

# Brigalow Peaking Power Plant



**CS Energy is developing a hydrogen-ready, natural gas power station to provide crucial ‘firming’ capacity to support more renewables entering the grid in Queensland.**

The project is located at CS Energy’s Kogan Clean Energy Hub next to our Kogan Creek Power Station near Chinchilla on the Western Downs. This region is known as the energy capital of Queensland and offers excellent connections into the existing power grid.

The open cycle power station with a capacity of up to 400 megawatts (MW) will have fast-start capability and will operate in high demand periods to support variable solar and wind energy and underpin energy security for Queenslanders.

Development of the Brigalow Peaking Power Plant was an action outlined in the Queensland Energy and Jobs Plan and is a significant step in the continued diversification of CS Energy’s portfolio.

## Fast facts

- **Up to 400 MW capacity**
- **Fast start – 5 minutes from cold to full output**
- **Ability to operate on up to a 35 per cent green hydrogen blend from day one**
- **Capacity to power more than 150,000 Queensland homes during peak periods**
- **Commercial operations expected by the middle of 2026**

## How it works

The Brigalow Peaking Power Plant will consist of a compact power station footprint (350m x 150m) and is proposed to feature up to 12 individual turbines, supplied by GE, which are capable of using a blend of renewable hydrogen and natural gas.

Renewable hydrogen, initially sourced from CS Energy's Kogan Renewable Hydrogen Demonstration Plant, will be mixed with natural gas to fuel the power station.

Production of hydrogen is expected to be scaled up through the development of a commercial scale hydrogen production facility as part of the Kogan Clean Energy Hub. This facility, which is subject to further studies, would be aimed at meeting the demand of the Brigalow Peaking Power Plant.

Natural gas will be transported to the Brigalow Peaking Power Plant via a proposed new 21-kilometre twin pipeline that would connect to the existing Roma to Brisbane Pipeline (RBP). It is proposed that one of the twin pipelines is constructed to enable conversion to 100 per cent hydrogen capability, subject to ongoing engineering and design studies.

Australian energy infrastructure business APA Group is undertaking early planning works for this new pipeline on behalf of CS Energy. APA is a specialist developer and operator of gas infrastructure and the owner of the RBP.

The Brigalow Peaking Power Plant is planned to connect into the Banana Bridge substation located next to CS Energy's Chinchilla Battery. This will require a few hundred metres of new transmission line to be constructed on land owned by CS Energy.

The Brigalow Peaking Power Plant will be a reliable source of fast power when needed. With its ability for multiple start/stop cycles per day and its ability to ramp up to full power output within five minutes, the plant for can be on the grid quickly to provide sustained power output during peak demand periods. This is important in helping to address the variability of renewable energy generation and providing firm capacity to the grid in addition to the role of batteries and pumped hydro.

## What is hydrogen?

**Hydrogen is the most common chemical element in the world.**

It can be produced in liquid or gas form and can be used as fuel for heating or transport, a raw material in industrial processes, or to generate electricity.

Green hydrogen is produced using a process called electrolysis, during which a clean energy source such as solar or wind power is used to produce a current which separates the hydrogen and oxygen molecules in water (H<sub>2</sub>O). When this hydrogen is burned, water is the only by-product emitted. Green hydrogen produces no carbon emissions, making it an exciting prospect for meeting the world's future energy needs.



## Timeline

- **Site selection and initial design and surveys for the power island site were completed in early 2023.**
- **Planning and environmental approval applications for the power island will be submitted in late 2023.**
- **APA will be undertaking early planning works on the new gas pipeline during late 2023 and early 2024.**
- **Site mobilisation is expected to commence in late 2024.**
- **The Brigalow Peaking Power Plant is expected to be operational by the middle of 2026.**

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