

Managing hazard and risk

Central-West Orana REZ transmission project

September 2023

EnergyCo is delivering the Central-West Orana Renewable Energy Zone (REZ) to provide a clean, affordable and reliable power supply for energy consumers across NSW. The Central-West Orana REZ transmission project will involve the construction of new transmission lines, energy hubs, switching stations and related infrastructure. The new REZ network infrastructure will enable renewable energy from solar, wind and storage projects to be distributed to energy consumers across the State via the existing NSW transmission network.



Overview

EnergyCo has carried out an assessment of hazards and risks to inform the Environmental Impact Statement (EIS) for the Central-West Orana REZ transmission project. The assessment identifies key hazards and risks associated with the construction and operation of the project, as well as proposed mitigation measures to avoid, minimise and manage potential impacts.

Hazards and risks during construction of the project would be managed through the Construction Environmental Management Plan (CEMP). The CEMP would include comprehensive emergency and incident response plans and procedures, including a Bushfire Emergency Management and Evacuation Plan.

Operational hazards and risks would be managed through continued development of the design of the project in accordance with relevant Australian Standards, guidelines and codes.

For more information on how hazards and risks will be managed for the Central-West Orana REZ, view **Chapter 16: Hazard and risk** of the EIS via EnergyCo's website at energyco.nsw.gov.au/cwo.

Bushfires

Parts of the Central-West Orana region are identified as high risk bushfire areas and the region has a history of significant bushfires. EnergyCo understands the serious impact bushfires have had on the region and is committed to avoiding and minimising bushfire risk during the construction and operation of the REZ transmission project.

The CEMP for the project would include a range of situation-specific mitigation measures to avoid the ignition and spread of bushfires from project activities. The project would be designed and managed in accordance with the *Electricity Supply Act 1995 and Electricity Supply (Safety and Network Management) Regulation 2014* which requires the Network Operator to take all reasonable steps to ensure that all aspects of its network are safe.

Managing bushfire risk

A range of mitigation measures would be implemented during construction and operation of the project to minimise bushfire risk and provide protocols in the case of emergency. These are in addition to the standard NSW Rural Fire Service (RFS) policies which can be viewed at rfs.nsw.gov.au.

Identified key mitigation measures are outlined below.



Asset protection zones (APZs)

An APZ is a clear area surrounding a built asset or structure. APZs will be established at construction compounds and workforce accommodation camps to reduce the risk of fire spreading from these locations, as well as minimising the risk of bushfire impacting the facilities.

APZs will be established within the project operation area including at switching stations and energy hubs to minimise both the risk of project infrastructure causing bushfire, and the risk to the project infrastructure as a result of a bushfire. Transmission line easements and vegetation within easements would also be managed as APZs.



Maintenance

Transmission lines would be regularly inspected and maintained to minimise risk of failure or incident. Other project infrastructure such as switching stations and energy hubs would also be regularly maintained to manage the risk of fire spreading from these locations.



Emergency protocols

A comprehensive Bushfire Emergency Management and Evacuation Plan would be prepared as part of the construction emergency response plan for the project to minimise bushfire risk from construction and maintenance activities and for operation.



Firefighting protocols

Safe access for firefighting operations within the APZs and water tanks for firefighting at switching stations and energy hubs would be provided as part of the project. Access for firefighting would be provided in accordance with Section 2 of the NSW Rural Fire Service Fire Trails Standards. There are no identified difficulties for accessing and suppressing fires within the operation area.

Electric and magnetic fields (EMF)

EMFs would be produced by electrical current moving through the project infrastructure. The modelled electric and magnetic fields levels at the boundary of the operation area are compliant with the current standards and guidelines administered by Australian Radiation Protection and Nuclear Safety Agency (APRANSA) within which a person may be exposed to EMFs without an adverse health effect and with acceptable safety factors. As a result, no mitigation or modifications in regard to EMFs are required for the project.

For further information, you can read our EMF fact sheet on our website at energyco.nsw.gov.au/cwo.



Burrendong Dam.

Aviation safety

We appreciate concern from landowners and the community about potential impacts to aerial activities as a result of the transmission project, particularly those required for agricultural activities and firefighting.

Transmission infrastructure is generally clearly visible from the air, even when there is smoke. The location of transmission infrastructure would be published on aeronautical charts and aviation stakeholders would be informed prior to construction. Transmission lines and towers are unlikely to impact take-off and landing operations at aircraft landing areas identified near the alignment.

Agricultural aviation activities

Aircraft are not able to operate under transmission lines and towers, which would impact aerial activities within






transmission easements. EnergyCo will work directly with host landowners in the detailed design phase of the project to prepare an aviation risk management plan which will minimise risks to carrying out aerial services on private properties.

Aerial baiting

The project is located near the Goulburn River National Park where aerial baiting is used by NSW National Parks and Wildlife to control pests. These aerial practices occur in the vicinity of existing transmission line towers that are similar to the towers proposed for the REZ transmission project. The transmission towers would be unlikely to negatively impact aerial baiting operations.

Other hazards and risks

Other less likely hazards and risks that could potentially occur during the construction or operation of the project are outlined in the table below.

Hazards or risks	Activity	Mitigation measure(s)
 Mine subsidence	Construction activities are required within the Mudgee Mine Subsidence District to enable construction of transmission line towers.	Infrastructure within areas of mine subsidence risk has been designed to manage the risk from existing and past mining activities, where required. EnergyCo is working with Subsidence Advisory NSW to inform mine operators on appropriate construction methods to mitigate mining subsidence risk.
 Dangerous goods and hazardous materials	Potential hazardous goods and materials will be used and/or stored in the construction area during construction of the project, and at energy hubs and switching stations during operation. Examples of these materials include oils, degreasers, fuel pods and pesticides.	Hazardous goods and materials used and/or stored for the project would: <ul style="list-style-type: none"> not be used in significant quantities comply with applicable legislation, guidelines and Australian Standards be stored in accordance with the supplier's instructions and at a suitable distance from nearby sensitive materials.
 Impacts to utilities	Damage and/or failure to shut down, isolate or appropriately manage utilities has the potential to result in the accidental release of electrical currents, mains gas or sewage.	Management of utilities would be carried out in accordance with the Utilities Management Framework. The Framework is provided in Appendix D of the EIS.
 Mobile radio connectivity	The design and placement of transmission line towers has the potential to obstruct microwave links which can impact mobile radio connectivity.	Where practical, the transmission towers have been placed outside the identified 100 metre link path to avoid mobile radio connectivity impacts. Towers within 100 metres of the link path will be reviewed during detailed design of the project to determine the effect on the microwave links.
 Radio frequency interference	Transmission line conductors may interfere with radio frequencies at ground level.	A satisfactory level of radio reception is expected even in the most affected areas for all services as the transmission line would generally operate on a different frequency.

For more information

The assessment of potential hazards and risks for the Central-West Orana REZ transmission project EIS has been informed by the following specialist technical papers:

- **Technical paper 1** – Aviation
- **Technical paper 10** – Bushfire
- **Technical paper 11** – Preliminary Hazard Analysis
- **Technical paper 12** – Electro Magnetic Field Assessment Report

The technical papers are included with the EIS and can be viewed via EnergyCo's website at energyco.nsw.gov.au/cwo.

The hazards and risks identified by the SEARs and where they have been addressed in the EIS are detailed in **Appendix A**.

Mitigation measures in other chapters of the EIS that are relevant to the management of hazards and risks include:



Chapter 17: Traffic and transport – traffic and transport safety.



Chapter 18: Waste management – management of waste generated by and from the project.



Chapter 19.1: Hydrology, flooding and water quality – measures to address flood risks.

Chapter 19.2: Soils and contamination – measures to address management of contaminated land and materials.

About EnergyCo

The Energy Corporation of NSW (EnergyCo) is a statutory authority responsible for leading the delivery of Renewable Energy Zones (REZs) under the NSW Government's Electricity Infrastructure Roadmap. For more information, visit our website at energyco.nsw.gov.au/about-energyco.

Contact Us

For more information about the Central-West Orana REZ project, you can visit our website or contact the project team:

✉ cwo@energyco.nsw.gov.au

📞 1800 032 101

🌐 energyco.nsw.gov.au

🗣️ If you need help understanding this information, please contact the Translating and Interpreting Service on **131 450** and ask them to call us on **1800 061 114**.

EnergyCo wants to hear what you think about our plans. If you have questions or want to give feedback, please get in touch with our team. You can find more information on our website by scanning the QR code or by visiting energyco.nsw.gov.au.

