Appendix A

HTP Overview

EnergyCo

NSW GOVERNMENT

Hunter Transmission Project Overview

November 2023

Published by the Energy Corporation of NSW (EnergyCo)

EnergyCo is the NSW Government statutory authority responsible for delivering the Hunter Transmission Project (HTP) as a critical part of transitioning to a cleaner future under the NSW Electricity Infrastructure Roadmap.

You can read more about EnergyCo on our website: energyco.nsw.gov.au

Title: Hunter Transmission Project Overview

First published: November 2023

Cover image: Existing 500 kV transmission line near Eraring

More information: energyco.nsw.gov.au/htp

Acknowledgement of Country

> We acknowledge that Aboriginal and Torres Strait Islander peoples are the First Peoples and Traditional Custodians of Australia, and the oldest continuing culture in human history.

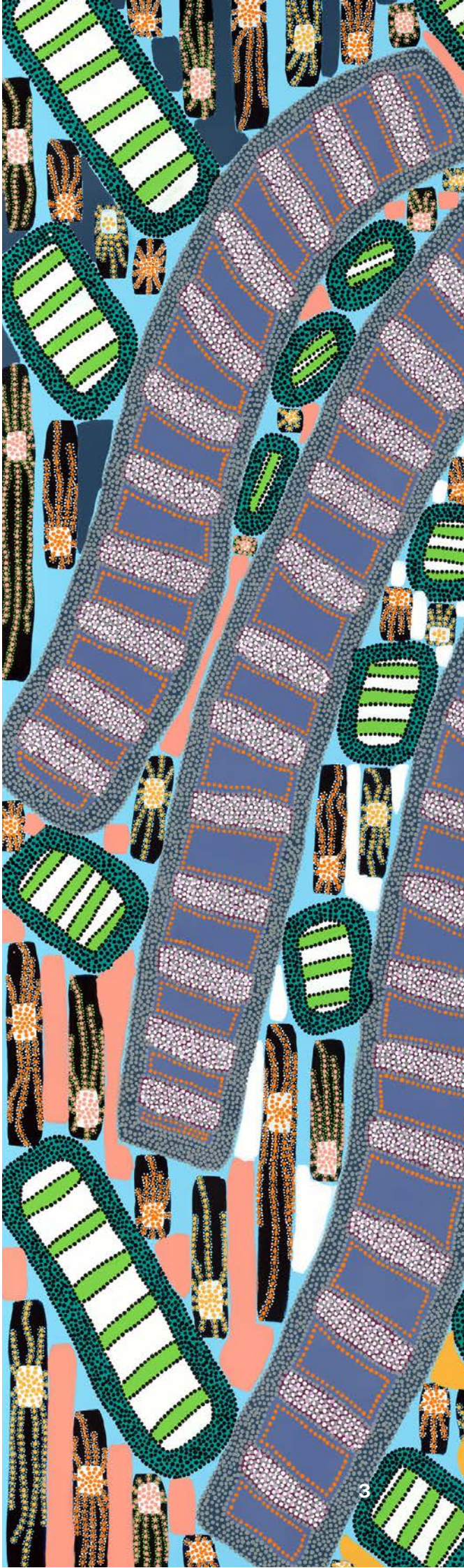
We would like to respectfully acknowledge the Wonnarua, Awabakal and Darkinjung people as the Traditional Custodians of the land on which we deliver our project to the community. We pay our respects to Elders past, present and emerging and to all Aboriginal people of these communities.

We acknowledge the work that Aboriginal people have done to maintain land and water, and will show respect through thoughtful and collaborative approaches to engage with the Aboriginal community to ensure local priorities and values inform and influence decision making.

We reflect on the continuing impact of government policies and practices and recognise our responsibility to work together, with and for Aboriginal and Torres Strait Islander peoples, families and communities towards improved economic, social and cultural outcomes.

Artwork:
Regeneration by Josie Rose

Josie Rose is a Gumbaynggirr woman who expresses her contemporary Gumbaynggirr cultural heritage through art. For Regeneration her chosen medium is acrylic paint on canvas and the design embodies both creative and cultural expression. The inspiration for her artworks comes from a deep place of spiritual connection to her family, community, culture and respect for Mother Earth. Gumbaynggirr Country is beautiful land with both freshwater and saltwater waterways which inspire her holistic connection to the Ancestors.



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Foreword

James Hay
Chief Executive
Energy Corporation of NSW

> The transformation of the NSW electricity system is well underway and the Hunter Transmission Project (HTP) will be another important step towards powering our State with renewable energy for decades to come.

As well as overseeing the implementation of the State's new Renewable Energy Zones (REZs), EnergyCo is responsible for planning the new supporting infrastructure that will unlock our clean energy future – and this is the purpose of the HTP.

I invite you to be part of these vital first steps as the HTP preliminary corridor is placed on public exhibition.

A crucial part of realising this project as part of the State's energy transition is genuine community engagement. We recognise this is a key ingredient that will enable EnergyCo to deliver the HTP in the right place, at the right time, to deliver clean reliable and affordable energy to the households and businesses of NSW.

The public exhibition of the HTP preliminary corridor is an opportunity for all stakeholders to offer their unique feedback and insights. This valuable local knowledge will inform how we can successfully deliver the project by its urgent deadline of early 2028.

We must do this in a way that minimises impacts on people and the environment, and maximises opportunities for local communities, industries and workers.

To make the public exhibition process accessible to as many stakeholders as possible, we've outlined several ways you can engage with us to submit feedback (see section 3).

Keep in mind this is just the start of our engagement process for the HTP. During 2024 we'll work through the community feedback so we can deliver the best outcomes for all stakeholders.

I urge you to join the conversation about the HTP. In doing so, we can work together to ensure the HTP not only achieves its goal of providing energy security — but leaves a lasting positive legacy for the Hunter community.

Introduction

The Hunter Transmission Project (HTP) is one of the State's most critical energy projects and will provide clean and reliable electricity to consumers for generations to come.

The HTP involves building a new above-ground 500 kilovolt (kV) transmission line of around 115 kilometres that will connect Bayswater to Eraring.

It will strengthen the State's core electricity grid and supply clean energy to the Hunter, Sydney and Illawarra where 80% of NSW's electricity is consumed.

This document will describe:

1. Why the HTP is urgently needed as coal-fired power stations close and New South Wales (NSW) transitions to renewable energy

2. How the HTP preliminary corridor was chosen as the most suitable option for this urgently needed transmission project

3. How the Hunter community can join the conversation and provide feedback on the HTP preliminary corridor during the public exhibition

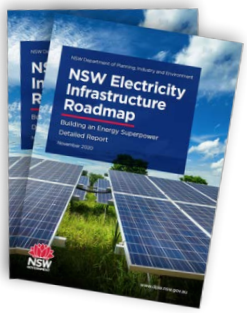
These are the important first steps for the Hunter Transmission Project ahead of its extensive assessment process.

Why the HTP is urgently needed

1

NSW is transitioning to a cleaner future

NSW Electricity Infrastructure Roadmap



Our ageing coal-fired power stations currently provide most of NSW's electricity supply as well as the firming capacity that keeps the grid stable during peak periods such as summer heatwaves.

Most of these power stations are reaching the end of their life and are due to shut in the next 10 years.

At the same time, our demand for electricity is increasing as our population grows and we electrify our vehicles, homes, businesses and industry.

This means NSW needs new electricity supply urgently.

The NSW Government has developed the NSW Electricity Infrastructure Roadmap (the Roadmap) to transition NSW to a cleaner future and ensure this new supply comes from renewable energy.

The Roadmap involves:

- generating electricity (wind and solar) in 5 new Renewable Energy Zones (REZs) across NSW
- improving the reliability of the grid with new storage capacity such as batteries and pumped hydro
- building new transmission lines to deliver clean energy to consumers, including the HTP.

> EnergyCo is helping to deliver the NSW Electricity Infrastructure Roadmap, which will provide cleaner, more affordable and reliable electricity to consumers for generations to come.

As part of this, EnergyCo is tasked with co-ordinating the implementation of REZs and transmission infrastructure to minimise the impacts on people and the environment and maximise the benefits for regional communities, including income and employment opportunities.

Roadmap at a glance by 2030

- Cleaner, more affordable and reliable electricity for consumers
- Up to 12 gigawatts (GW) of renewable energy generation and 2 GW of new storage capacity
- Around 1000 kilometres of new transmission lines
- 90 million tonnes reduction in carbon emissions
- $32 billion in regional investment
- Around $1.5 billion in payments to landowners for hosting transmission infrastructure
- Up to 6300 construction jobs and 2800 ongoing jobs

The Hunter Transmission Project is essential for the transition

The HTP is one of the State's most critical energy projects. It must be built by early 2028 to ensure energy security as our coal-fired power stations retire.

The HTP will help create a ring of 500 kilovolt (kV) transmission infrastructure that will be the backbone of the State's electricity grid for generations to come.

The HTP will unlock the supply of electricity from the Central-West Orana and New England REZs, allowing it to be imported to the grid via Bayswater. From here, it will be delivered to consumers in the Hunter, Sydney and Illawarra where 80% of the State's electricity is used.

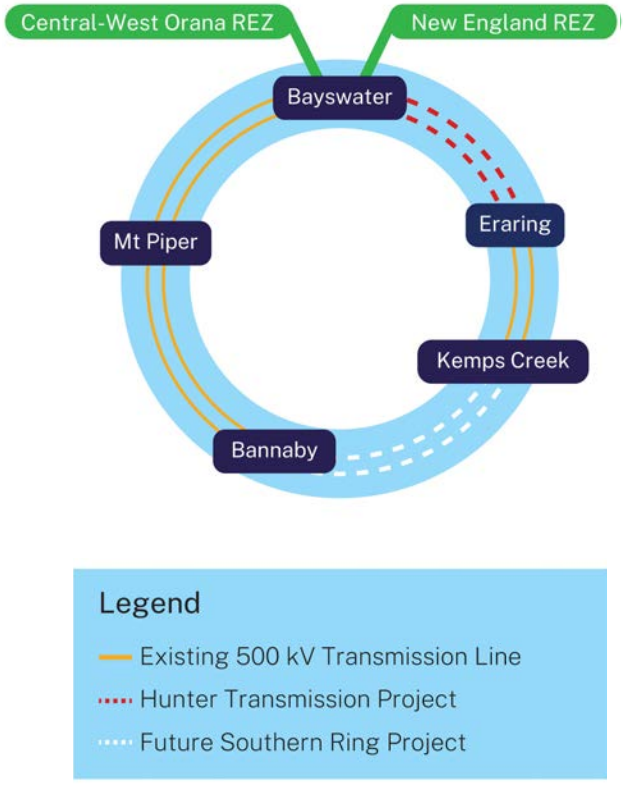
Strengthening NSW's electricity grid for generations to come

The existing 500 kV electricity grid is built around the coal-fired power stations.

In the east there are two 500 kV transmission lines connecting the power stations on the Central Coast (Eraring and Vales Point) via Eraring to the Kemps Creek substation in Western Sydney.

In the west there are two 500 kV transmission lines. These connect Bayswater Power Station in the Upper Hunter to Mt Piper Power Station near Lithgow, and Bannaby substation in the Southern Tablelands. This is where electricity from Snowy Hydro and Victoria feeds into the NSW grid.

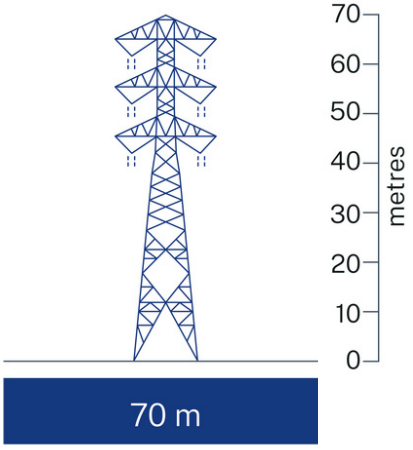
The HTP will close the northern loop between these transmission lines by connecting Bayswater in the Upper Hunter to Eraring in the Lower Hunter, providing 5GW of additional transfer capacity.



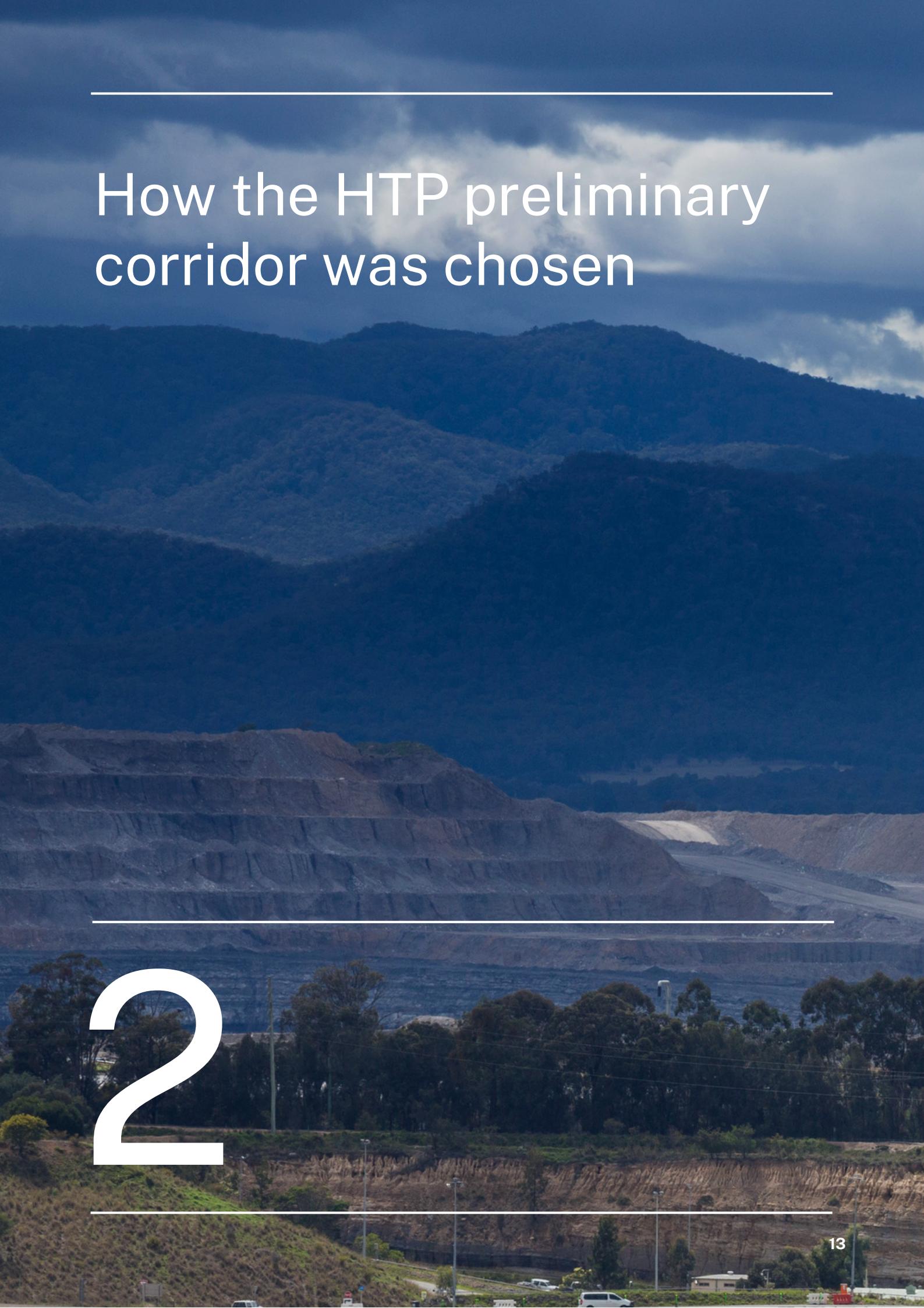
HTP at a glance

- A new above-ground 500 kV double circuit transmission line of around 115 kilometres
- New supporting infrastructure such as substation upgrades
- Will connect Bayswater to Eraring, strengthening the State's core electricity grid
- Will unlock electricity supply from the Central-West Orana and New England REZs
- Urgent and must be operational by early 2028
- Will supply clean energy to the Hunter, Sydney and Illawarra where 80% of NSW's electricity is consumed.

The HTP transmission towers will be around 70 metres tall. They're generally spaced between 400 and 600 metres apart and will sit in an easement around 70 metres wide.



How the HTP preliminary corridor was chosen



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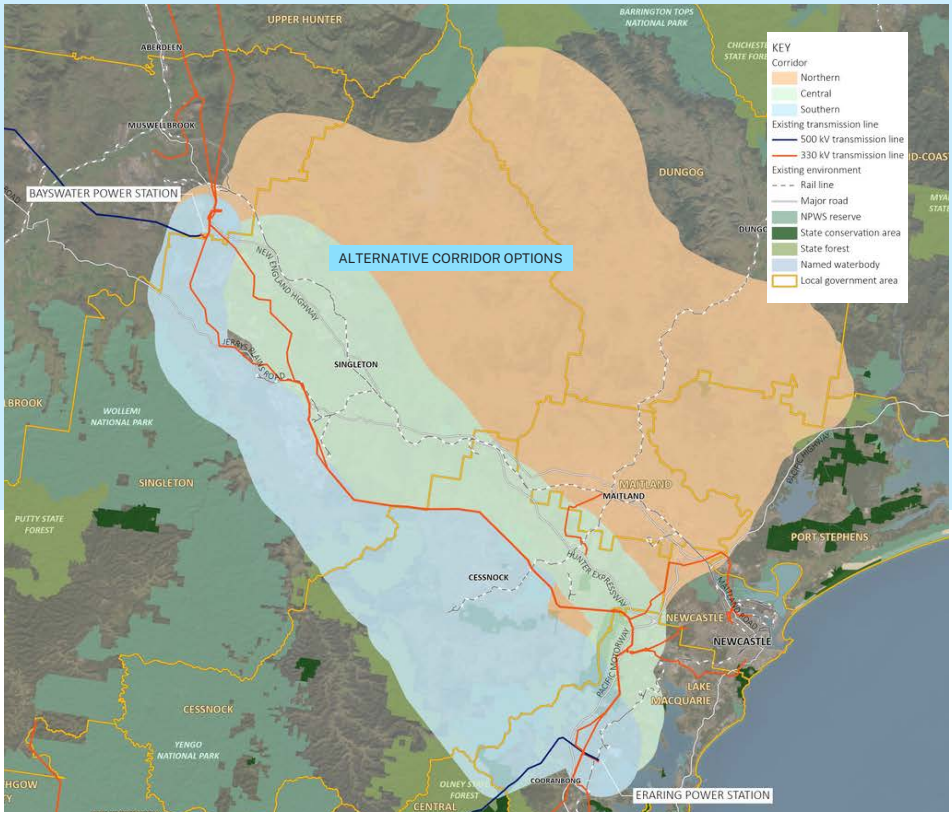


Finding a suitable route

In a region as diverse as the Hunter, it is difficult to find a suitable route between Bayswater and Eraring.

To guide this search, we developed strategic objectives for the project:

- maximise the use of power station and mine-owned land, suitable public land and existing transmission easements
- minimise significant land use conflicts and impacts on people and the environment
- minimise hazards and risks
- build community support
- deliver the project on time at a reasonable cost to consumers.

We then carried out extensive investigations to identify where the HTP could be located.

This included detailed electricity system planning, strategic land use planning, engineering and environmental studies (bushfire, biodiversity, heritage and visual) and consultation with key stakeholders such as local councils.

Initially, we divided the Hunter into 3 broad strategic corridors (northern, central and southern) and examined the suitability of each corridor.

We rejected the northern and central corridors as they would both result in significant land use conflicts and impacts to people in the urban areas between Singleton and Newcastle as well as the Pokolbin wine/tourist area. Using the northern corridor would also involve building a much longer and more expensive transmission line. This led us to examine multiple options in the southern corridor.

Alternative corridor options

Using the strategic objectives, we assessed and rejected a number of alternative options for the HTP preliminary corridor.

The existing 330 kV transmission easement between Bayswater and Richmond Vale

This option would be more expensive because the existing lines would need to be taken down and rebuilt to create space for the HTP. It would also take longer, ruling out any likelihood of delivering the HTP by early 2028. This is because the existing lines are essential for supplying electricity to Newcastle, making it difficult to secure the outages needed to construct the new transmission line. Finally, it would increase energy security risks in NSW by concentrating all electricity supply between Bayswater and Newcastle in a single easement.

Next to the existing 330 kV transmission easement

This option would cause significant land use conflicts in the Pokolbin wine/tourist area. It would also cause extensive clearing of endangered valley floor vegetation. This includes the Warkworth Sands Woodland and Central Hunter Valley Eucalyptus Forest and Woodland in areas such as the Singleton Military Area, Werakata State Conservation Area (SCA) and Werakata National Park.

The bushland to the south of the Pokolbin wine/tourist area

This option would result in even greater clearing of endangered valley floor vegetation in the Werakata SCA and Werakata National Park. This vegetation provides critical habitat for several threatened species such as the Swift Parrot and Regent Honeyeater. This option would also cause significant landscape-wide visual impacts in the rural-residential areas around Ellalong and Quorrobolong.

The valley further south of the Pokolbin wine/tourist area

This option would result in significant land use conflicts with the growing residential areas around Millfield and Mount View. It would also cause significant landscape-wide visual impacts in the rural-residential areas around Ellalong and Quorrobolong.

The HTP preliminary corridor

After a detailed evaluation of all the corridor options, we have chosen a preferred preliminary corridor for the HTP that seeks to strike a reasonable balance between different land uses in the Hunter and minimise impacts on people and the environment.

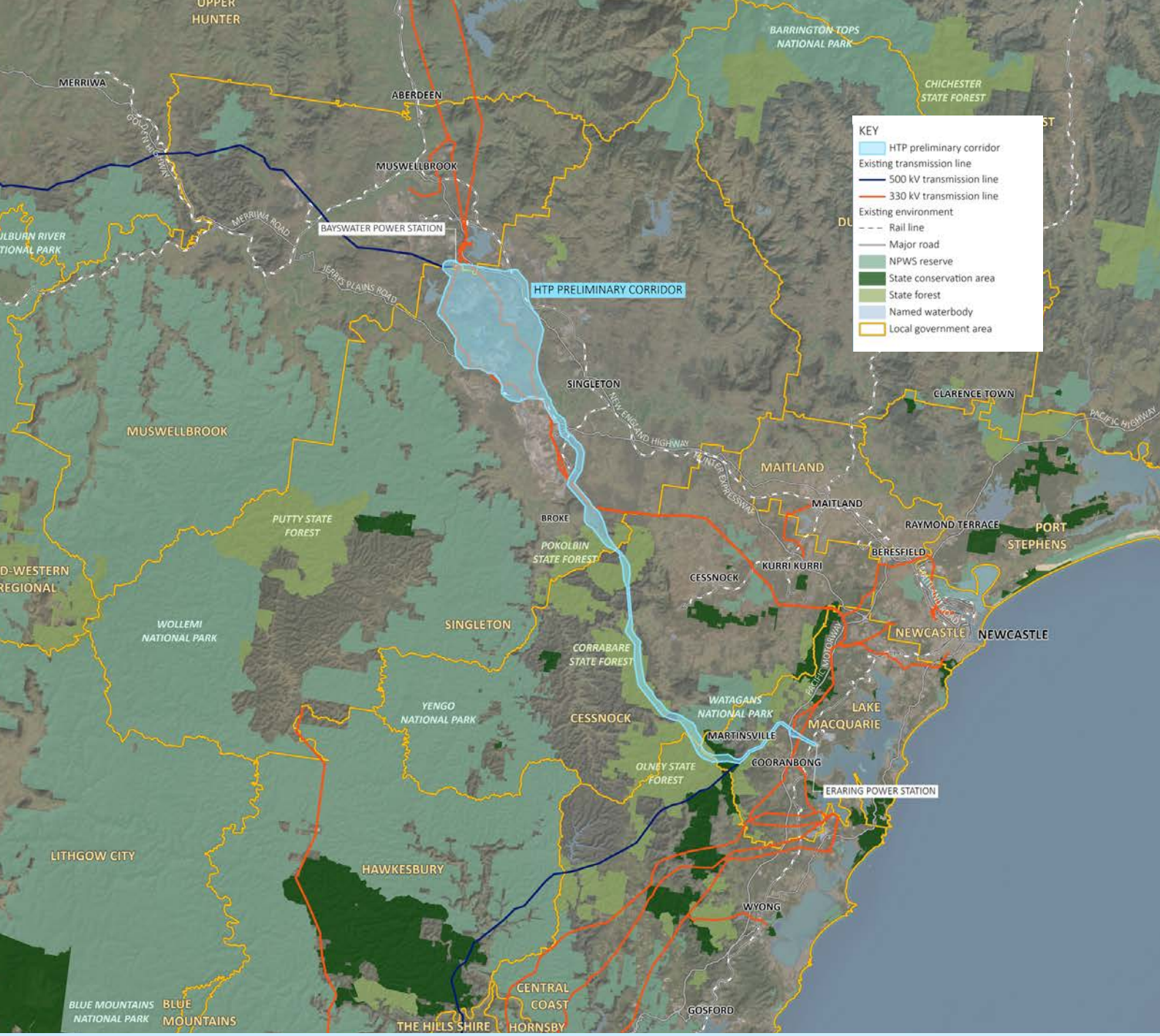
Between Bayswater and Broke, the HTP preliminary corridor runs mostly through land owned by power station and mining companies.

It then heads into the Pokolbin, Corrabare and Olney State forests (which are primarily used for growing commercial and native timber), before following the existing 500 kV transmission line through Martinsville and Cooranbong to Eraring.

While some impacts are unavoidable, using the HTP preliminary corridor will help to avoid and minimise impacts on both people and the environment.

At this stage we are working with around 80 potentially affected landowners along the HTP preliminary corridor.

By limiting the number of landowners along this corridor, we have increased the prospect that the HTP can be delivered on time to meet the urgent operational deadline of early 2028 to maintain energy security in NSW.



HTP preliminary corridor at a glance

- Fastest way to deliver the HTP and maintain energy security
- Over 85% of the HTP will be on power station, mining and government land
- Avoids most of the Hunter community, including major towns and villages
- Avoids the Pokolbin wine/tourist area and other strategic agricultural land
- Avoids the Werakata National Park and Watagans National Park
- Minimises the clearing of endangered valley floor vegetation and critical habitat
- Minimises the impacts of the HTP on scenic landscapes
- Significant scope to further reduce impacts on people and the environment

How the community can join the conversation

3

Why we need community feedback

Refining the preliminary corridor

Despite the benefits of the preferred route, there are several constraints to the delivery of the HTP that will require detailed engineering and environmental investigations to further reduce impacts on people and the environment.

Through a process of genuine community engagement, we want you to help us to refine the design of the project over the next 18 months starting with providing feedback on the HTP during the current exhibition period.

The HTP preliminary corridor identifies a corridor of land where the new transmission line could be located.

This corridor is around 115 kilometres long and varies in width. The widest parts identify the areas with the greatest constraints where extensive flexibility is needed to refine the design of the project.

The narrower parts of the HTP preliminary corridor identify areas where the design is the most resolved. This is because we want the corridor to cause the least possible impacts to people and communities in these areas.

The HTP preliminary corridor can be divided into 3 distinct sections.

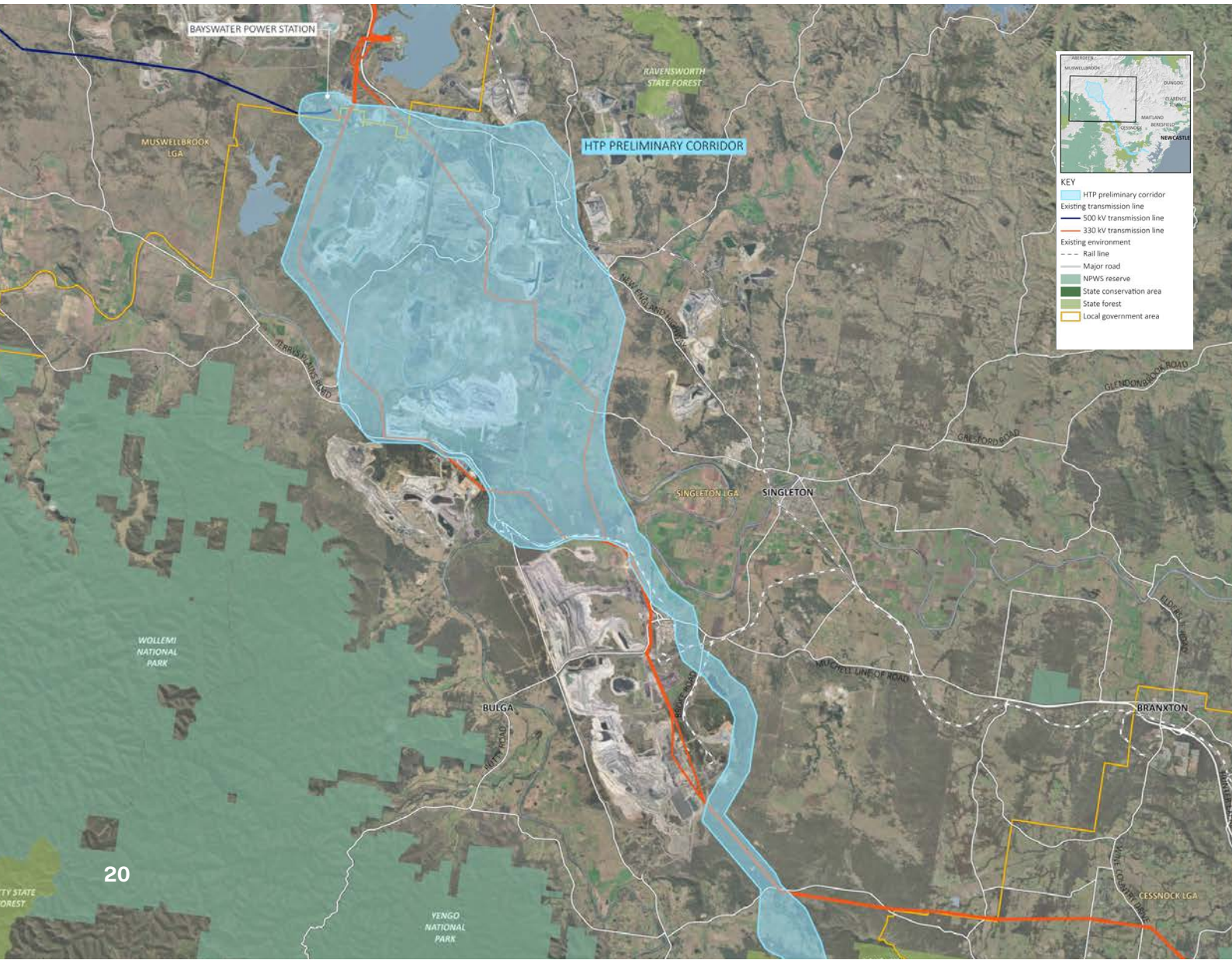
HTP North – Bayswater to Broke

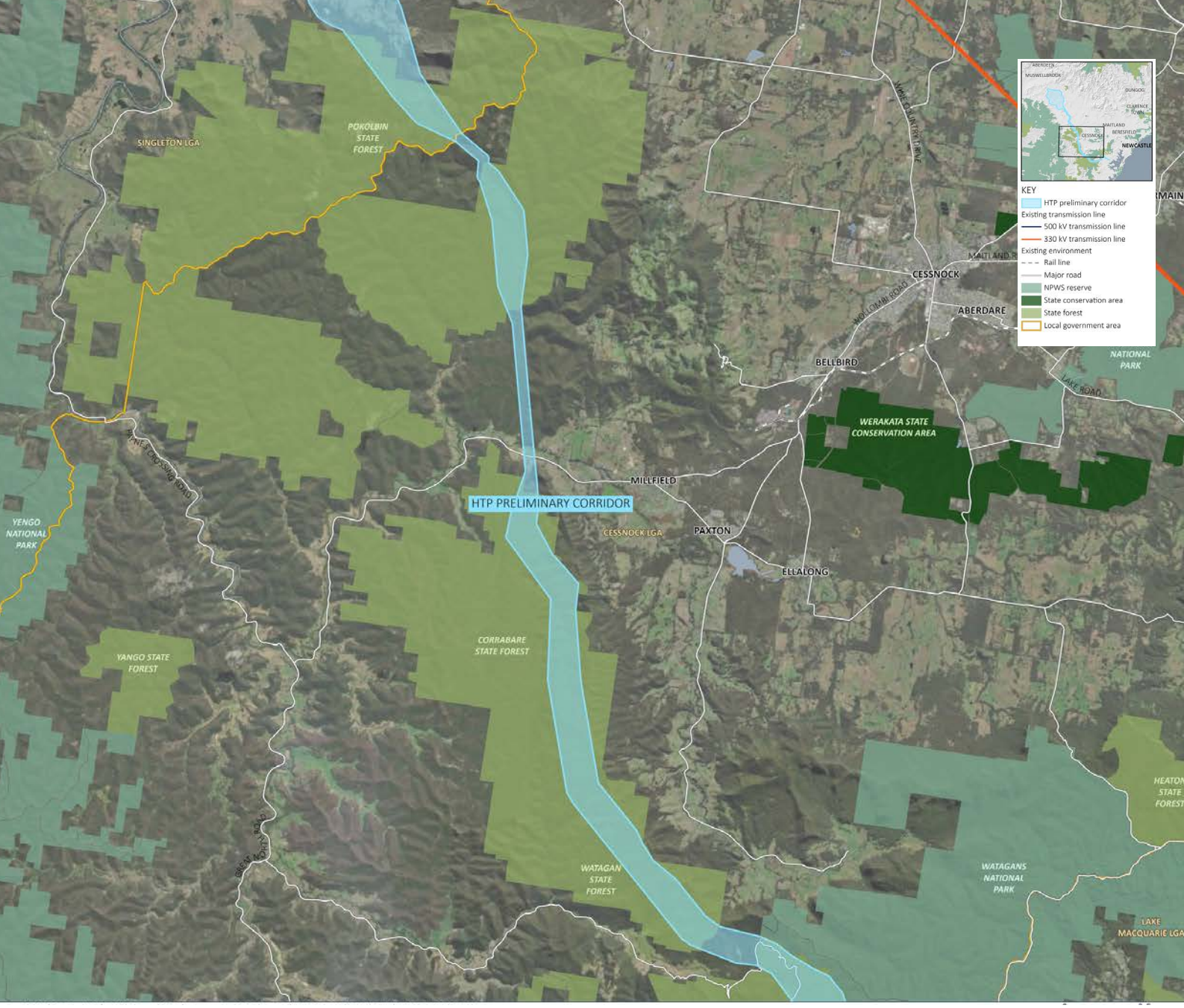
Most of the HTP North preliminary corridor runs through power station, mining and Department of Defence land. This means we can minimise impacts on private landowners and the local community.

Care has been taken to avoid Singleton, visual impacts on Jerrys Plains and Broke, areas with significant heritage values, and clearing endangered valley floor vegetation such as the Warkworth Sands Woodland. We have also tried to minimise clearing critical habitat for threatened species such as the Regent Honeyeater and Swift Parrot.

The corridor is wide in the north to allow a suitable alignment to be found through the large open cut coal mines around Bayswater Power Station.

At this stage, the preferred alignment runs through the middle of the Hunter Valley Operations mine. However, there are significant flooding and geotechnical constraints associated with crossing the Hunter River and Wollombi Brook in this location which will require further assessment. We're working closely with the mine to address these constraints.





HTP Central – Pokolbin to Corrabare

Most of the HTP Central preliminary corridor runs through the Pokolbin and Corrabare State forests to minimise impacts to the local community around Cessnock.

We're currently working with the Forestry Corporation to minimise the impacts of the HTP on forestry operations, recreation activities, Aboriginal cultural heritage values, and areas with significant biodiversity values such as the Corrabare North Flora Reserve.

The preliminary corridor avoids Cessnock, major villages such as Millfield and Wollombi, and the Pokolbin wine/tourist area. We've also taken care to minimise impacts on significant scenic landscapes.

While impacts to private land can't be avoided completely, we'll work closely with the small number of potentially affected landowners in Pokolbin, Cedar Creek and Mount View, making every effort to minimise impacts.

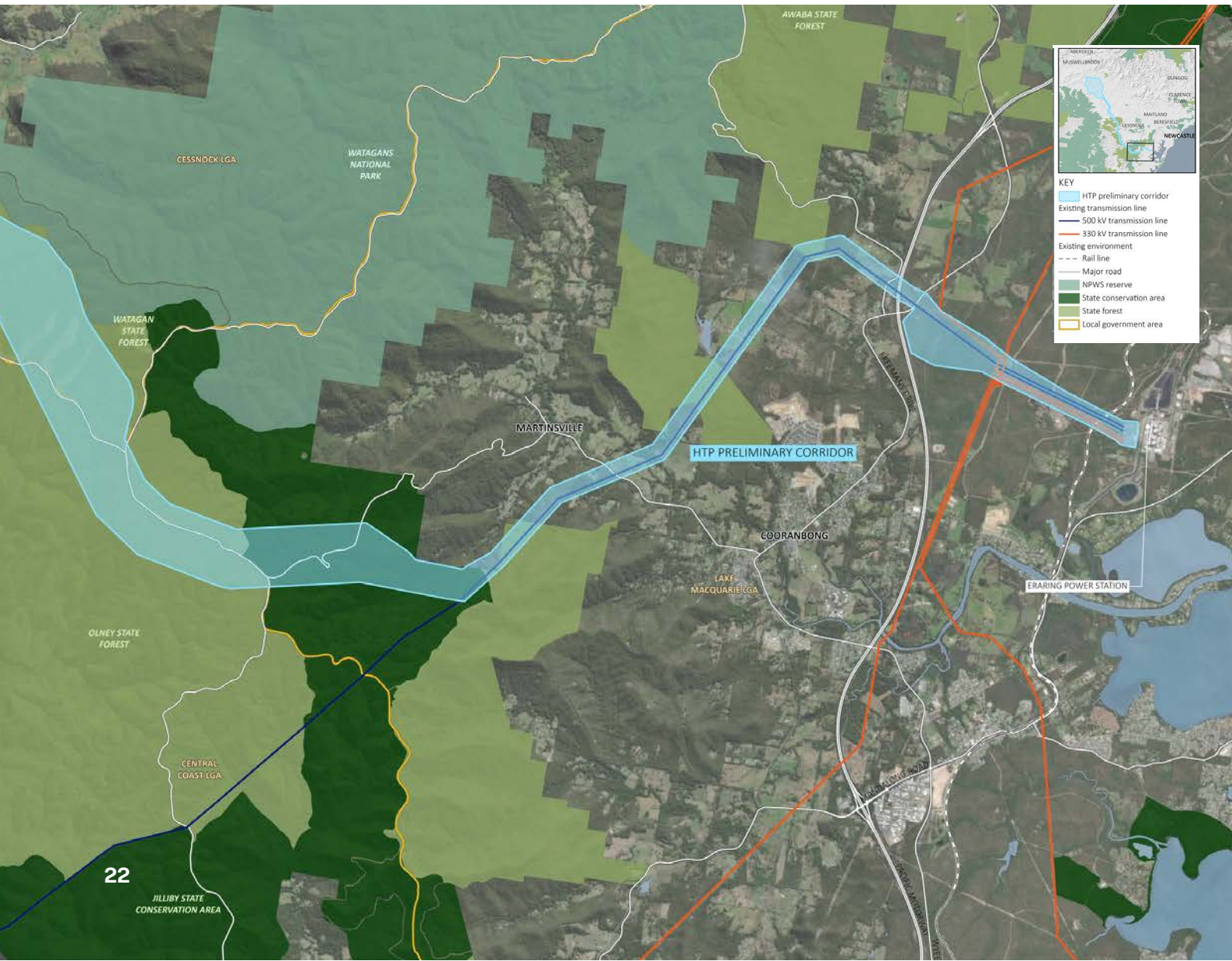
HTP South – Olney to Eraring

The HTP South preliminary corridor runs mostly through the Olney State Forest before joining and then running alongside the existing 500 kV transmission line through Martinsville and Cooranbong to Eraring.

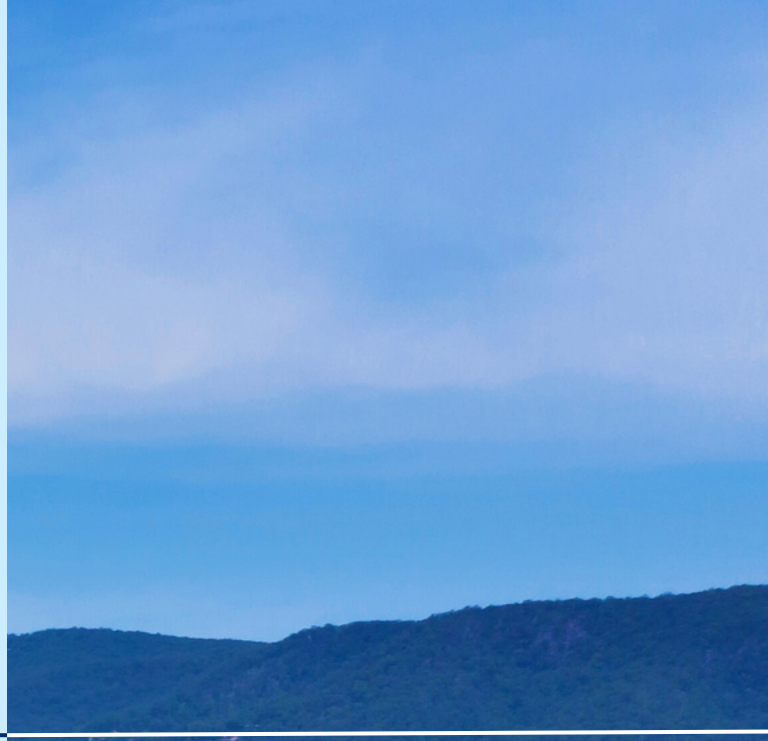
While care has been taken to avoid the Watagans National Park and Warrawolong Flora Reserve, the preliminary corridor needs to cross the Jilliby State Conservation Area (SCA) to get across the plateau and down to Eraring.

We're currently working with the Forestry Corporation and National Parks and Wildlife Service to minimise the impacts of the HTP on forestry operations, recreation activities, and the significant Aboriginal cultural heritage and biodiversity values of the Olney State Forest and Jilliby SCA.

In Martinsville and Cooranbong where the preliminary corridor runs along the northern side of the existing 500 kV transmission line, we'll work closely with potentially affected landowners and make every effort to minimise impacts.



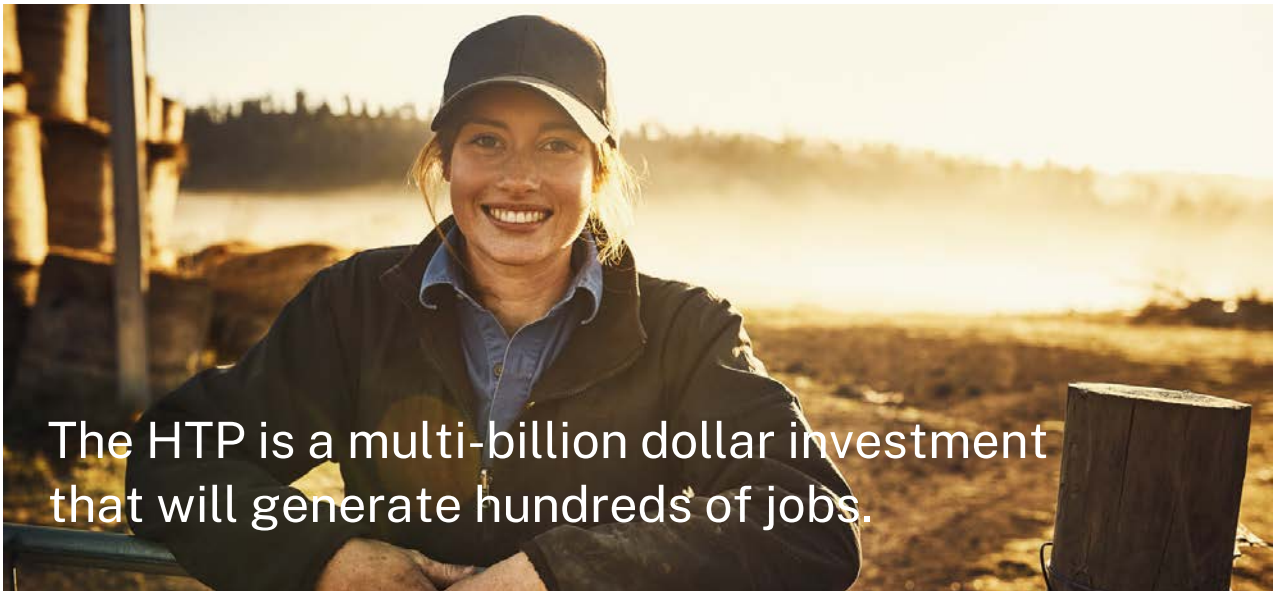
Benefit sharing for the Hunter community



Benefit sharing is at the heart of the Roadmap.

We recognise the critical role regional communities will play in hosting new renewable energy infrastructure to support economic growth and help NSW transition to a cleaner future.

And we want to make sure the Hunter community sees lasting, tangible benefits in return for hosting the HTP during and after construction.



In addition to providing clean and reliable electricity, we're committed to harnessing and building on the region's diverse economic skills base and maximising the opportunities for the Hunter community to benefit from the project.

We'll develop a detailed benefit sharing program for the HTP in consultation with local councils, affected landowners, local communities and other key stakeholders such as the local Aboriginal community.

This program will include initiatives to mitigate the impacts of the HTP such as creating income and job opportunities for local communities, investment in education and training, and strategic biodiversity offsets.

There will also be strategic benefit payments to private landowners hosting transmission infrastructure.

The benefit sharing program will seek to create a positive legacy for the broader Hunter community.

Benefit sharing at a glance

- Funding for strategic initiatives to directly benefit local communities affected by the HTP
- Strategic benefit payments ($200,000 per kilometre) for private landowners hosting transmission infrastructure on top of regular compensation
- At least 1.5% of contract value to go towards increased income and job opportunities for local Aboriginal communities
- Maximising the employment of locals and the purchase of local goods and services
- Creating education and training for the community to participate in the transition to renewable energy
- Delivering strategic offsets to enhance biodiversity values of the Hunter

Working closely with the community

Suggestions from the community may result in changes to the final HTP design.

We're still in the early stages of planning the project and have at least 18 months to work through the details with all stakeholders.

With the community's help, we want to take this time to identify and address concerns to create a positive legacy for the HTP.

We have a dedicated local team available to answer questions, provide information, investigate concerns and involve the community in the design of the project.

We're also establishing a Regional Reference Group (RRG) to provide a strategic forum for discussions between EnergyCo and the broader Hunter community about the HTP.

This group will have an independent chairperson with representatives from impacted local communities and councils, the local Aboriginal community, peak business groups and environment groups. The RRG will be able to invite community groups to attend meetings and discuss key issues associated with the HTP.

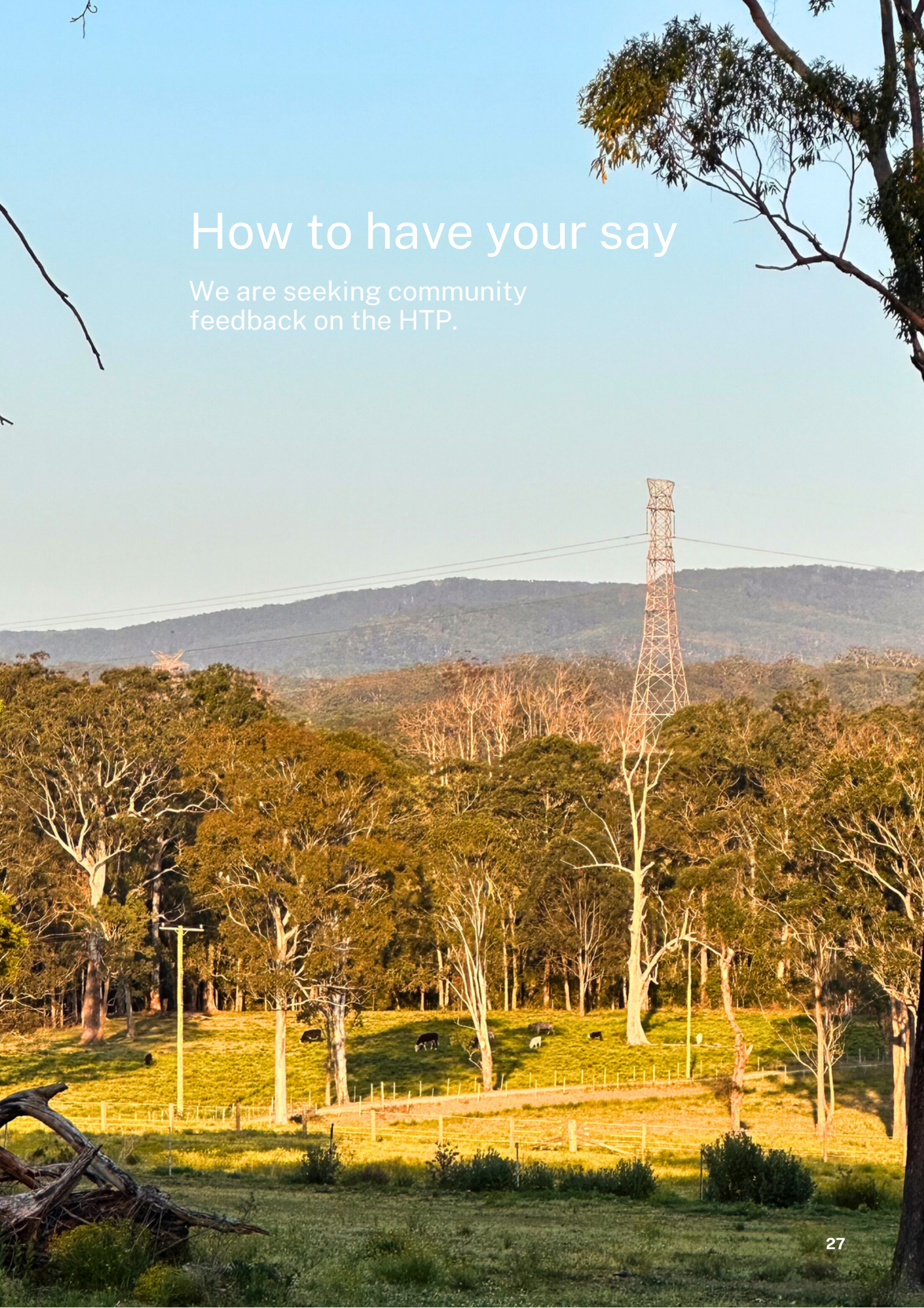
How community feedback can influence the project

We're committed to finding ways to minimise the impacts of the HTP on all stakeholders. That's why we are engaging with:

- **potentially affected landowners** to avoid dwellings and high-value land wherever possible, minimise fragmentation of blocks, work through construction access and address amenity issues
- **local communities and councils** in the Cedar Creek/Mount View and Martinsville/Cooranbong areas to minimise impacts during construction and operation, and identify strategic initiatives that could be delivered to provide long-term community benefits
- **the local Aboriginal community** to increase income and employment opportunities, and minimise the project's impacts on sensitive areas or Aboriginal cultural heritage by undertaking community surveys and cultural mapping in the State forests
- **environment groups** to avoid and minimise impacts on endangered ecological communities and threatened species, and deliver strategic offsets that will improve biodiversity values in the Hunter
- **recreation groups** to minimise disruption to recreation activities in the State forests and enhance these recreation facilities for future use
- **industry groups** to minimise the impacts of the HTP on mining, energy, forestry, strategic agricultural land and tourism, and maximise the purchase of goods and services from local businesses
- **education and training groups** to create opportunities for the local community to develop the skills required to work on the HTP or other renewable energy projects across NSW.

How to have your say

We are seeking community feedback on the HTP.



First steps

Please send us your submission by 18 December 2023.

We are interested in receiving your feedback on:

- the strategic need for the project and the role it will play in the transition to a cleaner future
- the HTP preliminary corridor (where the new transmission line could be located)
- ways we could minimise the project impacts
- opportunities to maximise the project benefits
- anything else you want us to know.

Please choose from the following options:

- make an electronic submission using this link: surveymonkey.com/r/HTPsubmission
- download and print a submission form at: energyco/nsw.gov.au/htp
- email your submission to: htp@energyco.nsw.gov.au
- mail your submission to: HTP public exhibition, PO BOX 1255 Newcastle 2300
- complete a short survey using this link: surveymonkey.com/r/HTPcorridor

You may also choose to visit one of our community drop-in sessions:

HTP North – Singleton Youth Venue
corner of Pitt St and Bathurst St Singleton
6 December 2023, 3pm to 7pm

HTP Central – Millfield Community Hall
25 Bennett St Millfield
7 December 2023, 3pm to 7pm

HTP South – Cooranbong Community Centre
614 Freemans Dr Cooranbong
5 December 2023, 3pm to 7pm

Please read our privacy statement on page 35.

Next steps

> We will involve the community in all stages of the planning, assessment and delivery of the HTP.

In February 2024, we'll publish a feedback report on the submissions we receive.

We'll use your feedback to:

- refine the design of the HTP
- inform our decision on the final corridor
- improve our community engagement on the project
- identify matters requiring further investigations, surveys or studies
- minimise the project impacts on people and the environment
- maximise the project benefits for the Hunter community.

Key dates

November 2023
Seek public feedback on the HTP preliminary corridor

February 2024
Publish a feedback report and start the environmental approvals process, including preparation of a detailed Environmental Impact Statement (EIS) for the HTP

February to late 2024
Involve the community in refining the design and assessing the impacts of the HTP

Late 2024
Seek public feedback on the EIS

Early 2025
Investigate issues raised in submissions and publish a submissions report

Mid to late 2025
Environmental approvals

Early 2026
Start construction

Late 2027/early 2028
Start operation

How to get in touch with us

visit our website: energyco.nsw.gov.au/htp

email: htp@energyco.nsw.gov.au

phone: 1800 645 972

scan the QR code

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 645 972.

Please visit our website or contact our local community team to receive a printed copy of the following fact sheets, which we have designed to help you get a better understanding of certain aspects of the HTP:

- Living and working near an easement
- Electric and magnetic fields
- Compensation and easement acquisition
- Strategic Benefit Payments.

Appendices

Appendix 1: Strategic importance and approvals process

Both the NSW Government and the Australian Government recognise the strategic importance of the HTP and want it to be built as quickly as possible.

The HTP:

- is an urgent NSW Actionable Project under the Australian Energy Market Operator's 2022 Integrated System Plan for the transition of the National Electricity Market to renewable energy over the next 20 years
- will receive part of the $4.7 billion allocated to the NSW Government to modernise the electricity grid under Australian Government's Rewiring the Nation program
- is a 'Deliver Now' project under the Network Infrastructure Strategy for NSW to support the delivery of the Roadmap
- is classified as a Priority Transmission Infrastructure Project (PTIP) under the NSW Government *Electricity Infrastructure Investment Act 2020* (EII Act) because it is essential for energy security and avoiding breaches of the NSW Energy Security Target.

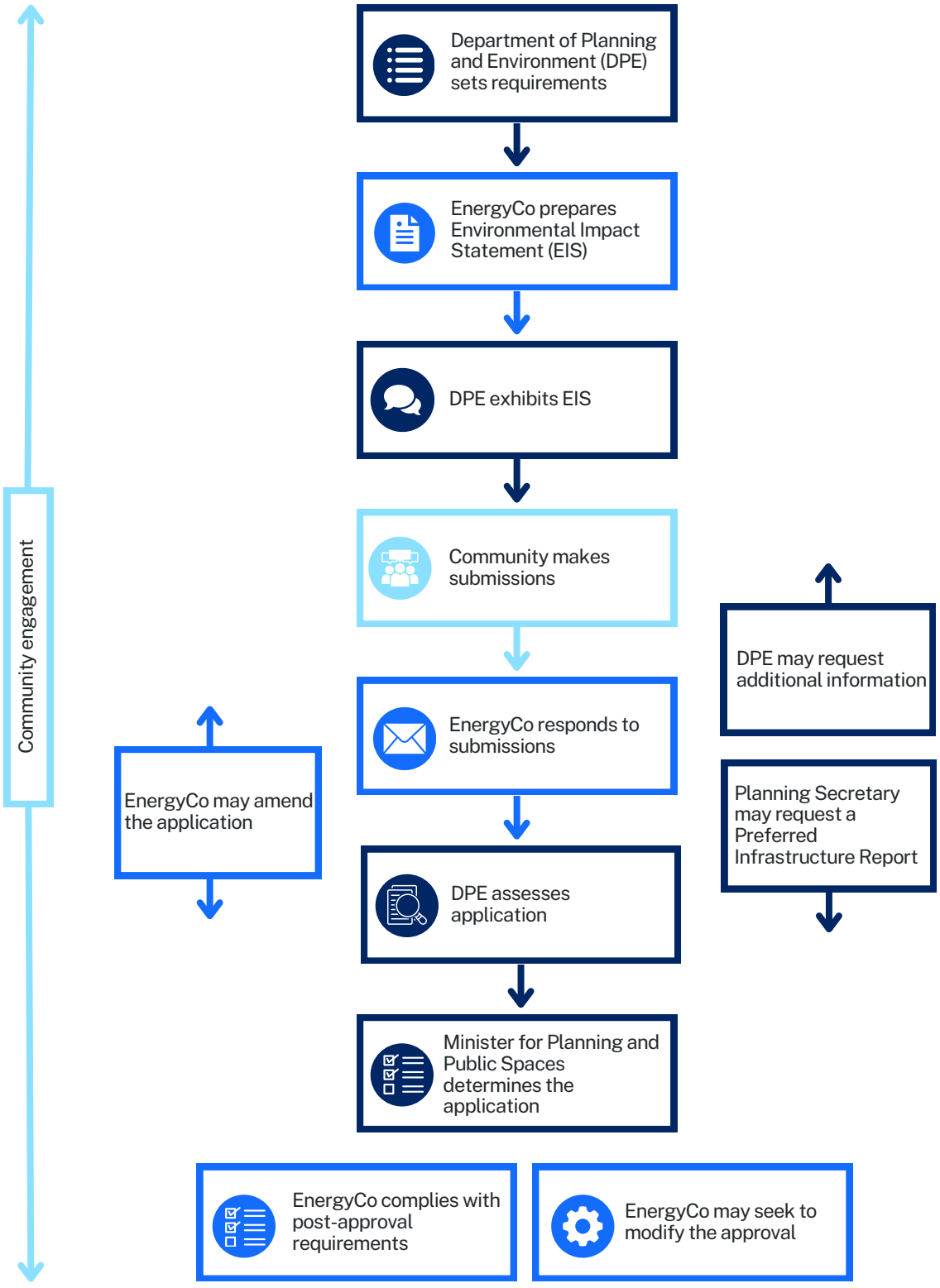
This means the NSW Minister for Climate Change, Energy, the Environment and Heritage is responsible for appointing a network operator to deliver the project under the EII Act and ensuring the HTP is in the best interests of electricity consumers.

From an environmental approvals perspective:

- the NSW Minister for Planning and Public Spaces has decided the HTP is essential to the State for economic, social and environmental reasons and has declared it Critical State Significant Infrastructure under the *Environmental Planning and Assessment Act 1979* (EP&A Act)
- the Australian Government Minister for the Environment and Water is likely to declare the HTP a controlled action under the *Environment Protection and Biodiversity Conservation Act 1999* (EPBC Act) because it may have a significant impact on Matters of National Environment Significance.

This means the HTP needs the approval of both Ministers before it can go ahead. Under the existing Bilateral Agreement, the NSW Government will co-ordinate a detailed assessment of the impacts of the HTP under both the EP&A Act and EPBC Act in a single, integrated approvals process that includes extensive community consultation before both Ministers make a final decision (see diagram on next page).

Critical State Significant Infrastructure assessment process



Appendix 2: Looking ahead to HTP 2

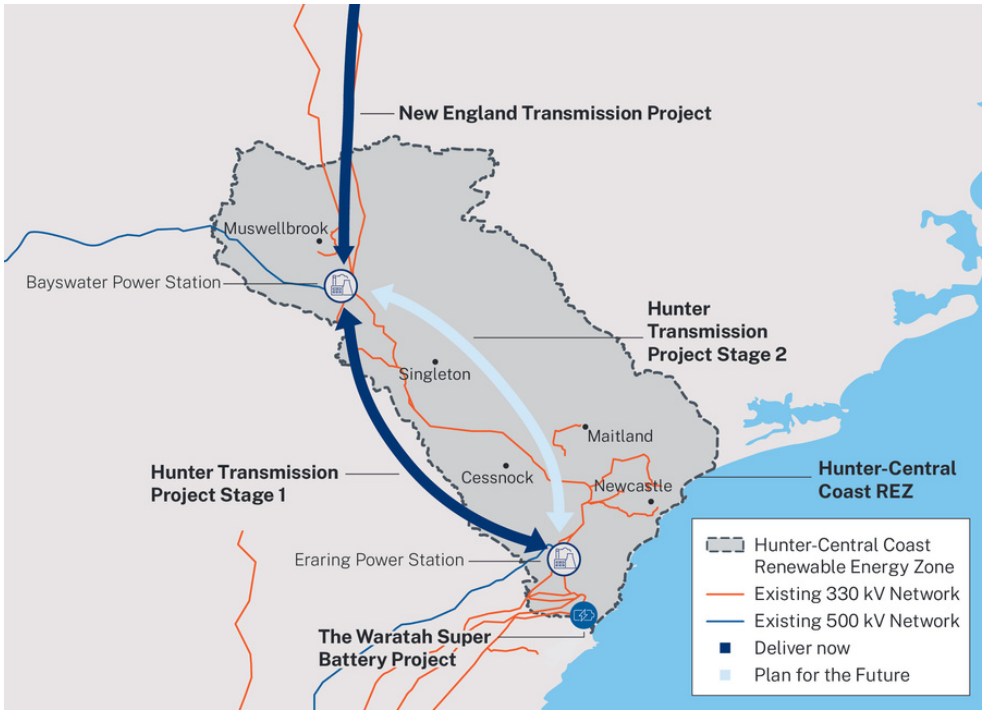
Detailed electricity planning has identified the need for two new 500 kV transmission lines between Bayswater and Eraring, but the timing of each transmission line varies.

The first transmission line (HTP) is urgent and must be operating by early 2028 to avoid potential breaches of the NSW Electricity Security Target. It will provide 5 GW of additional transfer capacity to maintain a reliable electricity supply in the region as the power stations on the Central Coast close.

Down the track, a second transmission line (HTP 2) may be required after 2033 to support future growth in the REZs. Its timing will depend on how quickly electricity demand grows and the actual retirement of the coal-fired power stations.

While we deliver the HTP as quickly as possible to ensure energy security in NSW, we will continue planning ahead for the second transmission line so it can be delivered in a timely way.

The HTP preliminary corridor has the added benefit of potentially freeing up the existing 330 kV transmission easement for a second HTP 500 kV transmission line in the future when it is needed, most likely after 2030.



Privacy statement

We're committed to protecting your personal details in accordance with the *Privacy and Personal Information Protection Act 1998 (NSW)* (PPIP ACT) For more information please visit energy.nsw.gov.au/privacy

Submissions – personal information

When you make a submission or provide feedback we collect your personal information, including:

- name (including title)
- address
- email (if provided)
- any other personal information contained in your submission.

Making a submission or providing feedback is entirely voluntary and you are under no obligation to provide any of your personal information.

How will your personal information be used when you make a submission?

We'll use your contact details to send you notifications.

Your submission or parts of your submission or feedback may be published in reports or other documents that are produced following the exhibition period.

We won't include your personal details in our reports and any commentary around submissions received will be generalised.

We may forward your submission to third parties including other public authorities, government agencies or local government for comment relevant to your feedback.

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