

Reasons for Priority Project Determination – Regans Reinforcement

6 June 2025

On 6 June 2025, I published a determination in the *Government Gazette* that Regans Reinforcement is a 'priority project', pursuant to section 16.1 of the Electricity Networks Access Code 2004 (**Access Code**) (**Determination**).

That publication was made pursuant to section 16.2 of the Access Code.

In accordance with 16.3 of the Access Code, I am also required to publish the reasons for the Determination, including the basis on which I consider that it meets the Access Code objective outlined in section 2.1 of the Access Code.

My reasons are set out below.

Hon Amber-Jade Sanderson MLA, Minister for Energy and Decarbonisation

Supply Infrastructure at Regans Terminal

In November 2023, the previous Minister for Energy determined that North Region Energy Project 1 (**NREP 1**) was a priority project.

The scope of that determination, which included the upgrade of supply infrastructure at Regans Terminal, was gazetted on 17 November 2023.

The priority project for NREP 1 comprised -

- a) Upgrade of the existing 132kV transmission line between Northern Terminal and Three Springs Terminal to 330kV and supply infrastructure at Reagan's (sic) Terminal from 132kV to 330kV;
- b) Installation of a new 330kV double circuit transmission line from Northern Terminal to Neerabup Terminal; and
- c) Associated network augmentation to –
 - i. Connect the new infrastructure to the existing network; and
 - ii. Reconfigure existing North Region 132kV network infrastructure and build new network infrastructure required for de-meshing, in order to remove constraints on existing generation and maximise utilisation of the upgraded 330kV network.

Since the November 2023 determination, the 'North Region Energy Project 1' is now known as the Clean Energy Link – North Project (**CEL-North**).

Reinforcement at Regans Terminal

Subsequent to the announcement of CEL-North in November 2023, and commencement of works, it has now been established that further expansion, augmentation and reinforcement of Regans Terminal is required to optimise the increase in transfer capacity.

Regans Terminal refers to a new 330kV Terminal station to be constructed and commissioned at Regans Ford, Western Australia.

The scope of the priority project to upgrade Regans Terminal, known as 'Regans Reinforcement', comprises –

- (a) Expansion of Regans Terminal with two additional bays (Bay 3 and Bay 6), each with breaker and a half configuration; and
- (b) Connecting the existing 330kV transmission line running from Eneabba Terminal to Neerabup Terminal, to the expanded Regans Terminal, by:

- i. Relocating the Regans to Yandin line from Bay 4 to Bay 3; and
- ii. Installing new conductor and associated equipment to Regans Terminal Bay 4 and Bay 6.

Initial modelling undertaken in 2023

The *South West Interconnected System Demand Assessment (SWISDA)*, published in May 2023, detailed an analysis of the network, generation and storage infrastructure required to support future low-emissions electricity demand for the SWIS.

The SWISDA was delivered by a Taskforce, led by the Department of Treasury, with members from the Energy Policy WA Group of the Department of Energy, Mines, Industry Regulation and Safety (**EPWA**); Electricity Networks Corporation (**Western Power**); the Department of Premier and Cabinet; the Department of Jobs, Tourism, Science and Innovation; and the Department of Water and Environmental Regulation.

The linear program modelling underpinning the SWISDA involved a simulation of the operation of South West Interconnected System (**SWIS**) assets to determine the infrastructure needed to meet electricity demand for the next 20 years for the lowest total system cost.

The simulation solved a mathematical optimisation problem which sought to minimise total system costs, and select from inputted generation, storage and transmission network candidates to determine the optimal location, size and timing of new infrastructure investments required to meet future electricity demand in the SWIS.

Four demand scenarios were developed through the SWISDA including extreme and high growth scenarios, a more conservative future-ready scenario, and a base model scenario which involved only load growth from the expansion of existing loads in the SWIS and electrification of existing connections.

The future-ready scenario was selected for further development as it balanced short-term customer needs with long-term network options.

In all four of the scenarios analysed through the SWISDA, the modelling identified that substantial new transmission network capacity would need to be built between the nodes in the northern parts of the SWIS. Prioritising the commencement of northern transmission network investments, such as Western Power's CEL-North Project, projected to 'unlock' 1 gigawatt of network transfer capacity, was identified by the modelling as necessary for enabling the connection of substantial new generation capacity in the region, while removing constraints on existing wind generation facilities.

Additional information from industry

Following the outcomes of the SWISDA, EPWA sought further information about industry's requirements for both likely future load and intent to provide generation, via a Registration of Interest process conducted in late 2023.

A significant level of interest was received through this process, with 45 customers proposing a combined total of 143 projects requiring connection to the SWIS to supply either existing energy-intensive industries with renewable energy, or to enable new, potential renewable industry projects.

Revised modelling outcomes from 2024

The outcomes of the May 2023 SWISDA modelling was updated in 2024 by EPWA, with inputs from Western Power and the Australian Energy Market Operator (**AEMO**).

The revised modelling:

- Considered the latest demand forecasts from:

- AEMO's Wholesale Electricity Market (**WEM**) Electricity Statement of Opportunities (**ESOO**) 2024, which incorporated record peak demands throughout summer, but with electrification and hydrogen loads removed from the forecast due to the uncertainty of these.
- The Registration of Interest process conducted in late 2023.
- Included updated inputs around generation connections and potential transmission infrastructure builds.

These additional inputs were applied to the same linear modelling program used for the SWISDA in 2023.

The new modelling tested a number of variables – including maintaining system strength in situations where there were high volumes of renewables connecting to the SWIS, consideration of coal retirements, how much generation capacity and transmission network was still required under a situation where demand growth is conservatively low (i.e. 'least-regrets' investments), and whether planning work to deliver transmission network builds in stages affected delivery timelines.

This updated modelling confirmed the need for transmission builds in the northern network initially identified in 2023 to meet the forecast demand, and underpinned the summary of the proposed new network investments required for the northern network in the 'SWIS Transmission Planning Update' released in May 2024. The northern network region of the SWIS extends from Northern Terminal in Malaga to the Three Springs Terminal.

The revised modelling outcomes from 2024 indicated that:

- In all scenarios, augmenting the network between the Neerabup/Pinjar and Moora/Regans regions is part of the lowest-cost development pathway for the SWIS, which would enable generation capacity developed in the Mid West and Central Midlands regions to transfer power southwards into the Perth metropolitan region.
- Additional network capacity expansion along the northern transmission corridor to reach renewable resources in the North is part of a least-cost whole-of-system solution, even in the absence of major new loads appearing.
- The additional capacity unlocked by Regans Reinforcement is indicated as being part of the least-cost capacity mix when available prior to 2030.

Urgency and value-for-money

The updated modelling conducted in 2024 highlights that network investments to unlock further capacity in the northern region is part of a 'least regrets' investment pathway prior to 2030.

AEMO's 2024 WEM ESOO modelling also reaffirms the need for continued transmission investment – in addition to the already-funded CEL-North – and timely connection of new generation and storage projects to meet demand growth and maintain reliability of the SWIS, particularly for the period from 2027 onwards.

Progressing Regans Reinforcement now enables Western Power to leverage work underway with existing contractors delivering CEL-North, expediting project completion by 2029. The 400 megawatts of capacity unlocked by Regans Reinforcement, which leverages existing contracts, will also see the per MW cost of delivering these projects substantially reduced.

The Access Code Objective

The Access Code objective is set out in section 2.1 of the Access Code. I have also considered the State electricity objective as set out in section 3A(1) of the Electricity Industry Act 2004.

The additional transmission capacity unlocked by Regans Reinforcement was identified in system modelling to be the lowest cost outcome in all scenarios where it was available prior to 2030.

Long term safety, reliability and security of electricity supply and the electricity network, are incorporated as key parameters in the updated 2024 modelling used to determine the ability of the network to deliver electricity to consumers as forecast near-term and future demands on the network increase, as well as the demand to source electricity from renewable energy sources.

The determination of Regans Reinforcement as a priority project considers environmental consequences, including reducing greenhouse gas emissions by unlocking greater capacity for existing and future renewable generation and enabling further connection of new and varied sources of renewable electricity to the SWIS. As Regans Reinforcement augments current network infrastructure and utilises existing transmission corridors, impacts on land use and biodiversity are minimised.

Preliminary estimates associated with the network upgrades to Regans Reinforcement indicate that prioritising its commencement to allow its delivery concurrently with the CEL-North project already underway will result in significant time and cost efficiencies for its delivery.

Further, with timely augmentation of Regans Terminal, the benefits of the CEL-North project will be maximised, as constraints on connections North of Neerabup terminal will be eased.

I therefore consider that the determination of Regans Reinforcement as a priority project meets the Access Code objective, and the State electricity objective, by promoting efficient investment in, and the efficient operation and use of, the SWIS network for the long-term interests of consumers.