

Onsite during the final construction phase.



# MORTLAKE POWER STATION

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Mortlake Power Station is a 550 MW gas-fired peaking power station that will generate electricity at times of high demand. It is the largest power station of this type in Victoria.  
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Located 12 km west of Mortlake, the power station will help to meet the growing demand for electricity in Victoria, New South Wales, Tasmania, Queensland and South Australia.

Operating at full capacity, the power station will generate 550 MW of power to the grid. As a peaking power station, this will coincide with times of the day when people use the most electricity. (For example, during summer, when air conditioners are used extensively and during the winter months at times of high demand for industrial and domestic heating).

All 550 MW of power generated will be sent to the national power grid via the existing Moorabool to Heywood 500 kV high voltage transmission line.

Origin has worked with the Traditional Owners of the land, through a number of groups – the Kirrae Whurrong, Kuuyung Maar and the Framlingham Aboriginal Trust.

We have used an auditing process to ensure ongoing conformity to all of the compliance requirements – ranging from environmental to industrial relations, to community engagement.

Associated major contractors have included Lend Lease Infrastructure Services, Siemens Ltd and AJ Lucas Operations for the pipeline.

### **Significant economic and social contributions during construction include:**

- an alternative to coal-fired generation in the National Electricity Market
- reduced need to transmit power from the Latrobe Valley to western Victoria, reducing system losses and further reducing emissions
- during construction, 370 jobs were created, including many people from the local community
- increased demand and jobs for local businesses through the supply of goods and services
- will provide up to 10 ongoing permanent jobs when commissioned.

## Our commitment

Origin respects the rights and interests of the communities in which we operate by working safely and being mindful of, and attentive to, the environmental and social impact of the resources, products and services we use or provide to others.

## About Origin

Origin is the leading Australian integrated energy company focused on gas and oil exploration and production, power generation and energy retailing.

Listed in the S&P ASX top 20, the company has more than 5,200 employees and is a leading producer of gas in eastern Australia. Origin is Australia's largest energy retailer servicing 4.5 million electricity, natural gas and LPG customer accounts and has one of the country's largest and most flexible generation portfolios with more than 5,310 MW of capacity, through either owned generation or contracted rights. Origin's strategic positioning and portfolio of assets provide flexibility, stability and significant opportunities for growth across the energy industry.

Through Australia Pacific LNG, Origin's incorporated joint venture with ConocoPhillips and Sinopec, we are developing one of Australia's largest CSG to LNG projects.

Origin has a strong focus on ensuring the sustainability of its operations, and has significant investments in renewable energy technologies.

## Project timeline

- Early 2004 Origin investigated a number of potential sites along the Moorabool to Heywood 500kV line.
- October 2004 Origin began approvals and community engagement.
- January 2005 the environmental assessment process began (under the Environment Effects Act 1978).
- July 2006 the Victorian Government endorsed Origin's Mortlake Power Station proposal.
- July 2008 the Origin Board committed to proceed with construction.
- January 2009 preliminary work on the gas pipeline commenced.
- September 2008 Origin held a major information day.
- March 2009 first sod turned by the Victorian Premier and construction began in earnest.
- March-May 2009 over 20,000 loads of in-fill delivered to site from local quarries.
- May 2009 excavation of the Power Station and Switchyard areas completed.
- June 2009 Moyne Shire Council institutes a community based Mortlake Power Station subcommittee, in which Origin and Lend Lease Infrastructure Services consistently participate.
- August 2009 major concrete poured for the gas turbine foundations.

- October 2009 the project started to receive the major infrastructure (including turbines, generators and transformers) to power the station.
- Late 2009 mechanical plant construction and cabling underway.
- January 2010 an open day at site attracted 1000 from the local community.
- August 2011 first megawatt of electricity generated.
- September 2011 water treatment plant completed and handed over to Wannon Water. The power station uses recycled water from the Mortlake township.

## The past few months

As the project moves towards completion:

- a pre treatment plant has been commissioned to process recycled water for use on site
- the 500 kV switchyard has been connected to the Moorabool to Heywood transmission line
- natural gas was introduced to the pipeline and the turbines fired for the first time.

## Next steps

- The power station will undergo a period of performance testing
- Commercial operations are expected to commence by the end of 2011.



Origin and Lend Lease Infrastructure Services site managers discuss the onsite turbine construction with Siemens engineers.

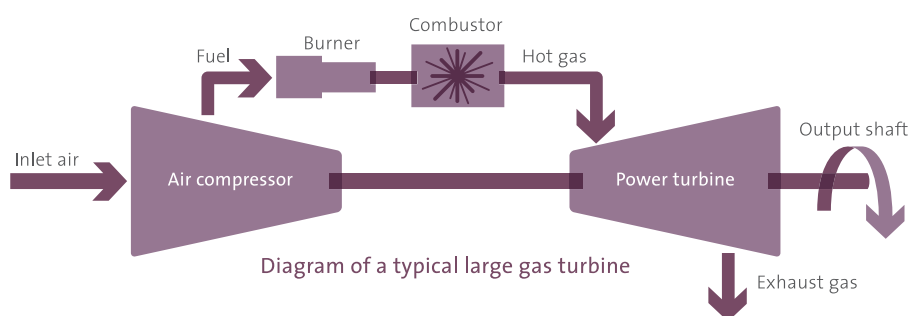
## Contact Mortlake Power Station

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[originenergy.com.au/vicgenproject](http://originenergy.com.au/vicgenproject)



## How a gas turbine works

Mortlake Power Station uses natural gas to operate the two turbines, which work on similar principles to an internal combustion engine in a car:

- air and gas are mixed together and combusted within the turbine
- this force causes the rotor of the turbine to turn
- the turbine is coupled to a generator

- as the turbine turns, the generator rotates and produces electricity
- electricity from the generator is passed through a transformer and uploaded to the grid.

## Fuel supply

The power station's natural gas supply is piped via an 83 km dedicated underground natural gas transmission pipeline from the Port Campbell area.