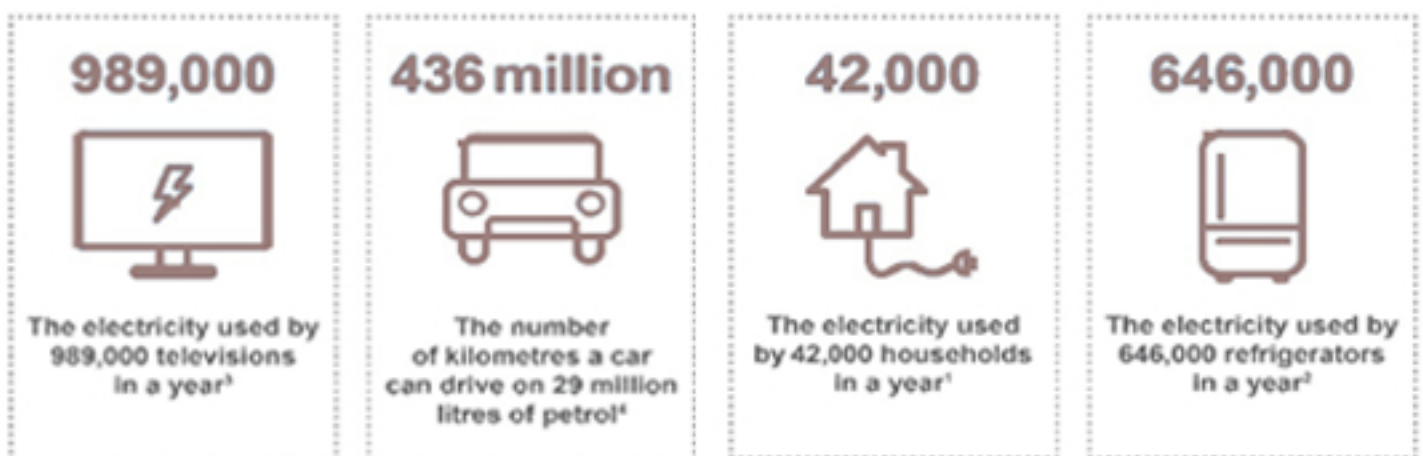
The wholesale gas prices, and conditions of supply are governed by these agreements.



ABOUT

Conventional natural gas occurs in underground porous sedimentary rock. Sedimentary rocks are formed from pre-existing rocks or pieces of once-living organisms. They form from deposits that accumulate on the Earth's surface.

Gas measurement units are complex, but the basic unit of energy is the joule. The common energy unit is the megajoule (MJ) or one million joules. One petajoule is equivalent to filling up a car with a fuel tank capacity of 55 litres of petrol around 532,000 times.



"South Australia's electricity market has more installed gas fired generation per capita than any other state in the National Energy Market (NEM). Further, we also have proportionally the largest installed capacity of intermittent renewable generation – wind and solar – than any other region in the NEM. So, for our state, access to an affordable and a reliable source of gas – a natural complement to renewables - is vital."