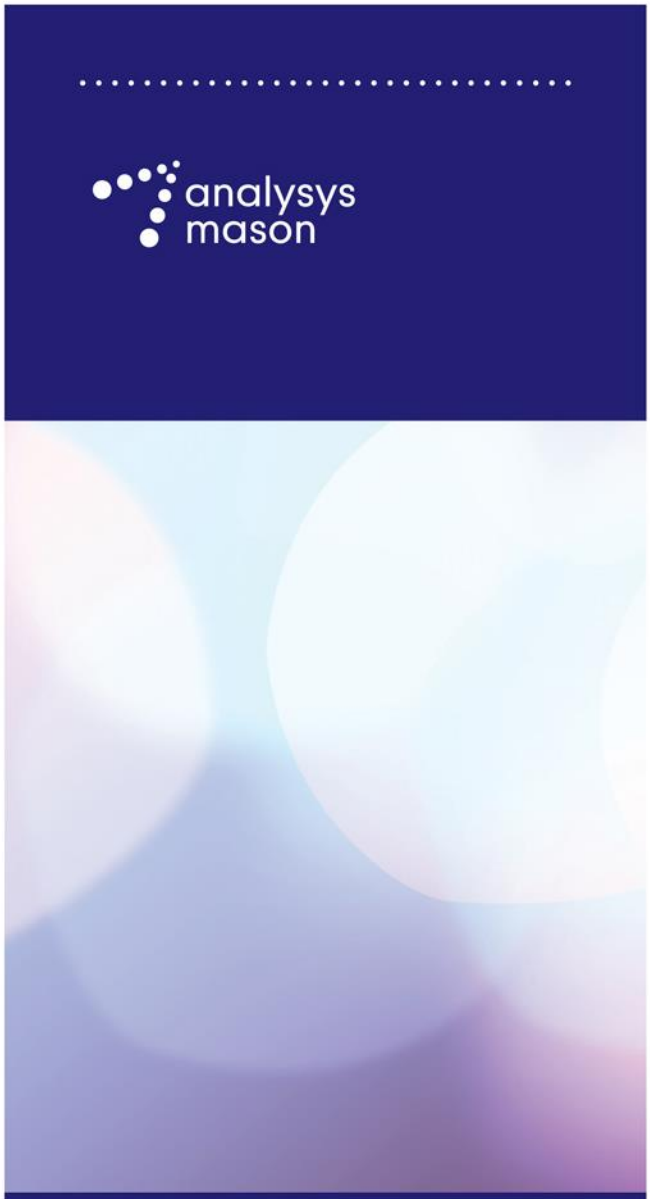

**Report for Chorus**

# Submission to UCLL and UBA pricing review determinations: Supplementary consultation on network footprint and demand

*4 October 2015*

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# 1 Introduction

On 21 September 2015, the Commerce Commission published a consultation paper to seek industry views on whether their proposed UCLL network footprint correction requires the Commission to adjust the 'gap' between the modelled footprint and the modelled demand.[1] This is in relation to the further draft determination for its final pricing principles (FPP) for the unbundled bitstream access (UBA) service and the unbundled copper local loop (UCLL) service.

Analysys Mason has been requested by Chorus to review this consultation paper. This report provides a summary of our response:

The authors of this report have read the Code of Conduct for expert witnesses and have complied with its requirements when completing this report.

## 1.1 Network footprint data

There appears to be the potential for confusion between vacant lots and vacant but developed address points:

- A vacant lot is a piece of land that has no permanent buildings on it
- A vacant but developed address point is a building that is not occupied (within a defined timeframe).

We had requested access to:

- a list of the values of ID_BUILDING that are affected by this correction; this would have enabled a sample check of whether there were in fact buildings on these sites
- definitions of "vacant" and "likely vacant".

The definitions matter because:

- a vacant developed address point (a building with no occupants) would be a very different thing from a vacant lot (no building).
- if "vacant" were defined as the property represented by the address point being unoccupied on the date the last census was taken, then too many address points will be removed.

In Section 4.1.1 of the model specification, TERA state that (with our emphases show in **bold**):

[1] See http://www.comcom.govt.nz/dmsdocument/13718

> As described in the Model Reference Paper, the copper access network is dimensioned according to **all dwellings**. Indeed, in line with other TSLRIC models developed in other jurisdictions and in line with the approach followed by network designers, fixed wired access networks **are dimensioned for the number of dwellings** and not for the actual demand. The reason for that is that dimensioning a network for the number of dwellings is much more efficient in the long run since it prevents having to redeploy cables, redig trenches or redeploy poles when actual demand increases and therefore enables significant cost savings. This is why any fixed wired access network dimensioning would consider the number of dwellings of a given area **since all these dwellings** represent a potential demand in the long run.

If "vacant" means a vacant building then the Commission is going against the reasoning of its own experts.

We have not been given an indication of the split between "vacant" and "likely vacant" address points. The argument for excluding all "likely vacant" address points is likely to be weaker than excluding vacant address points.

The Commission needs to explain the definitions used.

# 2 Response to the consultation paper questions

The Supplementary consultation paper released by the Commission sets out three questions:

> [Q1] Do you agree that a 3.6% gap between the UCLL footprint and demand is too small, and an adjustment should be made?
>
> [Q2] We have Census data that suggests that the gap between the UCLL footprint and demand is closer to 7.5%. Do you support this statistic? Do you have any other data sources that support a different gap?
>
> [Q3] Do you agree with our proposed adjustment to demand? Do you have any alternative methods for implementing a gap between footprint and demand?

We provide our comments on each of these questions in turn below in Section 2.1–0.

We propose a more balanced approach to the modelling below in Section 2.3

## 2.1 A 3.6% gap between the UCLL footprint and demand is too small

The issue of the "gap" between the modelled active connections ('active demand') and the modelled footprint of potential active connections ('footprint demand') is mentioned in paragraph 949 of the UCLL further draft determination. The Commission indicates that the footprint demand is approximately 9% greater than active demand. They also state that this difference is below the range of 10-20% identified by TERA based on its experience of TSLRIC modelling in other jurisdictions.

As indicated in our September 2015 cross-submission, we have been able to provide several examples of models of fixed access networks developed where not only every building is passed, but also where actual modelled demand is in the region of 80–90% of footprint demand (consistent with TERA's own experience). These are summarised in Figure 2.1 below.

*Figure 2.1: Consideration of the footprint modelled in other countries [Source: Analysys Mason, 2015]*

| Model | Footprint assumed | Active demand / passed demand |
|---|---|---|
| Denmark | All premises are passed[2] | 80%[3] as of 2014 |
| Belgium (draft model)[4] | All households are passed by the copper network | 83% as of 2010 |
| US[5] | Network is sized to serve all potential customers | 90% as of 2012 |
| Norway | All buildings requiring connectivity (i.e. a residence or business site, but not a holiday home, barn, garage, etc.) are passed[6] | 77% as of 2011[7] |
| Australia[8] | All building locations from the G–NAF are passed, after poorly geocoded data and duplicates (e.g. aliases) have been removed | 91% as of 2007 |

Therefore we believe that the difference of 9% between footprint demand and modelled demand is already at the low end of these benchmarks, and that the removal of vacant premises puts the Commission's model well below the low end.

Moreover, removal of vacant premises (if this is what the Commission has done) would also be inconsistent with the approaches taken in these other models. which include all premises/buildings/households, potential customers, or buildings requiring connectivity respectively.

## 2.2 We do not support the use of the census statistic

We believe the census data suggesting the gap between the UCLL footprint and demand is in the region of 7.5% is an invalid measure.

According to paragraph 18 of the Supplementary consultation paper, which sources Statistics New Zealand, 7.5% of residential dwellings were unoccupied in 2013 (10% were unoccupied dwellings during the census, but about one quarter of these were "residents away").

The Commission then claims that the active demand should be adjusted to calibrate the ratio "modelled demand/footprint demand" to be 92.5% (1–7.5%).

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[2] See https://erhvervsstyrelsen.dk/sites/default/files/media/endelig-modeldokumentation.pdf, page 16

[3] See https://erhvervsstyrelsen.dk/sites/default/files/media/offentlige_modeller_0.zip, cells '[2012-55-DB-DBA-Fixed LRAIC-Access Cost Model - v4.07 DBA - Public.xlsb]Parameters'!I137:I139

[4] See http://www.bipt.be/en/operators/telecommunication/Markets/price-and-cost-monitoring/ngn-nga-cost-model/access-network-module, checked using Assets!BE124/Assets!BE123 and Assets!BE735/Assets!BE123

[5] See https://transition.fcc.gov/wcb/tapd/universal_service/caf/CAF2-Part1.pdf, slide 32

[6] See http://www.nkom.no/marked/markedsregulering-smp/kostnadsmodeller/lric-fastnett-aksess/_attachment/1805?_download=true&_ts=139100f7b30, Section 5.2.2

[7] See http://www.nkom.no/marked/markedsregulering-smp/kostnadsmodeller/lric-fastnett-aksess/_attachment/3963?_download=true&_ts=13a885c7d51. Total passed lines is SUM(A2NwDsScen!H12:W13). Total active lines is SUM(B3ServiceDemand!BP9:BP38).

[8] See http://www.accc.gov.au/system/files/Model%20documentation.pdf, page A-12

We believe this 7.5% to be an invalid measure for this purpose, for the following reasons:

- The "unoccupied dwellings" statistic is a measure of the number of actual buildings that are currently unoccupied. Buildings that are unoccupied according to the census may still have a fixed connection: they include holiday homes, for example.
- It does not address business premises.
- It takes no account of the level of spare capacity required to support local fluctuations in demand which may include address points requiring more than one active line

This "calibration" is flawed. Our recommended approach is set out in section 2.4 below.

## 2.3 Adjusting active demand is not the optimal means of ensuring this ratio

While we do believe that there needs to be more footprint demand than active demand, two wrongs do not make a right. The scale economies will be better reflected if the correct level of active demand for total connections and lead ins is reflected in the model and the footprint demand is higher than this (allowing for cable and terminals to have sufficient spares to deal with local fluctuations in connected premises, and with lead-ins provisioned for the long term steady state number of lead-ins) and the model run with the unit costs calculated based on that same level of active demand.

If the Commission believes there is too much active demand compared to the footprint demand, then the network capacity should be increased e.g. by the use of the copper distribution demand mark-up of 11% (CuSparePairsDistribution, equivalent to an utilisation factor of 90%) which could also be applied to the dimensioning of:

- CCTs, MDFs and all copper cabling (not just distribution) in the copper network
- FATs, ODFs and all fibre cabling in the fibre network.

This adjustment was proposed in Section 3.7 of our cross-submission.