ACT Government

Regulatory Plan Development Guide

Regulatory strategy – light rail stage 2

Contents

1. Overview and purpose

- The *Utilities (Technical Regulation) Act 2014* (**UTR Act**) sets out the regulatory frameworks for the regulation of licensed and unlicensed utilities in the Territory. Regulatory frameworks specific to regulation of unlicensed utilities, such as light rail utility, solar farms, and dams etc., are set out at Part 6 of the UTR Act.
- This Regulatory Plan Development Guide document (**Guide document**) summarises the regulatory and technical requirements to be considered by the light rail utility in its submissions to the Technical Regulator for obtaining regulatory approvals. These requirements are set out at Part 6 of the UTR Act and in the Technical Codes, made under Part 3 of the UTR Act.
- The Guide document is not intended to be a comprehensive list of all requirements from the Technical Codes, the UTR Act, and other applicable legislation. The utility is responsible for ensuring other relevant requirements are met in its submissions.
- References in the Guide document to 'submissions' include any operating certificate application and attachments, regulatory plan, or any other regulatory approval request under an existing operating certificate.
- The Guide document sits under the Technical Regulator's *Regulatory Strategy Light Rail Stage 2*.

2. Requirements and submissions

Pursuant to section 43(1) of the UTR Act, an unlicensed regulated utility providing, or intending to provide, a regulated utility service in the Territory, such as a light rail regulated utility network, is required to apply to the Technical Regulator for an operating certificate.

The utility's operating certificate application must be supported by a submission. The submission provides information on the proposed regulated utility service, including the infrastructure to be used for providing the regulated utility service, and is required to meet the regulatory and technical requirements from the UTR Act and the Technical Codes.

Responses to the regulatory and technical requirements and other project specific information are consolidated in a document, referred to as a Regulatory Plan. The Regulatory Plan, or any such document to that effect, is developed by the utility to support its operating certificate application to the Technical Regulator.

3. Objectives

This Guide document is intended to:

- Provide the light rail utility with a summary of the regulatory and technical requirements from the UTR Act and three technical codes:
  - *Utilities (Technical Regulation) (Light Rail Regulated Utility (Electrical) Network Code) 2021*
  - *Utilities (Technical Regulation) (Light Rail Regulated Utility (Electrical) Network Boundary Code) 2021*
  - *Utilities (Technical Regulation) (Regulated Utility Coordination Code) 2021*, and
- Assist the light utility to prepare a submission, to be appended with:
  - An *Operating Certificate* application for the design and construction of a light rail utility network, or
  - A regulatory approval request under an existing operating certificate for the design and construction of, including modifications to, the utility network

4. Abbreviations and Definitions

DC	Direct Current
DNSP	Distribution Network Service Provider
EMC	Electromagnetic Compatibility
HSEQ	Health, Safety, Environment and Quality
HV	High Voltage
IEC	Independent Electrical Certifier
ITPs	Inspection and Testing Points
LR Network Boundary Code	Utilities (Technical Regulation) (Light Rail Regulated Utility (Electrical) Network Boundary Code) Approval 2021
LR Network Technical Code	Light Rail Regulated Utility (Electrical) Network Code
LV	Low Voltage
Operating Certificate	Operating certificate issued under Part 6 of the UTR Act
Technical Code/s	Technical Code/s made under Part 3 of the UTR Act
Technical Regulator	A statutory office holder appointed under section 77 of the UTR Act
TPS	Traction Power Station
Utilities Coordination Code	Utilities (Technical Regulation) (Regulated Utility Coordination Code) Approval 2021
UTR	Utilities Technical Regulation

5. Recommended items of the regulatory plan

The regulatory and technical requirements from the UTR Act and the Technical Codes are summarised in this Guide document under some broad categories, each covering key aspects of the project, such as design development, construction, and certification of electrical works etc.

Additionally, some items regarding the utility's general information and proposed regulated utility service are covered in this Guide document. The provision of this information will assist the UTR officer in better understanding the utility's application and efficiently assessing the submission.

The provision of suitable responses to the UTR Act and the Technical Codes' requirements in the utility's submission will likely reduce the regulatory activities for the UTR officers in assessing the submission. Successful assessment of the submission will underpin the UTR's recommendation to the Technical Regulator to grant any regulatory approval.

UTR recommend that the utility follow the Guide document to prepare any submission to the Technical Regulator to assist in easier approval. However, the utility may consider addressing the UTR Act and the Technical Codes' requirements in its own way to prepare the submission.

UTR will advise the utility on any missing information in its submission and will assist on providing relevant supplementary information.

5.1 Overview of light rail project and utility network

- Executive summary
- Governance structure of the light rail utility applying for the application, including information on the joint venture (where applicable)
- Overview of the proposed utility's electrical network (including changes to existing electrical network if relevant)
  - Single Line Diagrams (**SLDs**); Bulk supply points; Stops and their supply arrangements; Metering arrangement.
  - Network (or rail) alignment; Light rail vehicles (**LRVs**) and their traction specific requirements/design.

5.2 Project summary

- Overview of the project (including major additional electrical works)
  - Summary of the scope the regulatory plan covers.
  - Identification of any related changes which will be covered under separate regulatory submissions.
- Project governance systems milestones including:
  - Key engineering systems, or services
  - Key personnel; roles and responsibilities
- Project schedule, including design, construction, test, commissioning, energisation, and handover
- Requirements for Development approval; Building approval; Environmental approvals
- Accreditation requirements of other regulator(s) if applicable.

5.3 Electrical network services, including changes to the existing network

- Proposed utility electrical Network details (including changes to existing electrical network if relevant)
  - Details and reticulation arrangements (including Combined Service Routes and Overhead infrastructure) and TPS – HV, LV, DC; Supply arrangement and boundaries with the DNSP; Redundancy considerations; Connection & Interface agreement with the DNSP (s 9.5, s 9.6, and s 9.7 of the LR Network Technical Code)

5.3.1 Technical Performance consideration

Note - section numbers in this part are references to the LR Network Technical Code

- Earthing and bonding (s 9.2) and lighting protection (s 8.3) considerations
- DC Stray Current considerations to the Technical Code requirements (s 10)
- EMC considerations to the Technical Code requirements (s 9.3 and s 9.4)
- Energy regeneration and storage considerations (s 7.3)
- Passenger Stops – supply arrangement, boundaries with the electricity distributor, and their earthing consideration
- Safe clearance and separation requirements – other networks and utilities' assets (s 9.2)
- Network Safety management considerations (s 7.1)
- Safe Work Zones (s 7.2), including measures to prevent inadvertent energisation (s 7.4)
- Harmonics and Quality of Supply considerations
  - measuring and monitoring devices, and records; actions (s 9.6) & (s 9.1)

5.4 Design development and certification

- Compliance consideration to the operational and technical requirements set out in the Technical Codes for design development, including those of compliance with the Australian Standards and applicable legislation (s 12 of the LR Network Technical Code).
- Design assurance framework – design progress methodology and review process; Stakeholder engagement and/or review requirements.

5.4.1 Independent Electrical Certifier (IEC) Arrangements (s5 & s6 of the LR Network Technical Code)

- Qualification of the Independent Electrical Certifier (**IEC**) and Electrical Supervisor(s), and work experience (**CVs**)
- Scope of works (see Appendix)
- Declaration of independence from the utility and consideration regarding the Technical Regulator approval on the IEC's appointment
- Certification process and methodology, including on-going advice to the Technical Regulator on electrical works' compliance
- Arrangements for on-going advice to the Technical Regulator on design certification
- Process on approving and notifying the Technical Regulator of the Notice of Energisation (**NOE**)

5.4.2 Electrical Supervisor(s) Arrangements (s5 of the LR Network technical code)

- Appointment notification, 'unrestricted' class licence requirements, and scope of works (Appendix: Table 1)
- Verification process and methodology; records of verification works and advice to the Technical Regulator

5.5 Competency requirements and Risk management considerations (s43(2) UTR Act)

5.5.1 Competency Arrangements

- Nature of the works entailed with the project delivery
- Job description of the people relevant to the works (workers, supervisors, engineers, and managers) – UTR's consideration is scoped to the electrical works, or where there is overlap between electrical works and other services.
- Competency related legislative requirements, plans regarding training, competency assessment, and development needs as applicable
- Framework for ensuring sub-contractor's competency.

5.5.2 Construction, Safety and Risk management

- Proposed Safety Assurance framework – demonstrating how electrical safety is considered from the design through to the handover (including public safety); Consideration of the *Work Health and Safety Act 2011* (ACT) and national rail legislation.
- Refences to relevant aspects of HSEQ management systems consideration, if any, or any similar systems.
- Process for Quality Control and Design Approvals – inspection, hold-points, audits
- Overall project risk identification, assessment, monitoring, and treatment methodology.
- Project Risk Register frameworks (design, construction; safety; project management) and on-going control (monitoring, control measures; assessment, and treatments)

5.6 Construction, Safety and Risk management

- Proposed Safety Assurance framework – demonstrating how electrical safety is considered from the design through to the handover (including public safety); Consideration of the *Work Health and Safety Act 2011* (ACT) and national rail legislation.
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- Process for Quality Control and Design Approvals – inspection, hold-points, audits
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- Project Risk Register frameworks (design, construction; safety; project management) and on-going control (monitoring, control measures; assessment, and treatments)

Table 1 – Scope items for the independent electrical certification and electrical supervision

Design	Construction works, including testing and commissioning	Before handover and operations
The broad considerations regarding design of the regulated utility services (light rail utility network) are set out at section 43(2) of the UTR Act, with certification specific consideration at section 6.1(2) of the LR Network Technical Code. The scope items regarding electrical infrastructure's independent design certification must include the following: I. Review of the design documentation, with explicit advice on whether the documents are compliant, conditionally compliant, or non-compliant with the relevant Australian Standards and applicable legislation. II. Advice on any conditionally compliant or non-compliant document(s), with further consideration to: ○ Explicit advice on the resulting issues and/or risks; and ○ The efficacy of any mitigation measures III. Advice on certification on the design drawings of the relevant section(s) of the network progressing with construction in accordance with section 6.1(2) of the LR Network Technical Code.	The light rail utility needs to demonstrate its capacity to ensure the safe, reliable, and efficient delivery of regulated utility services (light rail utility network). In accordance with Section 5 and 6.1 of the LR Network Technical Code, the utility is required to engage an IEC and electrical supervisor(s), prior to commencement of any activity in relation to the electrical works of the light rail utility network during construction, testing, and commissioning. The scope of works during construction, testing and commission phases is required to include the following items: I. Review of the construction methodology for the proposed electrical works (process, plans, and procedure) II. Review of the safety management systems III. Witnessing and attending to the electrical works quality assurance activities, including documented site inspections and the ITPs, or hold points. IV. On-going advice to the Technical Regulator on compliance with progressive construction of the electrical works in respect of their compliance with the approved documentation issued for construction and other applicable legislation. V. Endorsing the Notice of Energisations (NOEs), with advice to the Technical Regulator. VI. Record of the verification works.	The IEC certification report will support the utility's application to the Technical Regulator for an operating certificate, allowing the utility to deliver the regulated utility services using the constructed electrical infrastructure. The IEC's scope items regarding certification of the as-constructed electrical infrastructure must include the following: I. Advice on compliance (compliant, conditionally compliant, or non-compliant) of the electrical infrastructure with certified design document(s), relevant Australian Standards, and applicable legislation. II. Advice on any conditionally compliant or non-compliant electrical infrastructure, with further consideration to: ○ Explicit advice on the resulting issues and/or risks for the operational phase; and ○ The efficacy of any mitigation measures III. Advice on outstanding issues yet to be resolved before operational readiness; and/or advice on safe and fit-for-purpose electrical network and its operational readiness.

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