



Clearance to Ground & Structure Program

Business Case

19 November 2024



Part of Energy Queensland

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DOCUMENT VERSION

Version Number	Change Detail	Date	Updated by
1	Approved Version	18/11/2024	General Manager Asset Standards

RELATED DOCUMENTS

- Ergon – 5.6.01 – Business Case Clearance to Ground & Structure Program
- Attachment 5 – Capital expenditure | Draft decision - Ergon Energy distribution determination 2025–30.
- Electrical Safety Regulation 2013,
<https://www.legislation.qld.gov.au/view/pdf/inforce/current/sl-2013-0213>

1. SUMMARY

Title	Clearance to Ground & Structure Program														
DNISP	Ergon Energy Network														
Expenditure category	<input type="checkbox"/> Replacement <input checked="" type="checkbox"/> Augmentation <input type="checkbox"/> Connections <input type="checkbox"/> Tools and Equipment <input type="checkbox"/> ICT <input type="checkbox"/> Property <input type="checkbox"/> Fleet														
Identified need <i>(select all applicable)</i>	<input checked="" type="checkbox"/> Legislation <input checked="" type="checkbox"/> Regulatory compliance <input type="checkbox"/> Reliability <input type="checkbox"/> CECV <input checked="" type="checkbox"/> Safety <input type="checkbox"/> Environment <input type="checkbox"/> Financial <input type="checkbox"/> Other Ergon Energy has a legislative obligation to maintain minimum electrical clearances of its overhead conductors to ground (CTG) and to structure (CTS) to ensure public safety. This business case sets out the options to meet the obligations and evaluates the costs and risks.														
Summary of preferred option	The preferred option is to remediate 12,270 defects across the Ergon Energy network over the 2025-2030 regulatory control period.														
Expenditure	A total of 11,139 CTG and 1,131 CTS defects are forecast to be remediated over the 2025-2030 regulatory control period at a unit rate of \$10,521 and \$22,563 respectively. Total cost of \$142.7 million in direct 2022-23 \$ is required over the 5 years. <table border="1" data-bbox="459 1218 1329 1384"> <thead> <tr> <th>Year</th> <th>2025-26</th> <th>2026-27</th> <th>2027-28</th> <th>2028-29</th> <th>2029-30</th> <th>Total</th> </tr> </thead> <tbody> <tr> <td>\$m, direct 22-23</td> <td>28.54</td> <td>28.54</td> <td>28.54</td> <td>28.54</td> <td>28.54</td> <td>142.72</td> </tr> </tbody> </table>	Year	2025-26	2026-27	2027-28	2028-29	2029-30	Total	\$m, direct 22-23	28.54	28.54	28.54	28.54	28.54	142.72
Year	2025-26	2026-27	2027-28	2028-29	2029-30	Total									
\$m, direct 22-23	28.54	28.54	28.54	28.54	28.54	142.72									
Benefits	Benefits – implementation of the preferred option will ensure that Ergon Energy can meet its compliance obligations and in so doing, keep customers and the community safe.														

2. PURPOSE AND SCOPE

This document sets out the capital investment required for remediating clearance to ground (CTG) and clearance to structure (CTS) issues for overhead conductors. It compares the benefits of options to remediate the known defects, with the risks associated with unmitigated clearance problems identified through the aerial LiDAR program.

This business case has been developed for the Ergon Energy Network Revised Regulatory Proposal and clarifies detail in the preceding business case submitted for the Ergon Energy Network 2025-30 Regulatory Proposal to Australian Energy Regulator (AER). This investment is a key public safety component of operating a safe distribution network across regional Queensland.

The terms to be used in this document in order of timeline are:

- Ergon Energy Network 2025-30 Regulatory Proposal (Regulatory Proposal)
- Draft Decision – Ergon Energy Distribution Determination 2025-30 (Draft Decision)
- Ergon Energy Network 2025-30 Revised Regulatory Proposal (Revised Proposal)

3. REVISED REGULATORY PROPOSAL

3.1. Changes from Regulatory Proposal

This Revised Proposal details changes to the unit rates for the regulatory control period 2025-2030. This change in unit rates for both CTG and CTS result in a reduction in cost from \$159.9 million to \$142.7 million in direct 2022-23. The volumes to be remediated remain unchanged.

The unit rates now reflect feedback from the Draft Decision where a combination of re-tensioning and actual unit rates from FY 2023-24 are used.

3.2. Minor / Major Works Assessment

When a clearance defect is scoped and triaged, several options may be suitable for remediation. In the range of solutions, the most prudent option is selected as the preferred remediation approach starting with minor works such as re-tensioning. Other minor works activities include use of raiser brackets and offset crossarms. Major works are considered when the minor rectifications are deemed unsuitable. Major works themselves have an increasing level of prudence starting with an interpolate arrangement through to use of taller poles and network reconfiguration such as undergrounding.

Where re-tensioning and other minor works is not deemed suitable by desktop assessment, the defect is sent to design for assessment. The design triage stage then assesses the defect for remediation options with the most prudent option selected.

3.3. Re-tensioning Assumptions

Development of the unit rate for CTG recognises the feedback in the AER Draft Decision where the “*clearance gaps less than 20cm can to be addressed via re-tensioning*” was applied to 46% of all defects at a re-tension cost of \$1,100. Both the volume and cost assumptions regarding re-tensioning are challenged in this Revised Proposal.

Volume Fit for Retension

Records show that just under 8% of defects are subject to re-tensioning after triage. Triage is the decision point where a defect is assessed as either requiring design support or can be sent 'straight to field' for retensioning. Given that 8% of defects are assessed "straight to field", in this Revised Proposal, a conservative value of 10% is assumed for re-tensioning.

The non-linear relationship between tension and sag means that not all defects within 200mm can be remediated by re-tension alone. Table 1 below shows the tension increase required on standard conductors and span lengths to achieve a 200mm clearance increase. During triage, an assessment is made using standard design tools as to whether re-tensioning will exceed pole tip loads and crossarm strength. A relatively small increase in mid-span ground clearance requires a disproportionate increase in tension.

Table 1 Relationship between tension and sag for a 200mm clearance increase

Region (%CBL)	Conductor	Span Length	Sag	Clearance Increase	Tension (kN)	Tension Increase %
Urban (4%)	Mars	60m	1.95m	200mm	0.481kN	11%
Urban (6%)	Mars	60m	1.75m		0.535kN	
Semi-Urban (9%)	Moon	100m	3.33m	200mm	1.252kN	6%
Semi-Urban (10%)	Moon	100m	3.13m		1.331kN	
Rural (20%)	Raisin	200m	2.81m	200mm	3.372kN	8%
Rural (22%)	Raisin	200m	2.61m		3.626kN	

Contributing factors as to why conductors (particularly aged conductors) can't simply be reinstated by re-tensioning can be due to the following factors:

- Stay movement and pole lean caused by soil expansion and contraction throughout the wet/dry seasons.
- Crossarm strength limitations and degradation.
- Pole strength degradation over time.
- Conductor degradation over time.

The assumption that 46% of defects can be remediated by re-tensioning alone is not supported by historical performance or engineering calculation. This Revised Regulatory Proposal uses a 10% re-tension rate for clearance defects.

Re-tension Cost

The second assumption to be challenged in the Draft Decision is cost of re-tension where the cost was stated at \$1,100. In the meeting with AER at Newstead on 16th Oct 2024, the cause of this low re-tension cost was discovered. An example was provided in the Information Requests of a re-tension estimate a single CTG clearance defect in a typical 5-span strain section as per Figure 1. The incorrect assumption was made that the cost would be apportioned across the 5 spans to a

per-span unit rate for re-tension. A strain section consists of multiple spans where the ends are fixed with tension fittings and the intermediate poles have the conductor tied to pin or post insulators. The activity to re-tension a strain section, involves untying the conductor from the intermediate pin insulators, installing temporary rollers, unwrapping the tension fittings at one end of the strain section, pulling tighter and re-applying the wraps. This activity is required to re-tension a single span in the strain section.

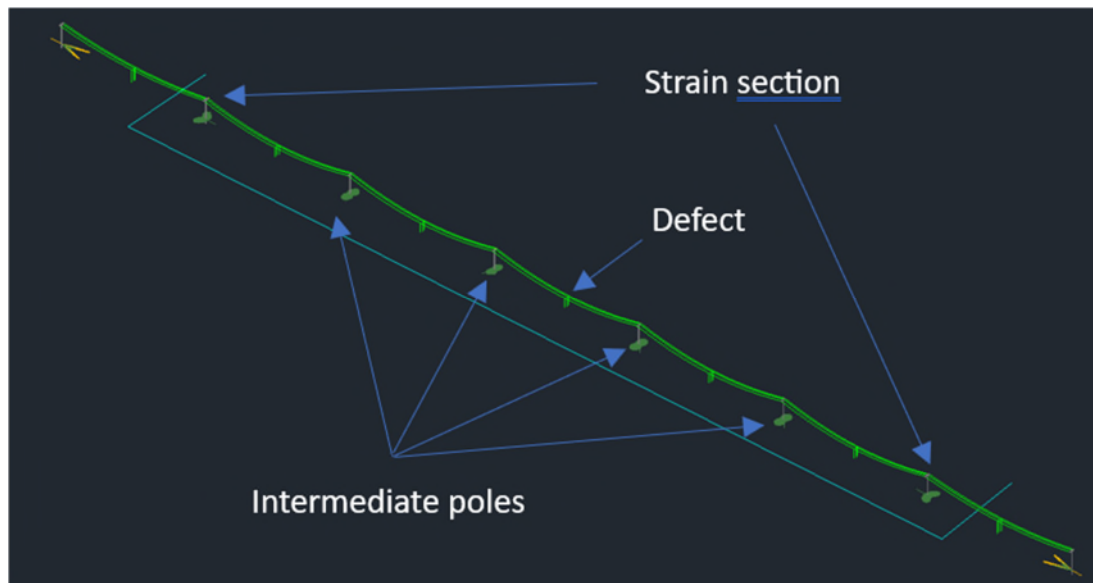


Figure 1 - Five span strain section with CTG defect

Traffic control alone for a simple re-tension can cost between \$800 and \$1,500 depending on a rural/urban location. Low voltage re-tension activities typically cost between \$3,900 (simple) & \$6,300 (complex) depending on travel time to site from depot, traffic control requirements, risk assessments, volume of switching required for access, length of strain section and number of conductor fittings to be re-made. An average of \$5,117 is used for the revised proposal for a single re-tension activity.

3.4. Acceptance of Actual and Forecast Volumes

Energy Queensland notes AER's acceptance of actual and proposed defect volumes in the Regulatory Proposal for the Clearance to Ground and Structure Program. A total of 11,139 CTG and 1,131 CTS are forecast to be delivered over the regulatory control period 2025-2030. Given this acceptance, justification for the volumes will not be discussed but are shown in Table 3 for clarity.

3.5. Clarification of Unit Rates

This Revised Proposal uses a unit rate based on a combination of the re-tensioning costs described above and the actual 2023-24 FY costs for the clearance program.

A total of 11,139 CTG and 1,131 CTS defects are forecast to be remediated over the 2025-2030 regulatory control period at a unit rate of \$10,521 and \$22,563 respectively expressed in 2022-23.

The volume of L5 defects to be remediated in the 2025-2030 regulatory control period is 3,015 which consists of defects forecast from the current Cycle 8 aerial LiDAR inspection program and defects already raised from previous flight programs. These are the defects within 200mm of being

statutory compliant and 10% (301) of these are expected to be remediated by re-tensioning at a unit rate of \$5,117.

The remaining 90% or 10,838 CTG defects will be remediated through design activities at the 2023-24 actual unit rate of \$11,128. The effective unit rate for CTG for this Revised Proposal is then \$10,965 in direct 2023/24\$ or **\$10,521** in direct 2022-23 \$.

The CTS unit rate in this revised proposal is \$23,515 which is the actual CTS unit rate for the 2023-24 FY or **\$22,563** expressed in direct 2022-23 \$. This unit rate of \$22,563 is higher than the unit rate used in the Regulatory Proposal of \$15,307. A common rectification for a LV open wire CTS defect is to change the open wire construction to LVABC. Where horizontal clearances are the primary breach, re-tensioning does not change the horizontal clearance so replacing the LV open wire with LVABC is a common solution. For CTS defects where customers are found to be the cause of the clearance breach, they are required to either remove their structure or fund a network solution.

3.6. Compliance Obligations

Table 2 shows the relevant compliance obligations for this proposal. Defect rectification timelines are documented in the EQL Standard for Conductor Clearance Prioritisation and Remediation. The Prioritisation Matrix is underpinned by EQL's Network Risk Assessment criteria and prioritisation based on clearance measurements at time of flight. These measurements, along with location are used to determine the priority for remediation.

Table 2: Asset Function and Strategic Alignment

Legislative Instruments	Obligations	Relevance to this investment
QLD Electrical Safety Act 2002 QLD Electrical Safety Regulation 2013 (Schedule 4?)	<p>EQL has a duty of care, ensuring so far as is reasonably practicable, the health and safety of staff and other parties as follows:</p> <ul style="list-style-type: none"> • Pursuant to the Electrical Safety Act 2002: <ul style="list-style-type: none"> (a) as a person in control of a business or undertaking (PCBU), EQL has an obligation to ensure that its undertaking is electrically safe¹. This duty also extends to ensuring the electrical safety of all persons and property likely to be affected by the electrical work (b) as an electricity entity, Ergon Energy has a duty to ensure that its works: <ul style="list-style-type: none"> (i) are electrically safe; (c) are operated in a way that is electrically safe²: <ul style="list-style-type: none"> (ii) This duty includes ensuring that CTG and CTS clearance requirements are complied with • Pursuant to the QLD Electrical Safety Regulation 2013 which prescribe CTG and CTS clearance requirements 	<p>This proposal is a key component in the management of safety for electricity customers. Inadequate clearances to structures or ground are in breach of the Queensland Electrical Safety Regulation 2013, Schedule 4.</p>
Distribution Authority for Ergon Energy or	<p>Under its Distribution Authority:</p>	<p>Fundamentally, this proposal aims to ensure that clearances are adequate and in accordance</p>

¹ Section 30, *Electrical Safety Act 2002*

² Section 29, *Electrical Safety Act 2002*

<p>Energex issued under section 195 of Electricity Act 1994 (Queensland)</p>	<ul style="list-style-type: none"> • The distribution entity must plan and develop its supply network in accordance with good electricity industry practice, having regard to the value that end users of electricity place on the quality and reliability of electricity services. • The distribution entity will ensure, to the extent reasonably practicable, that it achieves its safety net targets as specified. • The distribution entity must use all reasonable endeavours to ensure that it does not exceed in a financial year the Minimum Service Standards (MSS) 	<p>with standards. This aligns with good electricity industry practice proposal.</p>
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This program focuses on remediating clearances in accordance with Queensland Electrical Safety Regulation 2013, Schedule 4. Emergency defect notification has become a key part of the program whereby critical clearance breaches due to asset failure can be actioned as soon as possible.

Ergon Energy and Energex also report quarterly to the Queensland Electrical Safety Office on the status of clearance defect remediation.

A LiDAR flight cycle of 3 years across the Ergon Energy and Energex distribution networks allows the highest risks to be prioritised within the flight cycle and the lowest risks that have a treatment year longer than 3 years to be periodically reviewed.

3.7. Identification of Defects

Energy Queensland Limited (EQL) has engaged LiDAR provider Fugro, to survey the entire Queensland distribution network.

LiDAR flights Cycle 1 and Cycle 2 were initially used for vegetation management to identify vegetation encroachment zones around overhead lines and direct tree trimming maintenance accordingly. Clearance defects were previously reported by field-based asset inspectors with defects rectified using the P1/P2 defect process under routine maintenance program. Since the LiDAR was directed towards managing statutory clearance defects in Cycle 3, the volume of identified defects has increased significantly and the clearance risk matrix within the EQL Standard for Conductor Clearance Prioritisation and Remediation has been adopted to prioritise the volumes based on accessibility, high risk areas and magnitude of the breach.

A LiDAR flight cycle of 3 years across the Ergon Energy and Energex distribution networks allows the highest risks to be prioritised within the flight cycle and the lowest risks that have a treatment year longer than 3 years to be periodically reviewed.

Figure 2: LiDAR Program Delivery Timeline

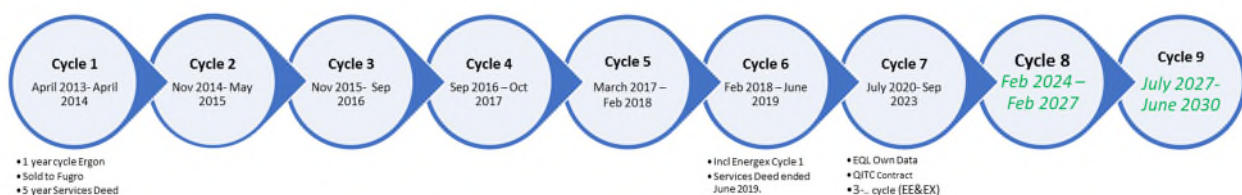


Figure 2 outlines the earlier and proposed cycles of clearance related LiDAR program and is summarised below.

- LiDAR was first used in Ergon Energy to survey its distribution network to identify clearance defects in 2015 (Cycle 3).
- Annual flight cycles to detect and identify clearance defects on the Ergon network were undertaken from 2015 to 2018.
- In 2018 (Cycle 6), the service was extended to include Energex network.
- In 2020, the 3-year cycle commenced to survey both Ergon Energy and Energex networks.
- A new contract for another 3-year cycle (Cycle 8) has commenced with the Energex network being flown first.

The table below shows the defects completed, in progress and forecast over the regulatory control periods. Note that the same defect may be represented across multiple cycles. For example, of the 15,650 defects raised in Cycle 7, there were 717 duplicates with a higher priority that were escalated meaning the Cycle 6 defect work order is left open due to possible committed resources.

Table 3: Defects Remediated by Regulatory Control Period

Cycle No	No of defects	2020-25	2025-30	2030-35	Monitor and complete with other works
Cycle 6 + carry over	35,972	3,012	242	0	1,810
Cycle 7	15,650	2,172	6,103	0	7,348
Cycle 8 (forecast)	5,669	45	4,877	747	0
Cycle 9 (forecast)	5,669	0	1,048	4,621	0

Given the overlapping flight, remediation and regulatory timeframes, the volumes are also forecast to reduce in Cycle 8 as defects are remediated and the benefits from the temperature correction algorithm are realised. In Cycle 7, temperature corrected defects represented 32% of the CTG population with 4,588 defects.

Temperature correction calculates additional sag to the line by comparing the ambient BOM temperature at time of flight to a standard temperature of 35°C. This actively identifies conductors that are calculated to breach legislative clearances on the hottest of days. While not a defect at the time of flight, these temperature corrected defects are treated as genuine defects and actioned accordingly as part of the overall clearance program.

This reduction will primarily be realised in the second half of the 2025-2030 regulatory control period where the volumes are predominantly Level 3-5 defects.

3.8. Prioritisation of Defects

Defects are categorised in the EQL Standard for Conductor Clearance Prioritisation and Remediation based on measured LiDAR conductor clearances to structures and ground while considering the severity of the regulatory breach, the location, and public accessibility to the defect. Standard rectification timeframes, defined in the Standard, are then assigned to each defects work orders. These defects levels and timeframes are as follows:

- **Emergency** – These defects are given the highest response priority and rectified as soon as practicable, normally the same day. EQL has processes in place with the LiDAR vendor whereby if during point cloud processing, an Emergency defect is suspected, normal quality assurance activities are bypassed and EQL is notified immediately. EQL then validates via desktop assessment and an 'Urgent Public Hazard' fault call is made to the relevant contact centre to dispatch a field crew for assessment and treatment. Low and high voltage conductors are categorised as an Emergency if they are equal to or below 3.5m. Clearance to structure defects receive an Emergency classification depending on their voltage and structure accessibility.
- **Level 1** - These defects are given a 9-month rectification timeframe. Accessible CTS defects that are less than 75% of the statutory clearance are assigned Level 1. For CTG defects, any defect below the statutory threshold and in a high-risk area such as schools, hospitals and agricultural areas are assigned Level 1. Level 1 defects also have a flag installed as a control measure and a customer safety advice is issued to nearby residents.
- **Level 2** – These defects are CTS defects only and receive an 18-month rectification timeframe. This level captures the remainder of the accessible structure defects and non-accessible defects that are within 66.7% of the statutory clearance requirement. Level 2 defects also have a flag installed as a control measure and a customer safety advice is issued to nearby residents.
- **Level 3** – These defects have a 3-year rectification timeframe. This level captures the remainder of the non-accessible CTS defects and sets a minimum CTG threshold of 5m for road crossing for low voltage conductors and 5.8m for high voltage conductors.
- **Level 4 & 5** – These defects have 4- and 5-year rectification timeframes respectively and capture the remainder of the CTG defects over areas other than roads, non-trafficable land and road clearances up to the statutory clearance.
- **Level 5 Monitor** – These are level 5 defects outside high-risk areas and do not cross a minor or major road. These defects are 200mm (up to 33kV) & 400mm (66kV -132kV) from being legislative compliant at locations other than roads.

4. IDENTIFIED NEED

4.1 Requirement for compliance

The design of power lines in Energy Queensland is based on AS/NZS 7000:2016. Ergon Energy has used LiDAR data, design information, modelling and environmental data to establish which overhead assets have encroached minimum legislative clearance requirements and require rectification as per Tables 3.5 to Table 3.7 of AS/NZS 7000:2016. A dedicated clearance program to manage identified clearance defects is required to address the inherent risk of legislative clearance breaches in a coordinated way.

Clearance defects using LiDAR are tested against Electrical Safety Act 2002 and the Electrical Safety Regulations 2013, where there is no alternative option other than to rectify the clearance breach.

5. OPTIONS ANALYSIS

There is a limited range of options to address known clearance issues. Once defects have been identified there is an obligation to remediate them in a timely manner. Only one option is presented using the compliance timeframes for each defect overlaid with the flight schedule. The option presented aligns with the National Electricity Rules as detailed in Appendix 1 and EQL's 'Enable Building Blocks' described in Appendix 3.

5.1 Option 1

This option remediates outstanding and forecast level 1-5 defects within compliance timeframes while monitoring and opportunistically rectifying the lowest priority defect 5 defects. The volume to be delivered is smoothed over the 2025-30 regulatory period.

Total cost of \$142.72 million in direct 2022-23 \$ is required over the 5 years.

Table 4: Cost Overview for Option 1

Item	Description \$m, direct 2022-23	2025-26	2026-27	2027-28	2028-29	2029-30
CTG	CTG Defects	2,228	2,228	2,228	2,228	2,228
	Unit Cost	\$10,521	\$10,521	\$10,521	\$10,521	\$10,521
CTS	Defects	226	226	226	226	226
	Unit Costs	\$22,563	\$22,563	\$22,563	\$22,563	\$22,563
Total	\$ million	28.54	28.54	28.54	28.54	28.54

5.2 Cost Summary

Table 5: Cost summary for 2025-30 period

Option (\$ direct 2022-23)	2025-26	2026-27	2027-28	2028-29	2029-30	Total 2025-30
Option 1	28,543,000	28,543,000	28,543,000	28,543,000	28,543,000	142,715,000

The expenditure shown in Table 5 has been phased in the context of the overall program of work for delivery and is slightly different in each year to the smoothed expenditure shown in Table 4. The overall expenditure and clearance issues remediated across the period are the same.

5.3 Risk Discussion

Given that the remediation of CTS/CTG defects is a compliance obligation under both the Electrical Safety Act 2002 and the Electrical Safety Regulations 2013, there is no alternative option other

than to rectify the clearance breach. Failing to act creates a potential risk to public safety and would place Ergon and potentially its officers at risk of breach of this legislation particularly in circumstances where there has been a failure to address a known risk. A breach of the safety legislation could result in serious consequences (including jail terms for individuals) for the organisation.

While conductors breaching legislative clearances is unacceptable, to manage overall network risk, EQL will continue to review lower risk works to ensure the management of network investments in accordance with the So Far As Is Reasonably Practicable (SFAIRP) principle.

6. RECOMMENDATION

Option 1 is the preferred option to manage legislative compliance from the LiDAR flight program.

A total of 11,139 CTG and 1,131 CTS defects are forecast to be remediated over the 2025-2030 regulatory control period at a unit rate of \$10,521 and \$22,563 respectively.

Total cost of \$142.7 million in direct 2022-23 \$ is required over the 5 years.

7. APPENDIX 1: ALIGNMENT WITH THE NATIONAL ELECTRICITY RULES

The table below details the alignment of this proposal with the NER capital expenditure requirements as set out in Clause 6.5.7 of the NER.

Table 6: Recommended Option's Alignment with the National Electricity Rules

NER capital expenditure objectives	Rationale
<p>A building block proposal must include the total forecast capital expenditure which the DNSP considers is required in order to achieve each of the following (the capital expenditure objectives):</p>	
<p>6.5.7 (a) (2) comply with all applicable regulatory obligations or requirements associated with the provision of standard control services;</p>	<p>Pursuant to the Electrical Safety Act 2002, as a person in control of a business or undertaking (PCBU), Ergon Energy has an obligation to ensure that its works are electrically safe and are operated in a way that is electrically safe.³ This duty also extends to ensuring the electrical safety of all persons and property likely to be affected by the electrical work.⁴ This proposal addresses Ergon's key obligation in relation to ensuring that it works are electrically safe.</p> <p>Clearances of electricity infrastructure to external structures and to ground are key factors in managing electrical safety risks and are compliance obligations related to Queensland Electrical Safety Regulation 2013, Schedule 4.</p>
<p>6.5.7 (a) (3) to the extent that there is no applicable regulatory obligation or requirement in relation to:</p> <ul style="list-style-type: none"> (i) the quality, reliability or security of supply of standard control services; or (ii) the reliability or security of the distribution system through the supply of standard control services, <p>to the relevant extent:</p> <ul style="list-style-type: none"> (iii) maintain the quality, reliability and security of supply of standard control services; and (iv) maintain the reliability and security of the distribution system through the supply of standard control services 	<p>While the primary purpose of this program is the delivery of safe outcomes for customers, it does also address reliability issues associated with service failures.</p>
<p>6.5.7 (a) (4) maintain the safety of the distribution system through the supply of standard control services.</p>	<p>Pursuant to the Electrical Safety Act 2002, as a person in control of a business or undertaking (PCBU), Ergon Energy has an obligation to ensure that its works are electrically safe and are operated in a way that is electrically safe.⁵ This duty also extends to ensuring the electrical safety of all persons and property likely to be affected by the electrical</p>

³ Section 29, *Electrical Safety Act 2002*

⁴ Section 30 *Electrical Safety Act 2002*

⁵ Section 29, *Electrical Safety Act 2002*

	<p>work.⁶ This proposal addresses Ergon's key obligation in relation to ensuring that it works are electrically safe.</p> <p>Clearances of electricity infrastructure to external structures and to ground are key factors in managing electrical safety risks and are compliance obligations related to Queensland Electrical Safety Regulation 2013, Schedule 4.</p>
NER capital expenditure criteria	Rationale
The AER must be satisfied that the forecast capital expenditure reflects each of the following:	
<p>6.5.7 (c) (1) (i) the efficient costs of achieving the capital expenditure objectives</p>	<p>The consistent use of the estimation system is essential in producing an efficient CAPEX forecast by enabling:</p> <ul style="list-style-type: none"> • Option analysis to determine preferred solutions to network constraints • Strategic forecasting of material, labour and contract resources to ensure deliverability • Effective management of project costs throughout the program and project lifecycle, and • Effective performance monitoring to ensure the program of work is being delivered effectively.
<p>6.5.7 (c) (1) (ii) the costs that a prudent operator would require to achieve the capital expenditure objectives</p>	<p>Attachment Cost Comparison of Energex RIN Unit Costs to the NEM outline the efficiency of the delivery of our work in comparison to other DNSPs.</p>

⁶ Section 30 *Electrical Safety Act 2002*

8. APPENDIX 2: RECONCILIATION TABLE

Table 7: Reconciliation

Expenditure	DNSP	2025-26	2026-27	2027-28	2028-29	2029-30	2025-30
Expenditure in business case \$m, direct 2022-23 in AER capex model input page	Ergon	28.54	28.54	28.54	28.54	28.54	142.72

9. APPENDIX 3: STRATEGIC ALIGNMENT

Alignment to Energy Queensland's Strategic Framework

This investment aligns with the following Energy Queensland 'Enable' Building Blocks:

Table 8: Alignment to 'Enable' Building Blocks

'Enable' Building Blocks	How this investment contributes	Impact
1. Safety The safety of our people, customers and communities is our first priority	Clearances of electricity infrastructure to external structures and to ground are key factors in managing electrical safety risks for the public under Queensland Electrical Safety Regulation 2013, Schedule 4.	High
2. Keep the lights on We will design, build and maintain a safe and reliable electricity network	This program audits and outworks solutions to ensure the overhead network is maintained in a safe state.	Medium
3. Financial sustainability We will ensure funds spent are done so prudently and we will grow our revenue streams.	Legislative compliance is the primary driver for the Clearance program.	Low
4. People & Culture Continue to build a capable & productive workforce to ensure we deliver EQL's electric life ambition.	Communicate requirements to rectify and manage defects through deployment of Standards.	Low

Regulatory and Compliance Obligations

The proposed investment addresses the following regulatory and compliance obligations.

Table 9: Alignment to Regulatory/Compliance Obligations

Regulatory/ Compliance Obligation	How this investment contributes to compliance	Implication	Residual Risk Level
Electrical Safety Act 2002	<ul style="list-style-type: none"> This Clearance program directly outworks compliance through adherence to electrical clearance in Electrical Safety Regulation 2013, Schedule 4. 	<ul style="list-style-type: none"> Directly managing compliance with Electrical Safety Regulation 2013 Schedule 4 ensures the requirements of the Electrical Safety Act 2002 are met. 	Low