

**Public** version

## Fibre Price-Quality Path Determination 2021

[2021] NZCC 27

**The Commission:** Tristan Gilbertson  
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**Date of determination:** 16 December 2021



**Tristan Gilbertson**  
Telecommunications Commissioner

Dated at Wellington this 16th day of December 2021

COMMERCE COMMISSION

Wellington, New Zealand

<b>Determination history</b>		
<b>Determination date</b>	<b>Decision Number</b>	<b>Determination name</b>
16 December 2021	[2021] NZCC 27	Fibre Price-Quality Path Determination 2021

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Under Part 6 of the Telecommunications Act 2001, the Commerce Commission makes the following determination:

1. Title

1.1 This determination is the Fibre Price-Quality Path Determination 2021.

2. Commencement

2.1 This determination comes into force on 1 January 2022.

3. Application

3.1 This determination applies to **Chorus** during the **first regulatory period**.

4. Interpretation

4.1 In this determination, unless stated otherwise—

4.1.1 terms that are defined in the **Act** but not in this determination have the same meanings as in the **Act**;

4.1.2 terms that are defined in the **IM determination** but not in this determination have the same meanings as in the **IM determination**;

4.1.3 any reference to a period of time is interpreted in accordance with s 54 of the Legislation Act 2019;

4.1.4 any reference to legislation includes a reference to that legislation as amended, consolidated, or substituted;

4.1.5 any reference to terms from legislation in this determination has the meaning given in the applicable legislation at the time it is applied;

4.1.6 any reference to a Schedule is a reference to a Schedule in this determination, unless otherwise specified;

4.1.7 any reference to “includes” means “includes, but is not limited to”;  
and

4.1.8 a word which denotes the singular also denotes the plural and vice versa.

4.2 In this determination, including in the Schedules, words or phrases in bold type have the following meanings:

**A**

<b>access seeker</b>	has the meaning given in s 5 of the <b>Act</b> ;
<b>Act</b>	means the Telecommunications Act 2001;
<b>availability POI area</b>	means a ‘UFB geographic area’ specified in the table under the heading “Chorus Limited

points of interconnection” in the *Notice of points of interconnection under section 231 of the Telecommunications Act 2001* issued by the **Commission** on 19 December 2019 that is served by one or more **POIs**, except that for the purposes of this definition:

- (a) the ‘UFB geographic areas’ specified in rows 6 (Palmerston North and Fielding) and 39 (Whanganui) are treated as one UFB geographic area;
- (b) the ‘UFB geographic areas’ specified in rows 12 (Hamilton) and 23 (New Plymouth) are treated as one UFB geographic area; and
- (c) the ‘UFB geographic areas’ specified in rows 24 (Oamaru) and 34 (Timaru) are treated as one UFB geographic area;

**average number of connections** means the sum of the **connections** on the first day of the calendar month, and the **connections** on the last day of the calendar month, divided by two;

**average net unplanned downtime** means the number of minutes (rounded to the nearest whole minute) calculated in accordance with the formula in paragraph (1) of Schedule 4;

## **B**

**bps** means bits per second, and is a measure of the speed of network data transmission;

**breach report** means a report on a failure to comply with a quality standard and which contains the content specified in clause 9.4;

## **C**

**central office** means a physical building or cabinet used to house a termination point of a **fibre network**;

**Chorus** has the meaning given in the **IM determination**;

**Commission** has the meaning given in s 5 of the **Act**;

<b>connection</b>	has the meaning given in paragraph (b) of the definition of “connection” in the <b>IM determination</b> ;
<b>core fibre asset</b>	has the meaning given in the <b>IM determination</b> ;
<b>CPI</b>	has the meaning given in the <b>IM determination</b> ;
<b>E</b>	
<b>E-NNI</b>	means an external network-to-network interface in relation to <b>PQ FFLAS</b> provided by <b>Chorus</b> ;
<b>end-user</b>	has the meaning given in s 5 of the <b>Act</b> ;
<b>F</b>	
<b>fault</b>	<p>(a) has the meaning given in paragraph (b)(i) of the definition of ‘fault’ in the <b>IM determination</b>; and</p> <p>(b) for the purpose of paragraph (b)(ii) of the definition of ‘fault’ in the <b>IM determination</b>, means a <b>port utilisation</b> equal to or greater than 95%;</p>
<b>FFLAS</b>	has the same meaning as ‘fibre fixed line access service’ defined in s 5 of the <b>Act</b> ;
<b>fibre network</b>	has the meaning given in s 5 of the <b>Act</b> ;
<b>first regulatory period</b>	means the three-year period beginning 1 January 2022 and ending 31 December 2024;
<b>force majeure event</b>	<p>means an event or circumstance beyond <b>Chorus’s</b> control which makes it impossible or illegal to provide <b>PQ FFLAS</b>, including:</p> <p>(a) fire, floods, storms, earthquake, or other act of God;</p> <p>(b) any act of a public enemy, war, riot, or act of civil or military authority;</p> <p>(c) nuclear, chemical or biological contamination; and</p>

- (d) any act of a third party (not being an employee, agent or subcontractor of **Chorus**) engaged in subversive or terrorist activity or sabotage; but does not include an event to the extent that the effect of that event could have been substantially prevented, avoided, overcome or mitigated by:
  - (e) implementation of any contracted business continuity or disaster recovery service, or any contingency plans agreed between **Chorus** and the **Commission** or which **Chorus** has represented it has in place;
  - (f) **Chorus** exercising a reasonable standard of care; or
  - (g) **Chorus** using information provided by the **Commission** or which is available in the public domain;

<b>forecast allowable revenue</b>	has the meaning given in the <b>IM determination</b> and is the amount calculated for each <b>regulatory year</b> in accordance with paragraph (3) of Schedule 2;
<b>forecast building blocks revenue</b>	means the amount specified in paragraphs (1) and (2) of Schedule 1;
<b>forecast total FFLAS revenue</b>	has the meaning given in the <b>IM determination</b> and is the amount calculated for each <b>regulatory year</b> in accordance with paragraph (5) of Schedule 3;

## **G**

<b>GAAP</b>	has the meaning given in the <b>IM determination</b> ;
<b>GST</b>	has the meaning given in s YA 1 of the Income Tax Act 2007;

## **I**

<b>IM determination</b>	means the <i>Fibre Input Methodologies Determination 2020</i> [2020] NZCC 21, including
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	any amendment in effect at the time this determination is made;
<b>inOctets</b>	means the number of <b>octets</b> received by a <b>port</b> ;
<b>input methodology</b>	has the meaning given in s 164(1) of the <b>Act</b> ;
<b>L</b>	
<b>layer 1</b>	has the meaning given in s 155ZS of the <b>Act</b> ;
<b>layer 2</b>	has the meaning given in s 155ZS of the <b>Act</b> ;
<b>N</b>	
<b>net unplanned downtime</b>	means <b>unplanned downtime</b> minus the length of time an <b>access seeker</b> or <b>end-user</b> experiences a <b>fault</b> to their <b>PQ FFLAS</b> attributable to any of the following: <ul style="list-style-type: none"> <li>(a) a <b>force majeure event</b>;</li> <li>(b) <b>non-diverse transport services</b>; and</li> <li>(c) <b>port utilisation</b> equal to or greater than 95%;</li> </ul>
<b>non-diverse</b>	means there is no alternate route to the <b>POI</b> available;
<b>O</b>	
<b>octet</b>	means a unit of digital information consisting of eight bits;
<b>OLT</b>	means an optical line terminal used for the provision of <b>PQ FFLAS</b> by <b>Chorus</b> ;
<b>other FFLAS income</b>	means income received by <b>Chorus</b> in respect of <b>PQ FFLAS</b> , excluding income from <b>PQ FFLAS</b> the <b>price(s)</b> of which are related to the quantity supplied;
<b>outOctets</b>	means the number of <b>octets</b> sent by a <b>port</b> ;
<b>P</b>	
<b>pass-through cost</b>	has the meaning given in the <b>IM determination</b> ;
<b>POI</b>	means a ‘specified point of interconnection’ listed in the <i>Notice of points of interconnection</i>

*under section 231 of the Telecommunications Act 2001 issued by the Commission on 19 December 2019;*

<b>PON port</b>	means the <b>port</b> on an <b>OLT</b> ;
<b>port</b>	means all physical, virtual and sub-interfaces for the exchange of traffic on a <b>fibre network</b> , excluding <b>UNI, E-NNI, and PON ports</b> ;
<b>port utilisation</b>	has the meaning given in the <b>IM determination</b> and is the amount calculated in accordance with paragraph (2) of Schedule 4;
<b>PQ FFLAS</b>	has the meaning given in the <b>IM determination</b> ;
<b>price</b>	means an individual fee or charge, in nominal terms exclusive of <b>GST</b> , for the provision of <b>PQ FFLAS</b> , and <b>priced</b> has a corresponding meaning;

## **Q**

<b>quantities</b>	means the amount of <b>PQ FFLAS</b> forecast on a demonstrably reasonable basis to be provided, which corresponds to the units in which each tariff, fee, or charge (or individual component of each) is <b>priced</b> ;
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## **R**

<b>regulatory year</b>	has the meaning given in the <b>IM determination</b> ;
<b>RFC 2863</b>	means <i>The Interfaces Group MIB Internet Official Protocol Standard RFC 2863</i> , issued by the IETF Interfaces MIB Working Group in June 2000;

## **S**

<b>section 193(2) notice</b>	means the <i>Notice to supply information to the Commerce Commission under section 193(2) of the Telecommunications Act 2001 – Compliance statements for the first regulatory</i>
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*period* issued to **Chorus** on 16 December 2021 and published on our website;

## **T**

### **transport service**

means a **layer 1**, or managed throughput, fibre service provided over the **fibre network**, to transport voice and data traffic between **central offices**, including **central offices** that are also **POIs**;

## **U**

### **UNI**

has the meaning given in paragraph (b) of the definition of “UNI” in the **IM determination**;

### **unplanned downtime**

has the meaning given in paragraph (b) of the definition of “unplanned downtime” in the **IM determination**; and

## **W**

### **working day**

has the meaning given in s 5 of the **Act**.

5. Price-quality path

5.1 **Chorus** must comply with the price-quality path, which consists of—

5.1.1 the price path specified in clause 7; and

5.1.2 the quality standards specified in clause 8.

6. Applicable input methodologies

6.1 The **input methodologies** that apply to this determination are those specified in Part 3 and clause 2.2.8 of the **IM determination**.

7. Price path

*Maximum revenues that may be recovered by Chorus*

7.1 For the purpose of s 194(2)(b) and s 195 of the **Act** and clause 3.1.1 of the **IM determination**, the maximum revenue that **Chorus** may recover in any **regulatory year** is **forecast allowable revenue** for that **regulatory year**.

*Compliance with the price path*

7.2 To comply with the price path for a **regulatory year**, **Chorus's forecast total FFLAS revenue** in that **regulatory year** must not exceed the **forecast allowable revenue** for that **regulatory year**.

8. Quality standards

*Compliance with the availability quality standards*

8.1 To comply with the **layer 1** availability quality standard for a given **availability POI area** in a **regulatory year**, **Chorus's average net unplanned downtime** must not exceed, for a **layer 1** aspect of a **fibre network**, 160 minutes in that **availability POI area**.

8.2 To comply with the **layer 2** availability quality standard for a given **availability POI area** in a **regulatory year**, **Chorus's average net unplanned downtime** must not exceed, for a **layer 2** aspect of a **fibre network**, 40 minutes in that **availability POI area**.

*Compliance with the performance quality standard*

8.3 To comply with the performance quality standard for a **regulatory year**, the percentage of **Chorus's ports** experiencing **port utilisation**, upstream or downstream, equal to or exceeding 90% in any five-minute interval in one or more calendar months in that **regulatory year**, must not exceed 0.12%.

9. Reporting requirements

*Timeframes for providing information required under section 193(2) notice*

- 9.1 For the purpose of s 194(2)(e) of the **Act**, **Chorus** must provide to the **Commission**—
- 9.1.1 the information specified in clause A3 of Attachment A of the **section 193(2) notice**—
- (a) in respect of **regulatory year** 2022, no later than 31 March 2022;
  - (b) in respect of **regulatory years** 2023 and 2024, no later than 30 August of the preceding **regulatory year**; and
  - (c) except when the information has already been provided under clause 9.1.1(a) or (b), at least 30 **working days** before the date on which **Chorus** intends to change the **price(s)** of an existing **FFLAS** product, or to introduce a new **FFLAS** product that is in all material respects the same as an existing **FFLAS** product; and
- 9.1.2 the information specified in clause A5 of Attachment A of the **section 193(2) notice** no later than six months after the end of **regulatory years** 2022, 2023, and 2024.

*Breach reports for failure to comply with quality standards*

- 9.2 If **Chorus** fails to comply with an availability quality standard under clause 8.1 or 8.2, **Chorus** must provide to the **Commission** a **breach report** within 5 months of the end of the **regulatory year**, with information in respect of each **availability POI area** giving rise to the breach of an availability quality standard.
- 9.3 If **Chorus** fails to comply with the performance quality standard under clause 8.3, **Chorus** must provide to the **Commission** a **breach report** within 5 months of the breach of the quality standard in clause 8.3.
- 9.4 A 'breach report' must contain—
- 9.4.1 the reasons for breaching the relevant quality standard, and supporting evidence for those reasons;
  - 9.4.2 an explanation of the cause of the breach;
  - 9.4.3 any independent review, investigation, or analysis into why **Chorus** breached the relevant quality standard; and
  - 9.4.4 an outline of any intended review, investigation, or analysis into why **Chorus** breached the relevant quality standard, which is planned but not yet completed.

## Schedule 1: Forecast building blocks revenue

- (1) **Chorus's** 'forecast building blocks revenue' for **regulatory year** 2022 is \$676,000,000.
- (2) **Chorus's** 'forecast building blocks revenue' for **regulatory year** 2023 and **regulatory year** 2024 is calculated in accordance with the following formula—

$$FBBR_{t-1} \times (1 + \Delta CPI_t) \times (1 + \Delta Q_t)$$

where—

$FBBR_{t-1}$  is 'forecast building blocks revenue' for the previous **regulatory year**;

$\Delta CPI_t$  is the change in **CPI** calculated in accordance with paragraph (3); and

$\Delta Q_t$  is the forecast changes in **quantities** listed in Table 1.1 below.

**Table 1.1** Forecast changes in quantities

<b>Regulatory year 2023</b>	6.10%
<b>Regulatory year 2024</b>	3.47%

- (3)  $\Delta CPI_t$  is calculated in accordance with the following formula—

$$\Delta CPI_t = \frac{CPI_{Mar,t} + CPI_{Jun,t} + CPI_{Sep,t} + CPI_{Dec,t}}{CPI_{Mar,t-1} + CPI_{Jun,t-1} + CPI_{Sep,t-1} + CPI_{Dec,t-1}} - 1$$

where—

$CPI_{q,t-n}$  is the **CPI** for the quarter ending in  $q$  in the 12-month period  $n$  years prior to **regulatory year**  $t$ .

- (4) For the purpose of paragraph (3), the calculation for  $\Delta CPI_t$  must use the most recent Reserve Bank Monetary Policy Statement available before 30 June of year  $t-1$ .
- (5) For the purposes of clause 2.2.8(8) of the **IM determination**, the depreciation method applicable to the **first regulatory period** is:
  - (a) for **core fibre assets**, a depreciation method consistent with **GAAP**; and
  - (b) for the **financial loss asset**, tilted annuity depreciation with a -13% real tilt rate and an asset life equal to the harmonic mean (being 14.2 years) of the asset lives of **core fibre assets**.

## Schedule 2: Calculation of forecast allowable revenue

- (1) **Chorus** must calculate its **forecast allowable revenue**—
  - (a) in respect of **regulatory year** 2022, no later than 31 March 2022; and
  - (b) in respect of **regulatory years** 2023 and 2024, no later than 30 August of the preceding **regulatory year**.
- (2) When calculating the **forecast allowable revenue** for the purpose of paragraph (1), **Chorus** must prepare and use a demonstrably reasonable forecast of **pass-through costs**.
- (3) The ‘forecast allowable revenue’ for a **regulatory year** is the amount calculated in accordance with the following formula—

$$FBBR + FPTC + WUA$$

where—

*FBBR* is the **forecast building blocks revenue**;

*FPTC* is the forecast of **pass-through costs** made prior to 30 June of the year prior to that **regulatory year**; and

*WUA* is the wash-up amount, which is, for **regulatory years** 2022, 2023, and 2024, nil.

### Schedule 3: Calculation of forecast total FFLAS revenue

- (1) **Chorus** must calculate or recalculate its **forecast total FFLAS revenue**—
- (a) in respect of **regulatory year** 2022, no later than 31 March 2022;
  - (b) in respect of **regulatory years** 2023 and 2024, no later than 30 August of the preceding **regulatory year**; and
  - (c) other than when the information has already been provided under paragraph (1)(a) or (b), at least 30 **working days** before any time **Chorus** intends to:
    - i. change the **price(s)** of an existing **FFLAS** product; or
    - ii. introduce a new **FFLAS** product that is in all material respects the same as an existing **FFLAS** product.
- (2) Any calculation or recalculation performed under paragraph (1)(c) must be in respect of the **regulatory year** in which the change in **price(s)** is intended to take effect or the new **FFLAS** product is intended to be introduced.
- (3) When calculating or recalculating the **forecast total FFLAS revenue** for the purposes of paragraph (1), **Chorus** must prepare and use a demonstrably reasonable forecast of the **quantities** and **other FFLAS income** for the **regulatory year** to which the forecast **prices** for each **regulatory year** will apply.
- (4) When recalculating **forecast total FFLAS revenue** for the purposes of paragraph (1)(c), the forecast of **quantities**—
- (a) may only be updated for an existing **FFLAS** product(s) for which the **price** is changing or a new **FFLAS** product that is in all material respects the same as an existing **FFLAS** product; and
  - (b) must not be updated for time periods before the date on which the change in **price** will take effect.
- (5) The ‘forecast total FFLAS revenue’ for a **regulatory year** is the amount calculated in accordance with the following formula—

$$\sum_i (P_i - D_i) \times FQ_i + FOFI$$

where—

- i* is each tariff;
- P* is the **price**;
- D* is any discount;



*FQ* is the forecast **quantities**; and  
*FOFI* is forecast **other FFLAS income**.

## Schedule 4: Calculation of quality standards

### Calculation of average net unplanned downtime

- (1) 'Average net unplanned downtime' for a **regulatory year** in an **availability POI area** is calculated in accordance with the following formula—

$$\sum_{i=1}^{12} \frac{\sum NUD_i}{ANAC_i}$$

where—

*NUD* means **net unplanned downtime** for that calendar month in that **availability POI area**;

*ANAC* means **average number of connections** for that calendar month in that **availability POI area**; and

*i* means the calendar month, where 1 = January, ..., 12 = December.

### Calculation of port utilisation

- (2) 'Port utilisation' is calculated as a percentage figure in accordance with the following formula—

$$\frac{octets \times 8}{5 \times 60 \text{ seconds} \times PS} \times 100$$

where—

*octets* means the number of **octets** at a **port**, being the greater of the **inOctets** or the **outOctets**, measured over a 5-minute interval in accordance with **RFC 2863**, and includes framing characters, but excludes Ethernet preamble, start frame delimiter, and interpacket gaps; and

*PS* means **port** speed and is measured in **bps**.