# IN THE HIGH COURT OF NEW ZEALAND AUCKLAND REGISTRY

# I TE KŌTI MATUA O AOTEAROA TĀMAKI MAKAURAU ROHE

**UNDER** Parts 4 and 6 of the Commerce Act 1986

**BETWEEN COMMERCE COMMISSION,** a body corporate

established under section 8 of the Commerce Act 1986 having its offices at Level 6, 44 The Terrace,

Wellington

Plaintiff

**AND VECTOR LIMITED,** a company having its

registered office at 101 Carlton Gore Road,

Newmarket, Auckland

Defendant

#### **AGREED SUMMARY OF FACTS**

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#### **AGREED SUMMARY OF FACTS**

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## 1. INTRODUCTION

- 1.1 The contravening conduct in this case relates to the defendant's failure to comply with quality standards imposed on it under s 52P of the Commerce Act 1986 (the Act) for the years ending:
  - (a) 31 March 2015 (the 2015 Assessment Period); and
  - (b) 31 March 2016 (the 2016 Assessment Period).
- 1.2 The defendant, Vector Limited (Vector), is a company with its registered office at 101 Carlton Gore Road, Newmarket, Auckland. Vector carries on business as an electricity and gas distribution company in Auckland. Vector is a supplier of electricity lines services that are subject to regulation under Part 4 of the Act, including quality standards imposed on it under s 52P.
- 1.3 Under s 87(1)(a) of the Act, the Court may order a person to pay a pecuniary penalty if the court is satisfied that the defendant has contravened any such price-quality requirements applying to regulated services. In setting the amount of pecuniary penalty, the court must take into account all of the matters listed in s 87(4):
  - (a) the nature and extent of the contravention (see Part 6 below);
  - (b) the nature and extent of any loss or damage suffered by any person as a result of the contravention (see Part 7 below);
  - (c) the circumstances in which the contravention took place (including whether the contravention was intentional, inadvertent, or caused by negligence) (see Part 8 below); and

(d) whether or not the person has previously been found by the court in proceedings under this Part to have engaged in similar conduct (see Part 9 below).

#### 2. PART 4 OF THE COMMERCE ACT 1986

- 2.1 Part 4 of the Act provides for the regulation of goods and services in markets where there is little or no competition and little or no likelihood of a substantial increase in competition.
- 2.2 The electricity lines services supplied by Vector are subject to:
  - (a) information disclosure regulation; and
  - (b) price-quality regulation.
- 2.3 The purposes of price-quality regulation include:
  - (a) limiting the ability of suppliers to extract excessive profits; and
  - (b) providing incentives to suppliers to provide services at a quality that reflects consumer demands.
- 2.4 Under the Act, the Commerce Commission (Commission) is required to publish input methodologies that set out the rules, requirements and processes that apply to regulation of services under Part 4 of the Act.
- 2.5 Section 52P of the Act requires the Commission to make determinations specifying the requirements that apply to each regulated supplier.

## 3. PRICE-QUALITY REQUIREMENTS

- 3.1 Vector is a supplier of regulated services to whom a determination under s 52P of the Act applies.
- 3.2 The relevant s 52P determinations are:
  - (a) the Electricity Distribution Services Default Price-Quality Path Determination 2010 dated 30 November 2009 (**DPP 2010**) which applied from 1 April 2010 to 31 March 2013;

- (b) the Electricity Distribution Services Default Price-Quality Path Determination 2012 dated 30 November 2012 (**DPP 2012**) which applied from 1 April 2013 to 31 March 2015; and
- (c) the Electricity Distribution Services Default Price-Quality Path Determination 2015 dated 28 November 2014 (**DPP 2015**) which applies from 1 April 2015 to 31 March 2020,

(together, "the DPPs").

3.3 DPP 2015 has been amended since 28 November 2014, but the relevant provisions were not affected.

## 4. APPLICABLE QUALITY STANDARDS

#### 4.1 Under the DPPs:

- (a) Vector supplies "**Electricity Lines Services**" as defined in the DPPs.
- (b) Vector is a "Non-exempt EDB" as defined in the DPPs and where "EDB" refers to an electricity distribution business.
- (c) An "Assessment Period" is defined:
  - (i) in DPP 2010 and DPP 2012 as a period of 12 months ending on an "Assessment Date", where Assessment Date means a date as at which compliance with the default price-quality path must be demonstrated, being 31 March of each of the years 2011 to 2015; and
  - (ii) in DPP 2015 as a 12 month period commencing on 1 April and ending on 31 March of the following year for which compliance with price-quality requirements is assessed.
- (d) The quality of a Non-exempt EDB's Electricity Lines Services is assessed under the DPPs in terms of the system average interruption duration index (**SAIDI**) and system average interruption frequency index (**SAIFI**).

- (e) SAIDI is a measure of the average outage duration per customer over the Assessment Period, and is expressed in terms of minutes per Assessment Period.
- (f) SAIFI measures the average number of service interruptions per customer over the Assessment Period.
- 4.2 The relevant quality standards are set out in clause 9 of the DPPs (Quality Standards):
  - (a) Clause 9.1 of DPP 2010 provides:

Compliance with Quality Standards

A Non-exempt EDB must, in respect of each Assessment Period other than the First Assessment Period, either:

- (a) comply with the annual reliability assessment specified in clause 9.2 for that Assessment Period; or
- (b) have complied with those annual reliability assessments for the two immediately preceding extant Assessment Periods.
- (b) Clause 9.1 of DPP 2012 provides:

Compliance with Quality Standards

A Non-exempt EDB must, in respect of each Assessment Period, either:

- (a) comply with the annual reliability assessment specified in clause 9.2 for that Assessment Period; or
- (b) have complied with those annual reliability assessments for the two immediately preceding extant Assessment Periods.
- (c) Clause 9.1 of DPP 2015 provides:

Compliance with Quality Standards

A Non-exempt EDB must, in respect of each Assessment Period, either:

- (a) comply with the annual reliability assessment specified in clause 9.2 for that Assessment Period; or
- (b) have complied with the annual reliability assessments in each of the two preceding Assessment Periods.
- 4.3 To comply with the annual reliability assessments, clause 9.2 of the DPPs provides that:
  - (a) A Non-exempt EDB's SAIDI assessed value for a given
     Assessment Period must not exceed the maximum specified in
     the relevant DPP (SAIDI Limit); and
  - (b) A Non-exempt EDB's SAIFI assessed value for a given Assessment Period must not exceed the maximum specified in the relevant DPP (SAIFI Limit).
- 4.4 The purpose of the Quality Standards is to hold regulated suppliers responsible for the quality of their Electricity Lines Services and the reliability of their electricity distribution networks.

### 5. APPLICABLE SAIDI AND SAIFI LIMITS

- 5.1 The SAIDI and SAIFI Limits for Vector for the period 1 April 2011 to 31 March 2013 (that is, the 2012 and 2013 Assessment Periods) were calculated in accordance with Schedule 3 of DPP 2010 as follows:
  - (a) the SAIDI historic average, based on the relevant reference period, was 114;
  - (b) the SAIDI Limit was 127; and
  - (c) the SAIFI Limit was 1.86.
- 5.2 The SAIDI and SAIFI Limits for Vector for the period 1 April 2013 to 31 March 2015 (that is, the 2014 and 2015 Assessment Periods)

were calculated in accordance with Schedule 2 of DPP 2012 as follows:

- (a) the SAIDI historic average, based on the relevant reference period, was 114;
- (b) the SAIDI Limit was 127; and
- (c) the SAIFI Limit was 1.86.
- 5.3 The SAIDI and SAIFI Limits for Vector the period 1 April 2015 to 31 March 2020 (that is, the 2016 to 2020 Assessment Periods) are set out in Schedule 4A of DPP 2015 as follows:
  - (a) the SAIDI historic average, based on the relevant reference period, was 96;
  - (b) the SAIDI Limit is 104.173; and
  - (c) the SAIFI Limit is 1.395.
- 5.4 The SAIDI and SAIFI Limits are set to allow for a reasonable degree of variability in performance.
  - (a) The limits are set at one standard deviation above the individual Non-exempt EDB's historical SAIDI and SAIFI averages, as measured over the applicable reference period;
  - (b) For a Quality Standard to be contravened, a Non-exempt EDB must exceed the annual reliability assessment in the particular year and in either of the prior two years; and
  - (c) To limit the impact of one-off events such as severe storms, the number of SAIDI minutes and SAIFI incidents that can arise in a single day are subject to upper limits. This process is known as normalisation.
- 5.5 DPP 2015 also includes a Quality Incentive Scheme (**Scheme**) which links a Non-exempt EDB's revenue to the reliability of the network.

#### 6. NATURE AND EXTENT OF CONTRAVENTIONS

- 6.1 Under clause 11 of the DPPs, every Non-exempt EDB is required to submit an annual compliance statement for each Assessment Period within 50 working days following the end of the Assessment Period.
- 6.2 The compliance statement must include:
  - (a) SAIDI and SAIFI assessed values, as provided for by the DPPs, for the Assessment Period;
  - (b) a description of the policies and procedures used for recording the SAIDI and SAIFI assessed values for the Assessment Period; and
  - (c) the SAIDI and SAIFI calculations used in determining the SAIDI and SAIFI assessed values.
- 6.3 The SAIDI assessed values stated by Vector in its compliance statements were as follows:
  - (a) for the 2012 Assessment Period, 96;
  - (b) for the 2013 Assessment Period, 96;
  - (c) for the 2014 Assessment Period, 141;
  - (d) for the 2015 Assessment Period, 155; and
  - (e) for the 2016 Assessment Period, 117.
- 6.4 The SAIFI assessed values stated by Vector in its compliance statements were as follows:
  - (a) for the 2012 Assessment Period, 1.12;
  - (b) for the 2013 Assessment Period, 1.01;
  - (c) for the 2014 Assessment Period, 1.45;
  - (d) for the 2015 Assessment Period, 1.84; and
  - (e) for the 2016 Assessment Period, 1.11.

- 6.5 The correct SAIDI assessed value for the 2015 Assessment Period is 178. Vector's calculation of 155 was based on applying a single boundary value for an event spread over multiple days (under the "Major Event Day" methodology), whereas that approach is incorrect.
- 6.6 Vector contravened the Quality Standard for the 2015 Assessment Period.
  - (a) Vector failed to comply with the annual reliability assessment for the 2015 Assessment Period because Vector's SAIDI assessed value was 178 and therefore exceeded the 2015 SAIDI Limit of 127 stated above at paragraph 5.2(a); and
  - (b) Vector failed to comply with the annual reliability assessment for the 2014 Assessment Period because Vector's SAIDI assessed value was 141 and therefore exceeded the 2014 SAIDI Limit of 127 stated above at paragraph 5.2(a).
- 6.7 Vector contravened the Quality Standard for the 2016 Assessment Period.
  - (a) Vector failed to comply with the annual reliability assessment for the 2016 Assessment Period because Vector's SAIDI assessed value was 117 and therefore exceeded the 2016 SAIDI Limit of 104.173 stated above at paragraph 5.3(a);
  - (b) Vector failed to comply with the annual reliability assessment for the 2015 Assessment Period because Vector's SAIDI assessed value was 178 and therefore exceeded the 2015 SAIDI Limit of 127 stated above at paragraph 5.2(a); and
  - (c) Vector failed to comply with the annual reliability assessment for the 2014 Assessment Period because Vector's SAIDI assessed value was 141 and therefore exceeded the 2014 SAIDI Limit of 127 stated above at paragraph 5.2(a).
- 6.8 In summary, Vector's annual reliability performance for the 2012 to 2016 Assessment Periods was as follows:

Assessment Period	SAIDI Limit	Assessed SAIDI	SAIFI Limit	Assessed SAIFI	Annual reliability assessment	Quality Standard
2012	127	96	1.86	1.12	Within	Compliant
2013	127	96	1.86	1.01	Within	Compliant
2014	127	141	1.86	1.45	Exceeded	Compliant
2015	127	178	1.86	1.84	Exceeded	Contravened
2016	104	117	1.40	1.11	Exceeded	Contravened

#### 6.9 For the 2014 Assessment Period:

- (a) Vector had an average of 540,125 Installation Control Points (**ICPs**), which is used to represent the number of customers.
- (b) The total non-normalised service interruption experienced by Vector's customers was 81,558,875 minutes (1,359,315 hours) or 151 minutes per customer.
- (c) After normalisation, the total service interruption experienced by Vector's customers was 76,157,625 minutes (1,269,294 hours) or 141 minutes per customer.
- (d) After normalisation, the total service interruption experienced by Vector's customers above the SAIDI Limit was 7,399,713 minutes (123,329 hours) or 14 minutes per customer.
- (e) Vector therefore exceeded its SAIDI Limit by 14 SAIDI minutes, or 11 per cent.

#### 6.10 For the 2015 Assessment Period:

- (a) Vector had an average of 540,539 ICPs / customers.
- (b) The total non-normalised service interruption experienced by Vector's customers was 268,215,452 minutes (4,470,258 hours) or 496 minutes per customer.
- (c) After normalisation, the total service interruption experienced by Vector's customers was 96,215,742 minutes (1,603,599 hours) or 178 minutes per customer.

- (d) After normalisation, the total service interruption experienced by Vector's customers above the SAIDI Limit was 27,675,597 minutes (461,260 hours) or 51 minutes per customer.
- (e) Vector therefore exceeded its SAIDI Limit by 51 SAIDI minutes, or 40 per cent.

#### 6.11 For the 2016 Assessment Period:

- (a) Vector had an average of 545,968 ICPs / customers.
- (b) The total non-normalised service interruption experienced by Vector's customers was 73,541,890 minutes (1,225,698 hours) or 135 minutes per customer.
- (c) After normalisation, the total service interruption experienced by Vector's customers was 63,878,256 minutes (1,064,638 hours) or 117 minutes per customer.
- (d) After normalisation, the total service interruption experienced by Vector's customers above the SAIDI Limit was 6,988,390 minutes (116,473 hours) or 13 minutes per customer.
- (e) Vector therefore exceeded its SAIDI Limit by 13 SAIDI minutes, or 13 per cent.
- 6.12 Vector complied with its SAIFI limit in the 2014, 2015 and 2016 Assessment Periods.

#### 7. LOSS OR DAMAGE SUFFERED

- 7.1 Outages on an EDB's distribution network (whether planned or unplanned) can cause that EDB's customers to suffer loss or damage. Such harm may include the cost of back-up power and/or other mitigation steps. Examples of the types of harm that particular categories of customers may typically suffer include:
  - (a) for industrial consumers, interruption to industrial processes (such as the ability to receive raw materials, to conduct production processes, and to distribute the end product), and consequential loss including staff downtime, wasted product

- and the costs of cleaning and disposal required to recalibrate the supply chain;
- (b) for service-based commercial consumers, forced closure / interruption of service with consequential loss of revenue, loss of perishable items and wasted staff costs; and
- (c) for residential consumers, loss of perishable items, loss of heating and hot water, and revenue for consumers who work from home.
- 7.2 Vector's contraventions of the Quality Standards for the 2015 and 2016 Assessment Periods have caused significant loss to consumers.
- 7.3 The parties have not been able to agree on a quantification of the loss. However, the parties have agreed that the extent of loss caused by the contraventions is at least equivalent to the penalty that the parties intend to propose (\$5,500,000 before discount) and that the extent of loss caused by the contraventions is such that the proposed penalty is warranted.

#### 8. CIRCUMSTANCES OF THE CONTRAVENTIONS

- 8.1 Vector is the largest EDB in New Zealand.
- 8.2 There has been a material deterioration in Vector's service quality in the 2014 to 2016 Assessment Periods from the relevant reference period (Vector's recent performance is reflected in the table in paragraph 6.8 above).
- 8.3 Vector's conduct was a key driver of its contraventions of the Quality Standards. Aspects of Vector's practices were not in accordance with good industry practice.
- 8.4 Vector accepts that it is at fault for failing to meet such aspects of good industry practice and those failures have caused each of Vector's Quality Standard contraventions, or caused that contravention to be greater than it would otherwise have been.

- 8.5 Vector accepts that the degrees to which it has fallen short of good industry practice are such that they warrant the penalty that the parties have agreed to recommend to the Court.
- 8.6 Particular instances of Vector failing to act in accordance with good industry practice are as follows:

## Governance of compliance with the Quality Standards

- (a) Aspects of Vector's governance of compliance with the Quality Standards failed to meet good industry practice, as follows:
  - (i) Vector was not sufficiently critical of its own performance in managing SAIDI, and instead justified increased SAIDI as being beyond its control.
  - (ii) Vector underestimated the growing risk of noncompliance, such that: (i) it was not given sufficient priority in its corporate risk registers, and (ii) the controls proposed to manage the risk, prior and during the contraventions, were inadequate.
  - (iii) Vector failed to have methods to predict and plan for the effects of foreseeable increased traffic congestion over time, such as countering traffic "hot-spots" by relocating parts of depots, allocating work crews in a manner that enabled faster response times and other resourcing improvements.

## Asset life cycle management practices

- (b) Vector's life cycle asset management processes and framework were generally of an appropriate standard.<sup>1</sup>
- (c) However, aspects of Vector's asset life cycle management practices failed to meet good industry practice, as follows:

<sup>&</sup>lt;sup>1</sup> Asset life cycle management processes are put in place to ensure sustainable delivery of services to a defined standard at an effective cost. Good industry practice requires that asset management processes are based on good asset condition information and a strong risk management analytical framework.

- (i) Fault cause data suggests that the condition/health of certain overhead asset types and underground assets have deteriorated since the beginning of DPP 2012, which corresponds with a growing list of assets that are "near end of life", but with very few being addressed during that specified timeframe.<sup>2</sup>
- (ii) Vector did not have a sufficiently holistic and agile asset management approach, which was necessary for it to respond appropriately to the increasing risk of noncompliance through DPP 2012 and into DPP 2015 for example, it did not have a proactive replacement program at the time for small sized conductors, and Vector's asset management plans did not at that stage identify any response or root cause of the increase in underground outages (except for the Penrose incident referred to below) which inhibited Vector's ability to predict the effects of trends on reliability and compliance and put in place active strategies to manage these effects.
- (iii) Vector failed to routinely carry out post-implementation reviews of important projects and programs following their roll out, to develop learnings that can be applied to future projects and programs.

## Reliability management

- (d) Vector's data systems and reliability reporting broadly met good industry practice. Vector has good systems to monitor and report on reliability, and undertakes the analysis and produces the reports necessary to advise the business on the factors driving unreliability.
- (e) However, aspects of Vector's approach to managing reliability did not meet good industry practice, as follows:

<sup>&</sup>lt;sup>2</sup> Deteriorating asset health is likely to contribute to non-compliance events.

- (i) Vector did not have a consolidated and documented strategic reliability management plan, which would have helped to identify key issues and solution options, provided some framework for assessing solutions and helped to communicate important matters throughout the business.
- (ii) After exceeding SAIDI in the 2014 Assessment Period,

  Vector failed to consider available options to address the
  risk of future non-compliance, with the exception of its
  adoption of the 40-worst feeder program<sup>3</sup>

## Vegetation management

- (f) Faults caused by vegetation are a substantial cause of outages for all EDBs in New Zealand and controlling vegetation in the vicinity of network assets is an important part of maintaining service reliability. To that end, the Electricity (Hazards from Trees) Regulations 2003 (**Tree Regulations**) give EDBs rights to require landowners to trim or remove trees that encroach upon the "growth limit zone" – a defined area around a conductor.
- (g) Vector's practices for managing vegetation failed to meet good industry practice, as follows:
  - (i) Vector should have been aware of the risk of noncompliance due to the increasing number of vegetationrelated outages, and yet it failed to put in place sufficiently pro-active plans and methods to address those issues in the course of DPP 2012 and DPP 2015.
  - (ii) Vector should have placed greater focus on managing 'out-of-zone vegetation' (ie. vegetation outside the growth limit defined in the Tree Regulations) that posed potential reliability hazards by seeking agreements with relevant tree owners (Vector needed tree owners'

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<sup>&</sup>lt;sup>3</sup> The 40 worst-feeder program involved Vector identifying the 40 worst feeders on its network through long-term SAIDI, SAIFI and event data and taking steps to improve their reliability.

agreement for such vegetation management because it did not have statutory authorisation under the Tree Regulations to cut 'out-of-zone' vegetation at its own initiative).

- (iii) Vector did not redirect expenditure to managing vegetation when this would have been appropriate risk-management and/or more efficient than dealing with the consequences of worsening vegetation trends in the form of increases in SAIDI minutes.
- (iv) Vector's arrangements with its vegetation service provider: lacked sufficient strategic direction, oversight and control; were insufficiently audited; and did not sufficiently incentivise the provider to manage reliability and compliance.

# Arrangements with field service providers

- (h) Vector's contractual arrangements with its field service providers ("FSPs") generally met good industry practice.<sup>4</sup>
- (i) However, aspects of Vector's arrangements with FSPs failed to meet good industry practice, as follows:
  - (i) The FSP contracts did not include an incentive focused specifically on the average duration of a customer supply interruption over the measurement period, and did not include any penalty for non-performance (other than not achieving the bonus).
  - (ii) The roles and responsibilities for delivery of field services placed too much responsibility on the FSPs to identify and prioritise work, instead of Vector taking a greater role in the strategic direction of field services delivery.

<sup>&</sup>lt;sup>4</sup> Vector contracts with third parties that undertake work on the network on Vector's behalf (for example, maintenance of assets and restoration of faults). Vector's contracted field service providers are Electrix and Northpower.

## Management of Penrose outage

- (j) The Electricity Authority commissioned a report into a major outage arising from a fire at the Penrose substation on or around 5 October 2014. The parties agree that the Electricity Authority's report found that Vector failed to take appropriate steps prior to that fire which would have minimised the impact of that fire on consumer outages, including:<sup>5</sup>
  - failing to identify and manage the risks associated with co-location of multiple power cables in a single cable trench installation, especially given the criticality of the Penrose trench to electricity supplies over a wide area; and
  - (ii) failing to take appropriate risk control and mitigation steps for a high impact low probability event, to address the risk of fire ignition due to cable joint failures in in-air situations and the risk posed by co-location of multiple cables in an in-air trench.
- (k) Vector is legally challenging decisions made by Utilities Disputes Limited in favour of a small number of large commercial customers that relied in part on the Electricity Authority's findings in its Penrose report: [CIV-2017-404-605].
- 8.7 Vector failed to either incur the expenditure required to comply with the Quality Standards, or to apply for a customised price-quality path. Vector's reported return on investment for 2015 and 2016 was 5.59% and 5.64%. If Vector had incurred the expenditure required, Vector's return on investment would have been lower.
- 8.8 Factors other than those in paragraph 8.6 above were relevant to Vector's contraventions of the Quality Standards:

<sup>&</sup>lt;sup>5</sup> Electricity Authority "Penrose substation fire - Report on the inquiry conducted by the Electricity Authority" dated 20 November 2015.

#### Wind

- (a) Faults caused by high winds are a substantial cause of outages for all EDBs in New Zealand.
- (b) The effect of wind speeds on Vector's distribution network in the years in which Vector exceeded its SAIDI limit were as follows:
  - (i) In the 2014 Assessment Period, the average wind speed in Vector's supply area was marginally higher than in a typical year, but the average over the year was not materially higher than in several other years in which Vector had not exceeded its SAIDI limit, and the wind speed was therefore at a level that could reasonably have been expected by Vector in complying with the SAIDI limit.
  - (ii) In the 2015 Assessment Period, there were a significantly higher number of extreme wind speed events in Vector's supply area (defined as events where average wind speed was greater than 70km/hr) than in an average year. It is likely that, even if Vector had met good industry practice in the 2015 Assessment Period, it would still have exceeded its SAIDI limit due to this higher number of extreme wind events. However, Vector's failure to meet good industry practice that year in other respects of its operations in the manner outlined in paragraph 8.6 exacerbated the extent of the contravention in the 2015 Assessment Period.
  - (iii) In the 2016 Assessment Period, wind speed was relatively benign relative to the reference period.

## Health and Safety Practices

(c) During DPP 2012, Vector implemented changes to its health and safety practices. The most significant of those changes was to substantially limit the circumstances in which Vector and its FSPs undertook work on energised (i.e. 'live') lines.

- (d) The health and safety practices implemented by Vector were within the scope of good industry practice, although they represented a relatively risk-averse approach with regard to managing safety risks.
- (e) The best estimate of the extent to which Vector's changes to its health and safety practices increased SAIDI is as follows:
  - (i) In the 2014 Assessment Period, 6.3 minutes.
  - (ii) In the 2015 Assessment Period, 7.6 minutes.
  - (iii) In the 2016 Assessment Period, 9.4 minutes.
- (f) Although Vector's health and safety practices were within the scope of good industry practice, Vector failed to act in accordance with good industry practice by omitting to take steps open to it to mitigate or prevent the effect on SAIDI of those changed health and safety practices and therefore ensure those changes in practice did not materially affect is ability to comply with the Quality Standards.

## Traffic

- (g) Traffic in Vector's supply area during relevant Assessment Periods was heavier than it had been in prior years. A congestion measure published by TomTom indicated that traffic congestion in Auckland increased from 28% in 2011 to 32% in 2014, 33% in 2015 and 38% in 2016.
- (h) The likely extent to which the increases to Auckland traffic congestion have in turn increased SAIDI, relative to 2011, are as follows:
  - (i) In the 2014 Assessment Period, 1.5 minutes.
  - (ii) In the 2015 Assessment Period, 2 minutes.
  - (iii) In the 2016 Assessment Period, 2.5 minutes.
- (i) While traffic congestion in Auckland had worsened in the relevant years, that traffic congestion might have resulted was

entirely foreseeable and is an issue faced by many EDBs.
Because of Vector's failure to take appropriate steps to avoid increased SAIDI minutes due to Auckland's worsened traffic congestion, any SAIDI minutes lost due to traffic congestion remained in Vector's control.

# 9. PREVIOUS CONDUCT

9.1 There is no other relevant previous conduct to take into account in terms of s 87(4).

Date: 12 October 2018

L A O'Gorman Solicitor for plaintiff

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