UE Reference No. 20100304

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RIS Submission
Risk, Regulatory Planning and Policy
Energy Safe Victoria
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[redacted]

PROPOSED ELECTRICITY SAFETY (ELECTRIC LINE CLEARANCE) REGULATIONS 2020

Thank you for the opportunity to comment on the documents associated with the remake of the ***Electricity Safety (Electric Line Clearance) Regulations 2020***:

- Regulatory Impact Statement: ***Electricity Safety (Electric Line Clearance) Regulations 2020***
- Exposure Draft - Electricity Safety (Electric Line Clearance) Regulations 2020

Regulatory Impact Statement (RIS): Electricity Safety (Electric Line Clearance) Regulations 2020:

Section 2.2.2.1 Fires

About 6% of the fires caused by tree contact are due to vegetation grow–ins. Weather and other factors outside United Energy's control influence the number and impact fire starts to a significant degree. Trees from outside the ***minimum clearance space*** were responsible for 94% of the fires caused.

Electricity Safety (Electric Line Clearance) Regulations, Section 8 - Responsible person may cut or remove hazard tree provides a mechanism to minimise, *as far as practicable*, the risk of fire starts initiated by fall-in vegetation,

Electricity Safety (Electric Line Clearance) Regulations 2020:

Part 1 Preliminary 1. Definitions

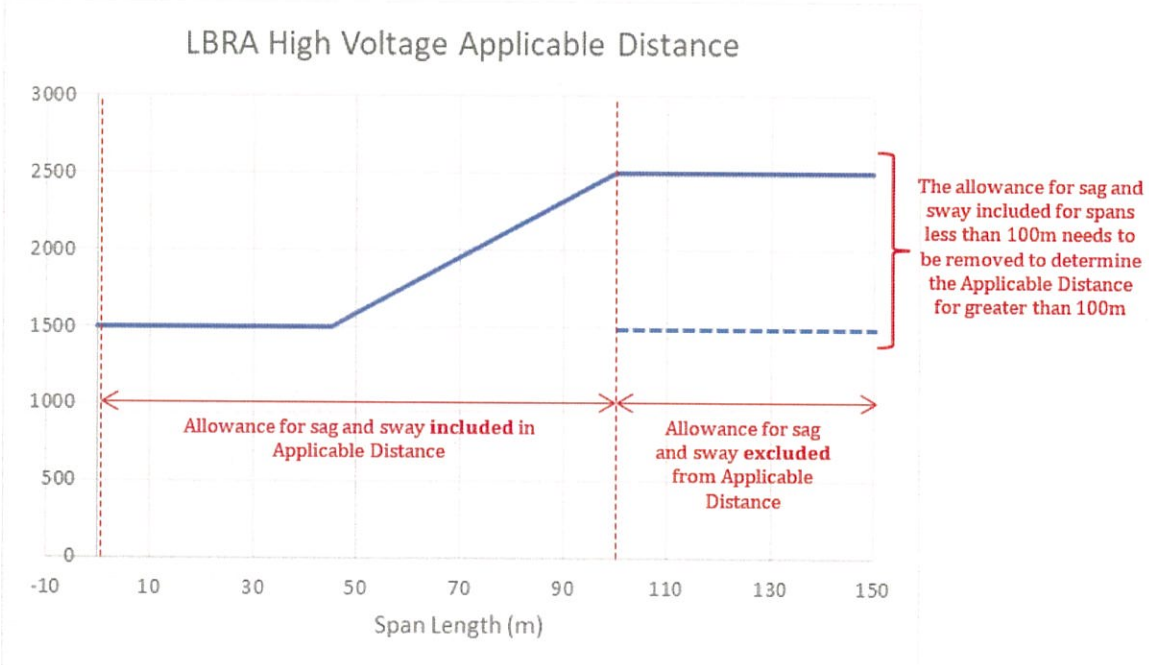
For consistency with the ***Electricity Safety (Management) Regulations***, ***AS 5577 Electricity network safety management systems***, and the definition of a ***published technical standard*** on page 14 of these regulations, the definitions of ***aerial bundled cable, covered conductor, electric cable, insulated cable,*** and ***insulating cover*** should include reference to "*an equivalent* ***published technical standard"*** in addition to the reference to Australian Standards (AS).

Applicable distances for uninsulated electric lines in LBRA

There appear to be inconsistencies in the ***applicable distance*** (AD) and the ***minimum clearance space*** (MCS) requirements for uninsulated electric lines in LBRA:

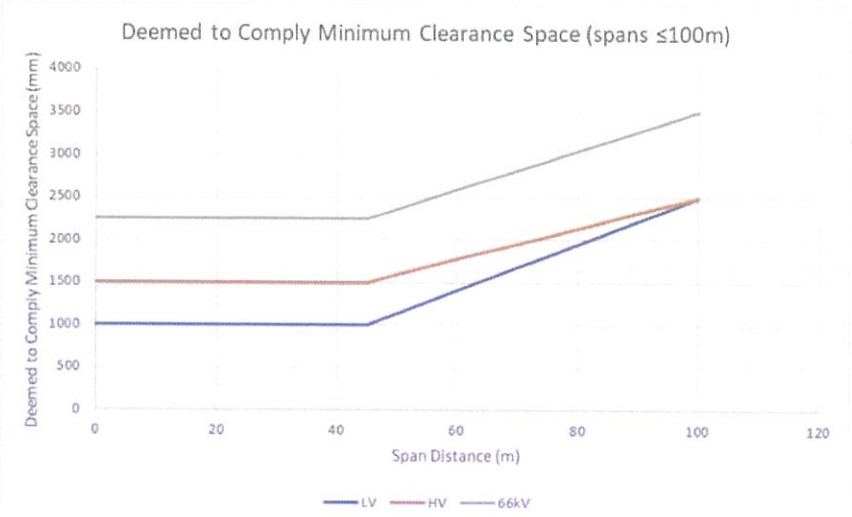
- For spans < 45m long, the AD is constant and independent of span length, sag and sway have been included as a constant, again independent of span length, and the MCS = AD
- For spans 45m-100m long, the AD is a function of span length, with sag and sway included, and the MCS = AD

- For spans > 100m long, the AD is again constant and independent of span length, sag and sway have NOT been included and now need to be included, and the MCS = AD+sag+sway. (No allowance has been made for the conductor sag and sway which was included in the ***applicable distance*** for spans up to 100m, resulting in the allowance for sag and sway being added to an ***applicable distance*** which already includes an allowance for sag and sway).



To remove these anomalies and clarify the situation, the Code of Practice could be revised to provide two methods for determining the ***minimum clearance space*** for uninsulated electric lines in LBRA:

1. **Deemed to comply method (spans <100m)**: employ the existing graphs 2, 3, and 4 for spans up to 100m long, which include an allowance for sag and sway. This method shall only be used for electric line spans < 100m long, and the MCS = AD.



2. **Allowance for sag and sway method:** Specify a constant ***applicable distance*** to which an allowance for sag and sway must be added to calculate the minimum clearance space, MCS = AD+sag+sway.

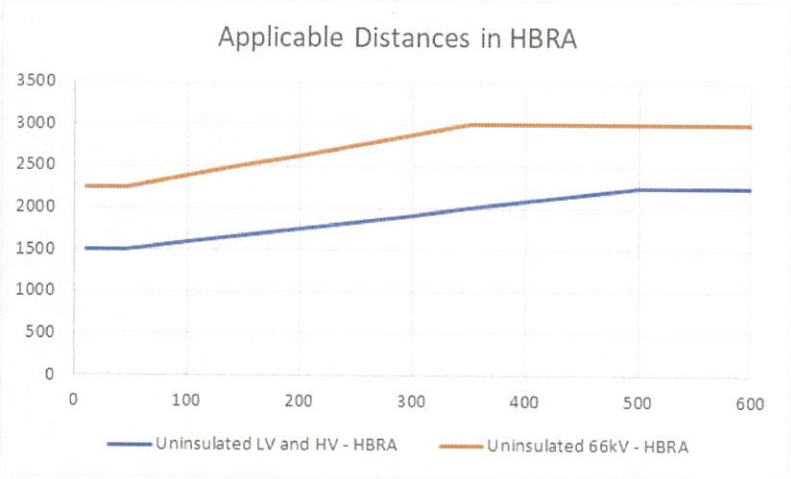
United Energy suggests that the ***applicable distance*** for uninsulated electric lines in LBRA could be a constant distance:

- LV – 1000mm
- HV – 1500mm
- 66kV – 2250mm

Similar comments apply for the applicable distances associated with insulated electric lines in all areas.

Applicable distances for uninsulated electric lines in HBRA

The ***applicable distances*** for uninsulated electric lines in HBRA are shown below. The rationale for the change in ***applicable distance*** with span length is not clear. Sag and sway are functions of, and increase with the span length, and must be added to the ***applicable distance*** to determine the ***minimum clearance space***.



United Energy suggests that the ***applicable distance*** for uninsulated electric lines in HBRA could be a constant distance:

- HV – 1500mm
- 66kV – 2250mm

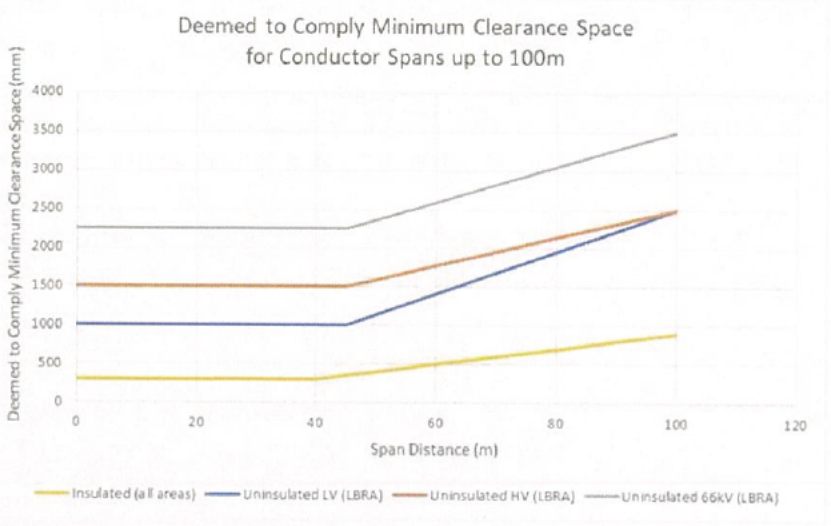
RECOMMENDATIONS

For clarification, the ***applicable distance*** be defined as: "***applicable distance is the minimum distance between vegetation and the nearest conductor at all times, at all points along the span".***

The sag and sway allowance will determine the maximum conductor movement envelope, and when added to the ***applicable distance***, determine the ***minimum clearance space***.

United Energy suggests that the Code of Practice be revised to provide two simple methods for determining the ***minimum clearance space*** for all electric lines:

1. **Deemed to comply method (spans <100m):** employ the existing graphs 1, 2, 3, and 4 for spans up to 100m long, which include an allowance for sag and sway. This method shall only be used for electric line spans < 100m long, and the MCS = AD.



2. **Allowance for sag and sway method (HBRA and LBRA):** Specify a constant ***applicable distance*** based on line voltage/type, to which an allowance for sag and sway must be added to calculate the ***minimum clearance space***, MCS = AD+sag+sway

The ***applicable distance*** for electric lines is specified as being:

- Insulated – 300mm
- LV – 1000mm
- HV – 1500mm
- 66kV – 2250mm

Adopting these two methods would mean that:

- Schedule 2, graphs 1-6 can be deleted
- Part 3 Division1, clauses 23-29 can be deleted

Thank you for the opportunity to comment on: Regulatory Impact Statement, ***Electricity Safety (Electric Line Clearance) Regulations 2020***; and the Exposure Draft - ***Electricity Safety (Electric Line Clearance) Regulations 2020***

Should you have any further queries in relation this matter please contact [redacted]

Kind Regards

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Network Risk and Assurance Manager