

Ampol Kurnell Battery Energy Storage System

As part of Ampol’s Future Energy and Decarbonisation strategies, we are exploring how we can better support our customers, employees, and the communities in which we operate through playing a role in Australia’s energy transition. At Kurnell, we are undertaking a strategic review to identify opportunities at the site, including a Battery Energy Storage System (BESS).

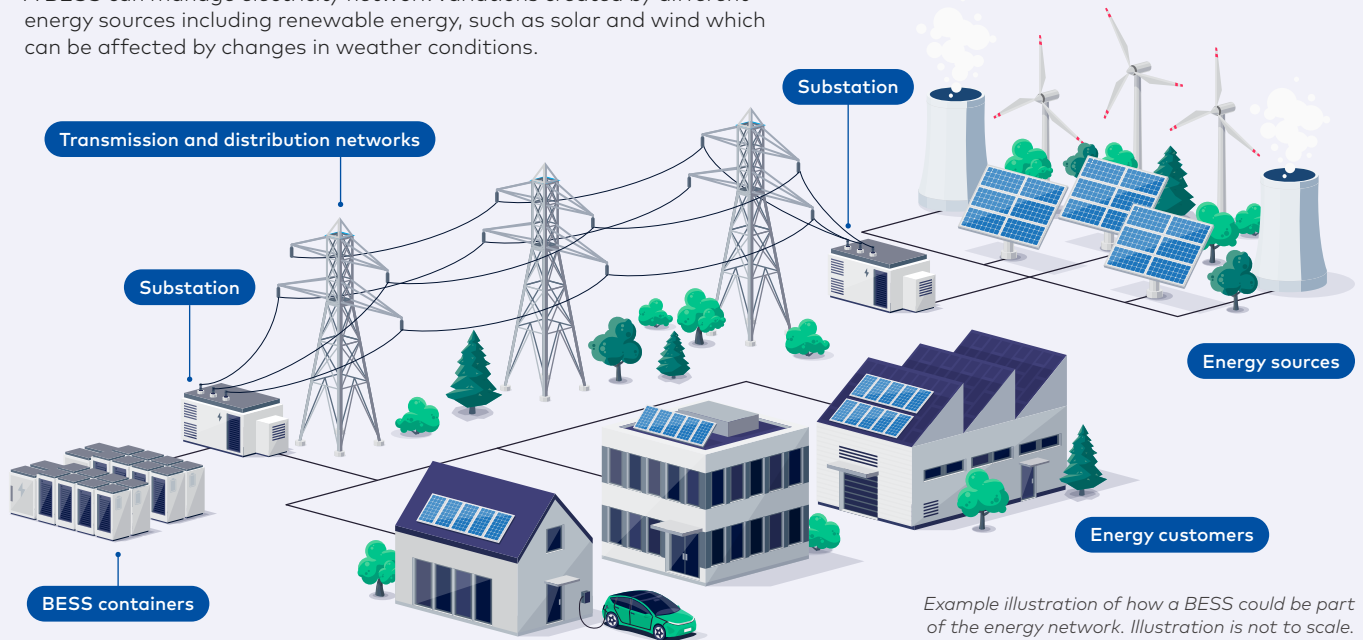
Planning and investigations are continuing into a proposed BESS at the Kurnell Terminal site. The proposed BESS would consist of multiple interconnected batteries in containers that would connect directly into the Ausgrid Kurnell South

Substation on Captain Cook Drive. Ampol’s proposed BESS would charge in periods of low demand and discharge back to the energy grid when the electricity is needed. The project would be delivered in stages:

- **Stage 1** includes construction of a 250 MW battery and is likely to consist of lithium-ion technology.
- **Stage 2** includes construction of a battery up to 550 MW and may consist of lithium-ion, sodium-ion, flow battery technology or a mix of these technologies.

How does a BESS work?

- A BESS can charge and store electricity during periods of high energy production and low demand, and releases energy during periods of high demand.
- A BESS can manage electricity network variations created by different energy sources including renewable energy, such as solar and wind which can be affected by changes in weather conditions.



Example illustration of how a BESS could be part of the energy network. Illustration is not to scale.

How would a BESS work at kurnell?

- Currently electricity is transferred from an external energy source through the electricity network to the Kurnell South Substation, and then on to the community.
- If a BESS is built at the Kurnell Terminal, it can charge with electricity from the Kurnell South Substation during periods of low energy demand. When the energy from the BESS is needed, it can be transferred back to the Kurnell South Substation and distributed to energy customers.
- A BESS is ideally located near to electrical networks, making Kurnell a suitable location for a BESS given the existing high voltage substation and proximity to areas with high energy needs.
- Large scale batteries, such as the BESS proposed at Kurnell, will provide future capacity and resilience for the NSW energy network.

Planning and approval process

As part of the Department of Planning, Housing, and Infrastructure's (DPHI) State Significant Development (SSD) application process, our project team is currently preparing environmental assessments in line with the Secretary's Environmental Assessment Requirements (SEARs). The SEARs set out assessment requirements that need to be addressed in the Environmental Impact Statement (EIS).

The purpose of an EIS is to document the assessment of relevant environmental, social, and economic impacts of a project. It helps the community, councils, government agencies, and the consent authority to get a better understanding of a project and its impacts so they can make informed submissions or decisions on the merits of the project. In the EIS, we will assess the potential construction and operational impacts of the project and outline mitigation measures to minimise impacts on the community and environment.

Should the EIS be submitted to DPHI, the EIS will go on public exhibition to provide an opportunity for anyone with an interest in the project to read the document, ask questions, and provide feedback in a formal submission. The EIS will include assessments for both stages of the project.

The EIS will include information and assessments on:







 Biodiversity	 Hazard and risk
 Heritage (both Aboriginal and Non-Aboriginal)	 Social and economic
 Noise and vibration	 Bushfire risk
 Traffic, transport & access	 Geology, soils, groundwater & contamination
 Surface water and quality & flood risk	 Other impacts



Artist impression of both Stage 1 and Stage 2. (Not to scale)

Fast facts

**One cycle involves charging and discharging the entire battery once*

 Equivalent to the energy needs of 32,000 houses for 2 hours per cycle*	 Expected to create up to 250 jobs during construction of each stage
 Can power around 100,000km of electric vehicle driving per cycle* (enough to drive Sydney to Perth and back 13 times)	 Around 12 months construction for each stage
 \$400 million estimated development cost	 Operational life of 20 to 30 years

Frequently asked questions

Will the fuel terminal continue to operate if a BESS is built?

The fuel terminal will continue to operate.

Will construction and operation of a BESS at Kurnell impact local traffic?

We acknowledge that traffic is a key area of interest for the Kurnell community. We are currently preparing a traffic, transport and access assessment that will be included in the EIS to identify and understand traffic, impacts and appropriate mitigation measures. This would provide an assessment of construction traffic.

During operation, we anticipate that a BESS would not result in significant traffic movements to and from the terminal.

Will the EIS consider noise generated by a BESS?

A Noise and Vibration Impact Assessment will be included in the EIS. This will assess the potential noise impacts from the proposed BESS to nearby residential and commercial properties during construction and operation. The assessment will also identify appropriate mitigation measures to minimise potential impacts to the surrounding community.

Preliminary noise modelling is currently being carried out to confirm the appropriate location of the BESS within the Ampol Kurnell Site. Background noise monitoring commenced in late 2023 to support the assessment.

Will the EIS consider risk of fire?

A fire from a BESS is rare and is generally contained to the location of the individual battery container by the battery design, automatic systems, and external intervention, such as onsite and offsite firefighting equipment. Due to the nature of the Kurnell Terminal, Ampol already has firefighting equipment on site.

The site investigation area is located near vegetation. A Bushfire Hazard Assessment will be prepared to meet the requirements of the NSW Rural Fire Service. Mitigation measures would also be identified and incorporated into the design and outlined in the EIS if required.

Will the EIS consider flood risks and water quality?

Regular ground water and stormwater monitoring is undertaken as part of the Kurnell Terminal's operational activities, which would continue during operation of a BESS.

The Surface Water and Flooding Assessment in the EIS will include information about flood mitigation and management, erosion, sediment, and other pollutant control measures and water requirements and supply arrangements during construction and operation. The proposed BESS would be designed to manage stormwater flows and stormwater quality to mitigate potential impacts on local receiving waters and groundwater quality.

Will the EIS consider air quality impacts?

During operation, a BESS does not typically result in air quality emissions. During construction, there may be potential for dust due to earth work activities. However, this impact is expected to be minor and managed within the site. The EIS will consider potential air quality impacts.

Will the EIS consider potential impacts from lighting?

Lighting is necessary for the safe operation of a BESS. It is typically designed to minimise off-site impacts, including the use of low intensity lighting except where required for safety or emergency purposes.

Community information drop-in session

We want to hear what you think about a BESS in Kurnell.



We invite you to attend our drop-in session to chat with our team about the project.

Date:

Thursday 27 June 2024

Time:

5pm to 8pm

Location:

Marton Community Hall,
92 Captain Cook Drive, Kurnell

ONGOING COMMUNITY CONSULTATION AND ENGAGEMENT

Early investigation and strategic review and community consultation
2022 - 2023

Scoping report and Secretary's Environmental Assessment Requirement (SEARS)
END 2023

Environmental Impact Statement (EIS) preparation and community consultation
2024

WE ARE HERE

EIS exhibition and submission period with community consultation events
EARLY 2025

Response to submissions
MID 2025

Project determination
LATE 2025

Stage 1 construction
EARLY 2027

Stage 1 operation
LATE 2027

Visit our new website and get in touch

We have a new website where you can find the latest information on the project. Please visit our website and contact us if you have any questions.



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