snowyhydro | Hunter Power Project

PROJECT OVERVIEW

Good for prices. Good for jobs. Underpinning renewables.

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ABOUT SNOWY HYDRO

Snowy Hydro is a dynamic energy company underpinning Australia's transition to a renewable energy future. Since the days of our pioneering past, Snowy Hydro has grown into the fourth-largest retailer in the National Electricity Market (NEM), becoming a leader and innovator in renewable energy.

Snowy Hydro owns and operates the Snowy Mountains Hydro-electric Scheme, along with other gas and diesel assets in New South Wales (NSW), Victoria and South Australia. Snowy Hydro recently expanded its renewable energy portfolio to include 1,000 megawatts (MW) of contracted wind and solar. As a 'peak provider' with a total generation capacity of approximately 5,500MW, we provide supply security and price certainty to customers in the energy market.

Snowy Hydro also owns the electricity and gas retail companies Red Energy and Lumo Energy, which supply electricity and gas to more than one million homes and businesses. The retail group also includes the utility connections business, Direct Connect.

With construction of the Snowy 2.0 pumped-hydro expansion project well underway, Snowy Hydro will continue to meet future energy needs in a changing and increasingly lower emissions economy.

To provide a reliable energy source and support the ongoing transition to renewables, intermittent energy sources such as wind and solar need to be firmed by dispatchable energy sources like gas-fired power stations.

The proposed Hunter Power Project - a gas-fired power station at Kurri Kurri - will supplement Snowy Hydro's generation portfolio with dispatchable capacity when the needs of electricity consumers are highest.

snowy hydro

red energy

LUMO ENERGY

DIRECT CONNECT
MAKES MOVING EASY

HUNTER POWER PROJECT OVERVIEW

Snowy Hydro is proposing to develop a gas-fired power station at the former Hydro Aluminium smelter site at Kurri Kurri in the NSW Hunter region.

The proposal is to construct a power station and electrical switchyard with capacity to generate up to 750MW of 'on-demand' electricity.

The power station will comprise two heavy-duty, open cycle gas turbines (OCGT) and are the latest and most efficient turbines that the world's best manufacturers can offer for the site. The OCGTs will operate on natural gas with a diesel back-up system and will be hydrogen-ready.

The proposed power station will operate as a 'peak load' electricity generation facility, capable of supplying electricity at short notice as needed. For example, it may be used at times of high community demand for electricity, when the supply from intermittent renewable sources is low, when there is an outage at 'baseload' power stations, or there are transmission line constraints.

The proposal is considered to be essential for NSW and was declared by the State Government as a Critical State Significant Infrastructure project in December 2020.

A proposed 132 kilovolt (kV) electrical switchyard would be located adjacent to the site and a new gas pipeline would be required. The new gas pipeline will form part of the same Critical State Significant Infrastructure declaration.

The proposed project will cost approximately $610 million, and if approved, it could be operational by the end of 2023.

PROJECT SITE MAP

KEY:

1. Electrical switchyard boundary
2. Power station boundary

Source: Nearmap 2021©

WHY WE NEED THE HUNTER POWER PROJECT

Large coal-fired power stations are retiring as Australia transitions to intermittent, renewable energy sources like wind and solar power. This means that having electricity sources that can produce energy 'on-demand' are also needed.

The proposed gas-fired power station at Kurri Kurri would fill the gap in electricity demand following the retirement of the Liddell Power Station in Muswellbrook.

The NSW Government's 2019 Electricity Strategy outlines the requirement for a reliable, affordable and sustainable electricity system. A key challenge to achieving this goal is that the existing fleet of NSW coal-fired power stations are reaching the end of their technical lives. There is a need for the market to deliver firm and flexible electricity generation, to ensure energy availability and reliability.

The closure of Liddell Power Station will reduce NSW's electricity supply by around 13%. Additionally, over the last 10 years, more than 5,000MW of similar 'baseload' energy has been removed from the market through coal plant closures. A further 10,000MW is due to be removed by 2040.

As coal plants reach the end of their technical lives, they have occasional (unplanned) shutdowns. These outages reduce the available capacity in the electricity system, making the system less reliable.

The open cycle gas turbines proposed for the Hunter Power Project will provide the necessary dispatchable 'firm' requirement, ensuring security and stability to support the volatility that arises from intermittent renewables.

GOOD FOR JOBS. GOOD FOR PRICES. UNDERPINNING RENEWABLES.

IN THE HUNTER REGION

600 direct construction jobs

1200 indirect employment opportunities

20 operational and maintenance staff

ONCE OPERATIONAL

$800m investment

IN THE HUNTER ECONOMY

The expansion of the energy supply market is

1 OF THE 10 critical drivers to help NSW businesses recover post COVID-19

(Source: NSW Business' Back on Track, July 2020)

UP TO

750MW generating capacity

132kV switchyard

2 heavy-duty, hydrogen-ready open cycle gas turbines

37% increase to the total peaking capacity (scheduled) in the NSW energy system

Expected to be operational **2023**

GOOD FOR THE ENVIRONMENT

The Hunter Power Project will underpin Australia's transition to renewable energy future

NSW needs additional dispatchable power to facilitate and firm the growth of renewable energy

INDUSTRY ESTIMATES FOR EVERY

2MW of renewables

1MW dispatchable generation is required

55-75% NSW gas-fired generation has between 55 and 75% lower emissions than coal

WORKFORCE & BUSINESS OPPORTUNITIES

The Hunter Power Project will generate employment, increase economic activity in the region and provide opportunities for local businesses.

It is estimated that the project will create up to 600 local jobs during the construction period, with $800 million worth of investment in the Hunter economy.

The workforce opportunities will be made up of the following:

During the 14 to 15 months of construction, the Hunter Power Project would generate an immediate 40 to 50 jobs at commencement, ramping up to approximately 250 jobs during peak construction

The electrical connection works would generate an additional 30 to 40 jobs during construction

Up to 10 permanent positions would be available during the operation of the plant, with some additional employment opportunities required for maintenance and special projects

The project will support shifting the economy away from a small number of income sources – helping to grow the local economy. The project would help offset the reduction in coal-related employment in the Hunter region.

In this next stage of planning, we will consider the social and economic benefits and impacts to the region, informed by ongoing work with local councils, along with stakeholder and community discussions in 2021.

The project's environmental assessment will include consideration of potential impacts to:

- property
- local business and industry
- demands on council infrastructure and construction
- workforce accommodation
- noise and vibration
- air quality
- traffic
- visual amenity

ENVIRONMENTAL ASPECTS

We understand there is a high level of community interest in how the project site is managed.

Our preliminary Environmental Assessment and Scoping Report has identified a range of environmental impacts likely to be associated with the project. Items to be closely examined include:

- *Aboriginal heritage*
- *Air quality and emissions from exhaust stacks*
- *Biodiversity*
- *Greenhouse gases*
- *Noise and vibration*
- *Soils and contamination*
- *Surface water and hydrology*

A thorough Environmental Assessment will be developed to avoid, then reduce and mitigate these potential impacts. Information will be provided to the community and stakeholders during the assessment process and feedback is welcome (see p15 for details).

The NSW Government has a clear target to achieve net-zero carbon emissions by 2050 as part of its *Climate Change Policy Framework*. The project is expected to provide broad-scale environmental benefits with the long-term reduction in carbon-intensive energy generation.

BUILDING THE HUNTER POWER PROJECT

The project will involve constructing and operating an open cycle gas turbine power station of up to 750MW at the former Kurri Kurri Hydro Aluminium smelter site.

The proposed gas-fired power station would require a new gas transmission and storage pipeline, which would connect to either the existing Sydney to Newcastle Gas Networks pipeline, or a new Sydney to Newcastle pipeline.

Gas would then be supplied to the power station from any number of Australian gas fields that feed to Sydney and Newcastle via the NSW gas transmission system.

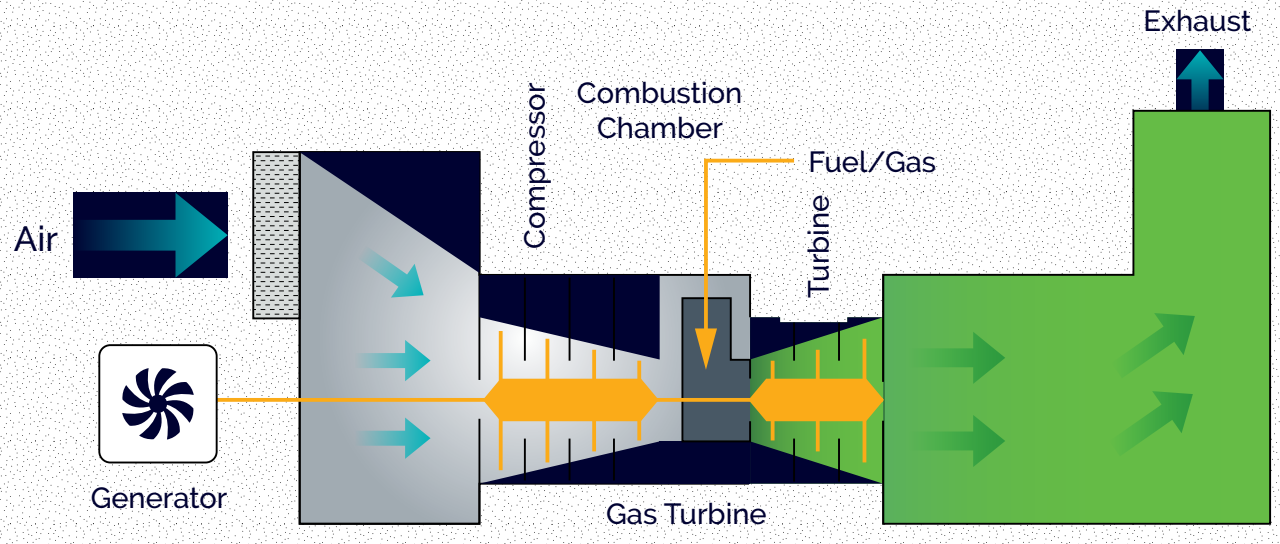
If the project is approved, construction activities at the site would include:

- clearing some vegetation to build the switchyard site
- earthworks to prepare the construction areas
- installing underground services
- constructing and upgrading the internal access roads
- installing the mechanical and electrical equipment

During construction, it is anticipated that heavy loads will be transported via the Hunter Expressway onto Hart Road, leading into the project site. A more detailed traffic assessment will be undertaken.

If approved, construction activities will commence in early 2022.

OPEN CYCLE GAS TURBINE



THE PLANNING APPROVAL PROCESS

The Hunter Power Project will go through a comprehensive and transparent planning and environmental approvals process. Snowy Hydro understands that a crucial step for successfully implementing the project will be to ensure public confidence in the environmental assessment and approvals process.

The proposal has been declared a Critical State Significant Infrastructure project under section 5.13 of the *NSW Environmental Planning Assessment Act 1979* as it is considered "essential for the State for economic, environmental or social reasons".

As it is a NSW Government Critical State Significant Infrastructure-declared project, there is a clear and rigorous planning approval pathway that must be followed.

A comprehensive Environmental Impact Statement (EIS) has been developed for the Hunter Power Project, addressing the project's environmental, social and economic impacts.

The EIS is assessed by the NSW Department of Planning, Industry and Environment as part of the approvals process.

The community can review the EIS and make submissions during the public exhibition period. After reviewing these submissions, Snowy Hydro will prepare a report that responds to the issues raised.

The EIS and final reports are considered by the Department when making an assessment and recommendation to the NSW Minister for Planning. Approval from the Minister for Planning is required for Snowy Hydro to begin construction.

It is also likely that the Hunter Power Project will require approvals from the Commonwealth Government under the *Environment Protection and Biodiversity Conservation Act 1999*.

COMMUNITY ENGAGEMENT

Snowy Hydro is committed to working closely with stakeholders and local communities to keep you informed about the Hunter Power Project and to obtain your feedback.

We will host a series of information sessions in the local community. Please visit hunterpowerproject.com.au for more information and to find out when and where these sessions will occur.

You can also get in touch with us directly by:

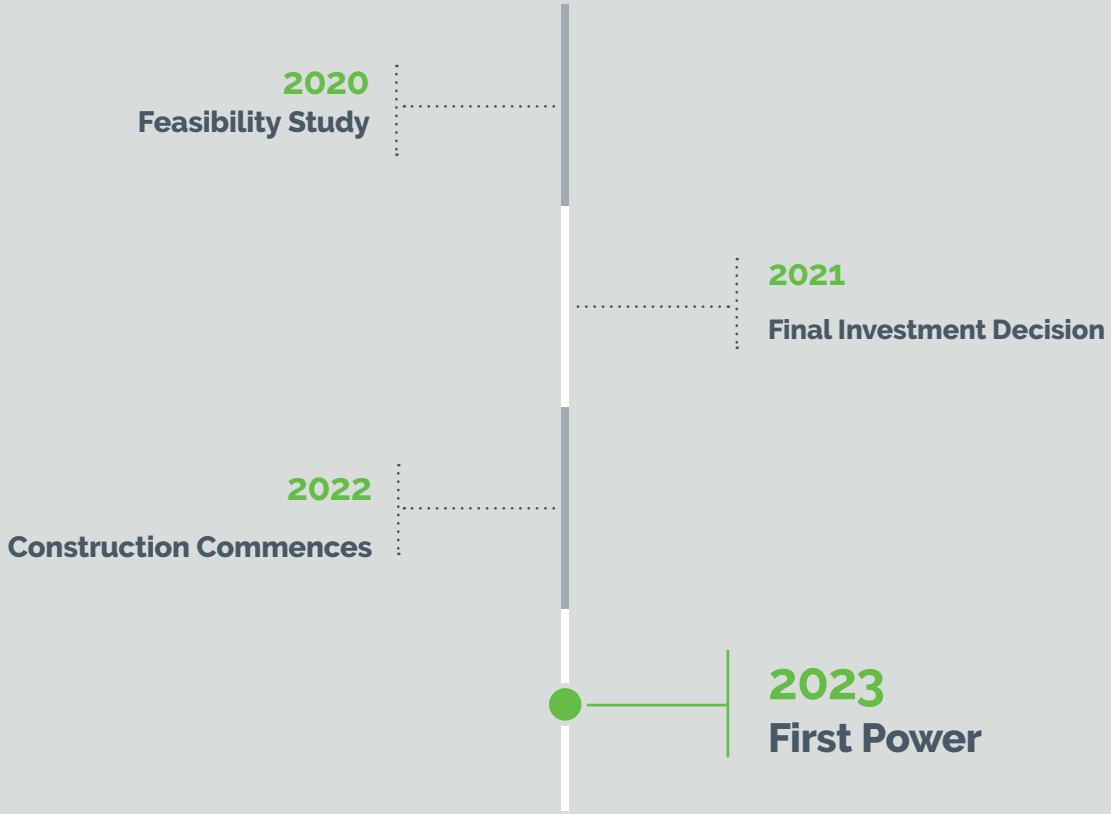
EMAIL communityconsultation@hunterpowerproject.com.au

PHONE 1800 570 529

We value your comments and encourage you to provide feedback. Please note you may choose to provide your feedback anonymously.

Further information can also be found at NSW Department of Planning, Industry and Environment dpie.nsw.gov.au

PROJECT TIMELINE



FREQUENTLY ASKED QUESTIONS

Why is Snowy Hydro proposing this project?

While there are indications that the private energy sector will be able to deliver at least 250MW of generation by 2023, the Hunter Power Project will ensure that any electricity shortfall is met once Liddell Power Station is closed.

What is dispatchable energy?

Dispatchable, or on-demand, energy is power supplied into the energy grid that can start up quickly to fill the gaps in supply.

Dispatchable energy is increasingly being required for the stability of the NEM. The proposed Hunter Power Project will function as a source of dispatchable energy into the market. It would respond to electricity demand following the retirement of the Liddell Power Station.

Why is the Kurri Kurri site a suitable location for the Hunter Power Project?

The project site involves the re-use of land that was previously occupied by heavy industry, the former Hydro Aluminium smelter. Using this land reduces the industrial impact of a new site and enables a transition from the smelter to a gas-fired power station.

The project site was selected because it best satisfies the criteria for a gas-fired power station and the infrastructure that supports it, while minimising the potential for environmental and social impacts.

GET IN TOUCH

hunterpowerproject.com.au

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