High-Voltage Transmission Line Setback Policy

A Best Practice Approach to Electricity Transmission Infrastructure Development

July 2021

Energy Grid ALLIANCE

Energy Grid Alliance was established with the purpose of engaging with energy transmission companies, industry regulators, market operators, relevant peak bodies, government and communities to establish best planning practices for new energy transmission infrastructure and to inform on the benefits of working with communities to acquire and maintain social license.

Contents

Purpose of this paper

The purpose of this paper is to provide framework and planning guidelines for the establishment of new large scale energy transmission projects.

It is important that State Planning Policies for Victoria emphasise the key role of planning in the establishment of energy infrastructure and the need to provide policies that allow for creative and innovative responses to energy demand and supply, while addressing potential impacts on communities and the environment.

Lack of planning policies, stakeholder and community engagement may result in material project delays or risk the project not proceeding at all, the results of which will impact the Victorian economy, energy infrastructure investment and energy consumers.

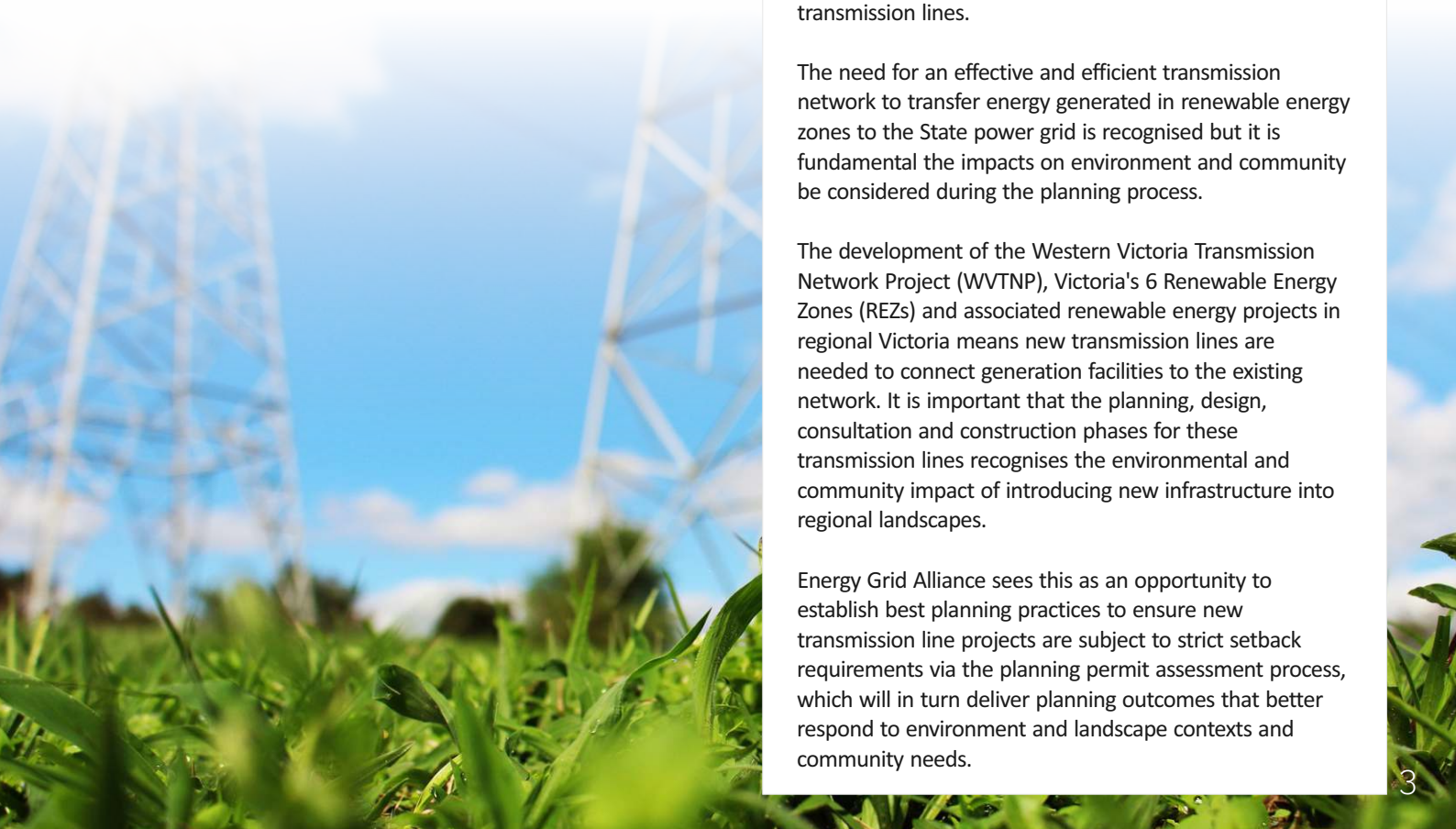
Introduction

Victoria is on the brink of a massive energy market transformation with the construction of new wind and solar power, coupled with hundreds of kilometres of new transmission lines.

The need for an effective and efficient transmission network to transfer energy generated in renewable energy zones to the State power grid is recognised but it is fundamental the impacts on environment and community be considered during the planning process.

The development of the Western Victoria Transmission Network Project (WVTNP), Victoria's 6 Renewable Energy Zones (REZs) and associated renewable energy projects in regional Victoria means new transmission lines are needed to connect generation facilities to the existing network. It is important that the planning, design, consultation and construction phases for these transmission lines recognises the environmental and community impact of introducing new infrastructure into regional landscapes.

Energy Grid Alliance sees this as an opportunity to establish best planning practices to ensure new transmission line projects are subject to strict setback requirements via the planning permit assessment process, which will in turn deliver planning outcomes that better respond to environment and landscape contexts and community needs.



1. Landscape, amenity and safety aspects of high voltage energy transmission lines

The renewable energy generation under construction across Australia will generally be built in areas of good resources (such as wind, solar irradiation and water reserves). New transmission lines (also known as 'dedicated connection assets') will need to be built to connect the energy generation facility into the electricity network. These transmission lines will vary in length, depending on the location of the connection point.

It is recognised that like the generation facilities they support, these new transmission lines can alter the landscape and may impact on flora, fauna and heritage values. It is therefore important that those leading their development (proponents) undertake careful planning, design and stakeholder engagement to build and maintain the social licence to operate throughout the life of the project.

1.1 Environment and Landscape values

Planning should help to protect the health of ecological systems and the biodiversity they support (including ecosystems, habitats, species and genetic diversity) and conserve areas with identified environmental and landscape values.

Planning must implement environmental principles for ecologically sustainable development that have been established by international and national agreements. Foremost amongst the national agreements is the Intergovernmental Agreement on the Environment, which sets out key principles for environmental policy in Australia. Other agreements include the National Strategy for Ecologically Sustainable Development, National Greenhouse Strategy, the National Water Quality Management Strategy, the National Strategy for the Conservation of Australia's Biological Diversity, the National Forest Policy Statement and National Environment Protection Measures.

Planning should protect, restore and enhance sites and features of nature conservation, biodiversity, geological or landscape value.

(Moorabool Planning Scheme May 2021: 12 - page 24)

1.2 Amenity responsibilities

Planning should consider the overall sensitivity of a particular viewing location to change in the visual environment as an important factor in undertaking an assessment of the potential visual impact of overhead transmission infrastructure. A viewing location with a higher level of sensitivity, such as a residential dwelling or significant landscape would be more susceptible to visual impacts than a viewing location with a lower sensitivity, such as an industrial property.

Visual impact should be assessed using a range of criteria against which the relative importance of each observer location is determined, including: context, setting, site elements, site character, adjacent development, distance to view (foreground, middle-ground and background), land use, visual prominence of the development, and potential changes to the view setting.

The landscape and visual amenity should have capacity to absorb further changes from transmission project development.

Network operators have a duty in formulating proposals for new development to "have regard to the desirability of preserving natural beauty, of conserving flora, fauna and geological or physiographical features of special interest and of protecting sites, buildings and objects of architectural, historic or archaeological interest; and shall do what [they] reasonably can to mitigate any effect which the proposals would have on the natural beauty of the countryside or on any such flora, fauna, features, sites, buildings or objects."

(Schedule 9 Statement - Section 38 of the UK Electricity Act 1989, National Grid)

1.3 Bushfire Ignition and Fire-fighting Risks

Overhead transmission infrastructure amplifies the risk to fire ignition and fire-fighting. Fires burning near or beneath transmission lines are hard to control and will endanger habitat, fauna, community, and homes.

Two primary objectives of the Code of Practice for Bushfire Management are:

- To minimise the impact of major bushfires on human life, communities, essential and community infrastructure, industries, the economy and the environment. Human life will be afforded priority over all other considerations.
- To maintain or improve the resilience of natural ecosystems and their ability to deliver services such as biodiversity, water, carbon storage and forest products.

In achieving these objectives, overhead transmission infrastructure should be:

- Installed underground to mitigate risks to life, property, and the environment.
- Routed away from Bushfire Management Overlays (BMOs)
- Routed away from High-Risk Bushfire prone areas
- Routed away from materially populated residential areas designated as high risk by Forest Fire Management Victoria

(Forest Fire Management Victoria - East Grampians Region)
(Code of Practice for Bushfire Management on Public Land)
(Grampians Bushfire Management Strategy 2020)

1.4 Electromagnetic Fields (EMF)

The effects of transmission line frequency electromagnetic fields (EMF) on humans are scientifically uncertain at this point, but some studies indicate that chronic exposure to relatively high-level EMFs from overhead high-voltage AC transmission lines (and other AC equipment) can lead to an increased incidence of adverse health effects, including childhood leukemia and miscarriage.

Although the health effects of chronic exposure to EMFs from AC transmission lines remain scientifically uncertain, many utilities and regulatory authorities employ EMF reduction practices, termed Prudent Avoidance, as a precautionary measure. This can be accomplished by one or more of the following methods:

- Use of HVDC transmission instead of HVAC transmission. DC transmission produces primarily static electric fields and is therefore assumed to pose a minimal EMF-related human health concern.
- Use of underground cable, especially in populated areas. Burying transmission lines can reduce the generated magnetic fields. The reduction occurs because the underground lines can be installed closer together than overhead lines. Overhead lines need to be further apart because air is used as an insulator, whereas underground cables use rubber, plastic, or oil for insulation.

As part of its Prudent Avoidance practices, it is recommended Australia (similar to other progressive countries and jurisdictions), consider undergrounding of transmission cables as world best practice and the preferred energy transmission standard. Proponents would be required to validate the safety and environmental impacts of any alternative approach. Setback distances may no longer be required as underground cable easement distances alone should provide suitable protection and mitigation of impacts.

2. Planning Schemes

2.1 Victoria Planning Provisions (VPP)

Amendment number VC157. Gazettal date 15 March 2019.
Amendment VC157 introduces changes to the Victoria Planning Provisions (VPP) and all planning schemes to require planning approval for power lines to connect new large-scale electricity generation facilities to the electricity network.

Planning schemes are made up of maps and ordinance. The ordinance are the policies and written clauses and the maps depict where the zones and overlays apply within the planning scheme area.

2.2 Purpose of Planning Schemes

- To provide a clear and consistent framework within which decisions about the use and development of land can be made.
- To express state, regional, local and community expectations for areas and land uses.
- To provide for the implementation of State, regional and local policies affecting land use and development.

2.3 Overlays

The planning scheme map may show that a piece of land has an overlay as well as a zone affecting it. Not all land has an overlay. Some land may be affected by more than one overlay. If an overlay applies, the land will have some special feature such as a heritage building, significant vegetation or flood risk. The overlay information will indicate if a planning permit is required for the construction of a building or other changes to the land.

2.4 Zones

The planning scheme zones land for particular uses, for example, residential, industrial, business or other. The zones are listed in the planning scheme and each zone has a purpose and set of requirements. This information describes if a planning permit is required, and the matters that the council must consider before deciding to grant a permit. A zone may also specify information that must be submitted with a planning permit application. The zone also contains information relating to land uses, subdivision of land, construction of new buildings and other changes to the land. A zone sets out land use controls in three sections:

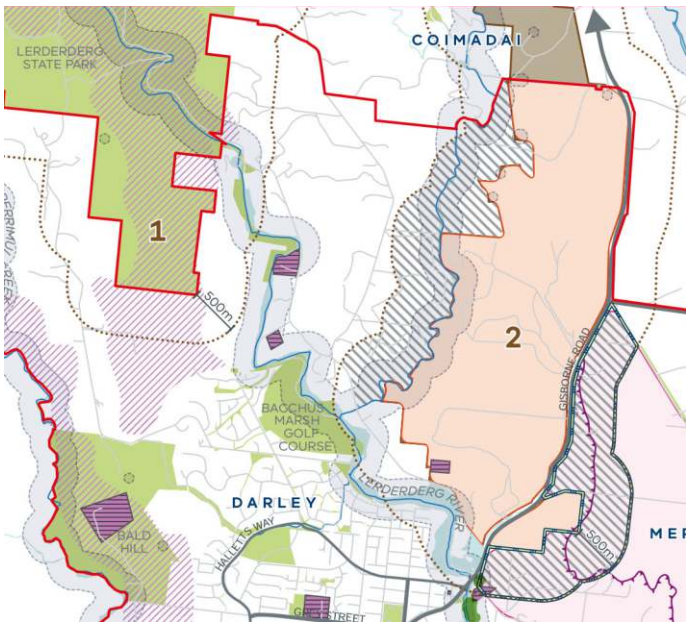
- Section 1: Land uses that do not require a planning permit.
- Section 2: Land uses that require a planning permit.
- Section 3: Prohibited uses. Some uses are not allowed on land in a zone because they may conflict with other uses; for example, industry is prohibited in the General Residential Zone.

(Planning Schemes - Planning Victoria: 1.3 & 1.4 - page 4)

2.5 Buffers and Land Use Compatibility

'Buffer' in the context of land use planning refers to land used to separate or manage incompatible land uses, often industrial uses and sensitive uses, to ensure land use compatibility and avoid land use conflict. Although buffers are not a substitute for best practice management of off-site impacts by industry, it is recognised that even 'state of the art' facilities are not always able to eliminate the potential for unintended off-site impacts. Buffers are often still needed to protect sensitive uses from these impacts and provide certainty for industry operators.

(Managing buffers for land use compatibility - Planning Practice Note 92 - Planning Victoria: page 1)



2.6 Setback Distances - Wind Turbines

Typical standards and permit requirements relevant to a wind farm project's development and operation can include matters such as audible noise, shadow flicker, visual amenity impacts, setback distances, environmental matters related to flora and fauna, vegetation clearance as well as noise and dust levels during construction.

A setback distance (also known as a 'veto' distance) is a default distance that, if a residence (dwelling) is within that specified distance from a proposed infrastructure, such as energy transmission, a wind turbine or solar array, the resident can either veto the asset or enter into a commercial agreement with the developer to allow the asset to be sited within the setback distance limit.

(Office of the National Wind Farm Commissioner Annual Report to the Parliament of Australia 2019: 5.1 - page 44)

3. Strategic Route Selection

Planning guidelines should be applied as early as possible during the investment test for transmission networks to strategically identify a single preferred route. This will mitigate many of the risks associated with multiple route selection within a region.

Route selection should try to avoid, mitigate or offset impacts on important environmental, social, cultural and landscape values and avoid community conflict by utilising existing easements and rights of way.

Responding to state and local planning policy will help determine if a route is suitable for establishing transmission infrastructure, including the advantages of a route, any inherent constraints and challenges, and the relevant land use planning policies and provisions that apply.

Considerations

- Policy context, zones, overlays and buffers
- Agricultural values including irrigation infrastructure impacts and potential for loss of prime production agricultural land
- Potential for increased noise levels
- Potential health risks
- Impact on property values
- Landscape values and visual amenity
- Heritage and Aboriginal cultural values
- Potential fire ignition risk and fire-fighting constraints
- Environment, biodiversity and native vegetation
- Potential for cumulative infrastructure investment associated with the grid such as additional connecting grids and access to future renewable energy generators
- Other infrastructure requirements

General practice for new high voltage overhead transmission lines is to route in straight lines and turn corners as few times as possible. Where an overhead line changes direction, this results in the need for bulkier deviation towers and a potential view of more towers and more lines. By running in straight lines the overall visual impact of the transmission route is reduced. Whilst the towers and overhead lines are often the most distinct and memorable part of the transmission route, the quality of the land through which it passes contributes to its distinctiveness, visual impact and overall perception.

The form and layout of development adjacent to the transmission route should aim to diminish the visual impact of the high voltage overhead lines and promote the highest possible environmental quality.

The impact of the transmission route can be dealt with in different ways and this should be considered at the earliest stage of site planning, and undertaken on a site-wide basis rather than when considering more detailed areas at a later stage. Whilst it is important to understand how design ideas might be constrained by the requirements of the transmission route, it is equally helpful to consider how the requirements of the transmission route can provoke new and innovative design and layout ideas.

(UK National Grid - Development near overhead lines - Planning and amenity aspects of high voltage electricity transmission lines and substations)

(UK National Grid - A Sense of Place - Design guidelines for development near high voltage lines: page 26)

In some jurisdictions, planning permits are not required for transmission and other associated infrastructure to connect the wind farm to the grid. This lack of review and oversight can lead to a wide range of community issues related to the design, routing and installation of the transmission line and related assets. The prospect also exists for duplicative assets connecting each wind or solar farm to the grid, with no mandatory requirement to seek consolidation of such assets to minimise community impact and promote a more efficient use of capital.

Transmission lines, substations and other related electrical infrastructure should all be subject to and require an appropriate and detailed planning permit, ideally as part of the overall permit for the project. Careful consideration should be given to the design and routing of the powerline. Proponents should collaborate wherever possible to optimise use of shared transmission facilities. Relevant governance bodies (transmission planning, electrical safety, road safety, local councils etc.) should be properly consulted on the project and exercise their oversight responsibilities accordingly.

(Office of the National Wind Farm Commissioner Annual Report to the Parliament of Australia 2019: 4.1 - page 40)

3. Approach to site layout and design

3.1 Site layout and design

Taking account of the different characteristics of the essential elements of overhead lines, an approach to site layout and design should be developed based on two primary aims:

- Diminishing the impacts associated with high voltage overhead lines
- Promoting the environmental quality of an area.

Clearly, high voltage overhead lines are major pieces of infrastructure that have a visual impact upon their surroundings. Such equipment cannot be screened from all parts of a site; it is therefore necessary to establish where efforts to diminish impacts will be most effective.

While the need to promote environmental quality is a fundamental aim of all good design, it is of particular importance in areas close to high voltage overhead lines. Only by pursuing both of these aims can the full design potential of areas close to high voltage overhead lines be realised.

(UK National Grid - A Sense of Place - Design guidelines for development near high voltage lines: page 33)

3.2 Prioritising the public realm

The first priority should be on promoting the environmental quality and diminishing the impact of towers on the public realm.

Most people will experience a place from the public realm: that is streets, squares and parks. Local residents, workers and visitors all use the public realm in one way or another, and will all base their perceptions of the environmental quality of a place and notions of civic pride on its environmental qualities.

It therefore follows that where the overhead line impacts upon the public realm, the potential visual impact of that overhead line would be experienced by more people and would impact more severely on the perception of environmental quality than, for example, if the impact was solely on private areas or situated well away from materially populated townships. Therefore, in promoting a sense of place, the first priority should be on promoting the environmental quality and diminishing the impact of towers on the public realm.

(UK National Grid - A Sense of Place - Design guidelines for development near high voltage lines: page 34)

3.3 Topography

The selection of any new electricity transmission line route will be a balance of all the various factors or constraints which have to be taken into account. Any overhead transmission line will be a visual intrusion into the landscape through which it passes, and it is the **dominant scale of towers** which makes them **difficult to absorb into the landscape**. In selecting a route, network operators should seek to reduce the **visual effect** of the line in terms of the **number of people affected** and the degree to which they are affected. The nature and **topography of the landscape** must be considered, and any **statutory protection afforded** to an area should also be taken into account.

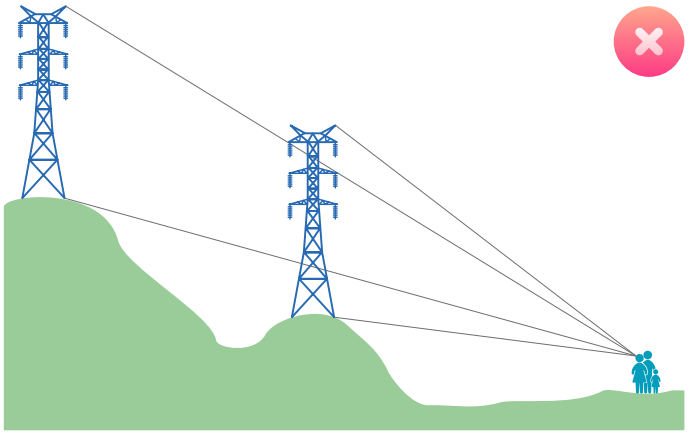
An understanding of the effect of topography will help to establish which towers may be more prominent, and will help to inform site layout and design decisions to reduce visual impacts.

The selected route should typically seek to avoid crossing the highest contours, where towers would generally be the most prominent and should take account of the quality of the landscape and its ability to accommodate an overhead line. In other words an overhead line should 'fit' into the landscape as much as that landscape permits.

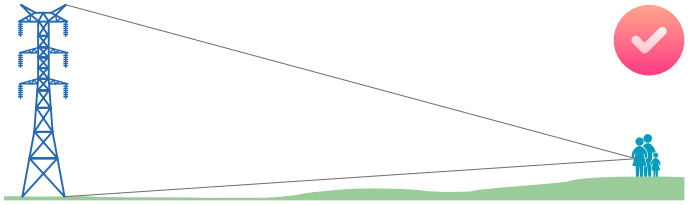
The topography of a development site can affect the perception of towers and high voltage overhead lines and is an important design consideration. Even subtle changes in topography can affect our perceptions of towers.

Where towers are set in an elevated position and are viewed from lower ground, the scale and visual impact of the towers is emphasised. Conversely, where towers are viewed from an elevated position the visual impact is much reduced.

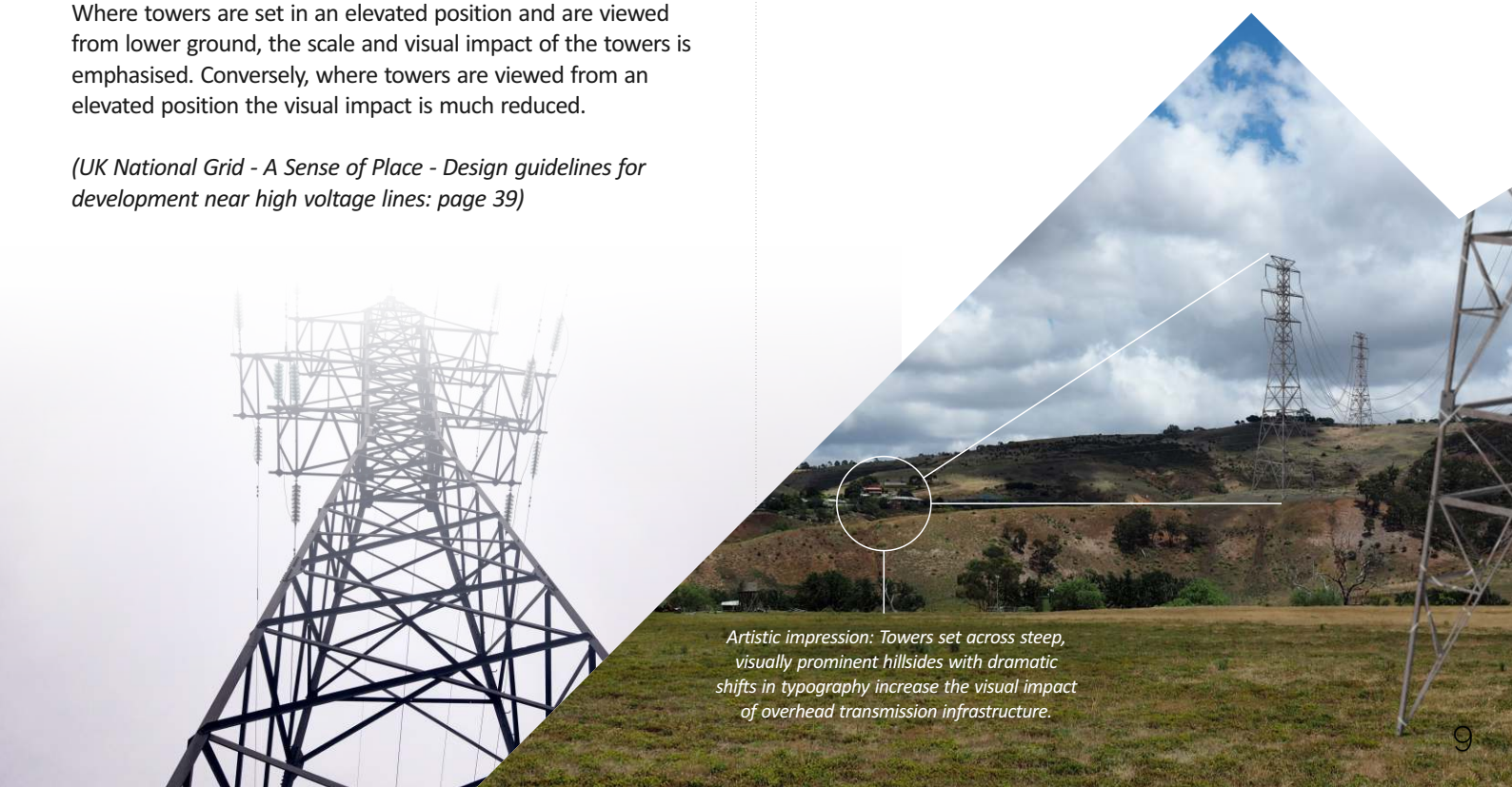
(UK National Grid - A Sense of Place - Design guidelines for development near high voltage lines: page 39)



As well as the position of the viewer, the perception of the visual impact of the towers is also affected by their relationship relative to the viewer's horizon. Towers set across the brow of a hill will be silhouetted against the sky and will appear more prominent. It is important to avoid steep, visually prominent hillsides with dramatic shifts in typography when siting overhead transmission infrastructure.



Flat or slight to moderate undulating open topography, well away from neighbours and towns reduces visual impact and represents a more acceptable option when siting overhead transmission infrastructure.



Artistic impression: Towers set across steep, visually prominent hillsides with dramatic shifts in typography increase the visual impact of overhead transmission infrastructure.

3.4 Visual Amenity

The overall sensitivity of a particular viewing location or area to change in the visual environment is an important factor in undertaking an assessment of the Project's potential visual impact. A viewing location with a higher level of sensitivity, such as a residential dwelling, would be more susceptible to visual impacts than a viewing location with a lower sensitivity, such as an industrial property.

Overhead transmission infrastructure is not compatible with scenic, rural, agricultural landscapes or residential neighbourhoods. Many landowners find transmission lines within or bordering their property particularly disruptive to scenic views.

Visual impacts depend on:

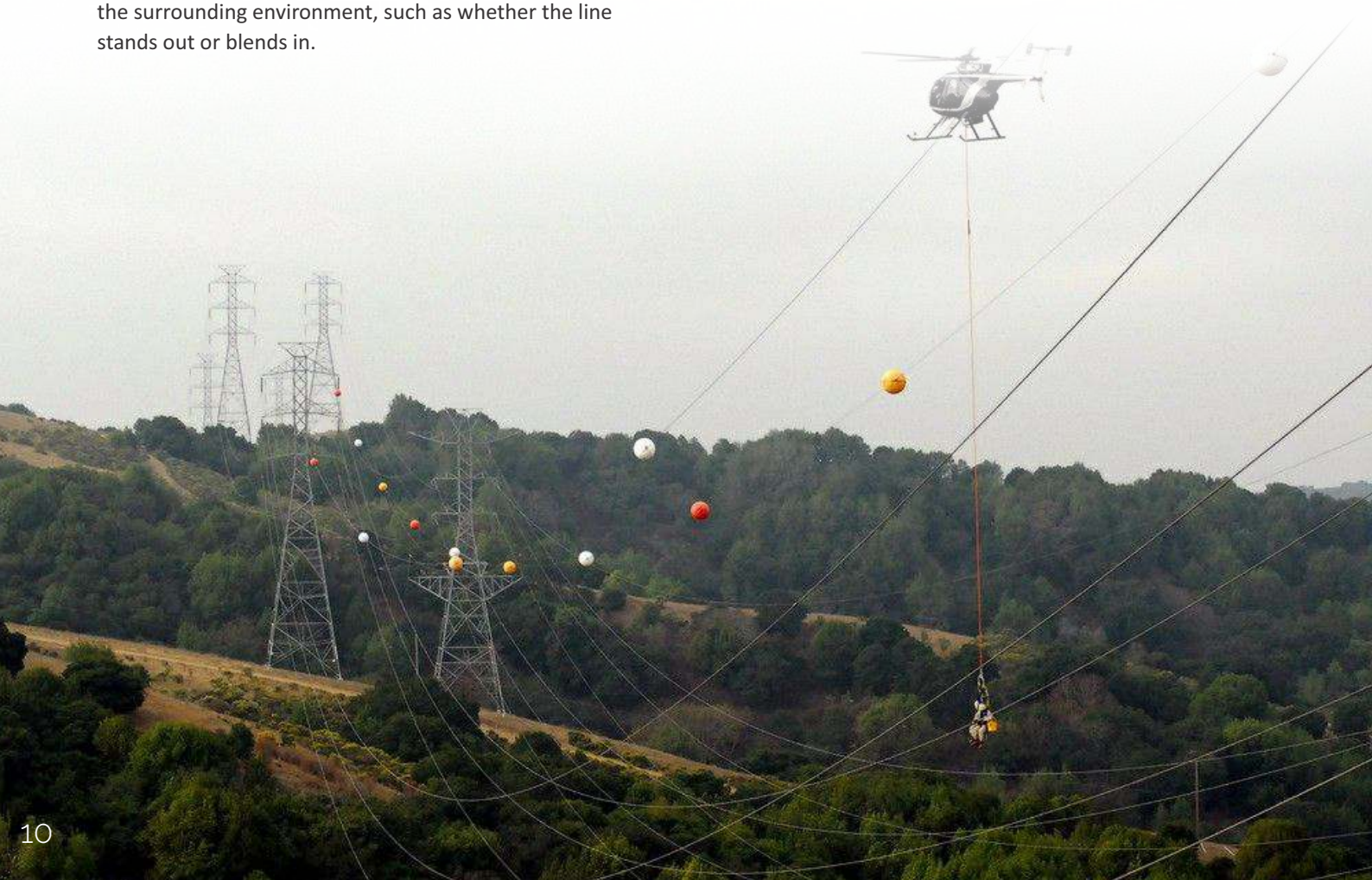
- The physical relationship of the viewer and the transmission line (distance and sight line)
- The activity of the viewer (e.g., living in the area, driving through, or sightseeing)
- The contrast between the transmission structures and the surrounding environment, such as whether the line stands out or blends in.

A transmission line can impact visual amenity by:

- Permanently degrading the surrounding environment (e.g., intruding on the view of a landscape)
- Changing the context of the view shed (e.g., evoking an image of development in a previously rural area).

To mitigate the visual impact of energy transmission projects, the following measures should be implemented:

- Genuine community consultation during the planning of the transmission line route
- Undergrounding transmission lines where they must be routed through, or close to, materially populated residential areas, or significant landscape
- Accurate assessment of changes in property values due to transmission line proximity
- Siting transmission lines, and designing substations, with due consideration to landscape views and important environmental and community features
- Location of high-voltage transmission and distribution lines in less populated areas, where possible.



Recommended Setback Distances

5.1. Zone and Overlay Setback Distances

Applying Wind Turbine Guidelines to Overhead Transmission Infrastructure

Setback distances for wind turbines are typically based on the distance from centre-line of the wind turbine to the residence or property boundary. The same methodology has been applied in developing guidelines for overhead transmission infrastructure. Setback distances to residence, zones and boundaries are calculated from the centre line of the transmission infrastructure (lines and towers).

Core recommended setback distances:

Setback distance from Residential Zones
Four times the Tower height + 50 metres (or 350m, whichever is greater)
Setback distance in Rural Zones from Habitable Dwelling
Four times the Tower height + 50 metres (or 350m, whichever is greater)
Setback distance from Public Use Zones (Education)
Four times the Tower height + 50 metres (or 350m, whichever is greater)
Setback distance from Public Use Zones (Park, sporting)
Four times the Tower height + 50 metres (or 350m, whichever is greater)
Setback distance from Planning Scheme Overlays
Four times the Tower height + 50 metres (or 350m, whichever is greater)
Setback distance from Road Zones
Tower height + 50 metres

Reference - Wind Turbine Setback Distances

Setback distances from an asset to a residence vary across states. For example, **prior to 2011 there were no setback distances for wind turbines in Victoria. The current setback distance is 1km**. Queensland has introduced a setback distance of 1.5km, while the New South Wales framework is based on a merit assessment of each project against the criteria and performance standards in the framework. Western Australia has recently recommended a 1.5km setback in their Position Statement: Renewable Energy Facilities *(Western Australian Planning Commission, March 2020)*.

While setback distances are typically based on the distance from the wind turbine to the residence, there may also be circumstances where the **distance of the turbine from the neighbour's property boundary should also be a consideration**. Such circumstances could include the potential effect of wind turbines on animals such as horses, driving distractions on nearby roads or other situations where turbines may impact neighbouring properties due to their proximity to land use activities on a property.

5.2.8.4 In addition to a setback distance between a turbine and a residence, **a minimum setback distance of 200 metres** (as measured at ground level from the centre of the tower or 150 metres from the extended horizontal blade tip, whichever is the greater) and a **neighbour's boundary fence line or public road carriageway**, should also be considered.

5.2.8.5 Consideration should be given to **setback distances between a wind farm and a materially populated township or city boundary**. A distance of **5 km may be appropriate to preserve amenity** and provide some flexibility for planning growth of the township (note – consideration of reducing these suggested setback provisions may be appropriate in the case of a small-scale, community-supported and owned wind energy facility).

(Office of the National Wind Farm Commissioner Annual Report to the Parliament of Australia 2019: 5.2 - pages 48-49)

5.2. Land Use Compatibility Setback Distances

The priority when planning land use and development is avoiding land use conflict in the first place. This involves understanding where existing industry and other uses with potential off-site impacts are and ensuring current zoning appropriately protects operators and surrounding communities. It also means making sure that sensitive uses and future urban growth are directed away from areas that could be affected by off-site impacts. Strategic planning around uses with potential off-site impacts should consider the capacity or need for future expansion of that use or expected changes to operations.

(Managing buffers for land use compatibility - Planning Practice Note 92 - Planning Victoria - page 2)

Recommended setback distances:

Setback distance from Bushfire Management Overlay
250 metres
Should it not be possible for overhead transmission infrastructure to 'avoid' land within a BMO overlay, all transmission infrastructure should be installed underground to mitigate risks to life, property and the environment.

Setback distance from National and State Parks
600 metres

Setback distance from Wedge-tailed Eagle nesting sites
500 metres

Setback distance from waterway, wetlands or flood plain
100 metres

Setback distance from Extractive Industries (SUZ)
600 metres

Setback distance from Rural Conservation Zone
Installed underground to protect and enhance biodiversity
Landowners have a duty of responsibility to ensure the purpose of this zone is upheld and not allow tenants to contravene the purpose

5.3. Township Settlement Boundary Setback Distance

Consideration should be given to setback distances between new energy transmission infrastructure and a materially populated township settlement or city boundary. A minimum setback distance will serve to preserve amenity of established residential areas, protect amenity of significant landscape and provide flexibility for future growth of the township.

Setback distance from Township Settlement Boundary
800 metres minimum

Consideration should be given to setback distances between a wind farm and a materially populated township or city boundary. A distance of 5 km may be appropriate to preserve amenity and provide some flexibility for planning growth of the township.

(Comparative reference: Office of the National Wind Farm Commissioner Annual Report to the Parliament of Australia 2019: 5.2.8.5 *- page 49)*

5.4. Situations for Further Consideration

Other situations where setback distances should be considered to determine more specific requirements include:

- Commercial Zones
- Industrial Zones
- Special Purpose Zones
- Planning Scheme Overlays (to determine specific constraints)
- Commonwealth Land (not controlled by planning scheme)

Supporting References

Moorabool Planning Scheme Ordinance (May 2021)
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Moorabool Planning Scheme - Natural Environment
http://s3.dpcd.vic.gov.au/planning_scheme_history/8342df9864ce909074058a45820fc49e.pdf

Planning Overlays - DELWP
https://www.planning.vic.gov.au/schemes-and-amendments/browse-planning-scheme/maps?f.Scheme|planningSchemeName=Moorabool

Maine - Inquiry on Setback Requirements
https://www.maine.gov/mpuc/legislative/Reports/ATTACHMENT%201%20-%2011-30-13.pdf

National Grid - Design guidelines for development near high voltage overhead lines
https://www.nationalgrid.com/sites/default/files/documents/Sense%20of%20Place%20-%20National%20Grid%20Guidance.pdf

National Grid Development near overhead lines
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PLANNING AND ENVIRONMENT ACT 1987 - SECT 46AP
Requirements for area to be declared as a distinctive area and landscape
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NEW HOPE GROUP Visual Amenity
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Zones & overlay legend
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Significant Landscape Overlay
https://www.planning.vic.gov.au/__data/assets/pdf_file/0023/94820/ROR-Chapter-5-Implementation-Part-2.pdf

The Uplands Lerderderg gorge & state park
https://www.planning.vic.gov.au/__data/assets/pdf_file/0025/94831/2-The-Uplands-Part-1.pdf

Lerderderg State Park Management Plan
https://www.parks.vic.gov.au/-/media/813c97523e2a4c07af7c3a2ef1d38416.pdf

DPCD South West Victoria Landscape Assessment Study | Significant landscapes. Planisphere 2013
https://www.goldenplains.vic.gov.au/sites/default/files/South%20West%20Landscape%20Assessment%20Study.pdf

Melton Significant Landscape Features Strategy
https://www.melton.vic.gov.au/files/assets/public/services/building-planning-amp-transport/strategic-planning/studies-strategies-guidelines/melton_significant_landscape_features_strategy.pdf

Framework for developing health-based EMF standards
https://apps.who.int/iris/rest/bitstreams/51605/retrieve

Eastlink: The Interconnection of NSW and Queensland Electricity Grids with a High Voltage Powerlink: Chapter 2 - Health and EMF
https://www.aph.gov.au/Parliamentary_Business/Committees/Senate/Economics/Completed_inquiries/pre1996/elec/report/c02

South Australia CFA Guidelines for Wind Farms March 2016
https://www.nwfc.gov.au/sites/default/files/cfs-guidelines-wind-farms.pdf

Best Practice Guidelines for Implementation of Wind Energy Projects in Australia - Clean Energy Council
https://assets.cleanenergycouncil.org.au/documents/advocacy-initiatives/community-engagement/wind-best-practice-implementation-guidelines.pdf

Australian Energy Infrastructure Commissioner - Planning Permits - Time Limits and Scope Changes
https://www.nwfc.gov.au/observations-and-recommendations/chapter-4-planning-permits

Energy Security Board - National planning coordination for renewable energy zones
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AusNet Services - AMS 10-65 Line Easements
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Framework for Developing Health-Based EMF Standards
https://www.who.int/peh-emf/standards/EMF_standards_framework[1].pdf

IUCN Protected Areas - Category II: National Park
https://www.iucn.org/theme/protected-areas/about/protected-areas-categories/category-ii-national-park

Australian Energy Infrastructure Commissioner - Governance and Compliance of Standards and Permit Conditions
https://www.nwfc.gov.au/observations-and-recommendations/governance-compliance

Australian Energy Infrastructure Commissioner - Site Selection
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Minimising Impact through best planning practices in the transmission of renewable energy

Energy Grid
ALLIANCE

Energy Grid Alliance was established with the purpose of engaging with energy transmission companies, industry regulators, market operators, relevant peak bodies, government and communities to establish best planning practices for new energy transmission infrastructure and to inform on the benefits of working with communities to acquire and maintain social license.

info@energygridalliance.com.au
www.energygridalliance.com.au