

Marulan Gas Fired Power Station

Preferred Water Option

EnergyAustralia acknowledges that the site of the proposed Marulan Gas Fired Power Project is on the traditional Country of the Gundungurra People. We recognise their continued connection to land, waterways and community, and we pay our respects to Elders past and present.

Water is a precious resource, and we are committed to using it wisely and respectfully.

We've been working closely with the community, stakeholders and local councils to explore water supply options — and we now have a clear direction.

It's a staged approach that combines a number of sources to improve reliability, drought resilience, and reduce impacts.

This includes:

- capturing rainwater onsite
- reusing water where possible
- a small, licensed allocation from the Wollondilly River when the high flows permit, and
- temporary water deliveries in the early stages of the project.

We understand that water truck movements to site may be daily and create a significant impact on local road networks and neighbours to the site. Trucking water is a short-term option while the infrastructure to support our other water supply sources is developed.

Over the longer term, we're looking to partner with Council to connect to the Marulan Sewage Treatment Plant — replacing the need for trucking.

This approach helps us balance reliability, sustainability, and responsible use of local water resources.

We worked with the community, stakeholders and local councils to explore a range of options, and identify the most reliable and responsible way to supply water. This wasn't a single-path assessment — we opened the full set of possibilities and tested what could work locally before identifying a preferred approach.

We looked at **water supply** options across **four categories**:

- **Water available on site**, including rainfall capture and groundwater bores.
- **Recycled wastewater**, such as from Mittagong or the proposed Marulan Wastewater Treatment Plant.
- **A small, licensed allocation from the Wollondilly River** during highflow periods.
- **Infrastructure-based alternatives**, including the Highland Source Project and potential wastewater pipelines.



Image: Artist impression of the proposed Marulan Gas Fired Power Station.

What we considered

Each option was assessed against criteria that matter to both the community and the project, including:

- reliability and drought resilience
- environmental protection
- road and traffic impacts — particularly from truck movements
- feasibility, cost, and delivery timeframes
- opportunities for community benefit, such as supporting local wastewater reuse.

This assessment proved no single option could deliver everything needed on its own — which is why a combination approach was explored in detail.

What we heard from the community

Feedback from the community and councils played a key role in shaping the solution. People told us they wanted:

- to minimise truck movements,
- confidence that local waterways remain protected, and
- a future ready, drought resilient approach.

Community input also helped confirm that some options were not viable — for example, the Highland Source Project pipeline was found to be at capacity.

Our preferred option

After weighting all options against the criteria — and listening to what the community said — we identified a staged, blended solution as the preferred approach. This includes:

- capturing rainwater onsite
- reusing water wherever possible
- accessing a small licensed allocation from the Wollondilly River during highflow periods
- using temporary trucked wastewater in the early stages of the project while longterm infrastructure is delivered.

In the long term, we aim to partner with Council to connect to the proposed Marulan Sewage Treatment Plant, which would remove the need for trucking and support broader wastewater reuse in the region.

Why this is the preferred option

This approach was chosen because it:

- reduces longterm reliance on trucking and its impacts
- improves drought resilience by drawing from several sources
- protects natural waterways by minimising required river allocation
- supports councils' wastewater reuse priorities
- provides flexibility for both early works and longterm operations.

It also directly responds to local concerns by acknowledging that trucking will have shortterm impacts — and outlining how it will be phased out as infrastructure comes online.

How we use water

We expect to need about 140 million litres of water each year to run the power plant.

Open-cycle gas power stations don't need as much water as traditional thermal power stations, but they still rely on water for cooling the air intake, reducing NOx emissions when using diesel, and for maintenance. That's why managing water carefully is important, especially in areas where water is limited.



We have designed the plant to reuse as much water as possible. For example, the air intake cooling system recycles water up to five times before it goes to wastewater treatment. Most of the water used in this process is lost through evaporation.



High purity demineralised water will also be produced on site from raw water. We need highly purified water for two reasons: (1) occasionally injecting water into the gas turbines to clean them and help maintain their high operating efficiency. (2) High-purity water is injected into the combustion process—only rarely—when diesel fuel is used, to help lower NOx emissions and keep them within legal limits.

Being responsible and compliant

When we manage water, we need to comply with Sydney Waters Neutral or Beneficial Effect requirements or NorBE. It means that any water we need to discharge — which would be a small amount — needs to be the same or better than the water source receiving the discharge. This requires strict monitoring by both an operator and regulators.

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