



Electricity

Variation to the Electricity Transmission Code – new exit point at Mount Gunson South

FINAL Decision

March 2019

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Glossary of terms

Commission	Essential Services Commission, established under the Essential Services Commission Act 2002
Code	Electricity Transmission Code TC/09.1
ElectraNet	ElectraNet Pty Ltd
Electricity Act	Electricity Act 1996
ESC Act	Essential Services Commission Act 2002
Treasurer	Treasurer for the South Australian Government
Minister	Minister for Energy and Mining

1 Overview

In October 2018, ElectraNet Pty Ltd (**ElectraNet**) advised the Essential Services Commission (**Commission**) that it is constructing a new transmission network exit point at Mount Gunson South, approximately 150km north of Port Augusta.

The Mount Gunson South exit point will supply the OzMinerals Carrapateena Mine facility. It is expected to be energised in May 2019. ElectraNet intends the Mount Gunson South exit point to be temporary, and will supply the Carrapateena Mine until a permanent exit point, with greater capacity, is established in the vicinity of Port Augusta.¹

As it is required to do under clause 2.12 of the Electricity Transmission Code TC/09.1 (**Code**), ElectraNet has proposed a reliability standard for the new exit point. Its proposed reliability standard, Category 1, is the lowest reliability standard provided for in the Code, and is consistent with that applying to other single-customer transmission exit points.

OzMinerals has confirmed that a Category 1 reliability standard is acceptable and consistent with the connection agreement between it and ElectraNet. The Commission's final decision is to accept ElectraNet's proposal, and therefore to amend the Code to apply a Category 1 reliability standard to the Mount Gunson South exit point.

2 Background

ElectraNet operates the main electricity transmission network in South Australia and holds an appropriate licence issued by the Commission pursuant to Part 3 of the Electricity Act 1996 (**Electricity Act**).

As a condition of its licence, ElectraNet is required to comply with the Code, an industry code made by the Commission pursuant to section 28 of the Essential Services Commission Act 2002 (**ESC Act**). The Code's requirements include exit point reliability standards, for which there are five categories (see clauses 2.5 to 2.9 of the Code).

In reviewing and considering variations to the Code, the Commission seeks to meet its primary statutory objective (as specified in section 6 of the ESC Act): to protect the long-term interests of South Australian consumers with respect to the price, quality and reliability of essential services.

¹ ElectraNet has yet to determine the location of the permanent connection point, and will advise the Commission of this in due course. At that time, ElectraNet advises it will seek approval to disconnect Mount Gunson South in accordance with clause 2.17.1 of the Code.

3 Code variation process

As the Mount Gunson South exit point will provide prescribed transmission services, clause 2.12 of the Code requires ElectraNet to submit a proposed reliability standard to the Commission.² The Code also requires ElectraNet to have regard to specific matters in making its proposal (see Appendix 1).

This variation directly affects two stakeholders, ElectraNet and OzMinerals. OzMinerals will be the only customer supplied by the Mount Gunson South exit point. In making its decision on ElectraNet's proposed variation, the Commission conducted targeted consultation with OzMinerals and the Minister for Energy and Mining (with whom the Commission must consult before varying any Code).³

ElectraNet proposed a reliability standard of Category 1, and OzMinerals has confirmed that a Category 1 reliability standard is acceptable and consistent with the connection agreement between ElectraNet and OzMinerals.

The Minister for Energy and Mining did not raise any objections to ElectraNet's proposal.

4 Final decision

The Commission's final decision is to accept ElectraNet's proposal and to amend the Code to apply a Category 1 reliability standard to the Mount Gunson South exit point, to the extent that the exit point is used to provide prescribed transmission services.

The Commission has made that decision for the following reasons:

- ▶ The proposed reliability standard directly impacts one customer (OzMinerals) and that customer has confirmed that the proposed standard is acceptable and consistent with its connection agreement with ElectraNet.
- ▶ There are no indirect impacts of the proposal on the reliability of supply experienced by other customers.⁴ While the process of constructing and energising the new connection may involve a planned outage affecting other customers in Woomera, such an outage is typical when establishing a new connection on a long, radial transmission line and is independent of the reliability standard that may be applied to the exit point. Further, the Code obliges ElectraNet to: minimise the number and duration of any interruption (clause 3.3.1) and coordinate planned outages with affected transmission customers, distributors or generators (clauses 3.2.1 and 3.2.2).
- ▶ The connection point will be temporary, and provide services only until a permanent connection point to OzMinerals is established. There is no prospect of other customers using the temporary connection point and a further review of the relevant reliability standard for the permanent connection point will occur prior to its establishment.
- ▶ The proposed reliability standard is consistent with the standard that currently applies to other transmission exit points in the region that supply a single customer (such as Woomera and Pimba).

² ElectraNet advises that the Mount Gunson South substation will provide prescribed transmission services, and the costs of its construction will be met by OzMinerals as a negotiated service. The Code defines prescribed services as having the same meaning as in Chapter 10 of the National Electricity Rules.

³ As required by section 28(3) of the Essential Services Commission Act 2002.

⁴ Obligations on OzMinerals to ensure that its operations do not negatively impact on reliability and power system security are contained in its connection agreement with ElectraNet.

The Category 1 reliability standard is described in clause 2.5 of the Code (see Appendix 1). It requires ElectraNet to:

- ▶ provide a single line and transformer to meet 100 percent of agreed maximum demand, and
- ▶ in the event of an interruption:
 - use its best endeavours to restore line capacity within two days of the commencement of the interruption
 - use its best endeavours to restore transformer capacity as soon as practicable, and
 - in any event, restore transformer capacity within eight days of the commencement of the interruption.

5 Code amendment

To implement this final decision, the Commission will amend the table in clause 2.4.1 of the Code. The table categorises exit points for the purposes of setting planning and reliability standards. The first row of the table will be amended as shown in Table 1.

Mount Gunson South exit point will be subject to the reliability standards only to the extent that the exit point is used to provide prescribed transmission services to a transmission customer (as indicated with an asterisk in the table in clause 2.4.1, and explained in clause 2.4.2). This is consistent with the application of reliability standards at other single-customer exit points.

The Commission will also use this opportunity to correct two typographical errors, as highlighted in Table 1:

- ▶ Leigh Creek South and Mannum/Adelaide 1 will be correctly listed as two separate exit points, and
- ▶ The duplicate listing of Murray/Hahndorf 1 will be removed.

Table 1: Extracted row from table in clause 2.4.1 of the Code

Category	Exit point	
Category 1	<ul style="list-style-type: none"> • Baroota • Back Callington * • Davenport * • Florieton SWER • Kanmantoo • Leigh Creek Coal * • Leigh Creek South • Mannum/Adelaide 1 * • Mannum/Adelaide 2 * • Mannum/Adelaide 3 * • Middleback* • Millbrook * • Morgan/Whyalla 1 * • Morgan/Whyalla 2 * • Morgan/Whyalla 3 * • Morgan/Whyalla 4 * • Mt Gunson • Mt Gunson South* • Murray/Hahndorf 1 * 	<ul style="list-style-type: none"> • Murray/Hahndorf 1 * • Murray/Hahndorf 2 * • Murray/Hahndorf 3 * • Neuroodla • Pimba * • Roseworthy* • Stony Point (Whyalla Refiners) - distribution • Stony Point* • Whyalla Terminal LMF • Woomera*

6 Appendix

Electricity Transmission Code extracts

Note: A transmission system with "N" reliability means that it has the ability to convey the agreed maximum demand, provided that all of the network elements are in service. The loss of a single transmission element (a line, a transformer or other associated equipment) will interrupt transmission services to customers.

2.5 Category 1 exit points

2.5.1 In respect of Category 1 exit points, a transmission entity must, subject to clause 2.5.2:

- (a) provide "N" equivalent line capacity for at least 100 percent of the agreed maximum demand for the exit point; and,
- (b) in the event of an interruption to the provision of prescribed transmission services at the exit point use its best endeavours to restore "N" equivalent line capacity at the exit point within a maximum of 2 days after the commencement of the interruption; and
- (c) provide "N" equivalent transformer capacity for at least 100 percent of the agreed maximum demand for the exit point; and
- (d) in the event of an interruption to the provision of prescribed transmission services at the exit point:
 - i. use its best endeavours to restore "N" equivalent transformer capacity at the exit point as soon as practicable; and
 - ii. in any event, restore "N" equivalent transformer capacity at the exit point within 8 days of the commencement of the interruption.

2.5.2 A transmission entity may implement an alternative solution or combination of solutions to those required by clause 2.5.1, to deliver the same or better outcomes in terms of the failure rate, the restoration time and the capacity, otherwise required to be achieved under clause 2.5.1.

2.12 New exit points

2.12.1 Where a new exit point, which will provide prescribed transmission services, is to be owned and operated by a transmission entity, the transmission entity must submit the applicable reliability standards for that exit point to the Commission for approval.

2.12.2 Any standards submitted under clause 2.12.1 must be developed having regard to:

- (a) any recommendations of AEMO;
- (b) the size of the load;
- (c) the value of lost load and types of customers;
- (d) the number of customers; and
- (e) the cost of installation of transmission assets relevant to the exit point.



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