

Direct cost attribution in the RAB model

Final report for Commerce Commission,
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Network Strategies Report Number 41019

1 Introduction

In developing the Initial Asset Value (IAV) model Chorus and its consultants allocated 100% of costs to Fibre Fixed Line Access Services (FFLAS) for certain assets¹, stating that there is no sharing with other services². Network Strategies prepared a report which examined key issues associated with the full attribution of these costs to FFLAS³. The Commerce Commission (the Commission) has requested that we review specific issues raised in

¹ Analysys Mason (2021), *BBM IAV model responses to Attachment B of the Commerce Commission's 26 February 2021 section 221 Notice*, 26 March 2021, section 5.1.5.

² Chorus (2021), *A12 UFB Assets directly attributable to UFB FFLAS*, 30 June 2021.

³ Network Strategies (2021), *Direct cost attribution in the RAB model*, 13 August 2021.

submissions and cross-submissions to the PQ RAB draft decision, including additional information supplied by Chorus⁴ in its submission.

Accordingly, this short report discusses issues raised with respect to:

- direct cost attribution of post 2011 UFB A-D ducts (Section 2)
- cost allocation of pre 2012 ducts (Section 3).

Although this report has been prepared for the Commission, the views expressed here are entirely those of Network Strategies.

2 Direct cost attribution of post 2011 UFB A-D ducts

2.1 Review of additional Chorus information

In its submission Chorus has provided additional information on the duct system being deployed which allows us to re-evaluate our earlier conclusions.

In the absence of data to the contrary we had assumed that when deploying an Air Blown Fibre (ABF) duct system, an operator would have an incentive to deploy additional non ABF ducts. These additional ducts could be used by non FFLAS services at some future time. Chorus has implied this situation does not exist in its network but has provided no evidence or direction to support that position⁵. Chorus has provided additional data on the duct assemblies being deployed and in particular has stated that by design, in the long term, only 20% of the Micronet duct capacity is available for uses other than planned FFLAS capacity⁶.

We also made the assumption that between 5% and 10% of the UFB A-D duct network could overlap with interexchange routes. Chorus has provided data extracted from its own network

⁴ Chorus (2021), *Submission on initial PQ RAB and additional IM amendments draft decisions*, 16 September 2021.

⁵ *Ibid*, paragraph 50.

⁶ *Ibid*, paragraph 49.

records that shows that the number is actually 3.7%. We appreciate Chorus' willingness to provide this data. Combining this 3.7% with the 20% of Micronet duct capacity available for non FFLAS uses, leads to an upper bound on the asset that could be used by other services of $20\% \times 3.7\% = 0.74\%$. It is possible that a greater share could be used in the short term but the circumstances necessary for that to occur are extremely improbable.

This 0.74% compares with a range of [] CI estimated in Network Strategies (2021)⁷. Given the Chorus figures are based on actual data from its network, these would be more reliable than our initial estimates.

An upper bound of 0.74% equates to a potential shared asset value of \$11 million.

We confirm that these are upper bounds on the degree of asset sharing that is possible and agree with Chorus that while such sharing may occur, it will only occur progressively over time and therefore is unlikely to be close to the upper bound at the start of RP1.

Chorus has articulated the difficulties with using UFB A-D duct assets to expand or restore inter-exchange capacity⁸. This suggests that current levels of sharing are likely to be low to negligible. In summary these difficulties encompass:

- the use of UFB A-D duct sections for fault repair is typically infeasible because the duct sections are not normally aligned with the interexchange duct capacity⁹
- Chorus endeavours to separate cables used for interexchange services from those used for distribution for reasons of operational reliability, precluding use of fibres in a UFB A-D sheath from use for interexchange traffic¹⁰
- non FFLAS fibre services pre-date the UFB A-D assets and have been established on independent infrastructure¹¹.

⁷ Network Strategies (2021), *Direct cost attribution in the RAB model*, 13 August 2021, Exhibit 2.

⁸ Chorus (2021), *Submission on initial PQ RAB and additional IM amendments draft decisions*, 16 September 2021, paragraph 47.

⁹ *Ibid*, paragraph 44.

¹⁰ *Ibid*, paragraph 45.

¹¹ *Ibid*, paragraph 46.

In summary, we consider the degree of sharing that may exist at present is considerably less than the upper bound of 0.74%. Chorus has not provided evidence that it is zero but it has provided arguments that it is very low at this initial stage in the asset life. In our judgement we would suggest assuming less than 10% of the capacity available for sharing is actually shared, which implies a maximum shared asset value of \$1 million. This value is well within the margin of error and so should be considered immaterial.

2.2 Conclusion

Our conclusion is that the degree of sharing that may exist at present is considerably less than the upper bound of 0.74% and should be considered immaterial.

3 Cost allocation of pre-2012 ducts

3.1 Introduction

In the draft decision¹² the Commission capped the attribution of pre-2012 duct assets to 30% at any given time period and geography.

3.2 Cross submission from Spark

Spark's cross submission¹³ suggests that the correct cap should be lower, at 17%¹⁴. This estimate is supported by a table of values (paragraph 23) and an associated footnote.

¹² Commerce Commission (2021), *Chorus' initial regulatory asset base as at 1 January 2022 – Draft Decisions: Reasons Paper*, August 2021, paragraph X21.

¹³ Spark (2022), *UPDATED SPARK cross submission in draft RAB 30 September 2021 FINAL*, October 2021,

¹⁴ *Ibid*, paragraph 22.

However, Spark's calculations appear to include two assumptions that are incorrect:

- Spark has based its analysis on a Chorus total duct route length of 65,000km, derived from a diagram in the Chorus FY21 annual report¹⁵. Spark also notes that this compares with the figure of 40,000km in the FY20 annual report¹⁶ and that growth of 25,000km in 12 months is unlikely. In our view it is most likely that a change of measurement base has occurred, with the result that the numbers cannot be compared. More importantly, it highlights the uncertainty as to whether 65,000km refers to duct route kilometres or to total duct kilometres. In the absence of a clear understanding of its derivation, it is not reasonable to apply this number as the basis for setting regulatory parameters.
- Spark has treated Chorus' 19,221km of core, mesh and regional fibre route¹⁷ as duct length¹⁸. This is incorrect as a significant portion of interexchange fibre will not be ducted.

An alternative treatment of the numbers can lead to quite different conclusions. For example, using a total duct route length of 45,000km to 50,000km derived from Chorus' own submission¹⁹ (24,638km pre-2012 duct plus 20,311km new UFB duct in won areas plus an allowance for other ducts built since 2011) yields a shareable fraction between 26% and 32%. This is very different from the 17% derived by Spark and closer to the 30% determined by the Commission.

The assumptions made by Spark conflate values for duct route length, fibre route length, and possibly duct length, making the analysis unreliable.

¹⁵ Chorus (2021), *Chorus Annual Report 2021*, August 2021. Figure 4.

¹⁶ Chorus (2020), *Chorus Annual Report 2020*, August 2020. Figure 5.

¹⁷ Chorus (2021), *Submission on initial PQ RAB and additional IM amendments draft decisions*, 16 September 2021, paragraph 48.

¹⁸ Spark (2022), *UPDATED SPARK cross submission in draft RAB 30 September 2021 FINAL*, October 2021, footnote to paragraph 23.

¹⁹ Chorus (2021), *Submission on initial PQ RAB and additional IM amendments draft decisions*, 16 September 2021, paragraph 58.

3.3 Conclusion

Reasonable amendments to Spark's assumptions lead to significant changes to the resultant percentage of sharing. This means that the Spark proposal of 17% has an unacceptably high margin for error.

Our conclusion is that the current cap of 30% remains reasonable.