



Public inquiry on the access determinations for the voice interconnection services

Draft report

August 2025

Acknowledgement of country

The ACCC acknowledges the traditional owners and custodians of Country throughout Australia and recognises their continuing connection to the land, sea and community. We pay our respects to them and their cultures; and to their Elders past, present and future.

Australian Competition and Consumer Commission

Land of the Ngunnawal people

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Executive summary

In 2024, the ACCC decided to extend the declarations of the mobile terminating access service, fixed terminating access service and the fixed originating access service as we were satisfied that doing so would promote the long-term interests of end-users. We are now holding a public inquiry into making access determinations for these services, collectively known as the voice interconnection services.

Access determinations can include both price and non-price terms which can be relied upon in the absence of commercially agreed terms.

The ACCC's draft position in relation to price terms in the new access determinations are as follows:

	Price terms (nominal cents/minute)	Period
Mobile terminating access service	0.90	1 January 2026 to 30 June 2029
Fixed terminating access service	0.65	1 January 2026 to 31 December 2026
Fixed originating access service	0.21	1 January 2027 to 30 June 2029

In relation to non-price terms and conditions, the ACCC's draft position is that the current terms should be maintained in substance with only minor changes to ensure consistency between the terms in the access determinations for the 3 voice interconnection services and to remove terms irrelevant to voice interconnection services. The ACCC's draft position is not to include any additional term(s) to address scam issues in the access determinations at this point.

In relation to the duration of the new access determinations, the ACCC's draft position is that the new access determinations should commence on 1 January 2026 and expire on 30 June 2029, in line with the expiry of the declarations for the voice interconnection services.

Price terms

As part of this inquiry, the ACCC is considering a holistic approach to pricing the 3 voice interconnection services.

The ACCC has in the past adopted different approaches to pricing the mobile terminating access service and the fixed terminating/originating access services due to different underlying technologies used to provide these services as well as other circumstances that apply to the respective markets. In particular, the ACCC previously determined the price for the fixed terminating/originating access services using the Building Block Model based on Telstra's costs of providing these services on its copper network in 2011. During the transition period where customers are migrating from Telstra's copper network to the National Broadband Network (NBN), the ACCC decided to apply a one-off adjustment to these prices in 2015 and rolled over the prices in 2019. Now that the NBN roll out is complete and the fixed terminating/originating access services are technology neutral and provided by many operators, a comprehensive cost-based assessment of the efficient costs

of providing these services, together with the mobile terminating access service, is appropriate.

As part of this cost-based assessment, the ACCC has engaged Analysys Mason to develop a new cost model to estimate the costs of providing the 3 voice interconnection services. This approach enables the ACCC to estimate the costs of these services based on the same pricing principle in a robust and transparent manner, taking into account Australia-specific cost drivers.¹ The ACCC considers that this approach is most likely to lead to outcomes that promote competition and efficiency and is appropriate, taking into account the statutory matters in s 152BCA(1) of the *Competition and Consumer Act 2010* (CCA).

After consulting on the proposed model specification, Analysys Mason has developed a draft cost model that produces indicative cost estimates for the 3 voice interconnection services. Our draft position is that the draft cost model provides a reasonable estimate of the efficient costs of providing these services based on currently available technologies and market circumstances. As such, the ACCC's draft position is that these estimates provide a reasonable basis for the new regulated prices for the voice interconnection services.

Based on the cost estimates, the ACCC is proposing a draft price of 0.90 cents per minute for the mobile terminating access service for the duration of the access determinations, reflecting the average estimated cost of providing the service from 2025 to 2029. This represents a 24.4% decrease in the price of the mobile terminating access service (currently at 1.19 cents per minute).

For the fixed terminating/originating access services, the draft cost model estimates the cost at 0.21 cents per minute throughout 2025 to 2029. This is substantially lower than the current price of 0.86 cents per minute, which is expected given the prices for the fixed terminating/originating access services have not significantly changed since 2011. The ACCC's draft position is that a more gradual reduction is appropriate in the current circumstances to mitigate the significant impact the new price will have on access providers. The ACCC proposes a price of 0.65 cents per minute for the fixed terminating/originating access services for first year of the access determination and a price of 0.21 cents per minute from the remainder of the access determination period. These estimates represent a 24.4% and 75.6% decrease respectively compared to the current price.

The ACCC is seeking stakeholder feedback on the draft cost model and proposed price terms including the proposed glide path for the fixed terminating/originating access services. The ACCC is also expecting to update some of the inputs to the cost model with new available information, such as the latest coverage maps, before finalising.

Non-price terms and conditions

The ACCC's draft position is to maintain in substance the current non-price terms and conditions, while making minor changes to ensure consistency between the terms in the access determinations for all 3 voice interconnection services.

Consistent with our preliminary view, our draft position is not to include additional term(s) to address perceived tension between an access provider's obligation to provide access to voice interconnection services and other scam-related obligations to block traffic. While some stakeholders provided suggestions on how these issues could be addressed in the context of the access determinations, the ACCC is not satisfied that they would likely

¹ That is, the total service long-run incremental costs plus a contribution towards organisational-level cost (TSLRIC+) principle. This approach estimates the incremental costs of providing the service and is typically implemented in a bottom-up cost model calculating the forward-looking costs of a hypothetical efficient operator deploying best-in-use technology.

provide regulatory certainty or are otherwise appropriate when taking into account the matters in s 152BCA(1) of the CCA. The ACCC also remains of the view that seeking to address this issue in the access determinations at this point could risk cutting across other evolving scam-related regulations.

The ACCC will continue to monitor developments in the scams regulation landscape, such as the implementation of the Scams Prevention Framework, and explore options for clarifying the interactions between access regulation and scam obligations as the regulatory framework develops.

Next steps

After considering stakeholder submissions, the ACCC will determine any changes to the cost model to be implemented by Analysys Mason. The outputs of the final cost model will inform the ACCC's consideration of its final position on price terms for the voice interconnection services access determinations. The ACCC expects to release a final report in late 2025.

1. Introduction

On 21 June 2024, the Australian Competition and Consumer Commission (ACCC) commenced a combined public inquiry under Part 25 of the *Telecommunications Act 1997* into making access determinations under section 152BC of the *Competition and Consumer Act 2010* (CCA) for 3 voice interconnection services:

- the mobile terminating access service;
- the fixed terminating access service; and
- the fixed originating access service, (collectively the voice interconnection services).

The current access determinations for the voice interconnection services were due to expire on 30 June 2024. On 24 June 2024, the ACCC decided to extend the expiry date of the current access determinations for these services until the day immediately before the new access determinations come in force.²

The voice interconnection services enable different networks, fixed and mobile, to interconnect for the purpose of exchanging voice traffic.

An access determination provides a base set of terms and conditions that an access seeker can rely on if it is unable to come to a commercial agreement with an access provider on the terms and conditions of access to a declared service. If parties come to an agreement on terms and conditions of access, their access agreement will prevail over the access determination to the extent of any inconsistency.³

The inquiry considers what price terms and non-price terms and conditions should be included in the new access determinations.

The paper also sets out the ACCC's draft position on price terms for the voice interconnection services which are informed by a draft cost model developed by external consultant, Analysys Mason. It also presents the ACCC's draft position on non-price terms and conditions of access to the voice interconnection services.

1.1. Consultation process

On 16 July 2024, the ACCC released a discussion paper inviting stakeholders' views on a range of issues relating to the determination of price and non-price terms and conditions of access to the voice interconnection services (Discussion Paper).⁴

The ACCC received 8 submissions in response to the Discussion Paper.⁵

On 3 April 2025, the ACCC released a position and consultation paper which sets out the ACCC's position to develop a cost model for the purpose of informing the ACCC's views on price terms.⁶ The paper sought stakeholder views on the proposed approach to undertaking the cost modelling exercise, including a draft model specification paper prepared by

² Subsection 152BCF(10) of the CCA. See [Notice of extension of an access determination under subsection 152BCF\(10\)](#).

³ Section 152BCC of the CCA.

⁴ ACCC, [Voice interconnection services access determination inquiry – discussion paper \(Discussion Paper\)](#), July 2024.

⁵ All submissions are available on the ACCC website [here](#).

⁶ ACCC, [Voice interconnection services access determination inquiry – position and consultation paper \(Position and Consultation Paper\)](#), April 2025.

Analysys Mason (Draft Model Specification Paper). The paper also set out the ACCC's preliminary views on non-price terms and conditions of access to the voice interconnection services. The ACCC also sought information from relevant operators to inform the development of the cost model.

The ACCC received 4 submissions in response to the position and consultation paper.⁷

After reviewing the submissions in response to the position and consultation paper as well as information provided by relevant operators, the ACCC reached a position on the final model specification to be implemented by Analysys Mason. Analysys Mason prepared a paper detailing the final model specification (Final Model Specification Paper) which has been published alongside this report. In addition, Analysys Mason has constructed a draft cost model implementing the final model specification and prepared a report in relation to the draft cost model (Report on draft cost model) and an operating manual.

The ACCC is now seeking submissions on its draft positions on price and non-price terms and conditions of access for the voice interconnection services as set out in this report. The ACCC has also published a public version of the draft cost model developed by Analysys Mason and the Report on draft cost model for stakeholder feedback. We prepared a public version of the draft cost model to ensure that certain inputs relying on confidential information provided by operators are anonymised and could not be identified.

Consultation on weighted average cost of capital methodology

The ACCC has an economic regulatory role across various sectors of the economy. While the roles and regulatory frameworks differ in some respects, a number of them call for regulatory consideration of a rate of return (also referred to as weighted average cost of capital, or WACC) for a regulated firm.

The ACCC has typically applied broadly similar and consistent methods for estimating a WACC to inform these decisions. That said, new issues and additional information have emerged in the past decade in the approaches to estimating the WACC, which have been considered by other economic regulators.

As such, the ACCC is conducting a review of its approach to the WACC which it undertakes as part of its regulatory decision-making processes across various industries in the context of different regulatory frameworks, including Parts IIIA, VIIA and XIC of the CCA. The ACCC intends to develop a general methodology that informs its consideration of WACC across regulatory decision-making processes, which would promote consistency in our approach to WACC and provides regulatory certainty to industries. In making relevant regulatory decisions, the ACCC would continue to consult on its proposed approach to estimating the WACC in particular decisions and take into account the prevailing circumstances and factors relevant to particular decisions, and consider how its general methods apply to a particular decision, including whether to depart from its general methods in the particular circumstances.

As part of this review, the ACCC has engaged Cambridge Economic Policy Associates (CEPA) Australia to advise on suitable methods, including those considered / adopted by economic regulators in their WACC decisions and to make recommendations regarding the methods that the ACCC should adopt. The ACCC is consulting on the methodologies

⁷ All submissions are available on the ACCC website [here](#).

proposed by CEPA Australia as part of the current voice interconnection services access determinations inquiry and the replacement module process for NBN Co⁸ as:

- the proposed basis for our approach to determining a WACC in making the voice interconnection services access determinations, and assessing NBN Co's replacement module application and making a replacement module determination; and
- informing a general methodology to estimating the WACC applicable to future ACCC regulatory decisions or processes across various industries.

To assist with this consultation, CEPA Australia has prepared a Draft WACC Methodology Report and a Note on Voice Interconnection Services WACC. We are seeking feedback from stakeholders on this material, including those from non-telecommunications industries or stakeholders who are not directly engaged with the voice interconnection inquiry, on the proposed methodology. We will request that CEPA Australia consider submissions in finalising its recommendations on WACC methodologies that the ACCC should adopt.

The ACCC will have regard to the submissions and CEPA Australia's final recommendations in forming its view regarding the approach to WACC in the context of the voice interconnection services access determinations inquiry and in making a replacement module determination for NBN Co. We will also have regard to these submissions in developing a general methodology applicable to future regulatory decisions. To this end, we are exploring making an ACCC guideline on a general WACC methodology, which could be updated as appropriate, to provide clear guidance to industries on these issues.

Submissions

The ACCC will accept submissions in response to this draft report, the draft cost model with the accompanying documentation, the Draft WACC Methodology Report and Note on Voice Interconnection Services WACC until **5pm AEST Wednesday 3 September 2025**.

Submissions received after this time may not be taken into account. The ACCC prefers to receive submissions in electronic form, either in PDF or Microsoft Word format, which allows the text of the submission to be searched.

The ACCC's approach to handling information during this consultation, disclosure of confidential information, and the process for claiming confidentiality is outlined further in **Attachment A**.

Submissions should be sent to: telco.regulation@acc.gov.au.

After considering stakeholder submissions to the draft report, the ACCC will determine any changes to be made to the draft cost model and expects to issue a final report on the voice interconnection services access determinations in late November/early December 2025.

1.2. Structure of the paper

This draft report is structured as follows:

- Chapter 2 provides background information on the declared voice interconnection services and the history of their regulation

⁸ The ACCC is expecting to release a consultation paper for the NBN replacement module process on a range of issues, including the proposed WACC methodology, around mid-August 2025.

- Chapter 3 sets out the relevant legislative provisions in relation to the making of access determinations
- Chapter 4 outlines the ACCC's pricing approach and the final model specification
- Chapter 5 sets out the ACCC's draft position on price terms and conditions of access based on outputs from the draft cost model
- Chapter 6 sets out the ACCC's draft position on non-price terms and conditions of access
- Chapter 7 sets out the ACCC's draft position on duration of the access determinations
- Appendix A sets out the ACCC's approach to calculating the Spectrum Licence Tax as input for the draft cost model.
- Appendix B sets out the ACCC's proposed changes to draft voice interconnection services access determinations.

2. Background

2.1. What are the services?

What is the mobile terminating access service?

The mobile terminating access service is a wholesale service provided by a mobile network operator to other network operators, fixed or mobile, to connect or 'terminate' a call on its mobile network. The mobile terminating access service enables subscribers from a mobile or fixed line network to make calls to subscribers on a different mobile network and is essential to the provision of fixed voice and mobile services in downstream markets.

An access provider supplies the mobile terminating access service by connecting a call from a point of interconnection between its network and an access seeker's network, to a subscriber connected to the access provider's mobile network. The access provider charges the access seeker a fee for terminating the call. Historically, this charge has been a per-minute rate.

What is the fixed terminating access service?

The fixed terminating access service is a wholesale service provided by a network operator to other network operators to terminate a call to a geographic number.⁹

An access provider supplies the fixed terminating access service by connecting a call from a point of interconnection between its network and an access seeker's network to an end-user directly connected to the access provider's network using a geographic number.¹⁰

Just as with the mobile terminating access service, the fixed terminating access service is an essential input into the provision of fixed voice and mobile services.

What is the fixed originating access service?

The fixed originating access service is a wholesale service provided by a network operator to originate a call from a geographic number.

An access provider supplies the fixed originating access service by carrying a call from an end-user directly connected to its network using a geographic number to a point of interconnection between the access provider's network and an access seeker's network.

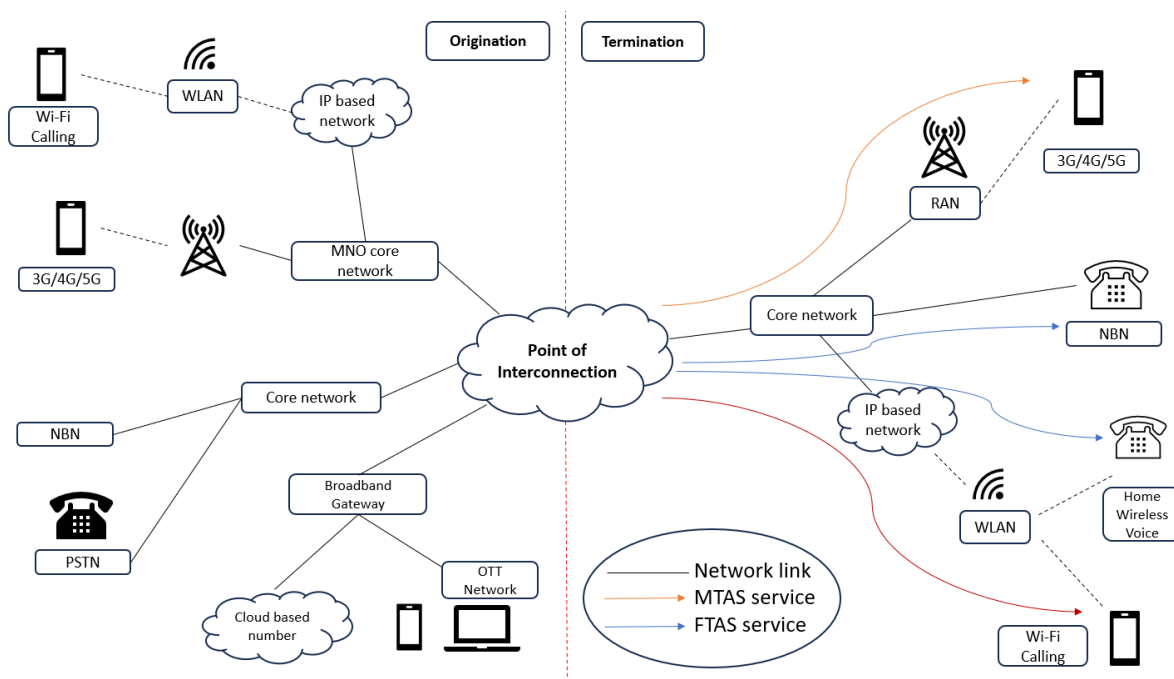
⁹ While geographic numbers are typically used in connection with fixed line voice services, or landlines, it can be used in connection with a voice service provided over mobile networks, (e.g. [Telstra's 4G Home Wireless Voice service](#)).

¹⁰ While the mobile terminating access service and the fixed terminating access service are analogous, the service descriptions of the two declared services differ, particularly with respect to the definition of the end-user that is being called. The mobile terminating access service description defines the end-user as being connected to the access provider's digital mobile network, while the fixed terminating access service description defines an end-user as being assigned a geographic number and connected to the access provider's network.

Illustrative example of how the voice interconnection services are provided

Figure 1 below demonstrates some of the ways in which the voice interconnection services are provided.

Figure 1 How voice calls may be originated and terminated



Source: ACCC

Why has the ACCC regulated these services?

In the case of the mobile terminating access service and the fixed terminating access service, each access provider has a monopoly over access to subscribers connected to its network. In the absence of regulation, a network operator has the ability and the incentive to set unreasonable terms of access to termination services on its network.

This may include setting prices for access higher than are economically efficient, or in extreme cases, denying access to rivals or potential new entrants. Even where all operators are willing to interconnect with one another, the operators may have an incentive to set termination rates above efficient costs in order to earn economic rents which would result in a lower-than-optimal number of calls being made.

At the retail level, the provision of voice services in Australia has historically operated under a 'calling party pays' model, sometimes known as a 'termination model'. That is, the calling party bears the full cost of the call, and the called party does not pay anything to receive calls.¹¹

Two important consequences flow from this model. Firstly, calling parties have no control over which network their call may be terminated on. Secondly, called parties are unlikely to

¹¹ Strictly speaking, under a termination model the called party does not pay any kind of variable usage charge to receive calls, but in most cases will be paying a fixed access charge for the service.

consider the wholesale termination rate charged by their prospective provider when deciding which network to contract with.

As a result, the mobile terminating access service and fixed terminating access service are essential bottleneck services, which if left unregulated may lead to inefficiently high prices in the downstream markets for which termination is an input.

In the case of the fixed originating access service, while the originating network does have exclusive access to its own end-users, its ability to refuse to originate calls to other networks is typically restricted by the ability of its own subscribers to switch networks. However, where a network has a significantly outsized share of subscribers, it may have market power such that it is able to refuse to originate calls to some smaller network operators without risking losing significant market share. The fixed originating access service includes the provision of pre-selection and override functions which have historically been part of the suite of fixed voice services offered over Telstra's legacy copper network.

The ACCC may deregulate a service if changes in market conditions indicate that an access provider has limited ability or incentive to set unreasonable terms of access to a service provided on its network, such that regulation would no longer promote the long-term interests of end-users. For instance, the ACCC decided to deregulate the Unconditioned Local Loop Service and Line Sharing Service in 2024 due to its declining use and the roll out of alternative networks such as the National Broadband Network and the availability of other regulated services such as the wholesale ADSL and the resale fixed voice services.¹²

How has the ACCC set regulated prices for these services?

The ACCC's approach to pricing a declared service is guided by the matters it must take into account in making an access determination under Part XIC of the CCA (discussed in Chapter 3).

In the past, the ACCC has considered a variety of approaches to inform its views on the appropriate price-terms for the voice interconnection services.

The ACCC has generally considered a cost-based approach to be the most appropriate method of setting prices, taking into account the relevant factors listed in section 152BCA(1) of the CCA. This is because when the price of a service reflects the efficient cost of providing that service, it promotes competition and allocative efficiency in the downstream markets where that service is an essential input. By promoting competition, cost-based pricing also promotes dynamic efficiency as it encourages access providers to invest in the most efficient technology and infrastructure to provide services in downstream markets, as well as respond to consumer demand and preferences through innovation.

Cost-based pricing also enables access providers to recover the efficient costs of providing the service, and accounts for the legitimate business interests of operators providing declared services.

Table 1 sets out the regulated prices (or indicative prices, under the pre-2011 regulatory regime) for the mobile terminating access service since 2004.

In the Pricing Principle Determinations in 2007 and 2009, the ACCC set the indicative prices for the mobile terminating access service based on the output from a specific cost model developed for the ACCC by WIK-Consult. The WIK-Consult model estimated the cost of a

¹² ACCC, [Public inquiry into the declaration of the domestic transmission capacity service, fixed line services and domestic mobile terminating access service – combined declaration inquiry – Final Report \(DTCS & fixed line services\)](#), March 2024.

hypothetical efficient mobile network operator providing the mobile terminating access service on a 2G network based on total service long run incremental cost plus organisational-level cost principles (TSLRIC+).¹³

In 2011, the ACCC set price terms for the mobile terminating access service in final access determination. In doing so, the ACCC assessed the efficient cost of providing the mobile terminating access service based on the estimates from the earlier WIK-Consult model, industry developments and international estimates of the efficient cost of providing the mobile terminating access service.¹⁴

In 2015, the ACCC used an international benchmarking approach to estimate the costs of providing the mobile terminating access service for the purpose of the final access determination.¹⁵ The ACCC also used an international benchmarking approach at the last mobile terminating access service final access determination inquiry during 2019–20.¹⁶

Table 1 Mobile terminating access service nominal price as set by the ACCC, 2004-present

Relevant time period	Nominal price (cents per minute)
1 July 2004 – 1 December 2004	21
1 January 2005 – 31 December 2005	18
1 January 2006 – 31 December 2006	15
1 January 2007 – 30 June 2007	12
1 July 2007 – 31 December 2011	9
1 January 2012 – 31 December 2012	6
1 January 2013 – 31 December 2013	4.8
1 January 2014 – 30 December 2015	3.6
1 January 2016 – 30 December 2020	1.7
1 January 2021 – present	1.19

Source: ACCC 2007, ACCC 2009, ACCC 2011a, ACCC 2015a, ACCC 2020.

Table 2 sets out the prices set by the ACCC for the fixed terminating access service and the fixed originating access service since 2010. Prior to the introduction of access determinations, the ACCC set indicative fixed terminating access service and fixed originating access service rates based on TSLRIC+ and pricing principles.¹⁷ In 2011, the

¹³ ACCC, [MTAS Pricing Principles Determination and indicative prices for the period 1 January 2009 to 31 December 2011](#), March 2009 (ACCC 2009); ACCC, [MTAS Pricing Principles Determination 1 July 2007 to 31 December 2008: Report](#), November 2007 (ACCC 2007).

¹⁴ ACCC, [Inquiry to make a final access determination for the MTAS - Access Determination Explanatory Statement \(MTAS FAD – Explanatory Statement\)](#), 7 December 2011 (ACCC 2011a).

¹⁵ ACCC, [MTAS Final Access Determination – Final Decision \(MTAS FAD\)](#), August 2015 (ACCC 2015a).

¹⁶ ACCC, [Public inquiry on the access determination for the Domestic Mobile Terminating Access Service – Final report](#), October 2020 (ACCC 2020).

¹⁷ ACCC, [Public inquiry to make final access determinations for the declared fixed line services - Discussion paper](#), April 2011 (ACCC 2011b). The ACCC has had the power to make Final Access Determinations since 1 January 2011, following

ACCC used a building block model, the Fixed Line Services Model, to set the prices of the fixed terminating and originating services (at 0.95 cents per minute), along with other fixed line services, provided over Telstra’s copper network.¹⁸

In 2015, the ACCC decided to update the building block model and apply a 9.4% decrease for all fixed line services (including fixed terminating and originating access services).¹⁹ In 2019, the ACCC rolled over the prices set in 2015.²⁰

Table 2 Fixed terminating access service/fixed originating access service nominal prices as set by the ACCC, 2010-present

Relevant time period	Nominal price (cents per minute)
Indicative price – 2010	1
1 July 2011 – 30 June 2016	0.95
1 July 2016 – 30 June 2019	0.86
1 July 2019 – present	0.86

Source: ACCC 2011b, ACCC 2011c, ACCC 2015b, ACCC 2019

Over time, the price path of the mobile terminating access service has followed a regular downward trajectory, and the decline in regulated prices over the years has been significant. By contrast, the prices for the fixed terminating and originating services have remained relatively static over a long period of time, with relatively limited reductions since 2010.

Non-price terms and conditions for voice interconnection services

Separate to price terms, the ACCC has also historically included a targeted set of non-price terms and conditions in the access determinations for the voice interconnection services. These terms focus on those aspects of access where commercial agreement may be less likely to be reached, and where specific competition concerns may arise. The current non-price terms and conditions cover a broad range of issues, including terms regarding billing, operational processes, and dispute resolution processes. These are discussed further in Chapter 6.

In 2015, the ACCC undertook separate public consultation on the non-price terms and conditions applicable to the mobile terminating access service, the domestic transmission and capacity service, and the fixed line services, including the fixed terminating access service and fixed originating access service. These non-price terms and conditions were carried over into the existing access determinations for the mobile terminating access service in 2020, and the fixed terminating and fixed originating access services in 2019.

amendments to the telecommunications access regime under the Telecommunications Legislation Amendment (Competition and Consumer Safeguards) Act 2010.

¹⁸ ACCC, [Inquiry to make final access determinations for the declared fixed line services - Final Report](#), July 2011 (ACCC 2011c).

¹⁹ ACCC, [Public inquiry into final access determinations for fixed line services - Final Decision](#), October 2015 (ACCC 2015b)

²⁰ ACCC, [Inquiry into final access determinations for fixed line services - Final Decision](#), November 2019 (ACCC 2019).

3. Legislative framework

The telecommunications access regime in Part XIC of the CCA gives the ACCC the power to, among other things, make a final access determination for a declared service.²¹

The ACCC may make a final access determination if it:

- has held a public inquiry under Part 25 of the *Telecommunications Act 1997* about a proposal to make a final access determination,
- prepared a report about the inquiry under section 505 of the *Telecommunications Act 1997*, and
- the report was published during the 180-day period ending when the final access determination was made.²²

Section 152BC of the CCA specifies what a final access determination may contain. It includes, among other things, various terms and conditions on which a carrier or carriage service provider is to comply with the standard access obligations (SAOs) provided for in the CCA and terms and conditions of access to a declared service. A final access determination may, among other things, make different provisions with respect to different access providers or access seekers.²³ The ACCC must not make a final access determination that has any of the effects set out in section 152BCB of the CCA.

In making a final access determination, the ACCC must take into account certain matters prescribed in subsection 152BCA(1) of the CCA (summarised below) and may, where relevant, take into account the matters in subsection 152BCA(2) and any other matters it thinks are relevant.²⁴

If the ACCC makes a final access determination with terms and conditions on which

- the access provider must comply with SAOs, or comply with any of its requirements in relation to access to the declared service, or
- the access seekers can seek access to the declared service,

the terms and conditions must include terms relating to price or a method of ascertaining price.²⁵ A final access determination may also restrict the application of the SAOs in certain circumstances or to certain access providers.²⁶

A final access determination can provide a base set of terms and conditions that access seekers can rely on if they are unable to come to a commercial agreement with an access provider on the terms and conditions of access to a declared service. If parties come to an agreement on terms and conditions of access, their access agreement will prevail over the final access determination to the extent of any inconsistency.²⁷

²¹ Subsection 152BC(1) of the CCA.

²² Section 152BCH of the CCA.

²³ Subsection 152BC(5) of the CCA.

²⁴ Subsection 152BC(3) of the CCA.

²⁵ Subsection 152BC(8) of the CCA.

²⁶ Paragraphs 152BC(3)(h), (i) of the CCA.

²⁷ Section 152BCC of the CCA.

A final access determination must have an expiry date, which should align with the expiry of the declaration for that service unless there are circumstances that warrant a different expiry date.²⁸

This draft report seeks stakeholder views on issues relevant to the combined access determination inquiry.²⁹ The time limit for making a final access determination is within 6 months of commencement. However, the ACCC may extend or further extend the time period for making the final access determination by written notice by no more than six months.³⁰

3.1. Factors the ACCC must and may consider

The ACCC must consider a range of factors when making a final access determination, including:

- (a) whether the determination will promote the long-term interests of end-users of carriage services or services supplied by means of carriage services,
- (b) the legitimate business interests of a carrier or carriage service provider who supplies, or is capable of supplying, the declared service, and the carrier's or provider's investment in facilities used to supply the declared service,
- (c) the interests of all persons who have rights to use the declared service,
- (d) the direct costs of providing access to the declared service,
- (e) the value to a person of extensions, or enhancement of capability, whose cost is borne by someone else,
- (f) the operational and technical requirements necessary for the safe and reliable operation of a carriage service, a telecommunications network or a facility, and
- (g) the economically efficient operation of a carriage service, a telecommunications network or a facility.³¹

If an access provider of a declared service also supplies one or more other eligible services, the ACCC may take into account the characteristics of, costs and revenues associated with, and demand for, the other eligible service(s).³²

The ACCC may also take into account any other matters that it thinks are relevant.³³

In considering whether the determination will promote the long-term interests of end-users, the ACCC must have regard to the extent to which the determination is likely to result in the achievement of the objectives of:

- promoting competition in markets for listed services
- achieving any-to-any connectivity, and
- encouraging the economically efficient use of, and investment in, infrastructure.³⁴

²⁸ Subsections 152BCF(5)-(6) of the CCA.

²⁹ Section 499 of the *Telecommunications Act 1997*.

³⁰ Subsection 152BCK(3) of the CCA.

³¹ Subsection 152BCA(1) of the CCA.

³² Subsection 152BCA(2) and section 152AL of the CCA.

³³ Subsection 152BCA(3) of the CCA.

³⁴ Subsection 152AB(2) of the CCA.

Detailed discussion of how the ACCC considers the above factors is at **Attachment B**.

Compliance with any applicable final access determination is both a carrier licence condition and a service provider rule,³⁵ the breach of which may lead to a pecuniary penalty of up to \$10 million for each contravention.³⁶ Private enforcement of a final access determination is also available in the Federal Court.³⁷

³⁵ Sections 152BCO and 152BCP of the CCA.

³⁶ Section 570 of the *Telecommunications Act 1997*.

³⁷ Section 152BCQ of the CCA.

4. Pricing approach and final model specification

4.1. Pricing approach

As outlined in the position and consultation paper, the ACCC has decided to develop a cost model to estimate the efficient costs of providing the voice interconnection services to inform proposed price terms in the access determinations.³⁸

The ACCC considered that cost-based pricing remains the most appropriate approach taking into account the matters under section 152BCA of the CCA. In particular, cost-based pricing promotes sustainable competition and encourages economically efficient investment in and use of infrastructure. Additionally, the ACCC considered that developing a cost model is the best way to implement the cost-based pricing approach in this case as it would enable the ACCC to adopt a consistent approach to pricing across the 3 voice interconnection services.

The ACCC noted that developing a single cost model that is capable of estimating the costs of all 3 voice interconnection services would be a reasonable and practical approach that reduces the effort and burden of a cost modelling approach in the current circumstances.³⁹ The ACCC also considered that alternative pricing approaches are not feasible or appropriate having regard to the matters under section 152BCA of the CCA.⁴⁰

4.1.1. Submissions

Optus raised concerns about the overall pricing approach. Optus argued that the ACCC should not develop a cost model due to the regulatory impost associated with it and that any changes in the regulated prices are unlikely to have an impact on retail markets.⁴¹ Optus considers it is unclear that a cost model will lead to better pricing outcomes compared to other approaches, such as benchmarking or simple adjustment.⁴² Optus submitted that in the current circumstances, the long-term interests of end-users would be served by maintaining the current price for mobile terminating access service and reducing the prices for the fixed interconnection services to align with the total service long-run incremental costs plus organisational-level costs (TSLRIC+) methodology using a benchmarking approach.⁴³

Symbio submitted that it was unique in having a network almost fully dedicated to the provision of voice services, and both the ACCC and Analysys Mason have not provided rationales to indicate how the core network assets from the single model will adequately and appropriately reflect the efficient costs of providing fixed interconnection services. Symbio does not believe that current approach will adequately model the characteristics of

³⁸ The cost model does this by estimating the efficient costs of deploying infrastructure used to provide the services and derives per unit costs through reasonable cost allocation mechanisms.

³⁹ ACCC, [Position and Consultation Paper](#), April 2025, pp 18–20.

⁴⁰ ACCC, [Position and Consultation Paper](#), April 2025, pp 20–22.

⁴¹ Optus, [Optus submission](#), May 2025, p 2.

⁴² Optus, [Optus submission](#), May 2025, p 3.

⁴³ Optus, [Optus submission](#), May 2025, pp 2-5.

fixed voice services, and fixed voice interconnection services. Furthermore, Symbio submitted that the costs of providing fixed service alone should be modelled separately.⁴⁴

4.1.2. ACCC position

The ACCC position remains that developing a cost model is the most appropriate approach taking into account the matters in s152BCA(1). We consider that the reasons for developing a cost model as outlined in the position and consultation paper continue to apply in spite of Optus's submission. Specifically, the ACCC considers that:

- having regard to those who use the declared service⁴⁵, there is evidence that the voice interconnection services continue to be important and relied on by operators;
- a cost-based approach, specifically a TSLRIC+ pricing approach is the most appropriate having regard to the relevant factors under section 152BCA(1) of the CCA;
- a rollover of current prices (such as that of the mobile terminating access service as suggested by Optus) is inappropriate due to likely changes in the efficient costs of providing access to the voice interconnection services, the time that has passed since we last conducted cost-based assessments of these services, and that potential changes in the prices may still have an impact on downstream markets;
- an international benchmarking approach (which Optus suggested could be adopted for pricing the fixed terminating access service) may be practically challenging due to the move to single maximum mobile and fixed termination prices in the European Union since 2021.⁴⁶

For these reasons, the ACCC remains of the view that developing a cost model that is capable of estimating the costs of all 3 voice interconnection services is the most appropriate approach having regard to matters under section 152 BCA of the CCA.

In response to the concerns raised by Symbio regarding the development of a single cost model, the ACCC notes that Analysys Mason has provided clarification in the Final Model Specification paper. Analysys Mason noted that the hypothetical efficient operator is *not* assumed to provide both fixed and mobile voice services. But rather the model calculates the costs relating to two networks – a mobile network operator providing mobile services over its radio access and core network as well as a voice platform providing fixed voice services.⁴⁷

4.2. Final model specification

This section sets out each element of the cost model, the draft model specification proposed by the ACCC in the position and consultation paper, submissions in response to these proposals and the ACCC's view on the final model specification.

As noted in the position and consultation paper, there are three broad types of input will feed

⁴⁴ Symbio, [Symbio submission](#), May 2025, p 2.

⁴⁵ Subsection s152BCA(1)(c).

⁴⁶ ACCC, [Position and Consultation Paper](#), April 2025, pp. 18–22.

⁴⁷ Analysys Mason, [Final Model Specification Paper](#), June 2025, p B-2.

into the model which relates to:

- demand volumes (e.g. traffic volumes, busy-hour characteristics);
- network design parameters (e.g. technologies and coverage); and
- cost assumptions (e.g. unit capital expenditure (capex), unit operating expenditure (opex), cost trends and asset lifetimes).⁴⁸

In addition, there are four key dimensions of the cost modelling process which will require determination of appropriate modelling assumptions. These are:

- the modelled operator (e.g. whether the operator should be actual or hypothetical, the network coverage and market share of the operator);
- the modelled technology (e.g. technologies deployed on the operator's network, spectrum allocations and costs, transmission architecture and network nodes);
- the modelled services (e.g. the types of services, such as voice and data, to be provided by the operator on its network, volume of the traffic, and other services relevant for the purpose of allocating common and overhead costs).
- Other issues related to modelling implementation (e.g. relevant increment for the purpose of calculating the cost outputs, depreciation method, geotyping, modelling timeframe, etc).⁴⁹

Each of these dimensions are discussed below.

4.2.1. Modelled operator

Model structure

Draft model specification

The ACCC's preliminary view was to develop a bottom-up cost model as this is appropriate for estimating the costs of a hypothetical efficient operator. The ACCC also agreed with Analysys Mason's proposal to undertake a top-down validation process. Our preliminary view was that this process would provide a useful sanity check of the outputs of the bottom-up model and is appropriate having regard to the legitimate business interests of the access providers.⁵⁰

Submissions

Symbio submitted that it accepts that a bottom-up approach to modelling voice interconnection costs with top-down 'sanity checking' is appropriate but raised concerns with other aspects of the model process.

TPG Telecom expressed concern that the proposed modelling approach may not reflect the costs of providing mobile voice termination on a mobile network in Australia. While acknowledging the cost model should not account for imprudent investments, TPG Telecom noted that some inefficient investments have incurred for reasons outside the control of mobile network operators (such as costs incurred by TPG Telecom and Optus in replacing

⁴⁸ Analysys Mason, [Draft Model Specification Paper](#), April 2025, p 2.

⁴⁹ Analysys Mason, [Draft Model Specification Paper](#), April 2025, p 3.

⁵⁰ ACCC, [Position and Consultation Paper](#), April 2025, p 24.

Huawei equipment due to Government policy). TPG Telecom argued that a cost model that does not reflect this reality would not be just nor efficient in the Australian market.⁵¹

TPG Telecom also recommended that where there is a significant difference between the costs determined by the bottom-up model and the top-down verification process then the determination should follow the top-down approach. TPG Telecom submitted that such an approach would account for inefficiencies outside the control of the mobile network operators, noting that mobile network operators operate in a competitive environment which inherently leads to disciplined investment decisions.⁵²

Final model specification

The ACCC remains of the view that a bottom-up cost model with top-down validation is appropriate for estimating the costs of a hypothetical efficient operator.

The ACCC acknowledges the concerns raised by TPG Telecom but consider that the bottom-up model is intended to largely reflect the *forward-looking* costs of a hypothetical efficient operator deploying a network in 2025. As such, we do not consider it would be appropriate to include in the model historical costs incurred by operators due to past government policy decisions. The ACCC considers there is no indication that similar costs will be incurred by a hypothetical efficient operator seeking to deploy a mobile network in 2025.⁵³

The top-down validation process undertaken in the draft cost model is discussed in Section 5.1.

Type of operator

Draft model specification

The ACCC's preliminary view was that modelling a forward-looking hypothetical efficient operator for mobile and fixed voice services respectively was an appropriate approach. We agreed with Analysys Mason's proposal that the modelling of either actual or average operators can lead to the capture of past network inefficiencies and is therefore not appropriate for efficient network costing.⁵⁴

For mobile services, the ACCC's preliminary view was that the hypothetical efficient mobile operator would deploy 4G and 5G technologies from 2025, and that to achieve national coverage such an operator would be assumed to engage in network sharing in regional areas such as the Optus/TPG regional network sharing arrangement. These assumptions are reflected in the proposed approach to the market share of the modelled operator and modelled technology discussed below. Market developments such as the shutdown of the 3G networks and the Optus/TPG regional network sharing arrangement inform the ACCC's consideration of what is the 'best in use' technology and the efficient way to deploy a national mobile network in Australia.⁵⁵

For the hypothetically efficient operator for fixed voice services, the ACCC's preliminary view was that the modelling of a fixed core network equivalent to a mobile core network is

⁵¹ TPG Telecom, [TPG Telecom submission](#), May 2025, pp 2-3.

⁵² TPG Telecom, [TPG Telecom submission](#), May 2025, p 3.

⁵³ See also Analysys Mason, [Final Model Specification Paper](#), June 2025, p B-14.

⁵⁴ ACCC, [Position and Consultation Paper](#), April 2025, p 24.

⁵⁵ ACCC, [Position and Consultation Paper](#), April 2025, pp 24-25.

reasonable, given a modern IMS core can be used to provide voice and other multi-media services on both mobile and fixed networks.⁵⁶

Submissions

Symbio submitted that the ACCC must ensure assumptions about the hypothetical operator and its characteristics is approached with care. In particular, this should not extend to a requirement (or assumption) that the hypothetical operator would have a business model based on providing both voice and mobile services.⁵⁷

Optus outlined concerns that the proposed model specification primarily focused on development of a mobile cost model with application to fixed voice services.⁵⁸ Optus suggested there are several key differences between a hypothetical efficient operator in mobile and fixed voice markets. For network infrastructure, fixed voice networks rely on fixed-line infrastructure, whereas mobile networks use wireless spectrum and base stations to provide connectivity. This gives rise to differing cost structures with most fixed voice markets often operating with dominant incumbents with established infrastructure. Optus also noted that for scalability and coverage, mobile networks can scale more flexibly and provide coverage across large geographic areas, whereas fixed networks may be limited by physical infrastructure and network reach. Therefore, it is unclear on what common basis the differences in the hypothetical efficient operator will be considered.⁵⁹

Final model specification

The ACCC remains of the view that modelling a forward-looking hypothetical efficient operator is the most appropriate approach and notes that the intention is to model a hypothetical efficient fixed operator and a hypothetical efficient mobile operator separately. With regards to the concerns raised by Symbio, as noted previously, the hypothetical efficient operator is not assumed to provide both fixed *and* mobile voice services. The Final Model Specification Paper includes further clarification that the model will produce costs associated with two networks, i.e. a mobile network used by a hypothetical efficient mobile operator to provide mobile services, and a fixed core network used by a fixed operator to provide fixed voice services.⁶⁰

In regards to Optus's concern that the proposed model specification focused primarily on mobiles, the ACCC notes Analysys Mason's response that a pragmatic approach is being used to the modelling process so the modelled fixed assets and costs are primarily focused on those that provide fixed voice services.⁶¹ The ACCC considers this is a reasonable approach that takes into account material differences in the magnitude of voice traffic as a proportion of overall traffic on fixed and mobile networks respectively.⁶² The ACCC also notes that the final modelling assumptions regarding the hypothetical efficient fixed operator have been determined having regard to the information provided by fixed-only operators to ensure that they reasonably reflect the characteristics of a fixed-only operator in Australia. These are discussed in the following sections.

⁵⁶ ACCC, [Position and Consultation Paper](#), April 2025, p 25.

⁵⁷ Symbio, [Symbio submission](#), May 2025, pp 2-3.

⁵⁸ Optus, [Optus submission](#), May 2025, p 7.

⁵⁹ Optus, [Optus submission](#), May 2025, p 8.

⁶⁰ Analysys Mason, [Final Model Specification Paper](#), June 2025, p B-2.

⁶¹ Analysys Mason, [Final Model Specification Paper](#), June 2025, p B-1.

⁶² As noted in the ACCC's position and consultation paper, for the 2024 financial year estimated total mobile voice traffic was around 0.34% of overall traffic carried over mobile networks, whereas fixed voice traffic is around 0.03% of overall fixed traffic. See ACCC, [Position and Consultation Paper](#), April 2025, p 20.

Network footprint and rollout

Draft model specification

For the hypothetical efficient mobile operator, the ACCC's preliminary view was that achieving full national coverage and immediate scale in 2025 was a reasonable assumption given the state of network deployment in Australia.⁶³ The ACCC proposed that the

The ACCC agreed with Analysys Mason's proposal to model:

- a 4G network that achieves national-level coverage in 2025 that is sustained in the future, and
- a 5G network that achieves significant coverage in 2025, which then increases to achieve parity with 4G coverage over a longer timeframe.

The ACCC noted Analysys Maon's proposal to calculate the immediate 4G and 5G coverage based on the coverage maps provided by the national mobile network operators as of 31 January 2024, including areas where at least two of the three operators have coverage using any frequency based on these coverage maps.⁶⁴ The ACCC also noted we would use coverage maps provided by the national mobile network operators as of 31 January 2025 if possible as they contain more updated coverage information.⁶⁵

For the hypothetical efficient fixed operator, the ACCC's preliminary view was that Analysys Mason's proposal to assume that the modelled fixed core network covered the same proportion of the population as the modelled mobile network was a reasonable starting point.⁶⁶

Submissions

For the hypothetical efficient mobile operator, Telstra does not support the approach of excluding areas covered currently by only one mobile network operator, given that many regions, especially remote areas in Australia are served by only one mobile network operator and many by Telstra.⁶⁷ Telstra suggested that the modelling should reflect the largest network reach, either assume a second competitor would build to that level, or alternatively that 100% of market share in these parts of Australia is hypothetically efficient. Telstra submitted that not accounting for this coverage will produce harmful results to the long-term interests of end-users of the regional and remote areas who rely on this coverage by setting barriers to investment in regional Australia and further exacerbate issues regarding the digital divide. Therefore, the model must account for these costs associated with providing mobile coverage across all of Australia.⁶⁸

For the hypothetical efficient fixed operator, Symbio submitted that the population being covered by the modelled fixed core network should be based on the actual service populations of the operators. Symbio argued that since the ACCC does not intend to include the costs of the fixed access network in the fixed model, it is not clear why there needs to be

⁶³ ACCC, [Position and Consultation Paper](#), April 2025, p 25.

⁶⁴ Analysys Mason, [Draft Model Specification Paper](#), April 2025, p 10. 'Geotypes' are a key input in a mobile cost model which determines how a network is deployed in areas with different geo-demographic characteristics. The proposed approach to geotyping is discussed in Section 5.2.4.

⁶⁵ ACCC, [Position and Consultation Paper](#), April 2025, p 26.

⁶⁶ Analysys Mason, [Draft Model Specification Paper](#), April 2025, p 10.

⁶⁷ Telstra, [Telstra submission](#), May 2025, p 4.

⁶⁸ Telstra, [Telstra submission](#), May 2025, pp 4-5.

an assumption unless it is to set the upper limit on demand growth.⁶⁹ This is echoed by Optus who noted that the cost modelling exercise for the fixed voice services only attempt to leverage off the mobile assumptions.⁷⁰

Final model specification

Assumed network coverage for the hypothetical efficient mobile operator

For the hypothetical efficient mobile operator, the ACCC remains of the view that modelling immediate and full scale national rollout in 2025 with project coverage based on publicly announced targets remains the most appropriate assumption regarding mobile network roll out. As noted in the position and consultation paper, this approach would enable the outputs of the model in terms of assets deployed to be compared to actual networks as deployed in Australia.⁷¹ We consider this top-down validation to be an important cross-check on the implementation of the cost model. We note that stakeholders did not raise concerns about this aspect of the modelling assumption regarding network roll out.

For the purpose of the draft cost model, the coverage maps of the mobile network operators as of 31 January 2024 were used to derive network coverage for the hypothetical efficient mobile operator. To approximate the areas where regional network sharing occurs in the draft cost model, we have used an indicative coverage map of the Optus/TPG multi-operator core network (MOCN) arrangement to remove TPG coverage in regional areas as shown on its 2024 coverage map. The coverage calculation is discussed detail in Annex B of Analysys Mason's report on the draft cost model. The ACCC expects to be able to use the coverage maps as of 31 January 2025 as well as areas reflecting actual implementation of the MOCN arrangement for the purpose of the final cost model.

The draft cost model implemented 4G and 5G coverage as indicated by the 2024 coverage maps for 2025. 4G coverage is assumed to remain constant while 5G coverage is assumed to increase overtime and reach parity with 4G coverage in major cities, inner regional and high density geotypes in 10 years.

Areas where there are at least two networks should be included

Regarding the areas assumed to be covered by the hypothetical efficient mobile operator, the ACCC considered Telstra's proposal to include areas currently only covered by one mobile network operator. While all three mobile network operators likely have some unique coverage areas, we understand that the majority of these areas are covered by Telstra, particularly in regional and remote areas. The ACCC acknowledges that Telstra has made significant investment in extending its regional network in the past in order to gain a competitive advantage over its rivals. However, the ACCC considers the key question for the purpose of the current exercise is the extent to which a hypothetical efficient mobile operator would deploy its network in 2025, in light of the technologies that are available at this point in time.

In principle, the ACCC considers that areas where at least two operators currently operate a mobile network can be assumed to reflect efficient investments in coverage for the purpose of delivering mobile services. It can be reasonably assumed that a hypothetical operator would efficiently cover at least these areas, given the existing investment behaviour of the Australian mobile network operators. In the cost model, we are assuming that the

⁶⁹ Symbio, [Symbio submission](#), May 2025, p 3.

⁷⁰ Optus, [Optus submission](#), May 2025, p. 9.

⁷¹ Analysys Mason, [Final Model Specification Paper](#), June 2025, p 9.

hypothetical efficient operator can deploy an independent mobile access network in metropolitan areas but would choose to rely on network sharing arrangement to provide coverage in regional areas, reflecting the actual market structure after the Optus and TPG MOCN arrangement.

At this stage, the ACCC is not satisfied that such a hypothetical efficient operator will materially expand its coverage into areas where only one mobile network operator currently has coverage. We found in the Regional Mobile Infrastructure Inquiry 2022–23 that Telstra’s enduring competitive advantage in regional areas may have the potential to negatively impact its competitor’s incentives to expand their networks.⁷² We also noted previously that challenging economics of deploying infrastructure in regional areas means that government co-contribution programs are a key driver of improved coverage in regional areas.⁷³

This is not to say that coverage in excess of this area where at least two operators currently operate networks is inefficient or should not be incentivised. Indeed, the ACCC recognises that the use of active sharing arrangements in regional areas significantly reduces the costs of infrastructure deployment and may provide more scope of coverage expansion in regional areas beyond those that are currently covered by two operators. However, the ACCC has currently no reliable information on the commercial incentives to do so and the materiality of any such coverage expansion. The ACCC welcomes further information from the mobile network operators on this issue.

The ACCC also considers that the emerging low-earth orbit satellite direct-to-device (D2D) technology is relevant to assessing the extent to which a hypothetical efficient mobile operator is likely to deploy terrestrial network in 2025. The ACCC does not consider D2D technology should be directly incorporated in the cost model at this point in time (discussed further below). However, we consider that the upcoming regulatory period is a period of significant transition where uncertainty regarding the capabilities and sustainability of this emerging technology as a means of providing mobile coverage is likely to dampen any commercial incentives to significantly expand terrestrial coverage in the short to medium term.

For these reasons, the ACCC remains of the view that, as a base case, the assumed coverage should only include areas where there are at least two networks. However, we have implemented options in the cost model to incorporate a proportion of areas that is currently covered by only one network to test its impact.⁷⁴ This is discussed further in Section 5.1.

Population coverage by the fixed core network

For the hypothetical efficient fixed operator, Analysys Mason noted in response to Symbio’s concern that the purpose of the assumption regarding population coverage by the fixed core network is to calculate the modelled demand as speculated by Symbio. Analysys Mason noted that a centralised fixed core network is capable of serving most of the country, and thus an assumption where the fixed core network covers the same proportion of population as the mobile network is not unreasonable.⁷⁵ The ACCC agrees with Analysys Mason and consider this to be a practical approach that is required to estimate overall demand for fixed voice services in the cost model.

⁷² ACCC, [Regional Mobile Infrastructure Inquiry: Final report](#), July 2023, p. 79.

⁷³ ACCC, [Submission to 2024 Regional Telecommunications Review](#), July 2024, p 18.

⁷⁴ Analysys Mason, [Draft Model Specification Paper](#), April 2025, pp 10-12.

⁷⁵ Analysys Mason, [Final Model Specification Paper](#), June 2025, p B-3.

Market share and scale

Draft model specification

For the hypothetical efficient mobile operator, the ACCC's preliminary view was to assume market share based on the number of mobile networks in a given area, and any shared network is counted as one network in areas where network sharing occurs.⁷⁶ We also agreed with Analysys Mason's view that all national mobile network operators have a standalone core network, so it is assumed that there are in total three mobile core networks in Australia.⁷⁷

The ACCC's preliminary view was that this is a reasonable approach and that this approach means that different amounts of traffic can be assumed to be carried over the hypothetical efficient operator's mobile access network and the core network, as well as across its mobile access network in metro and regional areas.⁷⁸

For the hypothetical efficient fixed operator, the ACCC's preliminary view was that given there are multiple operators offering fixed voice services in Australia and they vary significantly in terms of scale and market position, it would not be possible for the hypothetical efficient operator to reflect all of these differences. We noted that Optus, Telstra, TPG Telecom and Vocus are the four major fixed operators that provide information relating to fixed voice services under the ACCC's Division 12 Record-Keeping and Reporting Rules (Record Keeping Rules) issued under section 151BU of the CCA. For this reason, the ACCC considered that a simple assumption of market share based on four operators in Australia (i.e. 25%) was a reasonable starting point.

Submissions

For the hypothetical efficient mobile operator, TPG Telecom submitted that as a smaller operator it is unfairly disadvantaged with the "take the average" approach to selecting model parameters, such as assumed market share, as it would lead to the estimated cost of the mobile terminating access service being less than its true cost. TPG Telecom submitted that the market share for the hypothetical efficient mobile operator should be set to no more than its own market share (i.e. 17%).⁷⁹

For the hypothetical efficient fixed operator, Symbio submitted that the use of a 25% fixed voice market share based on the number of operators providing information pursuant to the Record Keeping Rules is arbitrary. Symbio noted that it is not a record-keeper under these Rules but suggested that the ACCC should review this assumption to account for Symbio's presence in the market. Accordingly, Symbio proposed that the market share for the modelled efficient voice operator should be based on five operators (not four) or 20%.⁸⁰

Final model specification

For the hypothetical efficient mobile operator, the ACCC remains of the view that it is reasonable to assume that it has the average market share of the operators present in an area, where there is more than one operator (in terms of networks).

⁷⁶ ACCC, [Position and Consultation Paper](#), April 2025, p 26.

⁷⁷ Analysys Mason, [Draft Model Specification Paper](#), April 2025, p 11.

⁷⁸ ACCC, [Position and Consultation Paper](#), April 2025, p 26.

⁷⁹ TPG Telecom, [TPG Telecom submission](#), May 2025, p 3.

⁸⁰ Symbio, [Symbio submission](#), May 2025, pp 3-4.

As the cost model seeks to estimate the efficient costs of a hypothetical efficient mobile operator, it is not our intention to seek to reflect the actual costs of the smallest operator in the market, or any other specific operator. Nor do we consider that adjusting the assumed market share in the cost model to align with any specific operator's would necessarily produce the 'true cost' of any operator given the presence of other modelling assumptions and cost inputs. We do not consider it is reasonable to assume that a hypothetical efficient mobile operator deploying the best-in-use technology with efficient network scale and optimising its network deployment would be expected to have below average market share. We note the average market share approach is consistent with the ACCC's approach with respect to adjustment of assumed market share for the hypothetical efficient mobile operator as part of the international benchmarking exercise undertaken during the Mobile Terminating Access Service Final Access Determination Inquiry 2019–2020.⁸¹

For the hypothetical efficient fixed operator, the ACCC has reviewed traffic data provided by Symbio and considers it would be appropriate to adjust the assumed market share based on there being five major fixed voice providers in Australia, Optus, Telstra, TPG Telecom, Symbio and Vocus. This leads to an assumed market share of 20%.

We have conducted sensitivity tests on the impact of lower market share assumptions in the draft model which are discussed in Section 5.1.

4.2.2. Modelled technology

Radio network

Draft model specification

The ACCC's preliminary view was that the following technologies likely reflect the best in use technologies implemented or expected to be implemented at the mobile access network level for the purpose of providing mobile services:

- 4G and 5G technologies
- Voice over LTE (VoLTE)/Voice over NR (VoNR)
- Voice over WiFi (VoWiFi)/Direct to device (D2D)
- Further Radio Access Network (RAN) upgrades, in particular the use of Open RAN.⁸²

Submissions

TPG Telecom submitted that the cost model should not include any Open RAN solutions and any hypothetical efficiency gains given Analysys Mason has not provided evidence of realised cost savings from Open RAN deployment. TPG Telecom also noted the low and declining take up of Open RAN.⁸³

Telstra submitted it is important to include D2D⁸⁴ related costs (spectrum costs and satellite payments) in the cost model, given the expected significance in the future of this technology and the fact that it is likely to be an important driver of relevant incremental costs in the

⁸¹ ACCC, [Public inquiry on the access determination for the Domestic Mobile Terminating Access Service: Final report](#), October 2020, p 29.

⁸² ACCC, [Position and Consultation Paper](#), April 2025, p 27.

⁸³ TPG Telecom, [TPG Telecom submission](#), May 2025, p 4.

⁸⁴ Telstra referred to this as Satellite to Mobile in its submission. For consistency, we have adopted the term D2D throughout the report.

provision of voice services.⁸⁵ Telstra also disagrees with Analysys Mason's view on the impact of Universal Outdoor Mobile Obligation (UOMO), stating it is possible the mobile network operators will incur network costs (including by investing in emerging D2D technology) when complying with the obligation and a hypothetical efficient mobile operator would not incur. Telstra submitted that it is in the long-term of interests of end-users for these costs to be factored into the model. Telstra noted that adopting such an approach would be similar to the approach taken by the ACCC in its final decision regarding NBN Co's proposed variation to its Special Access Undertaking.⁸⁶

Symbio submitted that it had no objections to the radio technologies proposed to be modelled. However, they expressed reservations about the appropriateness of these technologies for the full modelling period given 5G Advanced and 6G technologies are expected to improve the efficiency of radio networks.⁸⁷

Final model specification

Having considered submissions from stakeholders, the ACCC has decided to make a few adjustments to the radio technologies deployed in the cost model.

First, as noted in the Final Model Specification Paper, deployment of Open RAN (including planned deployment) is limited in Australia at present. As such, the cost model will not make any direct assumptions as to whether the hypothetical efficient mobile operator may deploy Open RAN or similar technologies. The model will instead consider 4G/5G single-RAN architecture.⁸⁸

Second, D2D services will not be directly captured in the cost model at this point in time.⁸⁹ The ACCC agrees with Telstra regarding the future significance of this technology. However, the technology is currently at an early phase of deployment with only Telstra having launched it for text messages recently. The ACCC considers that there is currently a lack of reliable information that can be incorporated into the cost model to reflect the deployment of these services including the costs and the associated demand forecast. For similar reasons, the ACCC does not consider there is sufficient information to assess the likely impact of the Government's proposed Uomo. This is because the relevant obligations and regulatory framework have yet to be finalised and the potential impact on the mobile network operators' deployment of D2D services is unclear. For these reasons, we do not consider it would be appropriate to include D2D services in the cost model at this time. As noted in the Final Specification Paper, it would be possible for the model to include the relevant network assets at a point in the future where demand, network and cost parameters can be determined using actual deployment information from operators.⁹⁰

In response to Symbio's proposal regarding the inclusion of 5G Advanced and 6G in the cost model, the ACCC agrees with Analysys Masons view that these future technologies cannot be feasibly modelled if they are not deployed in Australia given network design parameters will not be available.⁹¹

⁸⁵ Telstra, [Telstra submission](#), May 2025, p 5.

⁸⁶ Telstra, [Telstra submission](#), May 2025, pp 5-6.

⁸⁷ Symbio, [Symbio submission](#), May 2025, p 4.

⁸⁸ Analysys Mason, [Final Model Specification Paper](#), June 2025, p B-18.

⁸⁹ For clarity, the draft model specification assumed that a proportion of voice traffic is carried over VoWiFi/D2D.

⁹⁰ Analysys Mason, [Final Model Specification Paper](#), June 2025, p B-12.

⁹¹ Analysys Mason, [Final Model Specification Paper](#), June 2025, p B-4.

Spectrum allocations

Draft model specification

The ACCC proposed a list of spectrum allocations that could be considered as a starting point for the holdings of the hypothetical efficient operator for mobile services (see Table 3 below).⁹² These are spectrum licensed bands allocated to mobile services in Australia.

Table 3 Proposed spectrum allocations⁹³

Band	Technologies used by actual operators	Proposed MHz across the licensed regions
700 MHz	Primarily 4G (some 5G)	2 x 10
850 MHz	4G and 5G	2 x 5
900 MHz	4G and 5G	2 x 10
1800 MHz	Primarily 4G (some 5G)	2 x 15
2.1 GHz	4G and 5G	2 x 10
2.5 GHz	Primarily 4G (some 5G)	2 x 20
3.4 GHz	5G	1 x 30
3.6 GHz	5G	1 x 40
3.7 GHz	5G	1 x 40
26 GHz	5G	1 x 750

The ACCC noted that the proposed allocations do not include the 2.3 GHz band.⁹⁴ The ACCC's preliminary view was that this is a reasonable exclusion as the 2.3 GHz band is not widely used for mobile services in Australia (only Optus uses it for mobile services in metropolitan areas).⁹⁵

The ACCC also expressed the preliminary view that area-wide apparatus licences held by the mobile network operators should not be included in the proposed allocation. The ACCC noted this is a reasonable approach given that the area-wide apparatus licences (AWLs) are usually used in allocations that seek to accommodate a range of users and use cases.⁹⁶ The ACCC considered that spectrum allocated via spectrum licences most accurately represent the spectrum bands that are used for mobile networks in Australia.⁹⁷

In addition, Analysys Mason proposed to consider regional allocations by operator and band across the relevant mobile spectrum bands identified and assess the extent to which these licensed areas can be captured within the geotype definition.⁹⁸ The ACCC considered that

⁹² ACCC, [Position and Consultation Paper](#), April 2025, p 29.

⁹³ Reproduced from Figure 3.7 of Analysys Mason's Draft Model Specification Paper.

⁹⁴ Analysys Mason, [Draft Model Specification Paper](#), April 2025, p 18.

⁹⁵ ACCC, [Position and Consultation Paper](#), April 2025, p 29.

⁹⁶ See for example, the [ACMA's 3.8 GHz band AWLs allocation](#).

⁹⁷ ACCC, [Position and Consultation Paper](#), April 2025, pp 28-29.

⁹⁸ Analysys Mason, [Draft Model Specification Paper](#), April 2025, p 17.

given most of the spectrum licensed bands in Australia have regional licences and holdings of the operators can vary between metro and regional areas, this is an important issue to examine. The ACCC understood that licence boundaries of various spectrum licensed bands are not consistent, so there is likely a need for some degree of simplification in implementing regional spectrum allocations in the cost model.

Submissions

TPG Telecom submitted that the modelling technology should account for future growth in spectrum requirements, for example, 600 MHz and 6 GHz bands. TPG Telecom also submitted that the 2.3 GHz band should be included in the model.⁹⁹

Optus stated that spectrum allocations needed further clarification to reflect spectrum that can be reasonably available to a hypothetical efficient operator in deploying its network in Australia. Optus expressed concerns that there appeared to be an inconsistent approach to consideration of proposed spectrum allocations, which may impact on spectrum cost inputs considered. For example, not all 3 mobile network operators currently hold spectrum in all spectrum-licensed bands used for mobile services and inconsistent licence boundaries in some cases may impact on spectral efficiency and channel assumptions for deployment. It is also not clear to what extent the apparatus-licensed spectrum used by all 3 mobile network operators are considered.¹⁰⁰

Final model specification

The ACCC does not consider it would be appropriate to include the 600 MHz or 6 GHz bands in the assumed spectrum allocation as suggested by TPG Telecom. The ACMA has not made any decisions regarding if and when these bands will be allocated for mobile services.¹⁰¹ Given allocation decisions have not been made in relation to these bands, and there is a lack of information regarding potential timing of allocation and prices of these spectrum, we propose not to include them in the current cost model. While the cost model limits the spectrum available to the hypothetical efficient mobile operator to the bands assumed, we note that there is a mechanism within the cost model to account for additional costs incurred by the modelled mobile operator due to future traffic growth (i.e. increased site build within the constraint of the available spectrum).

The ACCC remains of the view that it is reasonable to exclude the 2300 MHz band as it cannot be considered a band that is reasonably available to the hypothetical efficient mobile operator. We also consider the overall effect of including this band is unclear, as additional spectrum costs could potentially be offset by less site requirements. We have not included this band in the base case but have implemented an option to including this band for the purpose of testing its impact on the cost outputs.

The ACCC notes Optus's concerns regarding the proposed spectrum allocations. As noted above, the ACCC considers that the proposed spectrum allocations reflect what are reasonably available to the hypothetical efficient operator as they are primarily allocated and used for mobile services (with the exception of the 2300 MHz band as discussed above). This is different to area-wide apparatus licences which are normally allocated for a range of

⁹⁹ TPG Telecom, [TPG Telecom submission](#), May 2025, p 4.

¹⁰⁰ Optus, [Optus submission](#), May 2025, p 9.

¹⁰¹ While the ACMA has reserved part of the 6 GHz band for wide area wireless broadband services, it is monitoring international developments in the manufacturing of suitable equipment and will not proceed to allocation until any uncertainty regarding equipment availability is resolved. The ACMA is still monitoring the 600 MHz band and there are no planned activities relating to this band. The band is currently used for television broadcasting, and the government is currently exploring options for the future of television broadcasting. See ACMA, [Five-year spectrum outlook 2025–30 and 2025–26 draft work program: Draft for consultation](#), March 2025.

use cases and in practice are only used by mobile network operators to supplement their spectrum licence holdings in discrete areas. We note that stakeholders have not specifically raised concerns with the proposed bands and bandwidth.

The ACCC also acknowledges the complexity involved in regional licenses and inconsistent boundaries in licensed areas. As noted above, we consider a degree of simplification is likely required to address this issue in the cost model. We note that Analysys Mason has included additional splits within certain bands to reflect geographic variations in spectrum availability to the mobile network operators. Analysys Mason also calculated the maximum population/area coverage achievable in each geotype separately for each assumed band based on the regional licences. This was used as a cross-check to ensure that the way in which a band is deployed in a geotype largely reflects the availability of that band in that geotype in reality.¹⁰²

The spectrum allocations implemented in the draft cost model are outlined in the table below.

Table 4 Assumed spectrum allocations in the draft cost model¹⁰³

Band	Assumed technology used	Assumed MHz across licensed regions
700 MHz	4G	2 x 10
850 MHz	5G	2 x 5
900 MHz	5G	2 x 10
1800 MHz	4G	2 x 15
2.1 GHz metro	4G/5G	2 x 10
2.1 GHz regional	5G	
2.5 GHz	4G	2 x 20
3.4 GHz metro	5G	1 x 30
3.4 GHz regional	5G	1 x 10
3.6 GHz	5G	1 x 40
3.7 GHz metro/inner regional	5G	1 x 40
3.7 GHz outer regional/remote	5G	1 x 10
26 GHz	5G	1 x 750

For the purpose of sensitivity testing, an additional allocation of 98MHz of 2.3 GHz band in major cities was included. This is discussed further in Section 5.1.

¹⁰² Analysys Mason, [Analysys Mason draft report](#), July 2025, p 26.

¹⁰³ Analysys Mason, [Analysys Mason draft report](#), July 2025, pp 25–26.

Spectrum payments

Draft model specification

The ACCC's preliminary view was to use the approach adopted in the 2020 mobile terminating access service final access determination inquiry regarding the costs of spectrum as a starting point. This includes the consideration of historical auction payments and renewal fees which will be modelled as capex, as well as modelling other recurring spectrum fees as opex.¹⁰⁴ The ACCC also agreed with Analysys Mason's proposal to make some adjustments in the current cost modelling process including that:

- fees for all licences that have expired in or before 2024 will be assumed to have been fully recovered;
- 900MHz spectrum fees (charged when it was issued as apparatus licence) no longer apply following the 2021 auction of the 850MHz expansion and 900MHz bands:¹⁰⁵ these past costs will be assumed to have been fully recovered;
- the assumed demand will be updated from 2020 onwards, but the demand forecast for the years up to 2019 from the 2020 mobile terminating access service final access determination inquiry will be retained (as actuals).¹⁰⁶

The ACCC also expressed the preliminary view that the ACMA's consideration of the future of spectrum licences due to expire between 2028 and 2032 is a relevant process that should be taken into account in determining forward-looking spectrum costs.¹⁰⁷

The ACCC has also calculated the Spectrum Licence Tax payable by the hypothetical efficient mobile operator based on the assumed spectrum allocations. This is detailed in **Appendix A**.

Submissions

Optus submitted that the ACMA's expiring spectrum licence process and pricing is not finalised which will impact on future spectrum costs.¹⁰⁸

Final model specification

The ACCC remains of the view that it is reasonable to retain the broad approach used in the 2020 mobile terminating access service final access determination with alterations to take into account spectrum licence allocations that have taken place since then as well as the modelling timeframe in this cost model. For assumed bands that are due to expire between 2028 and 2032, the ACCC notes that the ACMA has released its preliminary views that the renewal of the expiring spectrum licences where they are used to provide mobile services will promote the long-term public interest. The ACMA has also determined the preliminary price range to apply to each band if they are to be renewed.¹⁰⁹ For the draft cost model, we consider it would be appropriate to use the mid-point of the ACMA's preliminary price range for each band, and conduct sensitivity testing for the upper bound.

¹⁰⁴ ACCC, [Position and Consultation Paper](#), April 2025, pp 29-30. These include the 900 MHz/850 MHz expansion band, 26 GHz band and 3.4/3.7 GHz bands auctions.

¹⁰⁵ The ACCC understands that the recurring apparatus licence fees for the 900 MHz band may have continued to be paid during the period between the auction and the new spectrum licence commencement date (July 2024). This may inform the timing of when the 900 MHz apparatus licence fees should no longer apply in the cost model.

¹⁰⁶ Analysys Mason, [Draft Model Specification Paper](#), April 2025, p 18.

¹⁰⁷ These include the 700 MHz, 800 MHz, 1800 MHz, 2.1 GHz, 2.3 GHz, 2.5 GHz, 3.4 GHz and 3.6 GHz bands.

¹⁰⁸ Optus, [Optus submission](#), May 2025, p 9.

¹⁰⁹ ACMA, [Expiring spectrum licences, stage 3: Consultation paper](#), April 2025, pp. 2, 27.

We note Optus's concern that the ACMA's expiring spectrum licence process is not finalised. It is our intention to update the cost model with the ACMA's preferred view on the prices for the expiring spectrum licences should they become available in time for implementation in the revised cost model after consultation on this draft report.¹¹⁰ We consider that the ACMA's views on the prices of the expiring spectrum licences, whether preliminary or preferred, provide a better proxy of the forward-looking costs of these bands compared to historical auction or renewal prices.

Backhaul and backbone transmission

Draft model specification

The ACCC's preliminary view was to model two types of backhaul transmission and assume a mix of various transmission links which will determine transmission costs:

- Last mile access backhaul, which connects the radio network sites to a transmission hub; and
- Backbone transmission, which can include transmission between transmission hubs to core network sites (in cases where these are not co-sited), and transmission between core network sites.

The ACCC also agreed with Analysys Mason's proposal to consider other factors which will impact the costs of transmission, such as the average length of each type of transmission links and the average costs of each type of transmission links.¹¹¹

Submissions

Optus submitted that the mix of different backhaul transmission types used will vary in different areas due to transmission type availability and network deployment. Optus considered that there may be different costs associated with a specific type of deployment choice (e.g. spectrum availability, range limitations).¹¹²

Final model specification

The ACCC acknowledges the various factors that may determine the choice of transmission links deployed in an area and the costs that may be incurred as suggested by Optus. The ACCC remains of the view that the proposed approach to backhaul and backbone transmission is appropriate as it enables the cost model to derive the transmission costs taking into account the relevant cost drivers. The ACCC has sought information from the operators in relation to the deployment of backhaul links and the associated costs. This information has informed the development of modelling assumptions regarding the mix of backhaul links and transmission costs in the cost model. Based on operator information, the draft cost model assumes a split of last mile access backhaul of 85% fibre and 15% microwave. We have also conducted a sensitivity test using the mix of backhaul transmission types in the 2020 mobile terminating access service access determination inquiry (i.e. 80% fibre and 20% microwave). This is shown in Section 5.1.

¹¹⁰ The ACMA has [indicated](#) that it expects to release its preferred views on the expiring spectrum licences in Q4 2025.

¹¹¹ Analysys Mason, [Draft Model Specification Paper](#), April 2025, pp 18–19.

¹¹² Optus, [Optus submission](#), May 2025, p 9.

Core network infrastructure

Draft model specification

The ACCC's preliminary view was to model an IMS core to switch and route the modelled voice traffic between core network locations. The ACCC proposed that this IMS core is used as the fixed core network for the purpose of providing fixed voice services as it is a platform dedicated to voice services. The ACCC agreed with Analysys Mason's proposal not to model other parts of the fixed core network (which are used for both voice and data) as contributions to the costs of fixed interconnection services from these assets will be minimal, as usage of these assets by voice services is negligible compared to overall traffic.¹¹³

The ACCC also expressed the preliminary view that a 5G standalone core should also be modelled for the hypothetical efficient mobile operator as all national mobile network operators have deployed or are in the process of deploying a standalone 5G core network.¹¹⁴

The ACCC noted Analysys Mason's intention to revisit the core network infrastructure based on information received from network operators as part of the data request.¹¹⁵

Submissions

Symbio submitted that all core network elements that contribute to the cost of provision fixed voice services should be included in the model, not just the IMS core. Symbio noted that in its response to the data request from the ACCC, it has delineated each element that contributes to the core network infrastructure and these costs should be included in the model.¹¹⁶

Telstra noted that not all fixed operators have an IMS, and the hypothetical fixed core network needs to be efficient for the capacity requirements to carry fixed only voice traffic which is not necessarily aligned with what is efficient to carry mobile voice traffic.¹¹⁷

TPG Telecom recommended the modelled technology should account for:

- the functions and infrastructure to support voice services such as IP switching, routing and firewalling,
- provisions made for anti-scam systems and teams.
- number portability requirements should be included in shared common costs.¹¹⁸

Final model specification

The ACCC's view remains that modelling an IMS core for voice services and a standalone 5G network core for mobile services remains appropriate. To the extent that the operators provided reliable information regarding the costs of providing services, they are incorporated into the cost model in various ways depending on the types of costs and what services they relate to.

¹¹³ ACCC, [Position and Consultation Paper](#), April 2025, p 31.

¹¹⁴ ACCC, [Position and Consultation Paper](#), April 2025, p 31.

¹¹⁵ ACCC, [Position and Consultation Paper](#), April 2025, p 30.

¹¹⁶ Symbio, [Symbio submission](#), May 2025, p 4.

¹¹⁷ Telstra, [Telstra submission](#), May 2025, p 7.

¹¹⁸ TPG Telecom, [TPG Telecom submission](#), May 2025, p 4.

As noted in the Final Model Specification Paper, Analysys Mason has considered the information Symbio provided to the ACCC as part of the data request concerning its direct and indirect network costs as well as corporate overheads.¹¹⁹ Analysys Mason noted that for the hypothetical efficient fixed operator it will not model the inter-node infrastructure and other switching/routing equipment. This is because the usage of these assets for voice traffic is negligible compared to the assumed data usage and dedicated capacity set aside for transmission services of modelled hypothetical efficient fixed operator.¹²⁰ However, Analysys Mason considers that Symbio's cost information can still be used to inform the assumed mark-ups for indirect network costs and corporate overhead attributable to the modelled assets.

In response to Telstra's submission that the fixed core network needs to be efficient to carry fixed voice traffic only, Analysys Mason clarified in the Final Model Specification Paper that the model will be able to calculate the costs of separate voice platforms – one for fixed and one for mobile.¹²¹

In response to the additional cost elements suggested by TPG Telecom, Analysys Mason noted that they can be captured in the cost model if there is evidence they are material. Cost information provided by TPG Telecom in response to the data request has informed the inclusion of some categories of network costs in the draft cost model.

Network nodes

Draft model specification

In relation to developing a deployment algorithm for network nodes in the cost model, the ACCC's preliminary view was to adopt a modified scorched node approach which takes the existing topology and eliminates inefficiencies that may be currently in place would be appropriate. The ACCC considered that this approach likely strikes a balance between determining the efficient costs of the network and ensuring that modelled network is not too significantly different from those actually deployed in Australia. We considered this approach was appropriate having regard to the objective of promoting economic efficiency and the legitimate business interests of the access providers. The ACCC also proposed that the fixed core network would be assumed to have the same number of core nodes as the modelled mobile core network.¹²²

Submissions

Symbio requested that the ACCC review the assumption that the fixed core network has the same number of core nodes as the modelled mobile core network. Symbio queried if this assumption is realistic for a fixed core network given there is no rationale offered and as such it appears to be arbitrary.¹²³

TPG Telecom recommended that the model use actual or a scorched node approach for node deployment. TPG Telecom considered that these approaches will allow for consideration of rational decisions at the time of deployment based on information available

¹¹⁹ Analysys Mason, [Final Model Specification Paper](#), June 2025, p B-5.

¹²⁰ Analysys Mason, [Final Model Specification Paper](#), June 2025, p B-5.

¹²¹ Analysys Mason, [Final Model Specification Paper](#), June 2025, p B-13.

¹²² ACCC, [Position and Consultation Paper](#), April 2025, p 31.

¹²³ Symbio, [Symbio submission](#), May 2025, p 4.

or that were due to factors outside the network operators control (e.g. government policy) but nevertheless inefficient in retrospect.¹²⁴

Final model specification

The ACCC does not consider that an actual or a scorched node approach as suggested by TPG Telecom are appropriate having regard to the objectives of encouraging efficient investment in infrastructure. It is unclear to us how these approaches could properly distinguish between rational decisions at the time of deployment and other decisions. As such, we consider that these approaches carry a high risk of introducing excessive inefficiency into the cost model.

For this reason, the ACCC remains of the view that a modified scorched node approach likely strikes the right balance between determining the efficient cost of a network deployed in 2025 and ensuring the modelled network isn't significantly different from the networks already deployed in Australia.

In response to Symbio's submission on assuming a similar number of core network nodes for fixed and mobile core networks, Analysys Mason has noted in the Final Model Specification Paper that based on information from network operators the number of fixed core network nodes modelled will be comparable to those of actual networks.¹²⁵

The draft cost model assumes there are two core network locations in each of the eight states and territories in Australia. Analysys Mason noted that this is a reasonable approximation given the significant distances between the core network locations.¹²⁶

4.2.3. Modelled services

Service set

Draft model specification

The ACCC's preliminary view was that the following service set reflected services that are commonly provided on the relevant modelled assets (i.e. mobile networks and fixed core networks) and are therefore appropriate to be included in the model.

- Voice and data services provided over mobile networks separately for 4G and 5G:
 - On-net and outgoing mobile calls
 - Domestic incoming mobile voice
 - Outgoing and incoming calls using VoWiFi/D2D
 - On-net and outgoing SMS/MMS
 - Packet data.¹²⁷
- Voice services provided over the fixed core network.
 - Retail on-net fixed voice
 - Outgoing off-net fixed voice

¹²⁴ TPG Telecom, [TPG Telecom submission](#), May 2025, p 4.

¹²⁵ Analysys Mason, [Final Model Specification Paper](#), June 2025, p B-5.

¹²⁶ Analysys Mason, [Analysys Mason draft report](#), July 2025, pp 26–27.

¹²⁷ Analysys Mason, [Draft Model Specification Paper](#), April 2025, p 23.

- Incoming fixed voice.¹²⁸

Submissions

Symbio requested that the ACCC and Analysys Mason clarify whether the listed fixed services constitute the entire set of modelled fixed services, noting that it believes that they probably are a complete set.¹²⁹

Optus noted that service set assumes provision of all commonly available voice and non-voice services but queried whether the requested traffic input data will be available to implement into cost model.¹³⁰

Final model specification

The ACCC remains of the view that the proposed service set represents all the services that should be captured in the cost model. We agree with Analysys Mason's view in the Final Model Specification Paper that the proposed fixed voice services are a complete set as they reflect all origins/destinations for voice calls.¹³¹

In relation to traffic input data for each of the listed services, we understand that Analysys Mason has used a range of information to develop a set of demand forecasts, including information provided under the ACCC's Record Keeping Rules, the operator's responses to data requests, information provided by the operators in the 2020 mobile terminating access service access determination inquiry and other market forecasts developed by its research and insights team. Where specific traffic data is not available, the ACCC has engaged with operators to explore alternative data that may be useful. The demand forecasts are discussed in detail in Section 3.1 of Analysys Mason's Report on the draft cost model.¹³²

Traffic volumes

Draft model specification

The ACCC's preliminary view was to take a holistic approach to traffic evolution to ensure consistency in the forecasting of voice traffic between fixed and mobile networks in Australia. The ACCC considered that this approach would ensure that the estimated costs of the voice interconnection services are based on a consistent set of inputs where relevant.¹³³

Submissions

Symbio agreed with the approach of basing traffic volumes on a consistent set of inputs.¹³⁴

Final model specification

The ACCC remains of the view that a holistic approach to traffic volumes, based on a consistent set of inputs for fixed voice and mobile voice services where relevant is appropriate.

¹²⁸ ACCC, [Position and Consultation Paper](#), April 2025, p 32.

¹²⁹ Symbio, [Symbio submission](#), May 2025, p 4.

¹³⁰ Optus, [Optus submission](#), May 2025, p 10.

¹³¹ Analysys Mason, [Final Model Specification Paper](#), June 2025, p B-6.

¹³² Analysys Mason, [Analysys Mason draft report](#), July 2025, pp 11–22.

¹³³ ACCC, [Position and Consultation Paper](#), April 2025, p 32.

¹³⁴ Symbio, [Symbio submission](#), May 2025, p 4.

Points of Interconnection

Draft model specification

The ACCC noted Analysys Mason's proposal to model a forward-looking number of Points of Interconnection locations and that information from operators on the number of Points of Interconnection locations in the network as well as the interconnection protocols they use would inform this assumption.¹³⁵

Submissions

Symbio agreed with the proposal to model a forward-looking number of Points of Interconnection but raised concerns about how an efficient number of Points of Interconnection will be determined for the hypothetical efficient fixed operator. Symbio suggested that major operators such as Telstra and Optus tend to structure their networks on a state-by-state basis and that this should be the approach in the model.¹³⁶

Optus submitted that the Points of Interconnection assumption is only modelled against a mobile access network and implies that there may be an undefined number of individual carrier Points of Interconnections feeding into this specified mobile Point of Interconnection.¹³⁷

Final model specification

The ACCC remains of the view that a forward-looking model number of Points of Interconnection, as proposed by Analysys Mason, is the appropriate approach. Analysys Mason has reviewed the information provided by operators in relation to their Points of Interconnection and noted in the Final Model Specification Paper the model will assume Point of Interconnection locations in each mainland state.¹³⁸

Wholesale versus retail demarcations

Draft model specification

The ACCC's preliminary view was that retail costs should be separately considered from network costs as proposed by Analysys Mason. This was because the voice interconnection services are wholesale services provided by one network operator to another at the network level. The ACCC's preliminary view was that costs in relation to retail activities should be recovered from the provision of retail services.¹³⁹

Submissions

Symbio agreed with the proposed approach to retail costs, that is to analyse top-down expenditure data provided by operators to calculate an appropriate mark-up for network and retail activities for the purpose of recovering business overheads.¹⁴⁰

On the other hand, TPG Telecom submitted that an integrated approach (where retail costs are included in service cost through mark-up) should be adopted given the common costs

¹³⁵ ACCC, [Position and Consultation Paper](#), April 2025, p 32.

¹³⁶ Symbio, [Symbio submission](#), May 2025, pp 4-5.

¹³⁷ Optus, [Optus submission](#), May 2025, p 10.

¹³⁸ Analysys Mason, [Final Model Specification Paper](#), June 2025, p B-6.

¹³⁹ ACCC, [Position and Consultation Paper](#), April 2025, p 33.

¹⁴⁰ Symbio, [Symbio submission](#), May 2025, p 5.

between retail and network activities. They recommended a holistic approach to common costs which should include costs such as IT provisioning and billing systems necessary for the provision of voice termination services.¹⁴¹

Optus submitted that given that interconnection services can only apply where commercial technical interconnection arrangements are in place, there is no need to reflect wholesale versus retail demarcations in the cost model.¹⁴²

Final model specification

The ACCC considers that the demarcation of retail and wholesale activities is important to ensuring clear categorisation of costs and how they should be allocated to various services.

The ACCC remains of the view that a separated approach for considering retail and network costs is appropriate. As voice interconnection services are wholesale services, costs relating to retail activities only should not be recovered through these services as they are more appropriately recovered via retail services. However, costs that are common to both network and retail services can be partially recovered through network services with a mark-up. For instance, Analysys Mason noted in the Final Model Specification Paper that with respect to the billing system, only a portion of wholesale-related billing costs should be attributable to voice interconnection services.¹⁴³

4.2.4. Modelling implementation

Increment approaches

Draft model specification

The ACCC's preliminary view was that a TSLRIC+ pricing principle is appropriate having regard to the matters under section 152BCA of the CCA.¹⁴⁴ This was reflected in Analysys Mason's proposal to use a long-run average incremental costing (LRAIC+) methodology, which is equivalent to the TSLRIC+ concept, in the cost model. This methodology considers all traffic to be the increment and allocates the incremental cost of traffic between the volumes of these services. This means that each service, including voice interconnection services, receives a share of common network costs, mark-ups are then applied to the network costs to capture organisational-level costs.¹⁴⁵

Submissions

Symbio, TPG Telecom and Telstra all supported the proposed incremental approach to be adopted in the model.¹⁴⁶

Final model specification

The ACCC remains of the view that a TSLRIC+ pricing principle is the appropriate approach to calculate voice interconnection services cost having regard to matters under section

¹⁴¹ TPG Telecom, [TPG Telecom submission](#), May 2025, p 5.

¹⁴² Optus, [Optus submission](#), May 2025, p 10.

¹⁴³ Analysys Mason, [Final Model Specification Paper](#), June 2025, p B-18.

¹⁴⁴ ACCC, [Position and Consultation Paper](#), April 2025, p 33.

¹⁴⁵ Analysys Mason, [Draft Model Specification Paper](#), April 2025, pp 27–28.

¹⁴⁶ Symbio, [Symbio submission](#), May 2025, p 5; TPG Telecom, [TPG Telecom submission](#), May 2025, p 5; Telstra, [Telstra submission](#), May 2025, p 2.

152BCA(1) of the CCA, in particular the direct costs of providing the service and the legitimate interests of the access providers. This is because the TSLRIC+ approach allows the access provider to recover the incremental costs of providing the service as well as a portion of the common network and overhead costs, which must be incurred in order to provide any of its services.

Depreciation method

Draft model specification

The ACCC's preliminary view was that it would be appropriate to consider the effects of likely trends in asset prices and outputs in determining how capital expenditure should be recovered over time. Both voice and data traffic are likely to change over time – in particular data traffic is likely to grow significantly and the change in traffic is unlikely to be constant. The ACCC sought stakeholders' feedback on Analysys Mason's proposed use of the economic depreciation method to account for these effects.¹⁴⁷

Analysys Mason noted that amongst possible depreciation methods (including historical cost accounting, current cost accounting, annuities approach and economic depreciation), economic depreciation is the only method that can take into account all relevant considerations. These include complex cases where the year-on-year change on forecast output or forecast asset prices is not constant and/or varies between different services. This is implemented by ensuring that the NPV of capital expenditure incurred equals the NPV of economic costs recovered, with the costs including an allowance for return on capital employed specific by the weighted average cost of capital (WACC).¹⁴⁸

Submissions

Symbio agreed with the depreciation method proposed to be used in the model.¹⁴⁹

Final model specification

The ACCC remains of the view that it would be appropriate to consider the effects of likely trends in asset prices and outputs in determining how expenditure should be recovered over time. For this reason, and given the ability of the economic depreciation method to consider more complex scenarios of how these change over time, we consider economic depreciation is the appropriate method to implement in the cost model.

The assumed cost trends for capital and operating costs are detailed in Section 3.4.3 of Analysys Mason's report on the draft cost model. Analysys Mason also clarified that economic depreciation is applied to both capital expenditure and operating expenditure in the draft cost model.¹⁵⁰ This means that the recovery profiles of both capital expenditure and operating expenditure are shaped by the assumed cost trends and forecast demand.

The ACCC considers that the similar treatment of capital expenditure and operating expenditure in the draft cost model is reasonable having regard to how costs are incurred and recovered in markets for the provision of voice interconnection services. In particular, ongoing operating expenditure are incurred as a necessity to maintain and operate assets

¹⁴⁷ ACCC, [Position and Consultation Paper](#), April 2025, pp 33-34.

¹⁴⁸ Analysys Mason, [Draft Model Specification Paper](#), April 2025, pp 28–30.

¹⁴⁹ Symbio, [Symbio submission](#), May 2025, p 5.

¹⁵⁰ Analysys Mason, [Analysys Mason draft report](#), July 2025, p 36.

used to provide services, but they may not be recovered on an 'as incurred' basis, and will instead be recovered based on demand for the services which grows significantly over time.

We also consider that a different approach to what is categorised as operating expenditure and capital expenditure risk treating the same cost differently. For instance, spectrum costs could either be considered capital expenditure or operating expenditure depending on whether there is an upfront payment or recurring payment (such as instalments), although they both represent the cost of acquiring the right to use the spectrum during the licence period.

Mobile network operators have also been increasingly restructuring their businesses in ways that reduce capital expenditure and increase operating expenditure while maintaining the ability to provide the same services. The divestment or selling of tower and site assets by the Australian mobile network operators recently is an example of this kind of restructuring.

Within the draft cost model, the hypothetical efficient mobile operator pays a monthly rental for tower access, as opposed to building its own towers. However, this expenditure structure does not necessarily have to affect how costs associated with being able to use the towers are expected to be recovered via the services to be provided using the tower assets.

Geotyping

Draft model specification

As an input to reflect areas with similar geodemographic characteristics, the ACCC's preliminary view was that using Statistical Areas Level 2 areas and the ABS Remoteness Structure¹⁵¹ for developing the geotypes in the cost model, as proposed by Analysys Mason, was an appropriate starting point. In particular, we noted that the ABS Remoteness Structure is commonly used as the basis for assessing differences in mobile infrastructure and market shares across the country, including in the ACCC's annual Mobile Infrastructure Report, and is well understood by industry.¹⁵²

We also considered that it was important to examine whether regional spectrum allocations can be reflected in the model and agreed with Analysys Mason's proposal to further explore this.¹⁵³

Submissions

No submissions commented on the proposed approach to geotyping in the model.

Final model specification

The ACCC remains of the view that using Statistical Areas Level 2 areas and ABS Remoteness Area for developing the geotypes in the cost model is the appropriate starting point.

After examining the coverage maps, Analysys Mason considers it would be appropriate to also include a separate geotype for major highways in remote/very remote areas where there are significant number of sites deployed. Analysys Mason noted that coverage along

¹⁵¹ These areas are then split into various groups based on the ABS Remoteness Structure (i.e. Major Cities, Inner Regional Australia, Outer Regional Australia, Remote Australia and Very Remote Australia)

¹⁵² ACCC, [Position and Consultation Paper](#), April 2025, p 34.

these roads can be defined as a portion of road length.¹⁵⁴ We agree with this approach as major highways in remote/very remote areas represent areas where traffic and required network deployment do not correlate with population.

The geotypes implemented in the draft cost model are outlined in the table below.

Table 5 Geotypes in the draft cost model¹⁵⁵

No	Remoteness category	Population density definition (pop/km ²)	Population (2021)	Area (km ²)	Number of areas
1	Major Cities: Very High Density	>2,500	6,142,440	1,665	439
2	Major Cities: High Density	1000–2,500	7,871,865	4,715	634
3	Major Cities: Medium Density	100–1,000	4,158,635	10,412	367
4	Major Cities - Low Density	<100	138,112	3,615	117
5	Inner Regional: Medium/high density	>100	2,281,781	8,376	226
6	Inner Regional: Low density	<100	2,212,830	247,196	412
7	Outer Regional: Medium/high density	>100	868,705	2,800	120
8	Outer Regional: Low density	<100	1,169,603	784,461	330
9	Remote: Medium/High density	>100	101,370	506	11
10	Remote: Low density	<100	172,500	908,388	85
11	Very Remote: Medium/high density	>100	11,599	41	3
12	Very Remote: Lower density	<100	146,294	5,698,701	66
13	Major transport routes in remote areas	n/a	–	23,071	–
14	Islands	n/a	93,902	31,945	6,624
TOTAL			25,369,636	7,702,821	9,434

¹⁵⁴ Analysys Mason, [Final Model Specification Paper](#), June 2025, pp 9-10.

¹⁵⁵ Analysys Mason, [Analysys Mason draft report](#), July 2025, pp 7-9.

Modelling timeframe

Draft model specification

The ACCC's preliminary view was that a long time series (2020-2070) as proposed by Analysys Mason, was likely appropriate. This is because it provides clarity on how costs are recovered over time and implications of the economic depreciation method as well as changes in demand forecasts. The ACCC considered these transparency benefits will likely enable us to better assess the robustness and reasonableness of the cost estimates. The ACCC also considered that in the event that the ACCC decided to continue to declare the voice interconnection services, a long modelling timeframe adopted in the model will likely mean that the model can be more readily updated with information for the purpose of pricing exercises if deemed appropriate during future access determination inquiries.¹⁵⁶ Such an approach would also promote regulatory certainty regarding the basis of any ACCC pricing exercise in the future.

Submissions

Symbio agreed with the proposed modelling timeframe.¹⁵⁷

TPG Telecom queried the extension of the modelling period to 2070, suggesting it is well beyond the useful lifespan of any relevant infrastructure. TPG Telecom noted generations of mobile infrastructure has tended to follow a 10-year life cycle and it is unclear how it is accounted for in the cost model. TPG Telecom also sought clarification on how asset lifetime values are proposed to be modelled and the assumptions made regarding future mobile infrastructure.¹⁵⁸

Final model specification

The ACCC remains of the view that having a long modelling timeframe from 2020-2070 is appropriate. The ACCC considers that a modelling timeframe that extends well behind the useful lifespan of any relevant infrastructure enables the model to capture how expenditures are continuously incurred over time to replace various infrastructure and how these are recovered by the modelled operators over the lifetime of its business, which is approximated by the 50-year modelling timeframe.¹⁵⁹

Analysys Mason has included additional information in the Final Model Specification Paper to clarify the issues by TPG Telecom. Analysys Mason noted that the model uses an equipment replacement algorithm to purchase new assets at the end of the assumed asset lifetime in addition to assets required to accommodate network growth.¹⁶⁰ The ACCC considers that this provides a reasonable basis for future expenditure incurred by the hypothetical efficient mobile operator over the modelling timeframe based on the assumed asset lifetime.

Analysys Mason also confirmed that it is not possible to model future generations of technology/upgrade cycles of infrastructure given their design is not currently known.¹⁶¹ The ACCC considers that similar to the consideration of D2D services, it is not possible for the current cost modelling exercise to include future technologies where there is currently no

¹⁵⁶ ACCC, [Position and Consultation Paper](#), April 2025, p 35.

¹⁵⁷ Symbio, [Symbio submission](#), May 2025, p 5.

¹⁵⁸ TPG Telecom, [TPG Telecom submission](#), May 2025, p 5.

¹⁵⁹ See Analysys Mason, [Analysys Mason draft report](#), July 2025, p. 37.

¹⁶⁰ Analysys Mason, [Final Model Specification Paper](#), June 2025, p B-19.

¹⁶¹ Analysys Mason, [Final Model Specification Paper](#), June 2025, p B-19.

reliable information that can be used as input to the cost model. It may be possible for the cost model to be updated to reflect the impact of new technology in the future when the relevant information becomes available.

In addition to implementing a 2020–2070 modelling timeframe, the draft cost model assumes that the last year in which new investment is incurred is 2060 and that the last year of cost recovery is 2070. We consider this is a reasonable assumption, allowing for all expenditure to be recovered before the final year of cost recovery.¹⁶²

Weighted average cost of capital (WACC)

Draft model specification

Analysys Mason noted that the cost model will require a pre-tax WACC as an input and that the ACCC will calculate a pre-tax WACC for this purpose.¹⁶³

The ACCC noted its intention to consult on the development of WACC methodologies that will inform its consideration of WACCs in various regulatory processes.¹⁶⁴

Submissions

TPG Telecom suggested that the ACCC adopt the WACC given by Frontier Economics of 8.49 percent in their consultation to the ACMA's Expiring Spectrum Licence process.¹⁶⁵

Telstra supports the ACCC's approach regarding consultation on the WACC methodology and noted that the correct application of WACC will depend on a detailed assessment like the company capital structure, risk profile and the current market conditions.¹⁶⁶

Final model specification

The ACCC has provided Analysys Mason with a draft real pre-tax WACC of 5.64% to apply as the assumed cost of capital for a hypothetical operator within the cost model.

As noted in Section 1.1, the ACCC has engaged CEPA Australia to advise on methodology that ACCC should adopt in estimating the WACC in the context of regulatory processes across industries. CEPA Australia prepared a Draft WACC Methodology and a Note on Voice Interconnection Services WACC which form the basis of the ACCC's consideration of a draft WACC to be implemented in the draft cost model for consultation.

Based on the proposed methodology and its application to the voice interconnection services, CEPA Australia estimated a nominal pre-tax WACC of 8.31%. The ACCC converted this to a real pre-tax WACC of 5.64% based on an estimated expected inflation of 2.53%. We have calculated the expected inflation rate using an annualised ten-year geometric average of the Reserve Bank of Australia's (RBA) headline forecasts for the first three years, and the midpoint of the RBA's target band for years 4–10. The RBA's most recent Statement on Monetary Policy estimates inflation to end of FY25, FY26, and FY27, at 2.1 per cent, 3.1 per cent, and 2.6 per cent, respectively. The mid-point of the target band remains 2.5 per cent.¹⁶⁷

¹⁶² In other words, the model will not deploy assets with an asset life that would extend beyond the final year of cost recovery.

¹⁶³ Analysys Mason, [Draft Model Specification Paper](#), April 2025, p 33.

¹⁶⁴ ACCC, [Position and Consultation Paper](#), April 2025, p 35.

¹⁶⁵ TPG Telecom, [TPG Telecom submission](#), May 2025, p 5.

¹⁶⁶ Telstra, [Telstra submission](#), May 2025, p 8.

¹⁶⁷ See RBA, [Statement on Monetary Policy](#), May 2025, p 4.

The ACCC's draft position is to adopt the same WACC for the hypothetical efficient mobile operator and the hypothetical efficient fixed operator. CEPA Australia observed that in developing the relevant comparator set, it is difficult to establish separate 'pure-play' sample firms of wireless and wireline services as many firms provide services across both technologies. CEPA Australia also noted that based on the rolling 5-year asset beta estimates, there is no concrete evidence that the asset betas for fixed and mobile comparator groups (noting the difficulty in constructing robust comparator groups), are consistently different.¹⁶⁸ Based on these, the ACCC considers it is reasonable to use a single WACC as input for the draft cost model.

We have conducted sensitivity testing on changes in the WACC in the model which is set out in Section 5.1.

Routeing factors

Draft model specification

The ACCC's preliminary view was to use average traffic routeing factors to allocate costs calculated by asset between the modelled service volumes (all converted into voice-equivalent minutes) as this was a relatively simple and transparent way to allocate asset costs across all services that are provided using those assets.¹⁶⁹

Submissions

Symbio agreed with the approach of converting all traffic to voice minute equivalents, but sought clarification on how the averages for the average traffic routeing factors will be calculated.¹⁷⁰

Final model specification

The ACCC remains of the view that using average traffic routeing factors, converting traffic volumes into voice-equivalent minutes using technical conversion factors is the appropriate approach. As noted by Analysys Mason in the Final Model Specification Paper, the inputs and derivation of these conversion factors are included in the draft cost model for stakeholder comment.

Mark-up mechanism

Draft model specification

The ACCC's preliminary view was that for other common costs (including network and non-network costs) that are not allocated using routeing factors, the use of equi-proportionate mark-up approach to allocate common costs that cannot be directly allocated to the modelled services was appropriate. The ACCC agreed with Analysys Mason's view that this approach was straight forward, noting that an alternative Ramsey pricing approach was unlikely to be practical given the significantly complex information required that may not be available.¹⁷¹

¹⁶⁸ CEPA Australia, [Note on Voice Interconnection Services WACC](#), 30 June 2025, pp 5–6.

¹⁶⁹ ACCC, [Position and Consultation Paper](#), April 2025, p 35.

¹⁷⁰ Symbio, [Symbio submission](#), May 2025, p 5.

¹⁷¹ ACCC, [Position and Consultation Paper](#), April 2025, p 35.

Submissions

Symbio agreed with the equi-proportionate mark-up approach.¹⁷²

Final model specification

The ACCC remains of the view that an equi-proportionate mark-up approach to allocate common costs that are not otherwise allocated using routing factors.

In the draft cost model, there are no common network costs identified that require the application of a separate mark-up.

Based on operator expenditure data provided by Australian operators, the draft cost model assumes a non-network common cost (overheads) mark-up of 1% for capital expenditure and 4% for operating expenditure.

Calculation of operating expenditure

Draft model specification

Analysys Mason noted that there are several approaches for calculating operating expenditure (opex) associated with the operation and maintenance of the network business and the cost model could use a combination of these approaches. i.e. different approaches for different network elements.¹⁷³ The ACCC sought information from stakeholders to inform the appropriate approach regarding operating expenditure in the model.

Submissions

Symbio recognised that opex is specific to a given service or asset and will need to be accounted for differently. Symbio noted that using a combination of approaches to calculate opex is likely required.¹⁷⁴

Final model specification

The ACCC considers that a combination of approaches is likely an appropriate way to calculate opex costs associated with the operation and maintenance of a network business. Assumed opex in relation to each of the network assets and how they are derived are set out in the draft cost model and discussed in Section 3.4.2 of the Analysys Mason's report on the draft cost model.

¹⁷² Symbio, [Symbio submission](#), May 2025, p 5.

¹⁷³ Analysys Mason, [Draft Model Specification Paper](#), April 2025, pp 33–34.

¹⁷⁴ Symbio, [Symbio submission](#), May 2025, p 5.

5. Price terms and conditions of access

Pursuant to s 152BC(8) of the CCA, an access determination must include terms and conditions relating to price or a method of ascertaining price if it specifies terms and conditions on which an access provider is to comply with the standard access obligations, any terms and conditions of an access seeker's access to the service, or any terms and conditions on which an access provider is to comply with other requirements in relation to access. This chapter sets out the ACCC's draft position on the price terms to be included in the access determinations for the voice interconnection services. The ACCC's draft position has been informed by the estimated costs of providing these services in the draft cost model as implemented according to the final model specification discussed in Chapter 4.

The ACCC has released a public version of the draft cost model for stakeholder feedback. A public version of the model is required due to the confidential nature of some of the data points included in the cost model. These include information provided under the ACCC's record keeping rules that have not been published or the disclosure of which may lead to confidential information being identified, and some cost and network design inputs. These data points have been anonymised by applying a randomly generated factor such that they are sufficiently different from the true values but still enables the model to produce sensible results.¹⁷⁵ Due to the anonymisation process, the public version of the draft cost model does not replicate the cost outputs set out in this Chapter. However, stakeholders will be able to assess how cost outputs are derived from the modelling assumptions and inputs as well as how changes in those will impact the cost outputs.¹⁷⁶

5.1. Draft cost model outputs

5.1.1. Summary of cost outputs

Table 6 below sets out the cost outputs from the draft cost model for the voice interconnection services from 2025 to 2029, with the ACCC's preliminary views.

The draft outputs for the mobile terminating access service range from 0.88 cents/minute to 0.91 cents/minute. The draft output for the fixed terminating and fixed originating access services is 0.21 cents/minute across the period.

Table 6 Draft outputs from the cost model

Years	2025	2026	2027	2028	2029
Mobile terminating access service (cents/minute)	0.88	0.89	0.90	0.91	0.90

¹⁷⁵ Please refer to Worksheet S in the public draft cost model to identify cells containing data points that have been redacted through the anonymisation process.

¹⁷⁶ For the avoidance of doubt, no formulae have been changed in the Excel model.

Fixed terminating and fixed originating access services (cents/minute)	0.21	0.21	0.21	0.21	0.21
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Sensitivity testing

Analysys Mason has included a number of sensitivity tests in the draft cost model.

The sensitivity tests allow for checking of the impact on the cost outputs as the result of changing some of the modelling assumptions. Analysys Mason has included 10 sensitivity tests in the draft cost model relating to various inputs including some of the matters raised in stakeholder submissions in response to the proposed model specification. Some of the sensitivity tests only affect the calculation of the costs of the mobile terminating access service as they relate to modelling assumptions for the mobile network only. A full list of the sensitivity tests and a description of each test is included in Table 7 below.¹⁷⁷

Table 7 Description of sensitivity testing

Test		Description
S1	<i>Extended coverage scenario A: geotypes 1–9</i>	Actual area covered by one operator only in geotypes 1–9 are included in the modelled coverage (as is the modelled demand)
S2	<i>Extended coverage scenario B: all geotypes</i>	Actual area covered by one operator in all geotypes are included in the modelled coverage (as is the modelled demand)
S3	<i>Exclude impact of Optus/TPG MOCN</i>	Use actual coverage of three operators in 2024 as provided
S4	<i>25% mobile market share 15% fixed market share</i>	Market shares of the modelled mobile network and fixed core network are reduced
S5	<i>Use of 2.3GHz spectrum in metro areas</i>	An additional 1x98MHz of 2.3GHz spectrum is allocated to the modelled operator in geotypes 1–4 (major city areas)
S6	<i>Use of upper range ACMA spectrum pricing</i>	The upper bound of the spectrum fees (rather than the midpoint) is used to set spectrum prices
S7	<i>Lower spectrum holdings</i>	Assume half the allocation of 900MHz and 2.5GHz bands
S8	<i>Using mix of backhaul more like previous inquiry</i>	A mix of backhaul closer to the split used in the 2020 MTAS cost model is applied
S9	<i>Assume higher WACC</i>	A higher WACC of 6.5% is set on the Ctrl worksheet
S10	<i>Assume earlier last year in which new capex is incurred</i>	Assume the final year in which capex is incurred is 2050 rather than 2060

¹⁷⁷ This table has been reproduced from Figure 4.2 in Analysys Mason's draft report.

Table 8 includes the cost outputs for the mobile terminating access service for each sensitivity test.¹⁷⁸ Table 9 includes the cost outputs for the fixed terminating and fixed originating access services for each of the relevant sensitivity tests.¹⁷⁹

Table 8 Draft outputs for the mobile terminating access service for each sensitivity test (cents/minute)

Test	2025	2026	2027	2028	2029	Change
Base case	0.88	0.89	0.90	0.91	0.90	
S1	0.92	0.93	0.94	0.95	0.94	+4%
S2	0.95	0.96	0.97	0.98	0.98	+8%
S3	0.92	0.94	0.94	0.95	0.95	+5%
S4	1.10	1.12	1.13	1.14	1.14	+25%
S5	0.88	0.89	0.90	0.91	0.91	+1%
S6	0.89	0.90	0.91	0.92	0.91	+1%
S7	0.93	0.94	0.95	0.96	0.96	+6%
S8	0.88	0.89	0.90	0.91	0.90	–%
S9	0.91	0.92	0.93	0.94	0.94	+4%
S10	0.87	0.88	0.89	0.90	0.90	–1%

Table 9 Draft outputs for the fixed terminating and fixed originating access services for each relevant sensitivity test (cents/minute)

Test	2025	2026	2027	2028	2029	Change
Base case	0.21	0.21	0.21	0.21	0.21	
S4	0.28	0.28	0.28	0.28	0.28	+33%
S9	0.21	0.21	0.21	0.21	0.22	+1%
S10	0.21	0.21	0.21	0.21	0.21	–1%

The results of the sensitivity tests show that the directions of the changes in the cost outputs in response to each of the modelling assumptions tested are consistent with our expectations. The results also show that the magnitude of the impact varies across the different modelling assumptions.

In particular, the assumed market share has a significant impact on the costs of all voice interconnection services. This is expected as the assumed market share directly determines the proportion of overall traffic the network is assumed to carry, which materially affects the per unit costs of the services assuming everything else is constant.

¹⁷⁸ This table has been reproduced from Figure 4.3 in Analysys Mason’s draft report.

¹⁷⁹ This table has been reproduced from Figure 4.4 in Analysys Mason’s draft report.

Extending the assumed mobile network coverage to areas where there is currently only one operator and reducing the assumed spectrum allocations in some bands also have material impact on the cost of the mobile terminating access service. The resulting increase in the cost of the mobile terminating access service when excluding the impact of the MOCN arrangement confirms the efficiency benefit associated with regional network sharing and supports the inclusion of such arrangement in how the hypothetical efficient operator would deploy its network.

We consider that the sensitivity test shows that the cost outputs are relatively insensitive to the WACC, as the test assumes a much higher WACC of 6.5% compared to the base case of 5.64%.

Top-down validation

As noted in the final model specification paper, the draft cost model includes a top-down validation process by comparing the actual base station counts of the national mobile network operators against the predicted number of base stations for the hypothetical efficient mobile operator.¹⁸⁰ These are shown in the table below.

Table 10 Mobile base station count comparison

Geotype groups	Modelled operator	Telstra	Optus	TPG
Major Cities	5,107	5,739	5,663	4,382
Inner Regional	1,392	2,278	1,841	8,22
Outer Regional	865	1,944	1,206	425
Remote	308	556	169	26
Very Remote	196	724	120	6
Major transport routes	314	325	144	27
Small islands	55	135	58	23
Total	8,237	11,701	9,201	5,711

The ACCC considers that this top-down validation process provides a useful sanity check of the outputs of the bottom-up model and is appropriate having regard to the legitimate business interests of the access providers. The ACCC view is that the number of mobile sites predicted to be rolled out by the hypothetical efficient mobile operator is reasonably comparable to the actual site numbers having regard to the assumed network coverage in the draft cost model. On this basis, we consider that the draft cost model is producing reasonable outputs.

¹⁸⁰ Analysys Mason, *Final Model Specification Paper*, June 2025, p 5. Mobile site base station information for the national mobile network operators has been sourced from the ACCC's Infrastructure RKR information available on data.gov.au.

5.2. ACCC draft position on price terms

The ACCC's draft position is that the cost outputs from the draft cost model provide a reasonable basis for the price terms in the access determinations. In the past, the ACCC has generally adopted a single price for voice interconnection services for the duration of the access determinations, as this provides pricing stability for access providers and access seekers. The ACCC's draft position is that this is an appropriate approach to setting the price term for the mobile terminating access service and proposes to set a single price of 0.90 cents per minute for the mobile terminating access service (which represents the mean and mid-point of the cost estimates for 2025 to 2029) for the duration of the access determination. This estimate represents a 24.4% decrease from the current price.

However, for the fixed terminating and originating access services, the ACCC notes that the estimated costs are significantly below the current price of 0.86 cents per minute. This is due to a range of factors, including that the ACCC has adopted a one-off reduction or rolled over the prices for these services in last two access determinations inquiries, and that the ACCC has decided to adopt a different pricing principle for these services in the current inquiry.

Having regard to the legitimate business interests of access providers of the fixed terminating and originating services, the ACCC's draft position is that a glide path to implementing the new price for these services may be appropriate. This will to some extent mitigate the impact of the sharp reduction in the price of the fixed terminating and originating access services.

The ACCC is proposing to set a price of 0.65 cents per minute for the fixed terminating and originating access services for the first year of the access determination period (i.e. 24.4% decrease from current price), with a further decrease to 0.21 cents per minute from the second year onwards. This provides affected operators with one additional year of transition before the regulated price reaches a level reflecting the estimated efficient cost of providing the services. The ACCC is seeking stakeholder view on the appropriateness of the proposed glide path.

Table 11 Draft prices terms in new access determinations compared to current prices

	Current (nominal cents/minute)	Proposed price (nominal cents/minute)	% change (compared to current price)
Mobile terminating access service	1.19	0.90	-24.4%
Fixed terminating and fixed originating access service	0.86	0.65 (first year) 0.21 (second year onwards)	-24.4% -75.6%

6. Non-price terms and conditions

Access determinations can specify a range of non-price terms and conditions of access and cover a broad range of matters, such as:¹⁸¹

- commercial terms, such as billing
- general dispute resolution processes
- operational processes by which the declared service is to be accessed.

This section sets out the ACCC's draft position on non-price terms and conditions to be included in the final access determinations for the voice interconnection services.

6.1. Current non-price terms and conditions

In the Discussion Paper and position and consultation paper, the ACCC sought views on whether changes should be made to the non-price terms and conditions that are currently in the final access determinations for the voice interconnection services. These non-price terms and conditions relate to the following matters:

- billing and notifications
- creditworthiness and security
- general dispute resolution procedures
- confidentiality
- suspension and termination
- liability and indemnity
- communications with end-users
- network modernisation and upgrade
- changes to operating manual
- recourse to regulated terms.

6.2. Preliminary view

The ACCC's preliminary view was that the current non-price terms and conditions should continue to be included in the final access determinations without change, as they provide a baseline set of terms that parties can rely on if they cannot agree on the terms of access.

The ACCC also outlined its preliminary view not to include a term(s) relating to scams in the final access determinations. The position and consultation paper set out opposing views

¹⁸¹ Section 152BC of the CCA.

from stakeholders on what steps should reasonably be taken to disrupt scam traffic in accordance with relevant scam practices. The ACCC agreed with views expressed by some stakeholders that these matters are best addressed in existing or developing scam-related regulations, such as the Reducing Scam Calls and Scam SMS Industry Code (Telecommunication Scams Code) and the Scams Prevention Framework.¹⁸² The ACCC noted it would monitor developments in the scam regulation landscape during the inquiry, including the ACMA's intention to explore scam-related regulatory controls under its scam reduction work program.¹⁸³

6.3. Submissions

Symbio, Telstra and Optus submitted that the current non-price terms and conditions should be maintained.¹⁸⁴

Stakeholders were divided on whether a term should be added to the access determinations to address scam-related issues.

Optus submitted that no new term should be added, while Symbio submitted that scam issues should be dealt with in the Telecommunication Scams Code rather than the final access determination.¹⁸⁵

Telstra restated its previous view that the ACCC should add a term clarifying that nothing in the access determinations prevents an access provider from complying with regulatory obligations to combat scams. Telstra argued that both scams and regulatory obligations on access providers to combat scams have increased since the non-price terms were originally set, and that this term would increase certainty and avoid risk of conflict between the access determinations and the Telecommunication Scams Code, Numbering Plan or Scams Prevention Framework.¹⁸⁶

TPG Telecom restated its prior view that the ACCC should consider describing circumstances in which access does not need to be provided due to scam concerns.¹⁸⁷ TPG Telecom also proposed that terminating providers be permitted to bill originating carriers a termination rate exceeding the standard rates, where they identify illegitimate traffic based on meeting a sufficient number of characteristics in the Telecommunication Scam Code.¹⁸⁸ TPG Telecom also suggested a flagfall fee be permitted for providers found to be originating a disproportionate volume of scam/spam like traffic. TPG Telecom considered that these changes would promote efficient use of infrastructure by disincentivising low-value and harmful activity. TPG Telecom also suggested these charges would incentivise carriage service providers to police scam activity, mitigate free-riding and enable mobile network operators to recover anti-scam costs.¹⁸⁹

¹⁸² ACCC, [Position and Consultation Paper](#), April 2025, pp 40-41.

¹⁸³ ACMA, [Proposed changes to the Numbering Plan and other instruments: Consultation paper](#), ACMA, Australian Government, November 2024, p 22.

¹⁸⁴ Symbio, [Symbio submission](#), May 2025, p 5; Telstra, [Telstra submission](#), May 2025, p 8; Optus, [Optus submission](#), May 2025, p 2.

¹⁸⁵ Symbio, [Symbio submission](#), May 2025, p 5; Optus, [Optus submission](#), May 2025, p 2.

¹⁸⁶ Telstra, [Telstra submission](#), May 2025, p 8.

¹⁸⁷ TPG Telecom, [TPG Telecom submission](#), May 2025, p 5.

¹⁸⁸ TPG Telecom, [TPG Telecom submission](#), May 2025, pp 5-6.

¹⁸⁹ TPG Telecom, [TPG Telecom submission](#), May 2025, p 6.

6.4. Draft position

Taking into account the matters in section 152BCA(1) of the CCA, the ACCC's draft position is that the existing non-price terms and conditions should be maintained, with limited and minor changes to ensure consistency between the terms in access determinations for all voice interconnection services and to remove terms that are not relevant to voice interconnection services.¹⁹⁰ The proposed changes are set out in **Appendix B**.

The existing non-price terms and conditions from the current voice interconnection services determinations have been combined into a single set of non-price terms at **Attachment C**, using the current MTAS Final Access Determination No. 1 of 2020 as the baseline instrument.

The ACCC considers the existing non-price terms and conditions will promote the long-term interests of end-users by continuing to provide a useful set of terms and conditions in relation to key matters relating to access for commercial negotiation for access seekers and access providers.¹⁹¹ They may also promote competition by ensuring that matters that could be the subject of dispute between access provider and access seekers have a regulatory fallback. The ACCC has also had regard to stakeholder support for maintaining the current non-price terms and conditions.¹⁹²

In relation to adding a term to address scam-related issues, the ACCC does not consider that the proposal by Telstra or TPG Telecom alleviate the ACCC's concerns expressed in the position and consultation paper.

The ACCC considers the addition of a clarifying term regarding the interaction between access obligations under Part XIC and scam obligations, as suggested by Telstra, is not in the long-term interests of end-users, at this time, given the ongoing development of the Scams Prevent Framework. As noted in the position and consultation paper, the primary purpose of including such a term would be to address perceived tension between the standard access obligations to provide voice termination services and other obligations to block scam traffic (such as those in the Reducing Scam Calls and Scam SMS Industry Code). The ACCC remains of the view that any term that sought to enable access providers to block traffic in accordance with scam regulations would not necessarily provide certainty or avoid disputes, unless it clarified what reasonable steps or methods to comply with scam regulations would entail.

The ACCC has considered TPG Telecom's suggestion of enabling access providers to impose additional charges on scam-like traffic, and the ongoing challenges and costs industry are experiencing in disrupting scam traffic. However, the ACCC's draft position is that the proposed terms are not likely to encourage the efficient use of infrastructure and they may adversely impact the interests of all persons that have the right to use the declared service.

TPG Telecom's suggested charges are dependent on an access provider forming the view that the traffic is 'scam-like' having regard to relevant scam regulations. The current Scams Code recognises that legitimate calls (including telemarketing calls) may exhibit the same characteristics of scam calls and more evidence is required to establish that they are actually scam traffic.¹⁹³ As such, there is a significant risk that the proposed approach will

¹⁹⁰ These terms relate to other declared or formerly declared fixed line services.

¹⁹¹ Paragraph 152BCA(1)(a) of the CCA.

¹⁹² Subsection 152BCA(3) of the CCA.

¹⁹³ C661:2022 Reducing Scam Calls and Scam SMS Industry Code, clause 4.1.2.

impact both scam and legitimate traffic. We also understand that blocking (and unblocking) of voice calls based on traffic characteristics is a significant source of disagreement between some industry participants. Therefore, there may be challenges and increased disputes in assessing whether the criteria for imposing such charges are met if such a term is included in the access determinations.

TPG Telecom's proposal also provides an access seeker with significantly more leverage, effectively permitting an access provider to penalise an access seeker. For example, it may result in situations where a carriage service provider who may otherwise have a legitimate interest to use the declared service, being financially penalised in circumstances where legitimate traffic (albeit with scam-like characteristics) is originated. This may cut across existing and proposed scam regulations, which already provide regulators with the power to issue financial penalties relating to scam breaches.

In reaching this draft position, the ACCC has also taken into account other relevant matters, in particular, the ongoing development of the Scams Prevention Framework (including upcoming enhancements to the existing Telecommunications Scams Code to reflect the overarching principles based provisions set out in the Scams Prevention Framework).¹⁹⁴ We also had regard to the ACMA's intention to conduct further work under its scam reduction program relating to the Multiple Service Practice.

We agree with Symbio's view (and that of stakeholders earlier in the process) that this issue is best addressed through the Scams Prevention Framework and scam specific regulations.¹⁹⁵ The ACCC will continue to monitor developments in the scam regulation landscape, in particular the implementation of the Scams Prevention Framework. We will also seek to explore options to help ensure the interaction of the new Scams Prevention Framework and Part XIC access regime is unambiguous.

¹⁹⁴ Subsections 152BCA(1)(c) and (3) of the CCA.

¹⁹⁵ Symbio, [Symbio submission](#), May 2025, p 6.

7. Duration

The ACCC must include an expiry date in an access determination for a declared service. Typically, the expiry date for an access determination should align with the expiry of the relevant declaration, unless the ACCC considers that there are circumstances that warrant a different date.¹⁹⁶ The current declarations for the voice interconnection services expire on 30 June 2029.

The ACCC must also specify a date on which the access determinations come into force.¹⁹⁷

Preliminary view

The ACCC's preliminary position was that the expiry dates for the access determinations should align with the expiry dates of the declarations for the voice interconnection services, which is 30 June 2029. The ACCC acknowledged that Symbio suggested a shorter expiry period would allow the ACCC to better respond to changes in market conditions.¹⁹⁸ However, the ACCC did not consider there were circumstances warranting specification of a different expiry date at this time.¹⁹⁹

Submissions

Telstra, Optus and TPG Telecom did not comment on the proposed expiry date in their submissions.

Symbio reiterated its previous support for a 3-year expiry date for the access determinations. Symbio argued that the use of a new model makes a review of the assumptions and outcomes more pressing than would otherwise be the case. Symbio was of the view that reviewing the basic assumptions of the model would not require a major exercise. Symbio also noted that this is not the same as a discretion for the ACCC to commence an inquiry if it sees fit prior to the expiry of the declaration.²⁰⁰

Draft position

The ACCC's draft position remains that the new voice interconnection final access determinations should expire on 30 June 2029, to align with the voice interconnection declarations. We are not satisfied that there are currently circumstances that warrant setting a shorter term as proposed by Symbio. The ACCC considers that aligning the expiry of the access determinations with that of the declarations will minimise the regulatory burden on industry to provide input into an earlier review. It would be open to the ACCC to consider an inquiry to vary the access determination, should there be any major changes in market conditions that warrant re-examining the cost model.²⁰¹ We consider that having the flexibility to review the cost modelling assumptions to respond to market conditions prior to the expiry date is more appropriate than mandating an earlier review regardless of market conditions.

¹⁹⁶ Sections 152BCF(5) and (6) of the CCA.

¹⁹⁷ Sections 152BCF(1) – (4A) of the CCA.

¹⁹⁸ ACCC, [Position and Consultation Paper](#), April 2025, p 42.

¹⁹⁹ ACCC, [Position and Consultation Paper](#), April 2025, p 42.

²⁰⁰ Symbio, [Symbio submission](#), May 2025, p 6.

²⁰¹ Section 152BCN(1) of the CCA

The ACCC's draft position is that the access determinations should come into force shortly after the current inquiry is finalised. Based on the current expected timeframe for the inquiry, the ACCC proposes that the access determinations specify that they come into force on 1 January 2026.

Appendix A: Approach to calculating spectrum licence tax

For the purpose of the cost modelling exercise, the ACCC has calculated the spectrum licence tax payable by the hypothetical efficient mobile operator based on the assumed spectrum holdings using methodology set out in the Radiocommunications (Spectrum Licence Tax) Determination 2021 (Determination).²⁰² The spectrum licence tax involves two components: 1) a Main Component; and 2) an EME Component for a Designated Spectrum Licence. The derived amounts for the Main Component and the EME Component for each band across the modelling years are included in the draft cost model. The section below sets out the approach to calculating these figures.

Main Component

For each assumed spectrum band, the Main Component is calculated using the following formula:

$$\text{Base amount for the frequency range} \times A \times \frac{\text{Spectrum licence bandwidth}}{\text{total specified spectrum}}$$

Where $A = \frac{\text{area population}}{\text{Australian population}}$

Base amount and total specified spectrum for each band are specified in Clause 2 Schedule 1 of the Determination. Population data from the 2021 Census data are used for deriving area population and Australian population. In calculating area population for each band, we have used the entire spectrum licensed area for each band. For the purpose of conducting sensitivity testing on including the 2.3 GHz band, we have assumed holdings in this band in metro licensed areas only.

EME Component

For each assumed spectrum band, the EME Component is calculated using the following formula:

$$\frac{\text{Main Component}}{\text{total Main Component for Designated Spectrum Licences}} \times \text{total annual EME Component}$$

The total Main Component for Designated Spectrum Licences is assumed to be \$609,362 which reflects the actual amount calculated by the ACMA for the purpose of deriving the EME Component for 2024–25. The total annual EME Component for 2024–25 is \$2,090,532, as specified in Schedule 2 of the Determination. This has been used as the total annual EME Component for 2025 in the cost model, with the figure adjusted each year for CPI growth (using RBA CPI annual growth forecast to the end of June).²⁰³

²⁰² See [Federal Register of Legislation](#).

²⁰³ Based on Australian Communications and Media Authority (Modifications to Apparatus and Spectrum Licences Taxes) Direction 2020.

Appendix B: Proposed amendments to draft voice interconnection services access determinations

The ACCC proposes to set out the three voice interconnection access determinations in a single instrument and that it be based on the current MTAS Final Access Determination No. 1 of 2020 access determination.²⁰⁴ Where appropriate, we propose to include relevant terms from Final Access Determinations No. 3 (FOAS) and No. 4 (FTAS) of 2019. In some cases, we propose to omit irrelevant or redundant terms in the current FOAS and FTAS Final Access Determinations.

The ACCC welcomes stakeholder views on the proposed changes below.

Schedule	Change made	Reason for change
Schedule 1 Definitions	<p>We do not propose to include the following definitions provided for in the Final Access Determinations No. 3 (FOAS) and No. 4 (FTAS) of 2019.²⁰⁵</p> <ul style="list-style-type: none"> • AGVC • Band • Bands 1-4 • CAN • Capped Exchange • Central Business District Area • Common Infrastructure Works • Complex Service • Connect Outstanding Process • Coordinated Capital Works Program • Coordinated Capital Works Forecast • Coordinated Capital Works Schedule • Demerged Telstra Company • Distribution Area • Exchange • Facility • IIC • LCS • Limitation Notice • LSS • MDF • MNM 	<p>We propose to omit these definitions which are irrelevant or redundant. Many of these terms relate to other declared (and formally declared) fixed line services provided for in the Final Access Determinations Nos. 1 to 7 of 2019.²⁰⁶</p>

²⁰⁴ Pursuant to s 152BCE of the CCA two or more access determinations may be set out in the same document.

²⁰⁵ For a copy of the access determinations, see ACCC [s.152BCW access determinations register](#).

²⁰⁶ For a copy of the access determinations, see ACCC [s.152BCW access determinations register](#).

Schedule	Change made	Reason for change
	<ul style="list-style-type: none"> • Network Deployment Rules • Pair • Proof of Occupancy • PSTN • Reseller • Retail Business Unit • Service Number • Service Qualification • Standard Zone • TEBA space • Telstra Provider • Transfer • ULL • ULLS • VLAN • Wholesale ADSL Service • WLR • Zone 1 • Zone 2/3 	
<p>Schedule 1 Definitions</p>	<p>The ACCC proposes to include the definition of 'Prohibited Traffic' from the Final Access Determinations No. 3 (FOAS) and No. 4 (FTAS) of 2019.²⁰⁷</p> <p><i>Prohibited Traffic means traffic offered across a POI for which there is no agreement between the Access Provider and the Access Seeker that the Access Provider will carry such traffic or provide a related service to the Access Seeker.</i></p>	<p>The term 'prohibited traffic' has been used in the suspension and termination Schedules to the fixed line services and MTAS access determinations since 2011 and 2015, respectively. The definition of prohibited traffic outlined in this table, has been included in the fixed line services access determinations since 2011, however was inadvertently excluded from the 2015 and 2020 MTAS access determinations. For consistency, we propose to include this long-standing definition in the new voice interconnection access determinations.</p>
<p>Schedule 1 Definitions</p>	<p>We propose to update the definitions of FTAS and FOAS as the relevant 'service declared under section 152AL of the CCA.' This is consistent with the way MTAS is defined in the MTAS Final Access Determination No. 1 of 2020.</p>	<p>We propose this change to ensure consistency of defined terms.</p>

²⁰⁷ For a copy of the access determinations, see ACCC [s.152BCW access determinations register](#).

Schedule	Change made	Reason for change
Schedule 1 Definitions	<p>We propose to use the definition of ‘Major Network Modernisation and Upgrade’ as defined in the MTAS Final Access Determination No. 1 of 2020, rather than the definition used in the Final Access Determinations No. 3 (FOAS) and No. 4 (FTAS) of 2019.</p> <p>We propose the definition omits the following sub clauses: <i>(a) involves the installation of the Access Provider’s customer access modules closer to end-users than an Exchange;</i> <i>(b) requires the removal/relocation of the Service provided from Exchanges and the establishment of a new POI (or relocation of an existing POI) for the Service.</i></p>	<p>We consider the definition of ‘Major Network Modernisation and Upgrade’ in the MTAS Final Access Determination No. 1 of 2020, is most relevant to the voice interconnection services.</p>
Schedule 1 Definitions	<p>We propose to replace the definitions of a POI with the definitions used in the current FOAS, FTAS and MTAS declaration service descriptions.</p> <p>The proposed definitions are</p> <p>Point of interconnection for the FOAS and FTAS is a location which:</p> <ul style="list-style-type: none"> ▪ is a physical point of demarcation between the networks nominated by the access seeker and the access provider; and ▪ is associated (but not necessarily co-located with) with one or more gateway exchanges of each of the networks nominated by the access seeker and the access provider in respect of the POIs nominated by the access provider. <p>Point of interconnection for the MTAS is a location which:</p> <ul style="list-style-type: none"> ▪ is a physical point of demarcation between the access seeker’s network and the access provider’s digital mobile network, and ▪ is associated with (but not necessarily co-located with) one or more gateway exchanges of the access seeker’s network and the access provider’s digital mobile network. 	<p>Ensuring regulatory consistency, by using the definitions of POI provided for in the current MTAS, FTAS and FOAS service descriptions.²⁰⁸</p>

²⁰⁸ For a copy of the service descriptions, see ACCC, [s.152AQ declared services register](#).

Schedule	Change made	Reason for change
Schedule 10, clause 10.7	We propose to use clause 10.7 of the MTAS Final Access Determination No. 1 of 2020, rather than clause 10.7 of the Final Access Determinations No. 3 (FOAS) and No. 4 (FTAS) of 2019.	We consider clause 10.7 of the MTAS Final Access Determination No. 1 of 2020 is most relevant to the voice interconnection services.
Schedule 10, clauses 10.10-10.18 and 10.20	We propose not to include clauses 10.10-10.18 and 10.20 in the Final Access Determinations No. 3 (FOAS) and No. 4 (FTAS) of 2019, which relate to 'Coordinated Capital Works Programs'.	These clauses are not relevant to voice interconnection services. The current MTAS Final Access Determination No. 1 of 2020 does not include these clauses.