



Ergon Energy Corporation Limited

Specification for Route Approval Documentation

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1. Purpose and Scope

This Specification is compiled to provide guidance to undertake a Line Route Approval process for Sub Transmission and Transmission Lines. Its purpose is to describe and define the information that must be obtained.

2. References

2.1 Ergon Energy controlled documents

ES000904R104 – EMF Guideline for New Infrastructure
ES000904R105 – EMF Assessment Protocol for Existing Electrical Infrastructure ES000904F100 – Magnetic Field Calculator
ES000904R108 – Magnetic Field Calculator – User Notes
NA000404R100 – TELSTRA Power Co-ordination Guideline
Agreements – QR and Waterway Crossing Design Requirements – various drawings
ES000905F102 – Safety in Design Risk Assessment Form
ES000906F100 – Cultural Heritage Risk Management Plan
ES000905F100 – Environmental Planning for Work (EPW) Risk Assessment Form
PW000702F100 – Simple Project Risk Management Plan
MN000301F137 – Water Crossing Works Checklist

2.2 Other sources

[Powerlink Crossing Application Form](#)
[Dial Before You Dig](#)

3. Definitions, Acronyms, and Abbreviations

Nil

3.1 Acronyms and Abbreviations

DBYD Dial Before You Dig
QR – Queensland Rail
TMR – Transport and Main Roads Department (Queensland Government)
A.G.S.U. – Armour Grip Suspension Unit
H.A.T. – Highest Astronomical Tide

4. Security

Nil

5. Safety, Environmental and Ergonomic Considerations

Refer to Section 6

6. Approvals

This section outlines the minimum list of approvals that shall be considered for each Line Route Approval process. Each Line Route shall be assessed on its physical and geographical location in order to take a professional approach to other approvals that may be required.

6.1 Community Consultation

Contact shall be made with Ergon Energy's nominated Project Manager to confirm whether this Project requires the Community Consultation Group to be engaged.

6.2 EMF

EMF studies shall be undertaken for each proposed Line Route and Feeder Loading option. EMF studies, once completed, shall be forwarded to Ergon Energy's Environmental Projects Engineer for approval. These calculations shall assist with the determination of the required Easement width for the Project. All studies shall follow Ergon Energy's Controlled Documents outlined in Section 2.1 of this Specification.

6.3 Blowout Calculations

Blowout calculations should be completed for typical spans to confirm easement widths are appropriately sized. Blowout should be considered for 500Pa wind pressures and allowances shall be made for extra slack in spans caused by longitudinal insulator swing due to differential wind pressures in adjacent spans. Allowance shall also be made for pole tip deflection under load.

6.4 TELSTRA Power Coordination

In order to mitigate possible safety and financial implications to Ergon Energy and TELSTRA, Power Co-ordination studies shall be completed in partnership with TELSTRA. For this to occur, feeder fault current levels, estimated future fault levels, fault current profiles, fault clearance times and line route alignments shall be forwarded to TELSTRA's Power Co-ordination Team at the earliest possible time in the Route Approval Process. TELSTRA shall then provide feedback as to possible areas of concern which can then be incorporated into any line route adjustments required. Once design is completed and poles have been spotted, pole co-ordinates shall then be forwarded to TELSTRA for final confirmation of approval before construction can commence. All studies shall follow Ergon Energy's Controlled Documents outlined in Section 2.1 of this Specification.

6.5 Rail Crossings

All crossings shall be in accordance with Ergon Energy Agreements as outlined in Section 2.1 of this Specification as a minimum. All QR or Aurizon rail crossings shall have the appropriate Wayleave Application Forms submitted. These forms shall be accompanied by drawings outlining the name of the proposed line, the type of pole to be erected (e.g. steel, concrete etc.) conductor and pole clearances to tracks under various condition (e.g. Hot Conductor, Broken Wire etc.), crossing angle, conductor type and typical tension, method of conductor support (e.g. termination, semi-termination in A.G.S.U etc.) and location of crossing etc. Arrangements shall be made with Ergon Energy's Project Manager to organise payment of the Wayleave Application Fees as applicable.

6.6 TMR

Transport and Main Roads shall be consulted during all stages of the Project where any part of the line or its associated infrastructure crosses or runs inside their Easement. Drawings shall be submitted detailing the proposed centreline location and co-ordinates and distances of all Ergon Energy assets from the running edge of bitumen.

6.7 Council

The Regional Council governing over the areas where the Line Route passes shall be contacted regarding the proposed Line Route. Information shall be requested from the Council regarding its underground infrastructure e.g. sewer, storm water and water locations etc. Council Road Crossings, offset distances from Council Roads, preferred alignments and pole loadings may require submission of drawings and calculations as required.

6.8 Powerlink

Powerlink shall be contacted where proposed line routes cross or run parallel with their Easements. Any crossings shall have the appropriate forms (Refer Section 2.2 of this Specification) and drawings submitted to Powerlink for approval. Drawings shall specify all Feeder names; all relevant structure numbers, types, heights, locations; conductor types, temperatures, clearances nominated under conductor conditions etc. in order for Powerlink to assess the viability of approving the undercrossing.

6.9 Harbour Board Approvals

All crossings shall be in accordance with Ergon Energy Agreements as outlined in Section 2.1 of this Specification as a minimum. Any navigable waterway crossing shall be submitted to the relevant Harbour Master for approval with copies of drawings outlining all relevant information as required. Information on the drawing shall include location of crossing, location of signage, pole types, pole heights, H.A.T. level, clearances above H.A.T. level for various conductor conditions etc.

6.10 Dial Before You Dig Application

Dial Before You Dig applications shall be submitted for all proposed Line Route alignments to confirm likely locations of any services within the area. Refer Section 2.2 of this Specification.

6.11 Safety in Design Risk Assessment Form

Refer Section 2.1 of this Specification.

6.12 Cultural Heritage Risk Assessment Form

Refer Section 2.1 of this Specification.

6.13 Environmental Planning for Work Risk Assessment Form

Refer Section 2.1 of this Specification.

6.14 Simple Project Risk Management Plan

Refer Section 2.1 of this Specification.

6.15 Water Crossing Works Checklist

Refer Section 2.1 of this Specification.

6.16 Easement and Wayleave Checks

Checks shall be carried out to confirm locations of any existing Easements or Wayleaves that may be affected the new Line Route.