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TREE PLANTING NEAR POWERLINES: WHAT SPECIES?

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Introduction

Since November 1988 the Electricity Act and Regulations have made restrictions to what could be planted under and near the powerlines throughout South Australia. Concerns were raised since this date over the plants that were chosen because of their size, shape and how they reacted to the different soils and climatic conditions throughout our state of South Australia.

Questions most asked

Where can we plant and what is the prescribed area?

The prescribed area is the distance from the centre line (an imaginary line on the ground directly below the conductor if one conductor, if more than one conductors it is the equidistance from the outside conductors.) to a point parallel to the centre line. This area can vary from 6m across under low voltage or 240 volt lines in a non-bushfire risk area to 25m across under 275,000 volts lines in a bushfire risk area. Within this area planting restriction apply, outside this area there are no restrictions applying to powerlines.

What and who is the Technical Regulator?

The Technical Regulator has many functions, one being the administration of the provisions of the Electricity Act relating to the clearance of vegetation from powerlines. At present the regulator is Rafael Orschulok, Principal Engineer Electrical, Office of Energy Policy. The Regulator can approve or disapprove any exemption.

What can we plant?

New species of plants are being found each year and there are existing plants that could fulfil the local governments idea of an ideal urban street trees. Local Government personnel have the best knowledge of local plant growth and the environmental conditions. Because some of these trees do not fall within the prescribed list of recommended trees being planted near or under powerlines, what options do you have?

- Change of overhead bare conductors to fully insulated or just insulated conductors.
- Relocation of conductors to a different position.
- Undergrounding of overhead conductors.
- Exemptions for plants under conditions from the Regulator.

Local government is responsible for maintaining clearances to powerlines at own expense.

What do the local ratepayers want and are they prepared to pay for unsuitable plants?

Are we still planting the wrong species?

'National Tree Conference 1994'- Truths and myths ahout the use of eucalypts. Eucalypts usually have a life span of around 35 years in the urban environment. With the cost of maintenance and issues of public liability and safety, are we prepared to have 3 trees planted in the same spot every 100 years or are there more suitable trees like an Ulmus, Platanus or Quercus a better choice lasting over 100 years with minimal costs?

Planning for the future, short, medium and long term strategies

What aims do Local Government have towards trees and powerlines? Have all powerlines put underground so areas can have large avenues of tree lined streets and at what cost? Insulate all low voltage cables for minimal clearances? Involving the community for plant species being planted? Relocate powerlines away from trees?

Present costs for options

All options have approximate costs and you should have ETSA Technical staff give true costings to any project.

- Low voltage 'ABC' 40m span (no replacement of poles) approx. $2000
- Low voltage only, undergrounding, approx. $350.00 per metre.
- Low and High voltage undergrounding, approx. $500 - $800 per metre.

Underground Cable Restrictions

Other than 66,000 volt cables and easements around Transformer and Switching Cubicles there are no restrictions on what can be planted over the top of underground cables. Over the top of 66,000 volt cables List 1 plants are only allowed.

References

Royal Australian Institute of Parks and Recreation (1994) URBAN TREES: The ChallengeforAustralian Cities and Towns

ETSA ACT and Regulations (1996)

Office of the Technical Regulator Trees and powerlines (Safe trimming and planting)