Transporting energy equipment to the New England REZ

April 2026

About the program

What is the Port to REZ Program?

EnergyCo is delivering the New England Renewable Energy Zone (REZ) network infrastructure project to provide a clean, affordable and reliable power supply for energy consumers across NSW.

Delivery of the New England REZ involves building:

- renewable energy projects, such as solar farms, wind farms and battery energy storage systems
- transmission lines and energy hubs to connect these projects to electricity consumers.

Both require significant volumes of oversize and over mass (**OSOM**) equipment to be delivered by sea to the Port of Newcastle and then transported by road along designated routes to the New England REZ.

The Port to REZ Program is essential for our transition to renewable energy. The Program will address the transport challenges of delivering OSOM renewable energy components, such as wind turbines, transformers, and other large pieces of electrical equipment, between the Port of Newcastle and key points within the New England REZ. Delivery of these components is essential to build renewable generation projects as well as the transmission infrastructure needed to connect them to the electricity network.

Who is planning the route and are road upgrades needed?

EnergyCo is working with Transport for NSW to determine the most suitable, low-impact OSOM route to deliver energy components from the Port of Newcastle to the New England REZ. Upgrades to road intersections and pinch-points may be required to allow large components to be moved safely across the route to renewable energy projects.

What are the benefits for road users?

Coordinating road upgrades to renewable energy zones will:

- enable delivery of large components essential to construct and operate renewable energy projects in the REZ
- be carried out in a well-planned and holistic manner to optimise efficiency and coordination
- improve pinch-points and intersections along the Port to REZ route

Coordinating OSOM deliveries will:

- reduce the impact on road users and communities

- improve safety

OSOM movements and operations

What are oversize and over mass (OSOM) loads?

Building renewable energy projects and new transmission infrastructure requires the movement of large components, which we refer to as oversize and over mass, or OSOM. These tend to be:

- Very long – such as wind turbine blades, which we need to ensure can get through intersections, around corners, and past utility poles and buildings
- Very tall – such as the base sections of wind turbine towers, which we need to ensure can get under bridges and overhead powerlines
- Very heavy – such as transformers, which we need to ensure can safely traverse bridges and culverts.

How big are the wind turbine blades?

Wind turbine blades vary in length with some exceeding 85 metres.

How big are OSOM vehicles?

OSOM deliveries will use road freight vehicles and specialised trailers that can be between 30 and 100 metres long, depending on the equipment being transported.

These vehicles will be operated by transport specialists with significant experience in transporting OSOM loads.

What is the timing for OSOM vehicle movements?

Transportation of large renewable energy components will increase progressively along the route as construction begins in a REZ.

Construction of major solar, wind and storage projects with planned connections to the New England REZ network infrastructure project will start once projects are approved.

There are also several renewable energy projects that are planned to be delivered ahead of the New England REZ, meaning OSOM movements for those projects would start earlier. At this stage, we expect those to start in late 2026, with the majority of OSOM loads to commence from mid-2028.

We are working closely with renewable energy project developers to coordinate the volume and frequency of OSOM vehicle movements during construction. We will keep the community updated as planning progresses and further details are finalised.

How will OSOM deliveries be coordinated?

Coordinating the timing and frequency of OSOM deliveries is critical to minimising disruption for road users and communities.

We are supporting Transport for NSW on an operational strategy which explains how this work will be coordinated and traffic impacts managed. This will consider local and regional road use. The strategy is being developed by Transport for NSW and will be shared with the community once the route is confirmed.

Some strategies to minimise impacts on road users include building pullover bays, coordinating with schools and transport companies to understand local bus routes and delivering OSOM components at night, where possible.

How will safety be maintained?

Safety is an important consideration as we design the route. We are working closely with Transport for NSW and local councils to understand local road use and constraints in pinch-point areas to minimise impacts on the road network.

Some of the ways OSOM vehicle movement safety is managed includes:

- scheduling OSOM vehicle movements to take place outside of peak traffic periods
- use of escort vehicles (driven by accredited drivers) or NSW Police to ensure deliveries are carried out safely, depending on the size and mass of the load
- speed restrictions for OSOM vehicles
- pulling over to allow other vehicles to pass safely at intervals
- installing signage and providing other information for all road users

OSOM vehicle permits are managed by Transport for NSW and the National Heavy Vehicle Regulator (NHVR). Transport and NHVR will notify communities and road users about OSOM vehicle movements along the Port to New England REZ route, including expected delivery volumes and times.

Route planning

How do loads get from the Port of Newcastle to Muswellbrook?

An OSOM route from the Port of Newcastle to Muswellbrook will operate as a common route for New England and Central-West Orana renewable energy projects and OSOM vehicles will follow the Hunter Expressway and Golden Highway to Denman.

OSOM vehicles travelling to the Central-West Orana REZ will continue via a Denman Bridge bypass to Elong-Elong. Upgrades along this route will be delivered in 2025.

OSOM vehicles travelling to the New England REZ will detour Muswellbrook and rejoin the New England Highway before continuing north towards the New England REZ.

Will the New England REZ route bypass local towns?

There are a number of towns along the road network between Muswellbrook and the New England REZ. EnergyCo and Transport for NSW are carrying out investigations to determine the most suitable, low-impact freight route to accommodate OSOM vehicles.

EnergyCo has been working closely with local councils to understand local road use and constraints in key areas around town centres to inform OSOM route design options. The route design will consider options that minimise traffic impacts to Muswellbrook, Tamworth, Uralla, Walcha and Armidale.

Will the OSOM route bypass Tamworth?

EnergyCo has selected a route that bypasses Tamworth CBD to minimise disruption. Since April 2025 we have been carrying out field work along the corridor which follows Whitehouse Lane, Marsden Park Road, O'Brien's Lane and Nundle Road.

We will continue to engage with residents, landowners and businesses in this area as part of the route investigation.

Does the Tamworth OSOM route consider Burgmanns Lane?

EnergyCo is engaging regularly with Tamworth Regional Council as part of planning the Port to New England REZ as well as on the REZ more broadly.

We understand Burgmanns Lane is part of Council's planned freight connection between South Tamworth and Nemingha.

Burgmanns Lane has been considered for the New England REZ route, however it is considered unsuitable due to major land impacts and the time required to build a road and bridge through a flood plain to connect Burgmanns Lane to Marsden Park Road. This would also require extensive environmental investigations and planning approvals, as well as significant private property impacts, making it unfeasible compared to the alternative Whitehouse Lane route.

Building an OSOM route now will ensure OSOM deliveries to the New England REZ avoid Tamworth's CBD.

Separately, Transport for NSW will continue to work with Council on its proposed Southern Access Route as part of future network planning.

Will the bridge over the Cockburn River at Nemingha need to be upgraded as part of an OSOM route around Tamworth?

From April 2025 we have carried out a range of investigations, including environmental assessments, survey work and geotechnical investigations to determine the most suitable OSOM route around Tamworth.

This included investigation on whether the bridge over the Cockburn River at Nemingha can support OSOM vehicle movements This, alongside property owner consultation, will inform further planning for the intersection at Nundle Road and New England Highway. We will keep the community informed as we progress this work.

How will EnergyCo engage with the Tamworth community now the route has been confirmed?

EnergyCo will continue to meet directly with landholders along the route to discuss proposed road and intersection upgrades.

We are also planning a community drop-in session in Nemingha in May 2026 where community members will be able to view intersection designs, ask questions and speak with the project team.

EnergyCo will continue to keep the community informed as planning and design work progresses.

What approvals are required before OSOM deliveries can occur?

Before any OSOM vehicle movement can occur in New South Wales, a permit must be obtained from the National Heavy Vehicle Regulator.

As part of this process, the proposed vehicle dimensions, weight and route must be assessed to ensure the movement can be carried out safely. Where a movement is considered higher risk under Transport for NSW criteria, a detailed Transport Management Plan is required. This includes route surveys, swept path modelling, traffic management arrangements, stakeholder consultation and risk mitigation measures.

Transport for NSW separately assesses permit applications and may impose conditions such as speed limits, time-of-day restrictions to avoid peak or school traffic, traffic control requirements and other safety measures. NSW Police may also be consulted for higher-risk movements and may provide escort vehicles with traffic control powers.

EnergyCo will also prepare a Minor Works Review of Environmental Factors (REF) to assess the environmental impacts of proposed intersection upgrades along the Tamworth OSOM route. This document will outline potential impacts, mitigation measures and consultation undertaken and will be made publicly available.

In addition, each renewable energy generation project proposing to transport OSOM components to the New England Renewable Energy Zone will prepare its own environmental assessment in accordance with applicable requirement, including a traffic assessment specific to that project, as part of its planning approval process.

Can large energy components be transported by rail?

No. Rail transportation of energy components has major challenges, including horizontal/vertical alignment issues, clearance from nearby structures, tunnels, underpasses and the size/length of the loads.

The dimensions of turbine components make them unsuitable to be transported by rail as their size exceeds the allowable tolerance of the NSW rail network, which would result in them colliding with infrastructure such as train platforms and bridges.

Will land acquisition be required?

Property acquisition may be necessary to deliver the OSOM route to and within the New England REZ. Our team will work closely with impacted landowners and businesses through the detailed design phase to provide further information as it relates to their property and next steps.

How will impacts to landowners be managed?

As we develop the OSOM route we want to understand property impacts as well as land and road use. EnergyCo is committed to working with landowners and businesses to minimise impacts to farming, business and other daily activities through the life of the project.

What intersections will be upgraded?

We are currently working to identify a preferred corridor for the New England REZ route and will progress to a detailed design in collaboration with Transport for NSW.

Proposed intersection upgrades will be confirmed at this time.

When are road upgrades expected to start?

Site investigations as part of the OSOM route planning will continue throughout 2026. Subject to detailed design, planning and approvals, road upgrades are expected to start in mid-2027.

Local communities and stakeholders will be notified ahead of work starting, including notification of expected work hours and temporary traffic changes, where applicable. We will make every effort to minimise impacts and disruption to landowners, local communities and motorists during this work.

Who will carry out the road upgrade work?

EnergyCo will engage a contractor to deliver the required road upgrades. During construction, EnergyCo, Transport for NSW and the contractor will ensure the local community is kept up to date. We will write to landowners and communities nearby work areas prior to any work starting.

Will the community have more opportunities to speak with the project team about this work?

Yes, EnergyCo will engage with the community on an ongoing basis as we plan and deliver the New England REZ route. Details about upcoming community engagement activities are available on our website at energyco.nsw.gov.au/ne.

Will local roads also be upgraded?

Yes. Since early 2024, EnergyCo and Transport for NSW have been investigating the most suitable low-impact OSOM route to unlock access from Muswellbrook to the New England REZ.

The route will include sections of the New England Highway and Oxley Highway, as well as some local roads.

Individual renewable energy project developers will plan and manage OSOM vehicle movements for their respective projects, including upgrading local roads and connections between the OSOM route and their project sites. The community will be invited to provide feedback as part of this process.