

**Public version**

## Fibre Price-Quality Path Determination 2021

[2021] NZCC ~~27~~~~[XX]~~

**The Commission:**

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**Date of determination:** ~~[Day]~~ ~~[Month]~~ 16 December 2021

[Signature]

Tristan Gilbertson ~~[Name]~~, Telecommunications Commissioner

Dated at Wellington this ~~[X]~~ 16th day of ~~[Month]~~ December 2021

COMMERCE COMMISSION

Wellington, New Zealand



Determination history		
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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~~<sup>35</sup> of the ~~Interpretation Act 1999~~<sup>Legislation Act 2019</sup>;

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;](#)

~~4.1.6~~[4.1.7](#) any reference to “includes” means “includes, but is not limited to”; and

~~4.1.7~~[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;
<u><a href="#">availability POI area</a></u>	<u><a href="#">means a ‘UFB geographic area’ specified in the table under the heading “Chorus Limited</a></u>

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 <a href="#">paragraph (b) of the definition of “connection” in the IM determination</a> ;
<a href="#">core fibre asset</a>	<a href="#">has the meaning given in the IM determination</a> ;
<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>	<ul style="list-style-type: none"> <li>(a) has the meaning given in paragraph (b)(i) of the definition of ‘fault’ in the <b>IM determination</b>; and</li> <li>(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 <del>95</del><u>90</u>%;</li> </ul>
<a href="#">FFLAS</a>	<a href="#">has the same meaning as ‘fibre fixed line access service’ defined in s 5 of the Act</a> ;
<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> <ul style="list-style-type: none"> <li>(a) fire, floods, storms, earthquake, or other act of God;</li> <li>(b) any act of a public enemy, war, riot, or act of civil or military authority;</li> <li>(c) nuclear, chemical or biological contamination; and</li> </ul>

- (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;

**forecast allowable revenue** has the meaning given in the **IM determination** and is the amount calculated for each **regulatory year** in accordance with, ~~and at times required by,~~ paragraph ~~(3)(5)~~ (3) of Schedule 2;

**forecast building blocks revenue** means the amount specified in paragraphs (1) and (2) of Schedule 1;

**forecast total FFLAS revenue** has the meaning given in the **IM determination** and is the amount calculated for each **regulatory year** in accordance with, ~~and at times required by,~~ paragraph ~~(5)(4)~~ (5) of Schedule 3;

## G

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

**GST** has the meaning given in s YA 1 of the Income Tax Act 2007;

## I

**IM determination** means the *Fibre Input Methodologies Determination 2020* [2020] NZCC 21, including any amendment in effect at the time this determination is made;

**inOctets** means the number of **octets** received by a **port**;

**input methodology** has the meaning given in s 164(1) of the **Act**;

## L

**layer 1** has the meaning given in s 155ZS of the **Act**;

**layer 2** has the meaning given in s 155ZS of the **Act**;

## N

**net unplanned downtime** means **unplanned downtime** minus the length of time an **access seeker** or **end-user** experiences a **fault** to their **PQ FFLAS** attributable to any of the following:—

- (a) a **force majeure event**; ~~or~~
- (b) **non-diverse transport services**; and
- ~~(b)~~(c) port utilisation equal to or greater than 95%;

**non-diverse** means there is no alternate route to the **POI** available;

## O

**octet** means a unit of digital information consisting of eight bits;

**OLT** means an optical line terminal used for the provision of **PQ FFLAS** by **Chorus**;

other FFLAS income means income received by **Chorus** in respect of **PQ FFLAS**, excluding income from **PQ FFLAS** the **price(s)** of which are related to the quantity supplied;

**outOctets** means the number of **octets** sent by a **port**;

## P

**pass-through cost** has the meaning given in the **IM determination**;

**POI** means a ‘specified point of interconnection’ listed in the *Notice of points of interconnection under section 231 of the Telecommunications Act 2001* issued by the **Commission** on 19 December 2019;

~~**POI area** means a ‘UFB geographic area’ listed 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**;~~

**PON port** means the **port** on an **OLT**;

**port** means all physical, virtual and sub-interfaces [for the exchange of traffic on a fibre network](#), ~~and excluding~~ **UNI, E-NNI, and PON ports**, ~~in relation to **PQ FFLAS** provided by **Chorus**;~~

**port utilisation** has the meaning given in the **IM determination** and is the amount calculated in accordance with paragraph (2) of Schedule 4;

**PQ FFLAS** has the meaning given in the **IM determination**;

**price** means an individual fee or charge, in nominal terms exclusive of **GST**, for the provision of **PQ FFLAS**, and **priced** has a corresponding meaning;

## Q

**quantities** means the amount of **PQ FFLAS** 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 **priced**;

## R

**regulatory year** has the meaning given in the **IM determination**;

<b>RFC 2863</b>	means <i>The Interfaces Group MIB</i> Internet Official Protocol Standard <a href="#">RFC 2863</a> , issued by the IETF Interfaces MIB Working Group in June 2000;
<b>S</b>	
<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 period issued to Chorus on 16 December 2021</i> <a href="#">and published on our website</a> <del>on [X]</del> ;
<b>T</b>	
<b>transport service</b>	means a <b>layer 1</b> , or managed throughput, fibre service provided over the <b>fibre network</b> , to transport voice and data traffic between <b>central offices</b> , including <b>central offices</b> that are also <b>POIs</b> ;
<b>U</b>	
<b>UNI</b>	has the meaning given in <a href="#">paragraph (b) of the definition of “UNI”</a> in the <b>IM determination</b> ;
<b>unplanned downtime</b>	has the meaning given in <a href="#">paragraph (b) of the definition of “unplanned downtime”</a> in the <b>IM determination</b> ; <a href="#">and</a>
<b>W</b>	
<del><b>wash-up amount</b></del>	<del>means, for regulatory years 2022, 2023, and 2024, nil; and</del>
<b>working day</b>	has the meaning given in s 5 of the <b>Act</b> .

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 in 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**, ~~15~~**160** minutes in ~~one or more~~[that availability POI areas in one or more calendar months](#).

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**, ~~3~~**40** minutes in ~~one or more~~[that availability POI areas in one or more calendar months](#).

*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.~~1~~**2**%.

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) no later than 30 working days after the start of each regulatory year; and~~

(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

~~9.1.2~~ except when the information has already been provided under clause 9.1.1(a) or (b), at least 30 working days before any time the date on which Chorus intends to change the its 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

(c) \_\_\_\_\_

~~9.1.3~~ 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 ~~each regulatory year~~ 2022, 2023, and 2024 of the first regulatory period.

*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 ~~\$675,157,258~~ \$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—

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

where—

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

$\Delta CPI_{t-1}$  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

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

- (3)  $\Delta CPI_{t-1}$  is calculated in accordance with the following formula—

$$\Delta CPI_{t-1} = \frac{CPI_{Mar,t-1} + CPI_{Jun,t-1} + CPI_{Sep,t-1} + CPI_{Dec,t-1}}{CPI_{Mar,t-2} + CPI_{Jun,t-2} + CPI_{Sep,t-2} + CPI_{Dec,t-2}} - 1$$

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**  $t$ .

~~Table 1.1 Forecast changes in quantities~~

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

- (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  $t-1$ .

- ~~(4)~~(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**. ~~diminishing value depreciation.~~

## 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
- ~~(a)~~(b) in respect of regulatory years 2023 and 2024, no later than 30 August of the preceding regulatory year. ~~within 30 working days of the start of each regulatory year.~~
- ~~(2)~~ ~~Within 30 working days of any time Chorus intends to change its prices in a regulatory year, Chorus must recalculate its forecast allowable revenue for that regulatory year.~~
- ~~(3)~~ ~~For the purpose of paragraph (2), the  $\Delta CPI_{t-1}$  calculated in accordance with paragraph (3) of Schedule 1 is deemed to be the CPI that was applicable at the start of that regulatory year.~~
- ~~(4)~~(2) must 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.
- ~~(5)~~(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~~ 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.
- ~~(1) Chorus must calculate its forecast total FFLAS revenue within 30 working days of the start of each regulatory year.~~
- ~~(2) Within 30 working days of any time Chorus intends to change its prices in a regulatory year, Chorus must recalculate its forecast total FFLAS revenue for that regulatory year.~~
- (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) whose 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
  - ~~(a)~~(b) must not be updated for time periods before the date on which the change in price will take effect.
- ~~(4)~~(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; ~~and~~  
*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 ~~calendar month~~ in an availability POI area is calculated in accordance with the following formula—

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

$$\frac{\sum NUD}{ANAC}$$

where—

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

*ANAC* ~~m~~ 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**.