



UCLL and UBA FPP: consultation on regulatory framework and modelling approach

Submission | Commerce Commission

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Contents

Executive Summary	1
Introduction	4
The regulatory framework	4
The FPP seeks to provide efficient cost signals	4
We support the Commission’s general approach	7
A flexible model supports giving best effect to the s18 purpose	7
The determination must give best effect to the section 18 purpose	8
Where flexibility should be built in to the model	10
Further s18 adjustments	12
Relativity	12
The reasonable investor expectation test	13
Promoting the migration to fibre	19
MEA	20
Maintaining a consistent approach across UBA and UCLL MEA	20
FWA should be given more weight within the model	21
Fibre network performance adjustment	22
Mapping local loop costs to services	22
Key inputs to TSLRIC model	23
Key inputs	23
Trenching and terrain	25
Implementation	25
Backdating	25
Regulatory period	26
A model reference paper	26
Attachment A: WIK report	27
Attachment B: Network Strategies report	27

Executive Summary

1. The Commission's principles paper is a major step forward in identifying the key modelling principles and choices that will determine the Commission's FPP prices for the UCLL and UBA services. We appreciate the Commission sharing its preliminary views on these matters, and consulting on them.
2. The Commission's proposed general approach seeks to model the costs of a hypothetical efficient (least cost) provider of the relevant services. We support this approach and agree that it will best approximate the expected outcomes of a competitive market and therefore best meet the requirements of the Act. The Commission is not modelling Chorus' costs, or the costs of a new entrant entering today's market to compete with Chorus – it is modelling the costs of a hypothetical operator that is a substitute for Chorus and that operates in a competitive market.
3. The Commission has also proposed two key objectives for its application of the TSLRIC methodology; investment efficiency and predictability. We support each of these principles and provide further elaboration in our submission of our understanding of how these might be recognised and advanced in accordance with the Act.
4. Similarly, we also support the Commission's cautious approach to seeking to encourage a particular policy outcomes through adjusting price, for example adopting a competitively neutral approach in respect of unbundling.

The Commission should develop a flexible model that allows it to test proposed settings

5. The Commission is required to make a determination that best gives effect to the purpose of section 18 and meets the requirements of the Act's Final Pricing Principles for the UCLL and UBA services. Within those bounds, the Commission has considerable discretion in the design choices it makes for its FPP models. It has signalled a number of preliminary design choices, some of which we agree with, and some of which we do not agree with.
6. At this point though, we consider the most important thing the Commission can do is ensure its FPP models are built in such a way as to allow it to understand the effect of each of its decisions on the models, and the investment efficiency results they produce, before it makes draft and final decisions. A sufficiently capable model that allows it to test key parameters is the best way of ensuring the Commission gives effect to the section 18 purpose. Key areas that we consider the Commission's models should be capable of flexing to accommodate multiple approaches are:
 - a. The proportion, and location, of network sharing;
 - b. The extent of fixed wireless access substitution;
 - c. The location, service area, and size of nodes; and
 - d. The mix of aerial and underground deployment (and treatment of terrain types within the model).

7. The Commission has, for example, proposed to not recognise re-used assets or make an adjustment to reflect the added functionality supported by a fibre network as a reasonable investor may not have expected to a TSLRIC model to be applied in this way. In reaching preliminary views on these questions, the Commission has acknowledged that their effect will be to push resulting prices up for the UCLL and UBA services (and, implicitly, investment efficiency, down).
8. We may not agree with these proposals, or the rationale given for them. But more importantly we believe the best way for the Commission to make decisions of this sort is to first quantify their effect on the cost base in the models. This quantification will assist the Commission in applying its judgement. For example, if it's modelling shows that the efficient level of network sharing has only a marginal effect on the modelled cost of the UCLL service, yet its assessment is that the use of these assets in its modelling will have a material impact on investment incentives and therefore lead to large dynamic inefficiencies, it will have a strong evidential basis on which to exclude their use. Or the opposite.

Predictability and reasonable investor expectations are at the heart of our regulatory framework

9. The Commission has also proposed to focus on providing predictability for major infrastructure investors by applying a reasonable investor expectations standard to its analysis. We recognise predictability and the advancement of reasonable investor expectations as fundamental pillars of our regulatory framework, and support the Commission's focus on them here. We consider the best way for the Commission to advance these objectives is to employ those legal and economic tests already set out in the Act.
10. The Act provides for IPP prices to be followed by FPP prices, where requested. The IPP process provides investors with a clear "proxy" for the FPP prices based on the best observable information – comparable prices in other jurisdictions. The same s18 purpose applies to both the IPP and FPP processes, and the pricing methodologies are transparently published in the Act (benchmarking and TSLRIC in the case of UCLL and UBA). As a result the Act provides high levels of predictability to investors and end-users alike:
 - a. Investors know the Commission will apply a common legal and policy framework to the IPP and FPP processes;
 - b. They know the Commission will benchmark against forward-looking prices in the IPP, and apply TSLRIC in the FPP process. They can refer to any number of reference material explaining the range of plausible applications of forward-looking and LRIC cost modelling methodologies; and
 - c. They know the IPP prices are a strong indicator of the likely FPP prices.
11. In establishing TSLRIC models and prices for the UCLL and UBA services, the Commission can enhance this predictability by providing for transparent processes for updating these models and prices, and ensuring the prices accurately reflect the true LRIC price of the services (and will therefore be enduringly sustainable).

12. In this context, we question the value of applying a separate and new (as far as we are aware) reasonable investor's expectation standard or test as the Commission appears to have done in its principles paper.
13. The conventional application a TSLRIC methodology should by definition provide investors with a reasonable expectation of normal returns, and meet the Act's requirements in s18 for efficiencies (including dynamic efficiencies) to be considered. This is true of the LRIC models referenced in the Commission's IPP process, and will be true of the LRIC models built by the Commission.
14. We are concerned that applying a further reasonable expectations test to Commission decisions at the FPP could artificially multiply the influence of this factor in the Commission's decision-making framework in a way that was not intended by the Act and not applied during the IPP process. That can only reduce predictability.

Further model adjustments

15. The principles paper captures the key modelling parameters. We agree with the Commission's modelling approach; that it should model the full local loop network; it should not be constrained in technology choices by the need to set separate UCLL and SLU prices; and it should set aggregated prices.
16. In this submission, we have also provided technical comments on how to improve the robustness of the model and parameters. We recommend that the Commission:
 - a. Build flexibility in to the model to capture network sharing at various levels. An efficient provider would seek to share infrastructure across services and other providers at all levels of the network. WIK outlines how this might be reflected in the Commission's model;
 - b. Ensure that, if using different UBA and UCLL MEAs, it applies consistent adjustments. For example, if using the copper network cost to inform decisions about whether to apply any adjustment to the FTTH/FWA modelled cost, then the same modelling principles – e.g. route and node optimisation etc. – must be applied to the copper network model in the same way they are applied to the fibre one;
 - c. Extend its consideration of Fixed Wireless Access (FWA). As noted by NSL, FWA is no longer a quirky technology for the last few percent of customers. The technologies today are realistic substitutes for fixed line technologies in large proportions of the country. The Commission should apply the same rigour to modelling FWA as it plans to apply to fixed technology options;
 - d. Ensure it captures all demand in the model.
17. We also support the Commission's proposed aggregated price approach, framework for considering backdating, and review period.

Introduction

18. Thank you for the opportunity to comment on the Commission’s consultation paper on the regulatory framework and modelling approach for UBA and UCLL services (**consultation paper**).
19. In the consultation paper, the Commission sets out its proposed framework within which it will make FPP cost model choices and its preliminary views on the approach it will take to key design choices in, and inputs to, its FPP cost models.
20. In this submission, we:
 - a. Support the Commission’s proposed approach, which seeks to identify the efficient forward looking costs to provide the UBA and UCLL services through modelling multiple MEAs. We make several suggested improvements to the modelling principles proposed by the Commission that we consider best support the efficient forward looking approach required by the Act;
 - b. Recommend that the Commission incorporates sufficient flexibility in the model to enable it to identify the choices that deliver the most efficient outcomes;
 - c. Comment on a number of proposed further adjustments to the model based on section 18 considerations.
21. The Commission has considerable discretion in the design choices for its FPP models, and has signalled a number of preliminary design choices. Some we agree with, some we do not. At this point though, we consider the most important thing the Commission can do is ensure its FPP models are built in such a way as to allow it to understand the effect of each of these decisions on the models, the results they produce, before it makes draft and final decision on these design choices. A sufficiently flexible model that allows it to test key parameters, is the best way of ensuring the Commission gives effect to the section 18 purpose;
22. Finally, Telecom and Vodafone have jointly asked WIK and Network Strategies (NSL) to comment on the Commission’s proposed approach (attached). We highlight in our submission specific modelling inputs and implementation matters addressed in their attached reports.

The regulatory framework

The FPP seeks to provide efficient cost signals

23. The Commission has proposed a number of principles to apply to model choices. We support the Commission setting out these principles. They provide helpful transparency to submitters and affected parties, and provide a useful framework for making decisions on model choices in accordance with the Act’s requirements.
24. In this case, the underlying purpose of the Act (and regulated FPP prices) is to set efficient pricing signals, encouraging efficient provision of the regulated services and efficient investment by Access Seekers and the Access Provider that benefit end users. This is similar to other

regulatory systems which seek to maximise consumer outcomes by setting efficient prices and encouraging efficient behaviour by the regulated Access Provider, i.e.:

- a. To reflect costs that would be incurred by an efficient provider of the service;
- b. To ensure that the provider has sufficient revenue to maintain service capability or financial capital intact; and
- c. To minimise distorting either consumption or investment decisions.

25. The Act defines TSLRIC as the efficient forward looking costs of providing the service plus an allocation of common costs. Forward looking costs are important because these provide the efficient signals upon which decisions are made. The ITU summarises the importance of forward looking costs:¹

The *economic cost* of an activity is the actual forward looking cost of that activity. This is the cost of accomplishing that activity in the most efficient way possible, given technological, geographical and other real world constraints. Forward-looking costs are the costs of present and future uses of a firm's (or society's) resources. Only forward-looking costs are relevant for making pricing, production, and investment decisions in the present, or the future. [page 52]

26. The socially desirable outcomes of forward looking methodologies, such as TSLRIC, are well understood and applied in many jurisdictions. TSLRIC seeks to provide efficient signals to providers, access seekers and consumers - encouraging and rewarding efficient investment, use of the infrastructure by access seekers, and ultimately to provide consumers services at lowest cost.²

27. This over-riding efficiency objective sits at the heart of the current FPP processes, and must remain paramount in the Commission's framework.

The hypothetical efficient provider reflects the competitive market standard

28. We have characterised this efficiency standard as reflecting outcomes consistent with those provided by a competitive market – efficient prices, normal return and limited supplier ability to extract excessive profits.

29. The High Court summarised competitive market outcomes as:³

[20] But the *tendencies* in workably competitive markets are towards such returns and prices. By themselves, these tendencies will also lead towards incentives for efficient investment (investment that is reasonably expected to earn at least a normal rate of

¹ ITU telecommunications regulatory handbook page 52

² Discussed more fully in our February 2014 submission.

³ *Wellington International Airport Limited v Commerce Commission* [2013] NZHC 3289 (the IM Decision)

return) and innovation. That is to say, the prices that tend to be generated in workably competitive markets will provide incentives for efficient investment and for innovation.

[21] The same tendencies towards prices based on efficient costs and reasonable rates of return will lead also to improved efficiency, provision of services reflecting consumer demands, sharing of the benefits of efficiency gains with consumers, and limited ability to extract excessive profits.

30. The markets for layer 1 and layer 2 fixed access services are not presently competitive, and do not therefore produce the outcomes they would if they were competitive – hence the need for regulation. This seems a simple point, but it is important: the efficient costs of the UCLL and UBA services the Commission is setting are not determined by the incumbent operator or the existing service definitions, but by a hypothetical efficient network that is a product of a hypothetical competitive market.
31. This means that the efficient prices the FPP is seeking to identify are not those of Chorus, nor those of a new entrant in the present market, with demand and cost disadvantages. To base modelled costs on such firms would overstate efficient costs, undermine efficiency and result in transfers from consumers to access providers. Therefore, the FPP requires an efficient provider substitute for Chorus, taking the lowest cost approach drawing on the lowest cost technology and efficient use of existing resources (whether that be sharing or existing assets) available to it.

There must be a purpose to prices higher than that necessary to maintain service

32. The efficient forward looking costs to maintain service capability on long sunk assets can be low. The High Court noted that for existing assets and capability, as long as the asset value was set above scrap value the provider would rationally keep the assets in operation and operate them as efficiently as possible [598].⁴ While low prices ensure some potential users are not priced out of the market and assets are not systematically under-used, though, this needs to be balanced with investors' need to recover total costs and the importance of wider regulatory signals about the regulator [602-603, 605]. Therefore, reasonable investor expectations are met by following a carefully considered approach when setting asset value, subject to there being not being evidence that suppliers would be unable to recover the costs of their past prudent and efficient investments [605].
33. Chorus' reported network net asset value was \$2.8B for the 2013 year and, as NSL note, has committed to minimising investment in the existing copper network. Of course, the framework paper approach will result in Chorus network values and investment significantly higher than in reported results - the Act requires this. But it also requires that these valuations should be inflated only as much as is necessary to reflect efficiency and no more, as has been identified by the Court.

⁴ See IM Decision

34. The Commission has taken a number of preliminary decisions that it acknowledges may increase modelled costs (such as the decision not to re-use existing assets). Where it chooses to do so, there must be a clear purpose and careful analysis of the options and their consistency with s18. A higher price means that some potential users prepared to pay the costs of running the network would be priced out of the market, and assets may be systematically under-used. Simple wealth transfers from end users to Chorus and inefficiencies from foregone end user demand cannot be supported.
35. The only justification we can see under the Act for setting asset values (and prices) above this minimum level, would be in anticipation of future investment to maintain the service capability intact and encourage innovation. But these are the very incentives that conventional TSLRIC models seek to address, signalling efficient investment and innovation. As noted by WIK, TSLRIC models are not static and respond to the circumstances within which they are set. They promote efficiency by, for example, reflecting efficient sharing and re-use of existing infrastructure. It is not clear, therefore, what the addition of new tests, such as the reasonable investor expectations test, can add to the clear purposes and modelling directions already set out in the Act – more likely they will distort these.

We support the Commission’s general approach

36. The Commission concludes that s18 informs the TSLRIC objectives, not the reverse [107]. This means identifying efficient forward looking costs that best gives effect to the s18 purpose (not the other way around).
37. Further, the Commission’s general approach seeks to identify the efficient forward looking costs of a hypothetical provider replacing Chorus. In particular, proposes to:
- a. Make a hypothetical assessment of the efficient costs today for equivalent service, unconstrained by Chorus’ (or end users) historic technology choices, but capturing the core functionality of the regulated service [105];
 - b. Model copper, fibre and fixed wireless technologies in order to identify the lowest cost technology to provide the service [164, 180]; and
 - c. Capture 100% of demand for the replacement network [237, 245].
38. These are what efficient provider would do and we believe is a practical approach consistent with the long term interest of end users. We support the Commission’s cautious approach to seeking to encourage a particular policy outcomes through adjusting price, for example adopting a competitively neutral approach in respect of unbundling [93]. Departing from efficient costs is problematic in that it inevitably results in inefficiencies and relies on weighting uncertain outcomes, incentives or behaviours.

A flexible model supports giving best effect to the s18 purpose

39. There are a number of areas, however, where the Commission proposes to depart from the general approach. For example, while accepted modelling methodologies, the Commission

proposes to not recognise re-used assets in the cost model or make an adjustment for additional functionality provided by a fibre network [80]. It acknowledges that the approach may increase prices, but this is outweighed by wider s18 considerations.

40. Further, as is evident from the principles paper, the Commission faces a myriad of decisions through the process of determining the FPP price.
41. While the Commission must make the decisions that best deliver the s18 purpose, it can't make a call on whether it is doing this unless the model informs the decision. Accordingly, the model needs to be capable of quantifying the effects or informing the decision, otherwise the Commission is leaving itself open to risk.
42. To provide an example, the Commission's decision not to incorporate re-use of assets in its model involves a trade-off between investment incentives and investment efficiency. If the Commission's model is designed in such a way as to allow re-use of assets to be incorporated – tested so to speak – in it, this will allow the Commission to make a much more informed decision as to how to manage that trade-off. If, for example, the model suggests that re-use of assets does not materially improve efficiency (or reduce cost) for the hypothetical operator, and yet the Commission assesses that rejecting re-use in its models will have a material impact on investment incentives, it will have a much stronger basis on which to make that decision than it would have if it's model was incapable of quantifying the impact of re-use on the overall modelled cost.

The determination must give best effect to the section 18 purpose

43. In terms of the FPP process, we agree that section 18 assists the Commission in applying its discretion and that this discretion is bounded by the requirements of the Act, i.e. s18 does not override the obligation to first focus on the technical task of determining and modelling the best estimate of efficient forward looking costs when applying a TSLRIC methodology.
44. Further, the only requirement in the Act is that the Commission make a Determination that gives best gives effect to section 18. Section 19 provides:

19 Commission and Minister must consider purpose set out in section 18 and additional matters

If the Commission or the Minister (as the case may be) is required under this Part or any of Schedules 1, 3, and 3A to make a recommendation, determination, or a decision, the Commission or the Minister must—

- (a) consider the purpose set out in section 18; and
- (b) if applicable, consider the additional matters set out in Schedule 1 regarding the application of section 18; and
- (c) make the recommendation, determination, or decision that the Commission or Minister considers best gives, or is likely to best give, effect to the purpose set out in section 18.

45. Accordingly, section 19 requires the Commission to ensure each of these FPP pricing review determinations, as a whole, gives best effect to section 18.

46. Consistent with the Commission’s submissions in the High Court and the Court of Appeal in *Chorus v Commerce Commission*, while section 18 should certainly be a guiding light throughout the process, it is not required to have a separate discernible effect at every decision point during the modelling process. As the High Court put it, the process set out in Schedule one (in this case TSLRIC) is akin to a fact finding exercise. The Commission’s first task is to make model choices that are consistent with international best practice and thought evolution in TSLRIC regulatory implementation. This is key. If New Zealand applies TSLRIC consistent with international guidance and recent practice, it enhances the predictability of its regulatory decisions – by ensuring that New Zealand avoids outlier status. This is the first time that the Commerce Commission has done a TSLRIC model for UBA and UCLL. There could, at best, be limited expectations among stakeholders that the Commission would make particular choices as a result of earlier indicative statements made years before embarking on the detailed exercise.
47. Arguably, the Commission could be considered to be “book-ending itself” if it limits its choices to previous statements made. So for example, if the Commission is not open to the optimised depreciated costs approach simply because it had previously suggested it would prefer ORC, then that may be regarded as a failure to properly consider all relevant choices available to it.
48. We already know that the TSLRIC methodology was determined by Parliament as being consistent with section 18. The Commission’s task is accordingly to develop a TSLRIC model as best it can. In doing so the Commission should consider guidance from international regulators that demonstrate model choices which have, in more recent years, been shown to give best effect to competitive outcomes. In that regard, for example, it would be difficult to justify a departure from the European Commission’s recent Guidelines on model assumptions relating to the re-use of assets.

The Commission must be confident the determination gives best effect to section 18

49. As a practical matter, the Commission recognises FPP cost modelling requires a number of modelling choices ahead of making the determination. Once made some of these model choices (decisions) could set the model down a path which may not best give effect to s18 (relative to other paths). Alternatively, the cumulative effect of each of certain choices may result in a determination that fails to give best effect to s18 purposes, i.e. taking a consistently low/high approach to each choice may have a multiplier effect that results in a determined price that disproportionately errs above or below the competitive price.
50. To be confident that the determined price is likely to give best effect to section 18, it makes sense to proceed in accordance with TERA’s recommendation and the Commission’s initial view, to produce more than one model from which efficiency comparisons may be made. That would enable the Commission to properly identify the “cost of accomplishing each activity in the most efficient way possible, given technological, geographical and other real world constraints” as referred to in the ITUs definition of TSLRIC referred to above.
51. Further, the Commission faces key choices within the principled approach. We believe that, where feasible and reasonable, the Commission should build flexibility in to the model so that

key parameters can be tested and trade-offs assessed to ensure the Determination is the one that best gives effect to s18.

Where flexibility should be built in to the model

52. The Commission has already build a degree of flexibility in to the FPP model by seeking to establish the costs of alternative – copper, fibre and fixed wireless – access technologies to identify the lowest cost methodology. We support the Commission proposed approach.
53. We recommend that the Commission extend this approach to capture the key inputs set out in the consultation, including the re-use of assets, fixed wireless access and sharing.
54. WIK advise that regulatory models can be, and are routinely overseas, constructed in a way so that scenarios can be run to consider the impact of these important elements of efficiency. Therefore, we believe the model should be constructed in a way that allows these parameters to be tested (even if the Commission proposed not to make the requested adjustments at the draft decision stage).

Re-use of assets

55. The Commission has proposed to adopt a replacement cost methodology for all assets.
56. We agree that the Commission has discretion over how it values assets. As the Commission notes in the paper, that forward looking can mean ORC or some other valuation [132]. The Commission itself has concluded in the past that historic and replacement cost approaches are possible under a TSLRIC approach. Further, we do not believe the Commission is limited to applying a single methodology to all or specific elements of the network. This means that the Commission can recognise re-used and unlikely to be replaced assets in an FPP model.
57. As there are various asset valuation methodologies available to the Commission, the Commission should choose the methodology that best supports the FPP purposes. All other things being equal, an efficient cost would reflect the re-use of existing assets – that must be incontrovertible.
58. The Commission notes that failing to recognise re-use may lead to higher prices [86] but tentatively concludes that there would have been a reasonable expectation that assets would be valued at ORC under a TSLRIC model and that specifically providing for a different approach to re-used assets may not best meet the requirements of section 18 [147]. We disagree with these conclusions. Further, we do not observe any substantial justification for them in the Commission’s paper. It seems intuitive to use that in the real world any sensible investor would require re-use of assets wherever that lead to lower costs without a material reduction in performance or capability, and do not consider Chorus’ investors would take any different view. We would welcome further elaboration from the Commission of the rationale for its conclusions.
59. TERA (and WIK in its report) advise that there is an international trend to include asset re-use in cost models. More than that, WIK note in section 2.1 of their report that the European Commission do not regard this as a new cost standard, but rather as a proper and appropriate

implementation of TSLRIC methodology in the specific circumstances of the migration to NGA networks. Therefore, it is not likely to be difficult for the Commission to provide for this variable in its FPP model. This would allow the parties to quantify and assess the cost of the proposed approach, against which the benefits of predictability can be tested (as below, we have reservations relating to the Commission making ad hoc adjustments to the FPP model on the basis of a reasonable investor expectation test).

60. The Commission must be careful that it is not importing impediments that depart from the competitive standard, for example by adopting commercial positions that are the product of today's business models rather than what would be observed in a competitive market. For example, the Commission notes it is not clear whether, and at what cost, access would be granted to Chorus' ducts [146]. The appropriate question is not what sharing would Chorus undertake or permit, but what sharing would occur in a competitive market by an operator seeking acting efficiently. To take into account these impediments is to account for costs that vary from the competitive market standard.

Sharing

61. The Commission proposes to take full account of sharing across services and other providers [266]. We agree that sharing is an important driver of an efficient providers costs. However, it is unclear how sharing will be reflected in the FPP model.
62. It is likely that the parties will have significantly different positions relating to the level of sharing able to be achieved by an efficient provider.
63. We believe the model must reflect the level of sharing that would be observed by a hypothetical efficient operator in a competitive market. Chorus will likely seek to reference existing sharing levels in today's markets.
64. As set out in the WIK report, the degree of sharing can be provided for at different levels of the network and across different providers. This is a mainstream approach to build cost models and seeks to capture where sharing can occur. WIK further recommends that the Commission ensure the FPP model capture potential sharing and flexible to test the implications of different settings.

Fixed wireless access (FWA)

65. As noted above, we support the Commission considering fixed wireless access as a potential efficient provider lowest cost methodology. The Commission, however, proposes to limit the potential scope of fixed wireless access to RBI areas [164].
66. We don't believe that the application of a viable technology should be limited in this way, the limit should be based on relative costs rather than specific modelling constraint. As noted by Network Strategies, FWA is a viable mainstream technology that can be reasonably built in to regulatory cost models. NSL believe that it could provide a reasonable substitute for fixed line technologies in large proportions of the country [section 3].

67. As with consideration of the relative efficiencies of copper and fibre networks, the Commission model should provide for assessment of fixed wireless technologies.
68. At this stage, the Commission has yet to finalise its approach to issues such as re-use, FWA and asset sharing. However, we agree that these are likely to be important (and disputed) considerations.
69. Further, while all parameters have yet to be consulted on, at this stage the Commission models should also be capable of flexing to accommodate multiple approaches to optimisation (location, service area, and size of nodes) and the mix of aerial and underground deployment.
70. WIK advise that flexibility to consider key parameters can be built in to the FPP model, as they currently built in to mainstream European cost models. Therefore, at this stage, we recommend that the Commission ask TERA to build flexibility in to the model around these aspects even if the Commission chooses to adopt its proposed approach at the draft determination stage.
71. A flexible approach would facilitate effective consultation by all parties. More importantly, we believe it is the only means by which the Commission can assess proposed settings (and trade-offs) to be confident that the determined price gives best effect to s18 purposes.

Further s18 adjustments

72. The Commission has further set out a proposed approach to considering further s18 adjustments. These relate to relativity, the reasonable investor expectations and in support of the migration to fibre.

Relativity

73. The Commission preliminary view is that relativity is a mandatory consideration in its own right under the Act, it is not enough simply for it to adopt TSLRIC pricing [74]. We largely support the Commission's conclusions on relativity. We agree that relativity is a mandatory relevant consideration and recognise that two TSLRIC based prices (if applied differently for the two services) may not necessarily result in the most efficient investment and purchasing signals to ensure that relativities are maintained. However, we consider that if consistent modelling assumptions are applied to both services, based on efficiencies and a consistent view to forward looking costs, relativities will likely be achieved and the Commission would not be required to take further specific action or adjustment.
74. We also recognise that a choice of different MEAs for UBA and UCLL may require that a further relativity consideration is made (as the assumption of consistent TSLRIC modelling / pricing may no longer hold).
75. As noted by the Commission, we believe that applying TSLRIC based pricing methodologies to both UBA and UCLL meant that not further consideration was necessary, and that concepts such as the ladder of investment has little relevance to today's legislative framework following the 2011 amendments.

76. Notwithstanding our view that relativity is now best provided for by TSLRIC based prices, seeking to provide a specific signal would be difficult to undertake. As the Commission notes, a number of factors come in to play in a decision to unbundle and the providers' incentives are not clear. The difficulties of predicting the actual impact were canvassed in the context of the IPP. We agree that the Commission should be hesitant before attempting to incentivise particular actions [77].
77. The difficulty of encouraging unbundling is further illustrated by taking the reverse position. Imposing an increment or reduction to a LRIC price must result in inefficiencies and must always result in the wrong relativity for someone in the market – the Commission is in the position of picking winners and losers. It is difficult to see such an approach as being consistent with s18.
78. Accordingly, we agree with the Commission's preliminary view section 18 and relativity is best met for UBA by competitive neutrality in respect of unbundling, i.e. neither promote nor discourage unbundling [88, 93].

The reasonable investor expectation test

79. The Commission further proposes that, to help build predictability in to regulation, it will respect what it sees as reasonable investor expectations in relation to major telecommunications infrastructure and we support that principle. We agree that, at the macro level, the regulatory framework should be predictable and produce outcomes that facilitate competition over the long term. Predictability and certainty are important for investors in both Access Seekers and Chorus, and for consumers. But the courts have recognised that certainty and predictability in business is illusive in any investment / market. In unregulated markets, a risk taken by investment could result in substantial profits or losses. In regulated markets, reasonable investors are likely to value the certainty of normal returns, thereby avoiding the more substantial risks (and benefits) likely in other markets.
80. However, the Commission proposes that, in support of predictability, it will not recognise the re-use of existing assets in setting the FPP price and rejects a capability based performance adjustment to the modelled fibre network (an adjustment to reflect the greater range of services supported by a fibre network) [80]. Here we differ from the Commission.
81. Section 18 does not require investor expectations to be met for their own sake (even if it were possible to establish what these expectations were, and show that they were reasonable). The task for the Commission is to set a price for the service using TSLRIC in a way that is most consistent with the statutory purpose of promoting competition for the long-term benefit of end-users.
82. The Commission's statutory objectives, and the modelling choices that it decides best promote those objectives, cannot be constrained or overridden by vague references to the expectations of an undefined class of investors, and/or past "in principle" statements about how the Commission may implement TSLRIC. Or, put another way, reasonable investor expectations cannot justify or allow an approach that is contrary to the long-term benefit of end-users.

83. Even if such expectations were able to constrain the Commission's analysis, we believe it would have little effect under current circumstances
84. To the extent that "reasonable investor expectations" has been used as part of the Commission's previous regulatory decisions, it is the expectation of a normal return over the life of the investments that is relevant when thinking about preserving investment incentives.
85. It cannot be reasonable for an investor to expect that a particular regulatory methodology or approach will be followed. In particular, a reasonable investor cannot expect that an approach will be followed that permits windfall gains to a regulated monopoly.
86. We consider that reasonable investor expectations are that they will receive a normal return over the life of assets⁵; that a firm in which they are invested would make the most efficient use of assets (i.e. would re-use assets wherever practical and efficient); and would not ordinarily replace assets unless such assets require replacement to meet ongoing and evolving demand.
87. All of these expectations are captured, by definition, in the correct application of a TSLRIC methodology. If the Commission wants to ensure reasonable investor expectations are advanced and met, then the best way of achieving this is through conventional application of the FPP and s18 purpose statement already in the Act.
- 88.
89. Relying on investor expectations to support a specific regulatory approach where that is not objectively justified by evidence is problematic. Allowing the regulator to justify its decisions by reference to its subjective view of investors' expectations actually undermines, rather than promotes, predictability and certainty.

How should the Commission think about predictability?

90. While the outcome of the FPP should be as predictable as possible in the circumstances, the Commission should be cautious reading "reasonable investor expectations" into the Act. Such a formulation has not previously formed part of the section 18 test articulated by the Commission. In one sense such a novel approach compromises the very objective of predictability in the regulatory process.
91. We would also caution against interpreting any requirement to consider investor expectations as an instruction that the efficiency standard should be outweighed by an expectations of higher (super-normal) returns to investors in the Access Provider. One element of predictability is certainly that the regulator, when making decisions, will consistently act in accordance with the prescriptions in the Act, which makes no express provision for elevating investor expectations above other competition concerns.

⁵ This is also how it was articulated in the Fletcher Inquiry

92. When considering predictability, a reasonable investor might also look to the conduct of overseas regulators implementing the same or materially similar regulatory regimes and expect the Commission to act consistent with decisions of those regulators, or to act consistently with that same Commission's previous decisions.
93. In our view, predictability is not achieved by the Commission limiting model choices to those it suggested were likely prior to embarking on this determination exercise. It may, for example, be an error of law if the Commission were to restrict itself to applying an ORC methodology because it had earlier suggested (in a non-binding statement) that it would likely use such a method, despite evidence that a ODRC/DORC methodology could be more likely in the circumstances to enable the Commission to identify the most efficient price / use of assets. It might equally be problematic if the Commission were to assume away re-use of assets (on the basis that it might enhance investor expectations or certainty) if it is evident that other regulators assume such re-use is more likely to result in normal returns to investors.
94. The Commission's statutory objectives, and the modelling choices that it decides best promote those objectives, cannot be constrained or overridden by vague references to the expectations of an undefined class of investors, and/or past "in principle" statements about how the Commission may implement TSLRIC. Or, put another way, one interpretation of reasonable investor expectations cannot justify or allow an approach that is contrary to the long-term benefit of end-users.
95. In other words, the Commission should not use the notion of "investor expectations" to justify adopting an approach that allows windfall gains and losses, locks in other inefficiencies, or results in worse outcomes for end-users. Rather, the Commission should apply section 18 and TSLRIC in an economically "orthodox" way, focusing on the choices and methods that will produce the best estimates of efficient forward looking costs (which will (i) deliver a reasonable return on efficient investment and therefore promote investment by Chorus; and (ii) result in a price that encourages competition and investment among access seekers).
96. It is also worth noting that the Commission must ask itself the right questions to inform the exercise of its function – i.e. how to apply TSLRIC to set a price for the service, while ensuring that it makes the determination in a way that best gives effect to the s 18 purpose. It is not entirely clear whether the consideration of what reasonable investor expectations are is in fact the right question to inform this function. To the extent it is a relevant question, the Commission should conduct the enquiry in a robust and constructive manner as part of its overall assessment of what best promotes competition and end user benefits.

What would a reasonable investor expect?

97. We know that when determining the prices for UBA and UCLL under the IPP the Commission went to some length to ensure that the price set was the best possible approximation for the likely price that would be achieved under the FPP methodology. It did so by identifying

benchmark countries that applied TSLRIC regulatory models in respect of services that most closely resemble the equivalent New Zealand regulated services.⁶

98. It therefore makes sense that the Commission (and investors) would be guided by the kinds of choices made by those overseas regulators, to the extent such choices are consistent with TSLRIC and not inconsistent with section 18. We would, accordingly, not expect model choices that take the FPP determined price materially beyond the IPP prices set by the Commission.

99. Further, even if investor expectations were to constrain efficiency considerations, it's unclear what the expectations might be.

100. The Commission is not prevented from evolving the way that it interprets and applies TSLRIC over time, including drawing guidance from international trends. No investor should expect the regulatory environment to stay the same, or that regulators are prevented from adapting their approaches and methodologies in light of changing understanding and regulatory practice over time.

101. The Commission has been clear that it may adopt different asset valuation methodologies for some assets. The Commission has recognised that a TSLRIC costing methodology can use a combination of current and historic costs. The Commission noted in its October 2010 submission to the Government review of the Regulatory Implications of Structural Separation that:

***Forward looking (and replacement) costs.** The underlying rationale for valuing assets on a forward looking cost basis is that prices are set on the basis of a hypothetical provider of these services. By basing prices on this basis, the correct pricing signals are given for entry, build or buy decisions.*

[...]

a. *In practice **TSLRIC** (total service long run incremental costs) can use a combination of these [current and historic cost] elements. Where elements of the cost are subject to realistic replacement, replacement costs can be used, where the costs are sunk, historic costs can be used; another important practical element within this is the identification and attribution of common and fixed costs to prevent double recovery. This is highlighted when considering specific services in isolation (such as UBA).⁷*

102. Further, the test can't be used to suggest that regulatory settings don't evolve over time.

⁶ See for example Chorus Limited v Commerce Commission and others [CIV-2013-485-9923 [2014] HC 690]; and paragraph 53 of the Commission's submissions in the Court of Appeal where (in the context of discussing the draft UBA decision it argued- "*In the absence of any other information the Commission's best estimate for the TSLRIC cost of the UBA service in New Zealand from this data would have been the median 9.90*"

⁷ See page 27 of Commission response to MED Discussion Document "Regulatory Implications of Structural Separation" October 2010.

103. TERA has advised that there is an international trend to reflect re-used assets in cost models [145]. As WIK notes in its report, the key environment change has been the replacement of the access network with fibre. This is a debate that has been ongoing for [5] years. Regulators are adjusting their LRIC implementation to reflect this market reality. EU an evolving perspective of TSLRIC to reflect the reality of the transition to fibre that is occurring. This consideration has resulted in LRIC being applied in a changes to how LRIC is to be applied – the constant is that the focus has remained fixed on efficient signals and consumers interests.

104. The Commission's consultation paper is the first time (to our knowledge) that the Commission has used "reasonable investor expectations" to support a specific regulatory methodology. Where the concept has been applied, it suggests very different outcomes that proposed in the consultation paper:

- a. The Commission has considered the standard in the context of part 4 of the Commerce Act. However, in that context it related to an expectation the providers should earn a normal return over the lifetime of an investment.⁸ Further, the Commission considered the investor expectations must be balanced against the need to ensure the approach was consistent with limiting the over-recovery of investments over their remaining lifetime;⁹
- b. In the telecommunications context, the Commission has previously taken supplier expectations, and the link between these expectations and investment, into account to some degree. For example, in the 2002 TSLRIC principles paper, the Commission noted that "prices should be set to ensure that access providers have the expectation of recovering the costs of prudent investment."¹⁰ Further, the Commission's 2009 guide to regulatory decision indicated that setting prices for telecommunications services on the basis of efficiently-incurred costs met supplier and investor expectations, promoting investment within the context of the Act.¹¹

105. To the degree that there is an investor expectation, this can only go as far as regulatory endorsement that the provider earn a normal return over the life of the investments. The consideration to date provides no suggestion that investor expectations should constrain the consideration of efficient costs or provide for windfall gains.

106. It cannot be a reasonable expectation that legacy assets would be artificially revalued upwards and/or that ORC would be used even where that approach permitted windfall gains or other inefficiencies. We note that In the Part 4 context, The Commission considered that it would be unreasonable for investors to expect upwards revaluations if these were not necessary

⁸ See, for example, Input Methodologies Discussion Paper at paragraphs 6.25-6.30.

⁹ Input Methodologies Discussion Paper at 6.25; EDBs Final Reasons Paper at 4.3.64-4.3.65.

¹⁰ Commerce Commission *Application of a TSLRIC Pricing Methodology: Discussion Paper* (2 July 2002) at paragraph 22.

¹¹ Commerce Commission *A Guide to Regulatory Decision Making by the Commerce Commission for the Telecommunications Sector: Discussion Paper* (31 July 2009) at paragraphs 133-134.

to allow them the opportunity to earn at least a normal return over time.¹² It considered that "caution should clearly be exercised" when valuing existing assets upwards unless there would be clear benefits to consumers from doing so, such as clear efficiency improvements.¹³ Further, a new replacement cost valuation was considered to be inconsistent with reasonable investor expectations in practice, given the possibility that a new valuation could lead to windfall gains or losses. More fundamentally, the Commission (and the Court) rejected the argument that a replacement cost methodology was required to promote investment - it is not clear how it could therefore be required in the FPP context due to "reasonable investor expectations".

107. This is consistent with previous judicial criticism in the telecommunications context, where there has been scepticism about the use of ORC to value legacy assets when modelling the service costs that would be incurred by an efficient service provider. For example, in *Vodafone v Telecom*, the majority noted that:¹⁴

[70] The Commission's use of ORC failed to address, however, the distortion caused by artificially revaluing old assets (already wholly or partly depreciated) which were in reality not likely to be replaced and optimised. It is sensible to revalue on an optimised basis, say, a switch by attributing to it the lower value (price) of a new switch which performs the same or better function but is able to be acquired at a lesser price. It is quite another thing to attribute a modern equivalent value to an old asset which is not actually being replaced and for which no replacement would sensibly be introduced. All that does is to artificially inflate the value of the old asset and provide a windfall for the firm in terms of an enhanced return on and of capital employed. This emerges starkly in relation to the very significant value attributed to installed copper wire in the PSTN, the attributed replacement value of which is in large measure the current cost of putting it in the ground. It cannot be right, where the ESP is supposed to be a proxy for a firm which will continue to employ old assets, to attribute a new (2001) value to them, including the cost of work notionally needing to be done if the assets were being newly installed (in the ground). That cost which was not actually incurred included notional current fuel and labour costs.¹⁵

108. To the extent that the interests of the actual service provider were relevant to that exercise, the majority of the Supreme Court also noted comments from the Australian Competition Tribunal that the legitimate business interests of the service provider "were to receive a commercial return on its prudent (past) investment in the infrastructure used [...] not a hypothetical new investment".¹⁶

109. In these circumstances, it is not reasonable for investors to expect all assets (including legacy assets) would always be valued at ORC whenever a TSLRIC exercise was carried out, and that

¹² See eg Input Methodologies Discussion Paper at paragraph B36; EDBs Final Reasons Paper at paragraph 4.3.51, 4.3.64.

¹³ Input Methodologies Discussion Paper at paragraph B36.

¹⁴ *Vodafone New Zealand Limited v Telecom New Zealand Limited* [2012] 3 NZLR 153 (SC), which involved the Court considering the correctness of the Commission's interpretation and implementation of the "net cost" provisions of the old TSO obligation. In order to determine net cost the Commission first modelled the hypothetical efficient service provider's network and calculated the asset value using ORC.

¹⁵ *Vodafone New Zealand Limited v Telecom New Zealand Limited* [2012] 3 NZLR 153 (SC) at paragraphs 73-74.

¹⁶ *Vodafone New Zealand Limited v Telecom New Zealand Limited* [2012] 3 NZLR 153 (SC) at paragraph 71.

there would be no scope for the Commission to adopt a different approach in the future. The Commission and Courts have not taken a static approach to asset valuation.

110. If reasonable investor expectations are to be relevant, the Commission should avoid speculating about what those expectations were, and when they arose. Instead, it should limit the expectations that are relevant to the only possible verifiable and non-controversial expectation – i.e. that investors can reasonably expect to recover their efficiently incurred costs.

111. We believe that, in terms of predictability, what is most important is that investors expect a robust consultation and decision-making process to be followed, and for decisions to be based on reliable evidence.

Promoting the migration to fibre

112. The Commission further preliminary concludes that the intention to respect reasonable investor expectations, when combined with the positive externalities and higher prices that may result (from declining to recognise asset re-use and a performance adjustment), will best give effect to the section 18 purpose without raising UCLL prices further [86]. Accordingly, the Commission's proposed approach means it's unclear what incremental weight, if any, the Commission might put on fibre migration incentives.

113. As set out in earlier submissions, we believe the link between UBA prices and customer migration to fibre services is tenuous at best. A number of factors come in to play when customers purchase particular services. While Telecom UFB broadband services are priced at a premium to copper based services, UFB uptake continues to exceed our forecasts. We continue to see substantive take up of UFB services where available to customers. Accordingly, any assessment of the impact of copper pricing on fibre migration can be speculative at best.

114. It may be that, as the market matures, relative prices become a material factor in consumer purchase decisions. However, this is not the case at this stage, and is unlikely to be a factor during the period of the determined price. Accordingly, this issue can be considered at a later date should pricing relativity become a material consideration rather than introducing inefficiencies at this stage with the implications this implies for end users.

115. Under these circumstances, it makes no sense to determine inefficient prices that simply distort the market further. As WIK note in its report, an upwardly biasing UCLL and UBA prices would generate significant welfare losses, yet there no quantitative analysis that indicates the migration benefits outweigh these losses. Any comprehensive analysis that would lead to meaningful conclusions would need to take the whole UFB framework in to account, including government subsidies and wholesale UFB prices. WIK notes that the ambiguity of the concept and complexities of the analysis has meant that regulators have generally avoided regulatory pricing approaches that rely on price and cross-price elasticities [section 2.4].

116. The Act does not specifically provide adjustments to regulated services to promote uptake of fibre service. However, the Commission is required to set an efficient price for the copper based service. In other words, if the Commission seeks to adjust copper prices to promote UFB uptake, it risks failing to set an efficient price for the regulated service as required by the Act.

117. Accordingly, we expect the migration to fibre will be a key issue for the wider 2019 review required by 157AA of the Act.

MEA

118. We support the Commission's proposed approach to MEA – it seeks to identify the lowest cost means to provide the regulated services.

119. In this section, we note that the Commission should ensure, in applying different MEA, that there is consistency across the assumptions and that the Commission make more use of FWA in the model.

Maintaining a consistent approach across UBA and UCLL MEA

120. The Commission proposes that the UBA modern equivalent asset – from which an efficient price is derived – will be based on Chorus' existing copper based network [174].

121. We think it important that, if the Commission is to use the copper network costs to determine the UBA increment, the MEA networks for each service should share the same underlying modelling principles. In other words, the same network topology must be applied to determine the copper and the fibre network costs, with the only differences being the additional assets actually required to deliver the functionality required to model the UBA service. For instance, the decisions taken in designing the FTTH/FWA MEA for UCLL on issues such as route and node optimisation, and sharing should be applied in determining the FTTN MEA for UBA. This will avoid the risk of inadvertent double counting between the two services due to the adoption of different MEA technologies.

122. Section 5 of the TERA report TSLRIC price review determination for the Unbundled Copper Local Loop and Unbundled Bitstream Access Services: Modern Equivalent Assets and relevant scenarios recognises and emphasises the importance of avoiding double counting, and of the importance of ensuring that the modelled network topologies are the same. By using two different MEAs for the two different services, and then subtracting the FTTN/copper increment, the Commission runs the risk that this approach will give rise to an inefficiently high combined price for the UCLL and UBA services. Extreme care is needed to ensure that double counting is avoided in order to minimise setting prices which inappropriately incentivise stakeholder's investment decisions.

123. While this may appear attractive since it appears to encourage further investment in copper and on maintenance of the copper network, there is some evidence to suggest that Chorus is unlikely to direct returns from regulated copper products towards continuing investment in copper. In section 2.2 of Network Strategies' report Key issues in modelling UBA and UCLL services, Network Strategies examines what public information is available on Chorus investment, reviews the constraints placed on Chorus by the contractual obligations entered into with Crown Fibre Holdings, and the incentives faced by Chorus. They conclude that it seems

unlikely “for Chorus to continue to invest in copper as a competitive alternative. It is more likely that the returns will be used to cross-subsidise its investment in fibre.”¹⁷

124. On the other hand the outcome of an inefficiently high combined price for the UCLL and UBA services would have an adverse effect on efficient signals for fibre network build, for access seekers, and for consumers. The TSLRIC process requires the Commission to determine a regulated price which is consistent with the section 18 purpose, and which recognises the importance of providing efficient pricing signals to access providers and access seekers for the long term benefit of end-users.

125. We agree with TERA that the best option is for the Commission to model both an FTTN/copper DSLAM network and a FTTH/FWA network fibre electronics, and then deduct the difference from the UCLL price using care to ensure that there is no double counting. This will most accurately maintain efficient price signals for UBA and fibre.

FWA should be given more weight within the model

126. The Commission’s preliminary view is that it model a FTTH network, and at the edges of the network model a FWA network. However, FWA coverage would be limited to the current, and projected, RBI fixed wireless footprint [164].

127. We support the Commission adopting the lowest cost technology and it should consider fixed wireless access costs in the model. However, we do not believe a viable technology such as FWA should be limited in this way - any limitation should be based on relative costs..

128. As noted by NSL in the attached report, an efficient operator would utilise FWA technology in areas with low line density. This reflects real life practice and is consistent with New Zealand TSO and overseas regulatory cost model practice. The NSL analysis suggests the viable FWA footprint is considerably wider than the proposed RBA footprint. It is reasonable to model FWA costs and several model approaches are available to the Commission. NSL recommend the Commission take an area approach rather than wireless cap as this will ensure the costs better represent the physical characteristics of the areas being modelled.

129. We agree. FWA is no longer a niche technology for the last few percent of customers. Today’s wireless technologies (particularly LTE technologies currently being rolled out by all mobile operators) are a realistic substitute for fixed line technologies in large proportions of the country. Accordingly, the Commission should apply the same rigour to modelling FWA as it planning to apply to fixed technology options.

¹⁷ Network Strategies: *Key issues in modelling UBA and UCLL services*, page 6

Fibre network performance adjustment

130. The Commission has also considered whether it should make an adjustment to reflect the fact that fibre technologies provide better performance and support a wider range of services than copper networks.

131. The Commission has proposed, given the difficulty of making an adjustment based on consumer preferences or technology performance, to model a copper and fibre network. It would then adopt the copper network costs where they provide a lower cost option [180].

132. We agree with the proposed approach. While an adjustment to the FTTH costs for lower copper performance would be preferable if viable, we appreciate the difficulties associated with consumer preference or technology performance based approaches. However, in doing this, the Commission should ensure that it models the copper network with the same level of robustness as that for the FTTH network to ensure prices are efficient.

Mapping local loop costs to services

133. The Commission has also proposed to adopt an aggregated approach to setting prices. We support the Commission's proposed approach. As set out in our previous submissions, the regulatory framework does not support alternative approaches and dis-aggregated approaches are unlikely to be sustainable. The services are substitutes for each other and any price differentials will see access seekers rapidly migrate to the lowest cost access. WIK further notes that it is common international practice to apply an aggregated approach as proposed in the consultation paper [50].

134. The Commission sets out in the consultation paper an example of how the aggregated approach could be applied in practice, while ensuring competitive neutrality between cabinetised and non-cabinetised lines [222-224].

135. We support the proposed approach which represents a pragmatic way to apply the aggregate approach. However, the approach allocates an equal share of sub loop backhaul to the UCLFS service. If the Commission were to adopt a different approach, it would need to consider how the shared backhaul is to be allocated. In this respect, an equal allocation may not be relevant as, for example, the UCLFS uses only a small proportion of the available access network frequencies/bandwidth.

136. The Commission also suggests that a s3OR review of the SLU Backhaul STD may be required [224.7]. While we agree it would be desirable to review the SLU Backhaul STD to ensure prices are aligned with cost, it's unclear whether this is necessary to implement the proposed approach. Under the proposed aggregated approach, the UCLL price will equal SLU plus efficient SLU backhaul costs. Therefore, the UCLFS price can be established as equal to UCLL or equal to SLU plus efficient backhaul costs even before such a s3OR review is undertaken.

Key inputs to TSLRIC model

Key inputs

137. The consultation paper sets out a number model for comment.

Demand

138. In relation to UCLL, we think that the Commission should take all fixed line access connections into account as the relevant demand. This is the aggregate demand which would be expected for a hypothetical efficient operator delivering UCLL access services in New Zealand. The Commission's approach to UCLL bases a bottom-up cost model on a MEA network which is based on a FTTH/FWA. This means that the model must include not only Chorus' currently active copper demand, but those connections which have already been migrated to fibre, and those lines migrated to other operators, together with those lines which are used to provide other regulated and non-regulated services (the latter, such as leased line and dedicated data access).

139. The volume of demand used as an input should be comprehensive, since it will drive the scale and dimensioning of the network and accordingly the costs. Equally the costs should be allocated across the services actually provided by the properly dimensioned network, based on appropriate parameterisation to operate efficiently and cost-effectively to maintain appropriate QoS. In order to construct this model correctly, all current connections should be included in the modelled demand.

140. In relation to the demand for UBA services, we agree generally with the Commission's proposed approach.

Tilted annuity

141. We support the tilted annuity approach to depreciation and agree with the Commission that it is the most widely used depreciation methodology by regulators. This approach is well suited to TSLRIC modelling given that it captures the effect of technological change by assuming that the same output can be produced in the next period more cheaply than in the current period based on an adjustment factor for expected change in price. The Commission's comments at paragraph 252 focus on the view that a tilted annuity approach is a good proxy for economic depreciation where demand is stable. In fact, a tilted annuity approach is capable of dealing with both expected demand changes as well as expected price changes.¹⁸

142. We suggest that the Commission consider adopting a tilted annuity approach which includes an adjustment factor for both price and demand changes for both the UCLL and UBA models. This flexibility will ensure that the model is able to deal properly with a range of assumptions which have significant impact on the timing and recognition of capex flows, and prices from period to period under differing demand conditions for the modelled service.

¹⁸ See section 4.2 of the appended expert report of WIK-Consult

Tax adjustments to annuity charge

143. In paragraph 258 and Attachment A, the Commission proposes a tax adjusted annuity charge to align the taxation cashflows with the model cashflows. We remain unclear as to the manner in which the Commission proposes to model taxation-related cashflows, and the use of real or nominal cost through the model.
144. On its face, we think that there could well be room for some refinements to the final pre-tax tilted annuity calculation given the post-tax WACC, the tilt factor for price (and demand changes), the corporate tax rate, and the asset's finite economic life, and with adjustments for the NPV of diminishing value tax depreciation including the tax write-off of any remaining tax book value at the end of the asset's economic life. These would require a more detailed approach than the Commission's proposal but would likely be more technically correct, and provide a more accurate estimate of the real capital recovery factor.
145. Given the absence of more detailed information on the structure of the Commission's cost model and its approach to taxation flows and nominal vs real costs we cannot comment further. Accordingly, we reserve our final position on this issue until such time as the details of the modelling approach are made public.

Allocation of common costs

146. We agree with the Commission that common costs should be allocated across the demand for all regulated and unregulated telecommunication services and non-regulated services for assets shared with third parties as suggested in paragraph 266. In general, we consider that the Commission's approach to allocation methodologies are appropriate for use in the TSLRIC modelling process.
147. One concern arises from a potential ambiguity in paragraphs 261 to 263 in respect of the use of terms relating to the identification of "incremental costs", "directly attributable costs", shared network costs, and shared non-network costs. It is not clear to us that the term "incremental" costs is or should necessarily be treated as synonymous with "directly attributable costs" under any reading of that term. The reason for this is that some shared network and non-network costs which may not be clearly attributable, may well be incremental to the service taking into account the service provider's provision of other telecommunications services. The difficulty of attribution may simply be due to a lack of information as opposed to not being properly attributable.
148. Based on the discussion in the 9 July consultation paper, we are now unclear whether or not the term "directly attributable costs" includes allocations to the various outputs of the costs associated with network assets which support a range of regulated and unregulated services, as well as those costs identifiably and directly attributable to one service and allocated to that output. The allocation of joint costs in supplying a range of services can clearly use identifiable cost drivers as allocation keys. Arguably then, there are some shared network costs which are not clearly attributable based on identifiable cost drivers, and some non-network shared costs

which are treated in the same way. We believe it would be helpful for the Commission to clarify the terminology.

149. A second concern relates to the suggestion that the Commission could use the Shapley-Shubik method as a methodology for allocation of indirectly allocable network costs. This approach is, in our experience, best suited to an examination of cost sharing where the costs are to be split between two participating agents on an arm's length basis in a cooperative game. This would be based on objectives of fairness, equity and neutrality associated with arm's length bargaining. This situation arises in circumstances where joint production is based on collective use of common services and where the allocation of joint costs to the separate classes of users is delegated to them. In these circumstances, firms would experience unnecessary costs (including transaction costs) and other inefficiencies if bargaining took place, or if another surrogate such as the Shapley-Shubik method was employed.

150. An efficient provider constructing a network and providing the modelled services would dimension the network to a given level of end to end QoS for a given level of demand, and provide the necessary services to support that process. In our view, the most appropriate allocation key for use in this context is the capacity based method used by the Commission.

Trenching and terrain

151. It is common that trenching and the associated terrain through which trenching must be carried out represent a significant proportion of the costs of building a fixed access network. The associated costs of labour, and the type of trenching required are directly linked to the nature of the terrain. In estimating trenching costs, the nature of the terrain to be traversed can be established using independent third party information as a primary source, and, to test and verify the relevance of any additional material supplied by parties to the TSLRIC modelling consultation process. We urge the Commission to consider the use of independent and authoritative data sources material. The best example we are aware of is Landcare Research's New Zealand Land Resource Inventory which has significant material held in a number of different databases relating to soil and rock conditions and other physical factors which may well be suitable as a primary or secondary resource for the Commission.¹⁹

Implementation

Backdating

152. We agree with the Commission's overarching view that it has a discretion to backdate, if and, to the extent that backdating is likely to best give effect to competitive outcomes required by section 18.

153. As we have previously stated, we do not generally support a backdating approach unless there are clear reasons why a failure to backdate would be contrary to the purpose of the

¹⁹ Section 5 of Network Strategies expert report *Key issues in modelling UBA and UCLL services*

legislation (which we consider was the case in the UCLF connection charges decision). We have also previously set out our view that an ordinary regulatory assumption against retrospectivity should also weigh against backdating and that our expectation is that in this case, any backdating of the UCLL price, in particular, is likely to be distortionary.

Regulatory period

154. We recognise that five years is a relatively lengthy regulatory period but consider that, in the circumstances, it is reasonable and pragmatic to align it with the future review of the Act. We therefore do support the Commission's initial view on the regulatory period.

155. We note that in the event that timing of the review of the Act changes materially, then the Commission should be open to reconsidering the regulatory period in conjunction with stakeholders. In such circumstances the Commission may be able to identify key inputs and assumptions that could provide a valid basis for an interim adjustment.

A model reference paper

156. Wik Consult also advise that it is standard regulatory practice internationally for the regulator to develop and publish a reference document which is capable of providing the basis for informed comment on the high level specifications of the model.

157. We consider this to be a pragmatic and relatively important addition to the Commission's process and recommend the re-inclusion of this step into the Commission's process. It is important for parties to have access to the specifications of the model prior to the draft decision for two key reasons:

- a. Parties should have the opportunity to identify and comment on any material issues in the model prior to the model calculations being run and finalised; and
- b. Following the draft decision parties will only be provided with a limited period in which to comment (30 working days) and on the current timetable that overlaps with the traditional summer holiday period. Such a challenging time period for understanding and commenting on all aspects of the draft decision elevates the importance of a cross-check on the model reference paper well in advance of a draft decision.

END

Attachment A: WIK report

Attachment B: Network Strategies report

Reports submitted as separate pdf documents.