

Submission in response to ACCC
Discussion Paper

**Mobile Terminating Access Service:
Final Access Determination**

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Contents

Section 1. Executive summary	3
Consistent approach to termination promotes the LTIE	3
Setting MTRs that promote the LTIE	4
SMS termination set at a fraction of the voice rate	5
Section 2. The two-way access problem	6
MTAS and PSTN TA utilise different methodologies	6
The need for consistent methodology between MTR and FTR	7
Different methodology sends inefficient price signals	9
Implications for setting MTRs	10
Section 3. The legislative criteria	11
Using LRIC to set efficient termination rates	12
Efficient MTRs with above cost FTRs	16
Section 4. Impact of data volumes on MTAS	18
Section 5. Cost modelling or benchmarking	21
Section 6. SMS termination rates	24
Appendix A. Assessing LRIC in the UK	26
Competition Effects	26
Allocative efficiency impacts	28
Dynamic efficiency impacts	30

Section 1. Executive summary

- 1.1 Optus welcomes the opportunity to comment in response to the Discussion Paper on the Mobile Terminating Access Service (MTAS) Final Access Determination (FAD).
- 1.2 Interconnection contracts are two-way reciprocal access agreements that relate to the supply of termination services by both parties. For mobile to mobile (MTM) calls both parties supply MTAS. However, interconnection agreements between fixed and mobile operators involve the provision of both MTAS and PSTN Termination Access services. Competition and efficiency in the two-way market for calls between fixed and mobile end-users is directly impacted by the efficiency of the fixed and mobile termination charges.
- 1.3 MTAS rates (MTRs) cannot be set in isolation from fixed line termination charges (FTRs). The LTIE is best promoted where both MTRs and FTRs are set using the same efficient cost method.
- 1.4 In principle, Optus considers that MTRs should be set at an efficient cost based level, which is likely to be achieved by the adoption of a long run incremental cost (LRIC) methodology (consistent with international best practice). However, Optus notes that the ACCC is somewhat constrained in its ability to set FTRs by the fixed principles set in the 2011 fixed line services FAD. These require the ACCC to set FTRs on the basis of fully allocated costs. As a result, FTRs are unlikely to reflect the efficient cost of supply
- 1.5 This creates the potential for the following distortions in access pricing:
 - (a) MTRs (reflecting efficient costs) will be set at or below the level of FTRs (reflecting inefficient costs);
 - (b) This in turn will result in a significant transfer of value from the competitive mobile operators to the dominant fixed line incumbent.
- 1.6 To avoid these distortions it will be important for the ACCC to ensure some consistency is achieved in setting prices for both MTRs and FTRs.
- 1.7 Optus recommends that the ACCC should maintain the current Australian differential between MTRs and FTRs (approximately 3:1) so that as MTRs are reduced to the efficient level FTRs are proportionately reduced. As an example, if MTRs reduce to 1.5cpm FTRs should reduce to 0.5cpm. The FTR might still be at a level above LRIC, but it would be closer to efficient levels and any potential distortion between FTR and MRs will be minimised.
- 1.8 In addition, Optus supports a reduction in the SMS termination rate to an efficient level which is likely to be a fraction of the voice MTR. All cost models prepared for regulators worldwide show that one voice minute is the equivalent to many hundreds of SMS messages.

Consistent approach to termination promotes the LTIE

- 1.9 The two-way nature of access means that the LTIE is promoted with a consistent cost methodology across related termination services. The European Union (EU) is in the process of implementing a common cost method across fixed and mobile termination. Consistency in

the cost approach promotes the LTIE because it removes artificial distortions between fixed and mobile operators on the basis of differences in MTRs and FTRs.¹

- 1.10 The Australian regime, however, is moving in the other direction. MTAS is moving towards an optimised incremental cost basis, whereas FTRs are set using fully allocated historic cost basis. FTRs, therefore, are set substantially above the efficient incremental cost of providing the service.
- 1.11 Optus is concerned that failure to adopt a consistent approach will result in a regulatory-imposed competitive distortion, creating a subsidy away from competitive MNOs towards the dominant fixed line operator, which makes a 60% EBITDA margin on fixed voice services. The LTIE is not promoted by requiring competitive MNOs to pay above-cost FTRs to the dominant fixed operator Telstra; yet requiring Telstra to pay incremental costs for MTRs to competitive mobile operators.
- 1.12 This negative competition impact is magnified by the horizontal integration of Telstra across mobile and fixed markets. Telstra does not pay access charges for calls between its mobile and fixed networks as these are 'on-net' across Telstra's two networks. It would represent yet another form of regulated 'subsidy' to Telstra. The cumulative impact of these regulatory decisions on telecommunications markets can be observed by the growing dominance of Telstra across all markets. Operator data shows that:
- (a) Telstra increased its mobile subscriber market share to 53% at June 2014.
 - (b) Telstra increased its share of mobile revenue to 63% at June 2014.
 - (c) Telstra retains a 69% subscriber market share for fixed line voice services.
 - (d) Telstra retains a 60% EBITDA margin on fixed voice; double that achieved in the competitive mobile market.²
- 1.13 Providing further regulatory assistance to Telstra will not promote the LTIE and is likely to result in further cementing Telstra's dominance in the mobile market and across other communications markets.

Setting MTRs that promote the LTIE

- 1.14 Optus supports setting MTRs at a level reflecting efficient costs. Generally, such an approach would promote the LTIE, promote competition and encourage efficient use of, and investment in, infrastructure. However, given the two-way nature of interconnection agreements the extent to which efficient cost based MTR promote the LTIE depends upon whether the reciprocal FTR is also set at the efficient level.
- 1.15 As noted above, the first-best solution is to set both MTRs and FTRs using the same efficient cost methodology. Using European benchmarks, the efficient FTR is around 0.12 cents per minute (cpm); and MTR is around 1.36cpm. This implies an efficient ratio of MTR to FTR of around 9:1. The current ratio of the Australian rates is around 3:1, and Optus expects this to move towards 1:1 if MTRs are set at the efficient level absent changes to the method in which FTRs are set.

¹ See observation of Ofcom, 2011 MCT Statement, [9.101]; Ofcom, 2012, FNM Consultation, [6.16]; EC, 2009, Commission Staff Working Document accompanying the 2009 EC Recommendation, section 2.1

² Optus made a 29% EBITDA margin in June 14 Qtr; Telstra made a mobile EBITDA margin of 40% for FY14. VHA retains an EBITDA margin around 15%.

- 1.16 Optus acknowledges that there are some complexities for the ACCC in setting FTRs at the efficient level due to fixed principles in the fixed line FADs. But competitive MNOs should not be penalised because of the terms of access in related FADs. This would not promote the LTIE. Optus believes the LTIE is best promoted by setting the MTR at an efficient ratio above the FTR, so that as MTRs move to the efficient level FTRs also fall. Such an approach should be possible within the scope of the ACCC's existing fixed principles for fixed line services. Optus welcomes further analysis of the appropriate ratio of MTRs to FTRs for the Australian market.
- 1.17 As noted above, setting MTRs at the efficient level while maintaining FTRs at 0.95cpm would result in a significant inefficient transfer from competitive MNOs to Telstra. It is unlikely to increase competition in mobile markets, and will likely further entrench Telstra's dominance across a range of telecommunications markets.

SMS termination set at a fraction of the voice rate

- 1.18 Optus supports the adoption of SMS termination rates that promotes the LTIE. The determination of efficient SMS termination rates should be informed by the efficient cost of providing SMS termination.
- 1.19 It is a reasonably simple process to establish the efficient cost of providing SMS. Every MTR cost model produced also estimates a ratio that equates the network usage of SMS to one minute of voice. Optus notes that the ratio ranges from 144 SMS' per one minute of voice to more than 3,000 SMS' per minute of voice.
- 1.20 There is little doubt that the efficient cost of SMS termination is a fraction the cost of voice termination. The ACCC should utilise existing cost models to set the cost to terminate one SMS to a ratio of the efficient MTR in Australia.

Section 2. The two-way access problem

- 2.1 The LTIE and economic efficiency is best promoted when firms are able to compete on the basis of their own efficiencies and the true cost of wholesale inputs they purchase. Efficient price signals are vital to ensure firms receive accurate build/buy signals. Where firms compete using wholesale inputs that are priced above the efficient level, the competitive process is distorted.
- 2.2 Interconnection agreements are two-way access services. Both parties to an agreement provide reciprocal access to their networks.
 - (a) For mobile traffic both networks provide MTAS and provide services in the related downstream mobile retail market.
 - (b) For fixed-to-mobile (FTM) and mobile-to-fixed (MTF) traffic one network provides MTAS and the other provides PSTN TA. In this context, MTAS is provided on a reciprocal basis with PSTN TA to MTF traffic. Termination impacts upon downstream retail mobile and fixed markets.
- 2.3 MTRs are a monopoly input into the provision of FTM calls, and hence directly impact upon the efficiency of the FTM call market. FTRs are a monopoly input into the provision of MTF calls, and hence directly impact upon the efficiency of the MTF call market. The FTM and MTF call markets are two-sides of the same interconnection market. Competition in the related downstream markets are maximised when the monopoly wholesale inputs are set using the same efficient cost methodology.
- 2.4 However, the ACCC will face some constraints in setting FTRs at an efficient LRIC level because of its existing fixed principles and Building Block Methodology. Under the current approach charges are set on a fully allocated cost basis. . As a result substantially more costs will be allocated to FTRs than permitted under a LRIC(+) method for MTRs. This will distort competition in the FTM and MTF call market.
- 2.5 To avoid this outcome Optus recommends that FTRs should be reduced in line with MTRs so that bot rates move closer to an efficient cost methodology. This will minimise the negative competitive impacts that would flow from setting above cost FTRs and efficient cost MTRs.
- 2.6 This section examines:
 - (a) Different methodologies used for MTRs and FTRs;
 - (b) The need for consistency;
 - (c) Inefficient price signals as a result of different methodologies;
 - (d) Implications for setting MTRs

MTAS and PSTN TA utilise different methodologies

- 2.7 The FTR and the MTR are set using different cost methodologies. As a result, the FTR is likely to contain significantly more costs than would be permitted under the method used for MTRs. While there is legitimate debate over which one methodology best promotes the LTIE, a different set of inefficiencies arise where two related wholesale inputs are priced using different methods.

- 2.8 The FTR is set through the fixed line services FAD. The rates in that FAD are based on the outputs of the Building Block Method (BBM), which sets a Regulated Asset Base (RAB) and calculates a total annual cost to be recovered across the fixed line services. It is essentially a top down cost model that allocates historic costs to regulated services (although the values to be recovered reflect regulatory values not the company's internal valuation). While there is scope to alter the allocation method across the fixed services, there is limited scope to adopt a more efficient cost method.
- 2.9 The MTR, on the other hand, is set on a forward looking bottom up long run incremental cost basis (LRIC). There is currently a debate around the world as to the extent to which non-incremental common costs should be allocated to MTAS – i.e. whether there should be a mark-up above LRIC, known as LRIC+. LRIC models are based on current costs and assume a hypothetical efficient operator.
- 2.10 The ACCC has consistently observed that fixed and mobile services are compliments to one another — the majority of end-users have both a fixed and mobile connection. The decision to call a mobile or fixed line number will in part be influenced by the price of the call. A factor for outbound call charges is the applicable termination charge. When different cost methodologies are applied, inefficient call decisions may result. For instance, given the different cost approaches, the fixed rate would be relatively higher and would impose higher calls charges on MTF calls.³

The need for consistent methodology between MTR and FTR

- 2.11 Optus submits that the ACCC should consider the efficient use of infrastructure and impact on competition in both related downstream fixed (FTM) and mobile (MTF) call markets. Consequently, Optus believes that the ACCC should consider the need for equal treatment of fixed and mobile termination services so as to remove any potential bias towards one network over another.
- 2.12 Consistency of cost methodology between fixed and mobile termination services removes any regulatory distortions and enables end-users to make calling decisions based on the true efficient costs of the termination services. For example, the European Commission (EC) has adopted a common cost methodology across both fixed and mobile termination services.⁴ The EC states:

Significant divergences in the regulatory treatment of fixed and mobile termination rates create fundamental competitive distortions. Termination markets represent a situation of two-way access where both interconnecting operators are presumed to benefit from the arrangement but, as these operators are also in competition with each other for subscribers, termination rates can have important strategic and competitive implications. Where termination rates are set above efficient costs, this creates substantial transfers between fixed and mobile markets and consumers.⁵ [emphasis added]

- 2.13 This is not to say that FTR and MTR should be equal. Network reality is that FTR should always be less than MTR when using the same cost methodology. Both MTR and FTR include

³ For the same cost base, fully allocated cost method includes a greater number of costs than included in incremental cost methods. For example, all costs are allocated to the relevant service rather than costs that are incremental to the provision of the service. The level of network optimisation may also differ between the cost approaches.

⁴ See EC, Recommendation of 7.5.2009 on the Regulatory Treatment of Fixed and Mobile Termination Rates in the EU, C(2009) 3359 FINAL

⁵ EC, Recommendation of 7.5.2009 on the Regulatory Treatment of Fixed and Mobile Termination Rates in the EU, C(2009) 3359 FINAL, p.3

core-related network costs. In both networks, core costs are relatively close as modern telecommunications networks are moving towards having common all-IP core networks. However, FTR do not include any access network components (i.e. last mile copper line) as these costs are not driven by the level of traffic. On the other hand, mobile access network components are allocated to MTRs (i.e. BTS costs, backhaul links) as mobile access networks are dimensioned to provide suitable levels of busy hour capacity — which includes the level of termination traffic. Optus notes that where a consistent cost methodology is used to determine the costs, results in MTRs that remain significantly greater than FTRs. For example:

- (a) The Netherlands set target FTRs using a common LRIC cost method at 0.108 € cents (AU 0.16c) per minute, and target MTRs at 1.019 € cents (AU 1.47c) per minute⁶ — around 9.5 times higher.⁷
- (b) Ofcom set FTRs using a common LRIC cost method at 0.034p (AU 0.06c) per minute from January 2014.⁸ Using the same LRIC method, MTRs were set at 0.69p (AU 1.25c) per minute for 2013-14⁹ — around 20 times higher than the fixed rate.
- (c) Ireland set target FTRs using a common LRIC cost method at 0.072 € cents (AU 0.10c) per minute from July 2015,¹⁰ and target MTRs at 0.57 € cents (AU 0.87c) per minute¹¹ — around 9 times higher.
- (d) Czech Republic set target FTRs using a common LRIC cost method at 0.11 € cents¹² (AU 0.16c), and target MTRs at 0.983 € cents (AU 1.42c) — around 9 times higher.
- (e) Austria set target peak FTRs using a common LRIC cost method at 0.137 € cents (AU 0.20c), and target MTRs at 0.805 € cents (AU 1.16c)¹³ — around 6 times higher.
- (f) Sweden set target peak FTRs using a common LRIC cost method at 0.0068 SEK¹⁴ (AU 0.11c), and target MTRs at 0.0815 SEK (AU 1.3c)¹⁵ — around 12 times higher.
- (g) Denmark set peak FTRs using a common LRIC cost method at 0.00656 DKK¹⁶ (AU 0.13c), and target MTRs at 0.067 DKK (AU 1.3c)¹⁷ — around 10 times higher.
- (h) France set FTRs using a common LRIC cost method at 0.08 € cents¹⁸ (AU 0.12c), and target MTRs at 0.8 € cents (AU 1.2c)¹⁹ — around 10 times higher.
- (i) Italy set target FTRs using a common LRIC cost method at 0.043 € cents²⁰ (AU 0.06c), and target MTRs at 0.98 € cents (AU 1.41c)²¹ — around 23 times higher.

⁶ http://www.comreg.ie/_fileupload/publications/ComReg1429.pdf

⁷ http://europa.eu/rapid/press-release_IP-13-760_en.htm

⁸ http://stakeholders.ofcom.org.uk/binaries/consultations/nmr-2013/statement/Final_Statement.pdf

⁹ Ofcom 2011 MTC Statement

¹⁰ http://www.comreg.ie/_fileupload/publications/ComReg12125.pdf

¹¹ http://www.comreg.ie/_fileupload/publications/ComReg1429.pdf

¹² European Commission Decision concerning Case CZ/2014/1581

¹³ European Commission Decision concerning Case AT/2014/1617 & AT/2014/1618

¹⁴ European Commission Decision concerning Case SE/2013/1517

¹⁵ European Commission Decision concerning Case SE/2014/1611

¹⁶ European Commission Decision concerning Case DK/2013/1519 & Case DK/2014/1546. Assume 3 minute call.

¹⁷ European Commission Decision concerning Case DK/2013/1501

¹⁸ European Commission Decision concerning Case FR/2011/1236

¹⁹ European Commission Decision concerning Case FR/2012/1304

²⁰ European Commission Decision concerning Case IT/2013/1507

²¹ European Commission decision concerning case IT/2011/1219

- (j) Portugal set target FTRs using a common LRIC cost method at 0.035 € cents²² (AU 0.05c), and target MTRs at 1.27 € cents (AU 1.83c)²³ — around 23 times higher
- 2.14 Spain, on the other hand, has not yet updated its 2010 FTR decision which set rates using LRIC+ at 0.65 € cents²⁴ (AU 0.93c) per minute for metropolitan calls. Spain has, however, used LRIC to set target MTRs at 1.09 € cents (AU 1.57c)²⁵ — around 1.7 times higher. It would be expected that Spanish FTRs would fall closer to the European average upon adoption of LRIC.

Different methodology sends inefficient price signals

- 2.15 As discussed above, using the same cost methodology, MTRs should remain significantly above FTRs. European evidence clearly demonstrates that under a common LRIC methodology, MTRs remain around nine times higher than FTRs. However, Optus is concerned that the use of significantly different cost methodologies between FTRs (using a top down allocated historic cost method) and MTRs (using either LRIC or LRIC+) will result in MTRs that approach, or fall below FTRs. Such a result does not represent differences in the efficient cost of supply; rather the differences would arise because of varying regulatory approaches.
- 2.16 As a result, consumption of related downstream products and investment signals would be based upon regulatory decisions and not the efficiency cost to supply both services. Such an outcome does not promote the LTIE, nor does it promote competition in related markets, nor will it promote efficient use of, and investment in, infrastructure.
- 2.17 Further, it would represent a significant subsidy from MNOs to the dominant fixed operator — a FTR of 0.95cpm is around nine times higher than the EU LRIC average. It would represent a transfer from the competitive mobile market to the dominant fixed market. Moreover, it would disproportionately impact Optus and Vodafone to the benefit of Telstra — Telstra remains the largest MNO and the dominant horizontally integrated fixed and mobile operator. Telstra does not ‘pay’ FTRs as it owns both the originating mobile network and the terminating fixed network.
- 2.18 As a result, there would be a subsidy away from mobile consumption towards fixed usage. As noted by the ACCC, most end-users have both mobile and fixed connections. They are complimentary services. When faced with the option of making calls from and to either a mobile or fixed number, the underlying cost of the call impacts the decision. Efficiency requires that call price reflect the marginal cost of provision. This is not possible for calls terminating on fixed networks. The cost to call a fixed network from a mobile network is likely to be 60% above the efficient costs to do so. Whereas calls from fixed to mobile will reflect the efficient costs.²⁶ There will, therefore, be an incentive for end-users to make calls from fixed numbers rather than mobiles. And this incentive is not based on the relative costs of the service, but rather the impact of FTRs set above the efficient level.

²² European Commission decision concerning Case PT/2010/1058

²³ European Commission decision concerning case PT/2012/1312

²⁴ European Commission decision concerning Case ES/2010/1089

²⁵ European Commission decision concerning Case ES/2012/1314

²⁶ MTF calls incur efficient costs of 1.3cpm for mobile origination (assume origination equals termination) and efficient cost of 0.1cpm to termination on fixed. But the termination charge would be 0.95cpm. Total cost charges equals 2.25cpm and the efficient cost is 1.4cpm. Represents a 60% mark-up over the efficient costs.

Implications for setting MTRs

- 2.19 Optus acknowledges that the ACCC is in a unique position as it is not able to adopt a more efficient cost methodology for FTR — under the fixed principles within the fixed line FADs the RAB/BBM approach must continue for all fixed services.
- 2.20 The worldwide trend is to adopt common methodologies across FTR and MTR price regulation. If it persists with its current approach, the ACCC is likely to remain one of the only regulators to maintain a different methodology across fixed and mobile termination. There may therefore be little precedent to guide the ACCC on this issue.
- 2.21 However, there is a solution to this issue. As shown above, the efficient differential between FTRs and MTRs should be around 9:1, but the Australian ratio currently stands above 3:1. Optus expects that absent movements in the FTR, this ratio will be approaching 1:1 over the next regulatory period. This represents a significant subsidy away from competitive mobile networks towards the dominant fixed line provider.
- 2.22 Optus recommends that all termination rates fall to the efficient cost to supply the service. But absent this first best solution, the next best solution is to ensure that the efficient ratio between mobile and fixed costs is maintained. This would ensure that the relative usage of the networks reflects the relative marginal costs. The FTR will then fall in line with MTRs reductions. This ratio should be maintained until MTRs hit the LRIC level, allowing the FTR to continue to reduce to LRIC.
- 2.23 Optus welcomes further consideration on what should be the efficient ratio.

Section 3. The legislative criteria

- 3.1 When making an access determination, the ACCC must take the following matters into account:²⁷
- (a) Whether it will promote the long term interest of end-users;
 - (b) The legitimate business interest of access providers and the access provider's investment in facilities used to supply the service;
 - (c) Interests of all persons who have a right to use the declared service;
 - (d) The economically efficient operation of a service, network or facility;
 - (e) Value of extensions and the operational and technical requirements necessary for the same of reliable operation of a service, network or facility.
- 3.2 When considering whether something promotes the LTIE, regard must be had to the following objectives:²⁸
- (a) Promoting competition in relevant markets;
 - (b) Achieving any-to-any connectivity;
 - (c) Encouraging the efficient use of, and the economically efficient investment in, infrastructure by which services are supplied, including:
 - (i) the legitimate commercial interests of the access provider;
 - (ii) incentives for investment.
- 3.3 The primary objective of access regulation is to promote competition. This is concerned with enabling efficient suppliers to operate in dependent markets, to gain the benefits of the process of competition such as lower prices for consumers and displacement of inefficient suppliers by efficient suppliers.²⁹ One reason for the primacy of the promotion of competition is that it enhances economic efficiency and consumer welfare — in simple terms competition is the force that leads to efficiency and monopoly is condemned for distorting it.³⁰
- 3.4 Another key element is the efficient use of, and investment in, infrastructure used in the provision of declared services. Access providers will have an incentive to make efficient investments so long as it receives a normal return on the investment.³¹ This requires that a carrier can recover the costs of its infrastructure, its operating costs and obtain a normal return on its capital.³²
- 3.5 It is clear that the common elements across the main matters to be considered are the promotion of economically efficient outcomes — both usage and investment. One could

²⁷ Section 152BCA

²⁸ Section 152AB

²⁹ Re Telstra Corporation Ltd (No 3) [2007] ACompT 3 (17 May 2007), [98-9]

³⁰ Application by Chime Communications Pty Ltd (No 2) [2009] ACompT 2 (27 May 2009), [1]

³¹ Re Telstra Corp Ltd [2006] ACompT 4 (June 2006), [103]

³² Re Telstra Corp Ltd [2006] ACompT 4 (June 2006), [104]

argue that if a FAD promoted economically efficient outcomes then it promotes the LTIE and other matters. Much discussion has occurred on what is efficiency in the context of Part XIC.

- 3.6 The Competition Tribunal has commented that productive and allocative efficiency related to *“the most efficient use of the resources and technology currently available to a firm, in **any given time period.**”*³³ [emphasis added] Further, allocative efficiency will be *“best promoted where the price of a service reflects the underlying marginal cost of providing the service.”*³⁴
- 3.7 Dynamic efficiency is a concept that involves consideration of adaptation by firms to the evolving supply and demand forces in the market.³⁵ It involves two elements:
- (a) Preserving incentives for innovation and investment;³⁶ and
 - (b) Ensuring ongoing competition which forces firms to seek to improve their goods or develop new goods as part of the battle³⁷
- 3.8 Dynamic efficiency takes into account investment decisions by the access provider, now and in the future. This requires that regulated prices be set at levels allowing recovery of efficient investments (irrespective of whether they are sunk). Specifically, dynamic efficiency takes into account the trade-off between short term and middle (or long) term dimensions in order to guarantee adequate returns to an investment.
- 3.9 Dynamic efficiency also looks at competitive entry and the additional competitive pressure to reduce costs over time. This takes into account the chilling effect on competitive investment as a result of high access prices leading to less-than-optimal levels of independent infrastructure investment.³⁸ Higher access prices would promote further investment by access providers, but may also discourage competitive investment by access seekers.

Using LRIC to set efficient termination rates

- 3.10 This section analyses the extent to which using LRIC method to set efficient MTRs promotes competition in related markets and economic efficiency. The Discussion Paper seeks comments on the appropriate methodology for setting MTRs that best promote the LTIE. There is no clear theoretical guidance on whether LRIC+ or LRIC is more efficient or which is to be preferred. The decision on which best promotes the LTIE depends upon specific facts of the Australian market.
- 3.11 The fundamental difference between the approaches is whether it is preferable to allocate a proportion of fixed and common costs to a non-competitive service on an arbitrary basis, or whether common costs should be allocated to competitive retail products. It is a choice between second-best options, of which neither is clearly preferable.
- 3.12 Optus further notes that the cost of MTAS calculated under LRIC+ and LRIC modelling converge where data volumes reach a certain level. To this end we note the observations from Analysys Mason that LRIC approaches the LRIC+ level at high level of volumes.³⁹ This is quite intuitive – at a certain level of traffic above the coverage layer, the cost over a small increment of traffic will approach the cost over a larger increment of traffic (the fixed

³³ Re Qantas Airways Ltd [2004] ACompT 9 (12 Oct 2004), [160]

³⁴ Re Telstra Corp Ltd [2006] ACompT 4 (June 2006), [94]

³⁵ Re Qantas Airways Ltd [2004] ACompT 9 (12 Oct 2004), [159]

³⁶ Re Duke Eastern Pipeline Pty Ltd [2001] ACompT 2 (4 May 2001), [63]

³⁷ Application by Chime Communications Pty Ltd (No 2) [2009] ACompT 2 (27 May 2009), [33]

³⁸ Application by Telstra Corp Ltd [2009] ACompT 1 (22 May 2009), [156]

³⁹ <http://www.analysismason.com/about-us/news/newsletter/Mobile-termination-cost-understanding-the-move-from-LRAIC-to-pure-LRIC/>

proportion will diminish in its relative significance). This is discussed later in the context of Australia's very high levels of mobile data usage.

- 3.13 Optus refers the ACCC to the detailed analysis conducted by Ofcom, Commerce Commission (UKCC) and Competition Appeals Tribunal (CAT) in the UK in response to appeals from MNOs following Ofcom's adoption of the LRIC methodology (see appendix A). Optus submits that the ACCC should undertake a similar analysis – noting that the answers may differ given Australian conditions.
- 3.14 To help assist the ACCC, we outline the relevant analysis below. The UKCC observed that *all parties* agreed that compared with LRIC, settings MTRs at LRIC+ would:
- (a) Decrease the customer lifetime value of users who make more calls than receive;
 - (b) Increase the customer lifetime value of users that receive more calls than they make;
 - (c) The effects of this would be larger for smaller MNOs than larger MNOs, who tend to have a higher proportion of off-net calls (both outgoing and incoming);
 - (d) Would put smaller MNOs at a disadvantage when competing for users that make more calls than they receive, and such customers tend to be post-paid and include the high-value users of data and voice.⁴⁰
- 3.15 As a result of these effects, the following conclusion on competition and efficiencies were made:
- (a) Setting MTRs at LRIC+, rather than at LRIC, would raise the marginal cost to a network of terminating off-net calls made by its subscribers **above the marginal cost** of terminating calls on-net. Therefore the competition effects of adopting a MTR based on LRIC+ would lead to an appreciable distortion of competition and that there were no significant competition considerations that favoured the choice of a LRIC+ cost standard.⁴¹
 - (b) There is no sufficient evidence to prefer either LRIC+ or LRIC based purely on efficiency grounds.⁴² The mere possibility that efficient level could be higher than LRIC+ is not sufficient to conclude that LRIC+ is more efficient than LRIC, or even that it is as efficient.⁴³
 - (c) Incentives to invest are driven by many factors other than the level of MTRs, especially because many of the assets used to provide termination are also used to provide other services.⁴⁴ Therefore, there is likely to be little impact on dynamic efficiency from choosing LRIC over LRIC+.
- 3.16 The ACCC needs to assess how these observed impacts are likely to affect an assessment of the LTIE.

⁴⁰ UKCC 2012, [2.362]

⁴¹ UKCC 2012, [2.524]

⁴² UKCC 2012, [2.578]

⁴³ UKCC 2012, [2.580]

⁴⁴ UKCC 2012, [2.839]

Promote competition in related markets

- 3.17 Competition is promoted where prices are set at the efficient level, and firms are able to compete on the basis of their relative efficiencies, product innovations, and customer service rather than based on benefits of regulatory decisions.
- 3.18 Setting MTRs at LRIC+, rather than at LRIC, would raise the marginal cost to a network of terminating off-net calls made by its subscribers **above the marginal cost** of terminating calls on-net. This difference in the marginal cost faced by networks of terminating calls on-net, compared with off-net, **would not reflect differences in the resource costs** incurred for on-net and off-net termination which are minimal and immaterial in the context of a comparison of LRIC and LRIC+. ⁴⁵
- 3.19 Adopting LRIC+ rather than pure LRIC would also impact on the relative attractiveness of different customer groups. Generally, it would increase the customer lifetime value (CLV) of users who receive more calls than they make and reduce the CLV of those that make more calls than receive. ⁴⁶
- 3.20 LRIC, therefore, is to be preferred over LRIC+ on competition grounds. Interconnection costs would be set on the true marginal cost of provision; and the value of customer groups are based on underlying cost of providing mobile services rather than difference in marginal cost is a result of regulatory decisions.

Economic efficiency

- 3.21 Economic efficiency requires an assessment of allocative and dynamic factors. Allocative efficiency will be *“best promoted where the price of a service reflects the underlying marginal cost of providing the service.”*⁴⁷ Dynamic efficiency preserving incentives for innovation and investment⁴⁸ and ensuring ongoing competition.⁴⁹
- 3.22 Optus agrees with the UK conclusion that there is not sufficient evidence to prefer either LRIC+ or LRIC based purely on efficiency grounds.⁵⁰ The mere possibility that efficient level could be higher than LRIC+ is not sufficient to conclude that LRIC+ is more efficient than LRIC, or even that it is as efficient.⁵¹
- 3.23 Optus agrees that any changes to retail prices as a result of the move to LRIC would be seen through a price rise for pre-pay customers as a whole, while prices for high-usage post-pay customers will tend to fall.⁵²
- 3.24 But ultimately, the question is how these price changes are likely to impact on mobile ownership and subscription. Given the growth of data in Australia, with an industry average monthly data usage over 1GB, and the already relatively low levels of MTRs, Optus does not expect that the delta between LRIC+ and LRIC to be sufficient as to cause a measurable decline in mobile ownership. While changes to the CLV of pre-paid customers are likely to alter the incentive of MNOs to attract new pre-paid customers, given the very low marginal cost it is unlikely any MNO would have an incentive to *remove* low usage pre-paid subscribers from their networks following a decrease in MTRs from LRIC+ to LRIC.

⁴⁵ UKCC 2012, [2.67]

⁴⁶ UKCC 2012, [2.76]

⁴⁷ Re Telstra Corp Ltd [2006] ACompT 4 (June 2006), [94]

⁴⁸ Re Duke Eastern Pipeline Pty Ltd [2001] ACompT 2 (4 May 2001), [63]

⁴⁹ Application by Chime Communications Pty Ltd (No 2) [2009] ACompT 2 (27 May 2009), [33]

⁵⁰ UKCC 2012, [2.578]

⁵¹ UKCC 2012, [2.580]

⁵² UKCC 2012, [2.634]

- 3.25 There is also likely to be no material impact on the incentives to invest for MNOs. The growth of data services and the deployment of 4G are the main drivers of mobile investment. Again, given the volume of data and its continued significant growth, mobile investment is required to provide sufficient coverage and capacity. The fact the mobile assets are used to provide data and voice services means that voice services will continue to be supplied. A change in net revenue as a result from a move from LRIC+ to LRIC is unlikely to impact the ability of MNOs to invest.

Discussion Paper observations on LRIC

- 3.26 The Discussion Paper makes some observations regarding the appropriateness of LRIC compared to LRIC+. It is stated that:

While a pure LRIC approach will lead to lower MTAS rates compared to TSLRIC or TSLRIC+, it could result in higher prices for other services offered by MNOs if service providers seek to recover traffic-related common costs or organisational costs through the prices of other services. The use of a pure LRIC approach to price the MTAS would also mean that an MNO's cost of terminating its own traffic (which would include traffic-related common costs and organisational-level costs) would be higher than the price it could charge access seekers for providing termination services.⁵³

- 3.27 While it is true that LRIC results in MTRs approaching marginal cost, it is not correct to state categorically that it would result in higher prices for other service, or that on-net termination would be priced higher. Optus refers to the detailed analysis and conclusions reached by Ofcom and the UKCC. We repeat that some prices will rise, and some will fall. The impact on efficiency depends upon the extent to which customers that see increased prices choose to forgo their mobile ownership. The observation that on-net termination would be priced higher than MTRs is not correct. The main benefit of LRIC is that it prices both on-net and off-net termination at the same incremental cost level (see UKCC discussion in appendix A). It allows MNOs to price retail propositions with all network inputs at the same marginal cost level. There will be no regulatory imposed discrimination for or against off-net traffic. Further, it allows MNOs the freedom to allocate common costs across retail services, using sophisticated pricing methods to ensure that distortions associated with pricing above marginal cost are minimised. As noted by the European Commission, given the two-sided nature of call termination, not all costs of termination need to be recovered from the originating operator. Ultimately it is a:

... question of how the financial transfers are distributed across operators in a way that best promotes economic efficiency to the benefit of consumers.⁵⁴

- 3.28 The Discussion Paper also states that absent “a similar assessment” the ACCC does not agree with the UK analysis.⁵⁵ Optus strongly disagrees with this assessment. First, the ACCC is obliged to undertake such a process. It would be unreasonable to draw conclusions on how changes in MTRs impact upon the statutory criteria without such a process. Second, the matters taken into account by Ofcom and UKCC (competition, efficiency, impacts on investment) are essentially the same matters required to be taken under account in Australia. Optus’ views on this are discussed above.
- 3.29 In conclusion, Optus believes that a move from LRIC+ to LRIC would better promote the LTIE, although the delta is relatively small. The volume of data traffic seen over mobile networks, and the small impact changes in MTRs have on retail prices and subscription levels, means

⁵³ ACCC, 2014, MTAS FAD Discussion Paper, p.15

⁵⁴ EC, 2009, Commission Staff Working Document accompanying the 2009 EC Recommendation, p. 17

⁵⁵ ACCC, 2014, MTAS FAD Discussion Paper, p.16

there are unlikely to be significant efficiency benefits. Nonetheless, Optus believes that LRIC based MTRs would enable MNOs to better compete on the basis of the true marginal cost of terminating calls on-net and off-net.

Efficient MTRs with above cost FTRs

- 3.30 This section analyses the extent to which setting MTRs using an efficient cost methodologies while maintaining the current FTR methodology promotes competition in related markets and economic efficiency.

Promote competition in related markets

- 3.31 The provision of mobile and fixed termination for calls between mobile and fixed end-users directly impacts the related downstream FTM and MTF call markets. Optus notes the ACCC has consistently recognised a unique FTM market, and has justified the regulation of MTRs on promoting competition in this market. The reciprocal market to FTM market is the MTF call market. As described above, MNOs cannot enter into an interconnection agreement with fixed operators without agreeing for mobile and fixed termination rates.
- 3.32 Optus submits that given the two-nature of the related FTM and MTF markets, the ACCC cannot assess the efficiency of one without assessing impacts on the other market. The ACCC has constantly stated that mobile and fixed services are complementary and that the majority of end-users consider both services when deciding which to use to originate calls from, and to makes calls to.
- 3.33 Competition in the related markets is promoted where prices are set at the efficient level, and firms are able to compete on the basis of their relative efficiencies, product innovations, and customer service rather than based on benefits of regulatory decisions. As discussed in section 2 this requires the ACCC to achieve consistency in changing prices for MTRs and FTRs.

Economic efficiency

- 3.34 Economic efficiency requires an assessment of allocative and dynamic factors. Allocative efficiency will be “*best promoted where the price of a service reflects the underlying marginal cost of providing the service.*”⁵⁶ Dynamic efficiency preserving incentives for innovation and investment⁵⁷ and ensuring ongoing competition.⁵⁸
- 3.35 As explained above, the first best solution of pricing MTR and FTR at the underlying marginal cost of provision is not possible as a result of the fixed line FAD fixed principles. The choice, therefore, is between second best solutions. For the reasons above, setting MTR at the LRIC level while maintaining FTRs above the efficient level will cause significant distortions in the consumption of calls between mobile and fixed networks. FTM calls will reflect actual cost, but MTF calls will be prices 60% above efficient levels. End-users will likely chose to consumer FTM rather than MTF – not because of efficient cost difference but because of the 60% mark-up on MTF calls as a result of regulated access prices. Inefficient consumption patterns are likely to send inefficient production signals. There is likely to be an over-consumption of fixed origination and an under-consumption of mobile origination. This will distort build/buy decisions regarding the convergence of fixed and mobile calling, and mask the true preferences of end-user for mobile calling.

⁵⁶ Re Telstra Corp Ltd [2006] ACompT 4 (June 2006), [94]

⁵⁷ Re Duke Eastern Pipeline Pty Ltd [2001] ACompT 2 (4 May 2001), [63]

⁵⁸ Application by Chime Communications Pty Ltd (No 2) [2009] ACompT 2 (27 May 2009), [33]

- 3.36 Maintaining the ratio, on the other hand, maintains the relative attractiveness of fixed and mobile origination. Competition distortions are therefore likely to be reduced. End-users will choose between mobile and fixed calls on the basis of their *relative efficiencies*. This will better promote economic efficiency than a regulatory subsidy to fixed calls. Optus acknowledges that the second best solution will not lead to the optimal economic efficiency outcome, as the rates will be higher than the efficient level. But the choice between alternative second best solutions shows that the second option better promotes competition than allowing MTRs to fall to LRIC but FTRs remain at fully allocated costs.
- 3.37 Advocates of maintaining FTRs at the current level could argue that this promotes dynamic efficiency. However, the arguments for keeping FTRs above the LRIC (or LRIC+) level for investment incentive purposes are the same for maintaining MTRs at that level. It is not reasonable for the ACCC to accept arguments for FTRs but not MTRs. This conclusion is compounded by the observation that data volumes are much greater on fixed core networks than mobile networks. That is, the voice usage ratio of fixed core assets is much lower than mobile core assets. This is in part one reason why the efficient FTR falls to 0.1cpm in LRIC models.
- 3.38 In conclusion, Optus believes that a move from LRIC+ to LRIC would better promote the LTIE, although the delta is relatively small. The volume of data traffic seen over mobile networks, and the small impact changes in MTRs have on retail prices and subscription levels, means there are unlikely to be significant efficiency benefits. Nonetheless, Optus believes that LRIC based MTRs would enable MNOs to better compete on the basis of the true marginal cost of terminating calls on-net and off-net.

Section 4. Impact of data volumes on MTAS

- 4.1 Cost models demonstrate that the cost of MTAS converges under LRIC+ and LRIC modelling where data volumes reach a certain level.⁵⁹ This implies that the choice of methodology matters less now than in previous regulatory periods.
- 4.2 Since the 2007 WIK cost model was developed, the growth of data has been phenomenal. First, the WIK cost model assumed essentially no data usage, meaning all networks costs were allocated across voice and SMS services only. This may have been a reasonable assumption given the observed levels of data usage at the time. For instance, in May 2008 average data usage was a fraction of voice minutes. But this is no longer the case. In the six years since there has been a mobile data revolution to the extent that almost all mobile investment occurs because of the need to provide coverage and capacity for mobile data. Average monthly data usage on the Optus network has grown from [CiC]. This growth is expected to continue.

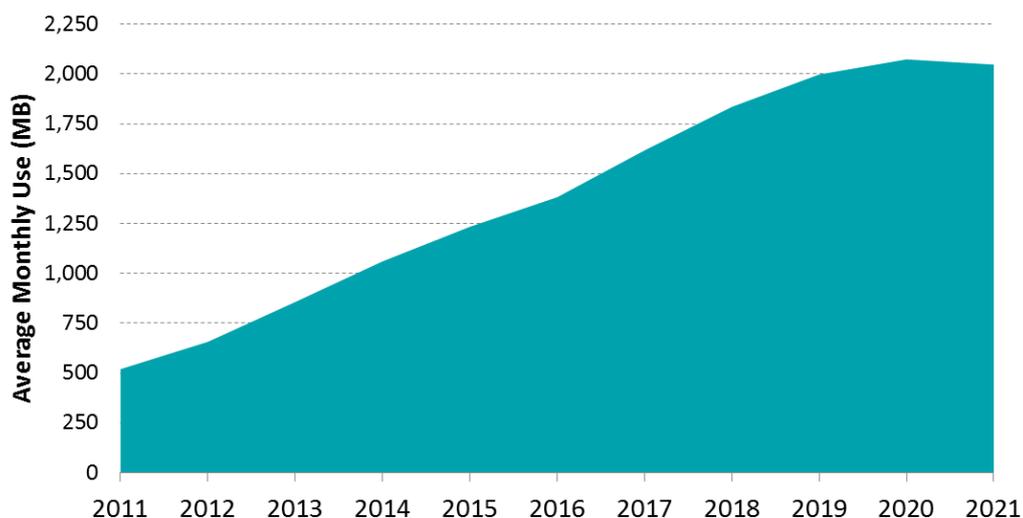
Figure 1 Average Monthly Usage per Subscriber

[CiC]

Source: Optus

- 4.3 Another relevant public data source is the recently completed mobile network capacity consultation undertaken by ACMA. This process involved the developed of a mobile network model by Analysys Mason, using industry average data inputs. All three MNOs provided confidential data inputs into this process. Optus believes the data in the model is the best public source of information available to the ACCC. The ACMA mobile network capacity forecasting model shows that average monthly data consumption for the industry in 2014 is expected to be 1.06GB, growing to 1.6GB in 2017 (figure 2).

Figure 2 Industry Average 3G Monthly Usage per Subscriber



Source: Analysys Mason, ACMA

- 4.4 Average usage, while instructive, is not the relative metric for allocation of costs in a mobile network cost model. To demonstrate the likely effect the growth in data consumption would

⁵⁹ <http://www.analysismason.com/about-us/news/newsletter/Mobile-termination-cost-understanding-the-move-from-LRAIC-to-pure-LRIC/>

have on cost allocation in MTAS cost modelling, we convert actual volumes seen on the Optus network into corresponding Mbps throughout. For simplicity, we use the conversion factors calculated in the 2011 Ofcom MTAS cost model.⁶⁰ Optus expects that any cost model developed in Australia would use similar, if not the same, conversion metrics. Further, we would also expect that the cost model would dimension the mobile network using Gbps throughput, which has been the international standard for several years. The monthly total shown below would be further converted to busy hour throughput, but the ratios between the different services would remain constant.

- 4.5 The phenomenal growth in data is again observed in figure 3 below. In May 2008 monthly throughput of voice was [CiC] That is, in May 2008, data usage placed the same demands on mobile networks as SMS usage. In May 2014, [CiC].

Figure 3 Monthly Network Traffic (Gbps)

[CiC]

Source: Optus

- 4.6 The relative usage of the services can be directly compared to the relative usage of the UK cost model. For Q2FY2015, total busy hour network traffic in Mbps was comprised of 10.9% voice traffic, 0.0006% SMS traffic, and 89% data traffic. This is assumed to steadily grow until Q4FY2021, where voice declines to 6.8% of total busy hour traffic, SMS declining 0.0004%, and data growing to 93% of total busy hour traffic.⁶¹ Optus notes that the proportion of total network usage represented by data in both Q2FY2015 and Q4FY2021 is [CiC] that seen on the Optus network in May 2014.
- 4.7 The relatively usage factors also imply that the current UK MTAS rates calculated over-estimate the likely MTAS rate in Australia. The cost model calculated MTAS to be 0.63p in FY2015 and 0.56p in FY2012 using LRIC method, and 1.63p in FY2015 and 1.47p in FY2021 using LRIC+ method. Optus notes that this is likely to overstate the corresponding Australian rates for several reasons, including level of coverage and lower market share of modelled operator. This is in addition to lower relative levels of data usage.
- 4.8 The Irish regulator's (ComReg) MTAS cost model also assumes that in 2013 values, voice represented around 10% of total network usage, SMS only 0.02% and data representing 90%. The ComReg model calculated the MTAS LRIC rate to be on average 0.45 € cents over 2015-17 for an operator with 33% market share.⁶²
- 4.9 The Portugal cost model produced in 2012, assumed that in 2014 mobile subscribers would on average consumer 214MB of data per month, growing to a maximum of 270MB per month in 2021. The model estimates the LRIC+ MTR to be 43% higher than LRIC at 1.73 € cents. Replacing the assumed monthly data consumption with that seen in Australia (i.e. 1GB), produces a LRIC+ rate 8% higher than LRIC in 2017. This demonstrates the impact that growing data has on the difference between the two methods.
- 4.10 Optus discusses the merits of benchmarking below (and the need to take into account the full range of variations between markets). But what can be seen from the UK and Irish examples, is that a LRIC rate of between AU 0.7c and AU 1.13c and a LRIC+ rate of AU 2.6c would likely over-estimate the efficient cost of providing MTAS in Australia.

⁶⁰ Ofcom, 2011 MCT Cost Model, <http://www.ofcom.org.uk/static/wmvct-model/model-2011.html>. See '2 Network.xlsx', cell "CostDrivers.MbpsConversion". One voice minute = 0.000233 Mbps; One SMS = 0.0000003 Mbps; One MB of data = 0.0022222 Mbps. This conversion rate also results in one minute of 3G voice being equivalent to 610 SMS 3G messages.

⁶¹ See '2 – Network.xlsx', worksheet 'Cost Drivers', table '6 Total busy hour network traffic over time'.

⁶² http://www.comreg.ie/_fileupload/publications/ComReg1429.pdf

- 4.11 While there are merits in the adoption on LRIC cost methodology over LRIC+, the efficiency benefits are unlikely to be significant. The likely difference between the two methods is further reduced given the massive growth in data volumes over recent years. Optus would expect at current levels of relative usage between voice and data, that the per unit cost of voice would not be notably different in a LRIC or LRIC+ model; and that the cost per unit of voice would be significantly below the current MTAS rate of 3.6cpm.

Section 5. Cost modelling or benchmarking

- 5.1 The Discussion Paper asks whether MTRs should be set after undertaking a detailed cost modelling process; or through another method such as benchmarking. Both methods have benefits and costs. Both methods can produce accurate estimates of the efficient MTR in Australia if implemented properly; and both can produce inefficient estimates if implemented badly. Optus does not have an a priori preference for either. The relevant question is whether one method produces a higher net benefit than the other.
- 5.2 MTR cost modelling is a time and resource intensive process. The ACCC prepared a cost model in 2007. This process took more than a year, and many rounds of consultations with industry.⁶³ The model received much criticism and was not used to set directly MTRs in 2007. It was subsequently not used in following MTAS pricing decisions. Optus agrees with the ACCC's observation in this Discussion Paper that this model is not fit for purpose.⁶⁴
- 5.3 Should the ACCC prepare another MTR cost model, Optus expects that a properly developed cost model would take substantially longer than previously in 2007. The process is likely to take at least a year, including intensive data collection and analysis. The cost model would likely cost the ACCC upwards of \$500,000 in consultancy fees, and impose at least that for each interested party in compliance costs. Further, it would be unlikely that a cost model would be ready in time for the ACCC to use to set MTRs by July 2015. One relevant question is whether the costs associated with delays in implementing efficient MTRs offsets the incremental benefits arising from marginally more accurate efficient MTRs than using benchmarked rates.
- 5.4 Benchmarking, on the other hand, is less resource intensive and would be implemented in a tighter timeframe. But benchmarking also has a higher risk of error in setting inaccurate MTRs for Australia. Traditionally, benchmarking has been difficult for Australia given its unique geography, population density and locations, which is not replicated in many, if any, European markets.
- 5.5 The relevant question before the ACCC is whether the risk of error in setting MTRs through benchmarking, and the impact of that error on the LTIE, is sufficient to warrant the regulatory delay (and the resulting decrease in LTIE due to extension of inefficient MTRs) and significant costs incurred by the ACCC and interested parties.
- 5.6 Optus does not believe so for the following reasons:
- (a) LRIC modelling has resulted in a convergence of rates across multiple jurisdictions. For example, the sample set of EU LRIC rates shows that only one rate (Ireland at 0.82cpm) falls beyond two standard deviations away from the mean. This supports the view that LRIC rates across markets tend to be less volatile than LRIC+ rates, and thereby reduces the risk of regulatory error of benchmarking.
 - (b) LRIC does not include the cost of coverage or the cost of spectrum, costs that typically vary significantly across markets, and which has been one of the main reasons why benchmarking has not been appropriate for Australia.

⁶³ The original tender for the model was issued in March 2006, and the MTAS Pricing Principle was finalised in November 2007 – six months late.

⁶⁴ ACCC, 2014, MTAS FAD Discussion Paper, p.17

- 5.7 Optus therefore sees merit in the use of benchmarking to assess the appropriate level of LRIC MTRs in Australia.
- 5.8 Optus acknowledges that there is debate as to whether LRIC+ or LRIC better promotes the LTIE in Australia. Optus explains above that it believes LRIC better promotes the LTIE, but that the delta between the two approaches is relatively small. Under either method, the actual MTR is likely to be similar given the level of data usage in Australia. Consequently, Optus supports the benchmarking of the ‘target’ MTR using international LRIC rates to be set in 2017. This would have several advantages:
- (a) Delaying the implementation of current LRIC rates until 2017 increases the probability that LRIC and LRIC+ rates will converge given the significant growth of data usage; and
 - (b) Enables the ACCC to put in place a glide-path before the end of FY2015, which would be very unlikely if the ACCC undertakes a proper cost modelling process
- 5.9 Optus has identified the following MTRs set in the EU using the LRIC method and set after development of detailed cost model. The rates below have been approved by the European Commission, indicating that they are consistent with the LRIC method, have undertaken extensive consultation, and have produced a detailed bottom up LRIC model. The simple average of the observed markets is 1.36cpm.

Figure 4 European MTAS rates

EU Market	Target Rate (AU cents)
Denmark	1.30
France	1.20
Portugal	1.83
Spain	1.57
UK	1.25
Belgium	1.56
Italy	1.41
Ireland	0.82
Czech Republic	1.42
Austria	1.16
Sweden	1.30
Netherlands	1.47
Simple Average	1.36

Source: ComReg, Figure 7.2, http://www.comreg.ie/_fileupload/publications/ComReg12125.pdf. See also paragraph 2.13. 1 EUR = 1.44 AUD

- 5.10 These LRIC rates are likely to overstate the efficient LRIC in Australia for the following reasons: data usage and penetration is greater in Australia than in most EU markets; the efficient market share in European markets is typically around 25%, rather than in Australia with only 3 operators at 33%. This does not mean that the rates should not be used, rather that the LRIC benchmarks are likely to lie somewhere in between the Australian efficient LRIC and LRIC+ output.
- 5.11 Further, many of these estimates are for the years from 2011 to present. Therefore, using these LRIC estimates for setting MTRs from 2017 is likely to reflect a rate somewhere between LRIC and LRIC+. As mentioned above, as data grows LRIC+ and LRIC converge.

Updating the 2012 Portuguese LRIC/LRIC+ model for 2014 Australian data usage shows that LRIC+ is only 0.14cpm (8%) higher than the LRIC estimate of MTR.

- 5.12 Optus supports a glide-path from the current rate to the efficient target rate, subject to reductions in the FTR to the efficient target rate.

Section 6. SMS termination rates

- 6.1 Optus welcomes the discussion over the efficient level of which SMS termination should be set. The SMS rate should be set using the same methodology as voice. It is logical that the approach taken for voice MTR, which is assessed as best promoting the LTIE, should also be the approach that best promotes the LTIE for SMS termination.
- 6.2 Optus acknowledges the initial set of benchmarked regulated SMS rates quoted in the Discussion Paper,⁶⁵ showing the average regulated SMS rate of 0.8 cents per message. This is a fraction of the termination rate imposed on originating MNOs by the two terminating MNOs which have refused to commercially negotiate lower rates. The benchmarked rate is **[CiC]** lower than the current commercial rate.
- 6.3 A reduction to 0.8 cents per message would better promote the LTIE than the current commercial rate, which is being held artificially high due to the use of some MNOs monopoly control of SMS termination.
- 6.4 However, the question is whether there is another approach which would promote the LTIE further. Optus sees merit in using accepted network conversion factors to link the efficient SMS and voice MTRs. This makes network sense — mobile cost models calculate the efficient cost of *all* traffic and are able to convert voice minutes to SMS message to data traffic.
- 6.5 Every MTR regulatory model produced contains a SMS to minute conversion. This conversion is used to convert market observable demand of SMS messages to a network equivalent throughput load so as to enable accurate network dimensioning and cost allocation. The conversion factors used in current and past MTR cost models worldwide are shown below (figure 5).
- 6.6 A comparison of worldwide cost models shows that the accepted network conversion ratio ranges from 144 messages per minute to 3,000 messages per minute. The difference is due to assumptions regarding the network over which SMS' are sent — 2G models assume a lower conversion, where 3G models assume higher conversion rates.
- 6.7 Optus notes that majority of SMS traffic is expected to be sent through 3G networks over the period of the next FAD. Indeed, Telstra has committed to switching off its 2G network in 2016. Mobile network cost models estimate that one minute of voice over 3G networks is equivalent to 3,000 SMS messages.
- 6.8 Irrespective of whether one adopts the lowest observation (144 SMS per minute) or the most aggressive (3,000 SMS per minute), the efficient cost of an SMS is much lower than the current commercially set rate.

⁶⁵ ACCC, 2014, MTAS FAD Discussion Paper, p.12

Figure 5 Mobile Cost Model SMS Conversion Factor

Country	Year	SMS messages per minutes of voice
Romania	2006	144
Sweden	2004	144
Netherlands	2007	144
Kenya	2006	288
Australia	2007	432
UK	2011	610
France	2007	650
France	2011	650
UK	2007	700
Portugal 2G	2012	1,150
Sweden 2G	2011	1,150
Netherlands 2G	2010	1,150
Portugal 3G	2012	3,000
Sweden 3G	2011	3,000
Netherlands 3G	2010	3,000

Source: NRA cost models

- 6.9 There is little doubt that a cost-based SMS termination rate will be a fraction of the voice MTR. Yet this is not the case. The SMS termination rate has remained at the same level for over a decade, while the voice MTR has fallen by 82% since 2004 — and is set to fall further over the next regulatory period. As a result, there is a significant disparity between the efficient cost to terminate an SMS and the termination charge levied by the terminating network.
- 6.10 The most relevant question is how the current commercial rate should move to the efficient rate during the period of the FAD. Should it move immediately to the new, or would a glide-path that enables orderly transition of market arrangements avoid undue transition costs.
- 6.11 Optus sees merits in a glide-path that enables MNOs and other parties to adjust to the efficient level and adjust the necessary commercial contracts in a reasonable timeframe.
- 6.12 Optus supports a glide-path from the current level to the efficient cost of SMS termination. Given the long standing commercial arrangements based on the current SMS termination rate, there is merit in a longer glide-path for SMS termination than voice termination. This will part recognise that reductions in SMS termination were not foreseen when existing commercial constructs were developed. Optus agrees that the LTIE is best promoted by setting access charges at the efficient level, but the transition to the efficient must be cognisant of the adjustment costs imposed. It is possible that adjustment costs could be sufficient so as to negate many of the benefits arising from reductions to the efficient level.

Appendix A. Assessing LRIC in the UK

- A.1 This appendix examines the assessment undertaken in the UK, first by the regulator Ofcom followed by the appellate body the UK Competition Commission (UKCC).

Competition Effects

- A.2 Ofcom concluded that MTRs set at LRIC+ appeared to dampen competition among MNOs to some degree, and to set MTRs and pure LRIC would eliminate (or very substantially reduce) these effects.⁶⁶
- A.3 The UKCC summarised the central competitive impact of the difference between LRIC+ and LRIC. Importantly, the summary was agreed by all parties (MNOs and Ofcom). As such, Optus notes the ACCC should also accept this summary as accurate and uncontroversial. The key competitive impact agreed by all parties is that setting MTRs at LRIC+, rather than at LRIC, would raise the marginal cost to a network of terminating off-net calls made by its subscribers **above the marginal cost** of terminating calls on-net.
- A.4 This difference in the marginal cost faced by networks of terminating calls on-net, compared with off-net, **would not reflect differences in the resource costs** incurred for on-net and off-net termination which are minimal and immaterial in the context of a comparison of LRIC and LRIC+.⁶⁷
- A.5 Adopting LRIC+ rather than pure LRIC would also impact on the relative attractiveness of different customer groups. Generally, it would increase the customer lifetime value (CLV) of users who receive more calls than they make and reduce the CLV of those that make more calls than receive.⁶⁸
- A.6 Of relevance to the ACCC is that the difference in marginal cost is a result of regulatory decisions and may as result distort competition. And the difference in the CLV of different customer groups is a result of a regulatory decision and not the underlying cost of providing mobile services.
- A.7 Both Ofcom and the appealing MNOs agreed that the level at which MTRs are set do affect the way in which MNOs compete with each other. There is no a prior reason why any MNO should have a balanced interconnection position. A MNO's net position is determined by a range of factors, including its own commercial strategy and those adopted by its rivals.
- A.8 After explaining and debating the impact of different MTRs would have on smaller MNOs (an issue of particular concern in UK, which may have less impact in Australia) — including whether small MNOs could make commercial decisions that would mitigate the impact of higher MTRs — the UKCC concluded that smaller networks could adopt commercial strategies that would avoid it being put in a commercially disadvantaged position by higher MTRs. But this would have the effect of constraining the commercial strategies available to smaller MNOs, and as a result, would put them at a commercial disadvantage.⁶⁹
- A.9 The UKCC did not conclude that adopting LRIC+ would have a negative impact on smaller MNOs, but merely that there is a risk that it could. And it is the potential for the cost method

⁶⁶ Ofcom 2011 MTC Statement, [8.101]

⁶⁷ UKCC 2012, [2.67]

⁶⁸ UKCC 2012, [2.76]

⁶⁹ UKCC 2012, [2.199]

to distort competition as a result of traffic directions rather than the underlying efficiency of mobile networks that is problematic. The LRIC method avoids this risk.⁷⁰

- A.10 In conclusion, the UKCC agreed with Ofcom that the competition effects of adopting a MTR based on LRIC+ would lead to an appreciable distortion of competition and that there were no significant competition considerations that favoured the choice of a LRIC+ cost standard.⁷¹

Impact on customer value of certain customer types

- A.11 The UKCC concluded it was common ground that MNOs set prices with regard to the customer lifetime value (CLV) of a customer or group. Reducing MTRs can be expected to affect the CLV of different customer groups. Groups that have net inbound calls will earn net incoming revenue from MTAS; hence a reduction in MTRs will reduce the CLVs of these groups. Conversely, groups that make net outbound calls, a reduction in the MTRs will reduce outbound payment and increase the CLV of these groups.⁷²
- A.12 The fundamental element of the likely impact of moving from LRIC+ to pure LRIC is the calling patterns of the different customer groups. The UKCC observed that the most important factor is the outbound-inbound call ratio for different groups of consumers. The UKCC concluded, based on the market evidence, that the inbound call ratio of post-pay customers is only a little larger than 1:1, whereas the call ratio of pre-pay customers is considerably smaller than 1:1.⁷³
- A.13 Customers can also be further segregated beyond post-paid and pre-paid. Customers that make more outgoing calls have a higher outbound-inbound ratio. The UKCC observe that 'high-end' post-paid customers have net outbound calls, while 'low-end' post-paid customers have net inbound calls. 'Low-end' pre-paid users are large net receivers of calls, while 'high-end' pre-paid users may be either net makes of calls, or roughly balanced. UKCC concluded that these observations provide a reasonable broad overview of calling patterns across the market.⁷⁴
- A.14 The UKCC noted that all parties did not dispute that setting MTRs at LRIC+ would put smaller networks at a disadvantage in competing for customers who make more calls than they make, and that such customers tend to be in the post-paid segment. Importantly, this group also includes the higher value users of mobile voice and data.⁷⁵ The UKCC concluded that:
- ... absent any offsetting competition effects, the result would, for a period at least, be weaker competition within the post-pay customer segment than might otherwise be the case.*⁷⁶
- A.15 Moreover, even if it were possible for a network to overcome the competition effect until such time the network gained sufficient scale, setting MTRs at LRIC+ resulting in networks having to compete in a certain manner to overcome the disadvantage: then adopting the cost standard would distort competition by restricting the strategies available to new entrants and smaller networks.⁷⁷

⁷⁰ UKCC 2012, [2.202]

⁷¹ UKCC 2012, [2.524]

⁷² UKCC 2012, [2.24-6]

⁷³ UKCC 2012, [2.34]

⁷⁴ UKCC 2012, [2.35]

⁷⁵ UKCC 2012, [2.318]

⁷⁶ UKCC 2012, [2.319]

⁷⁷ UKCC 2012, [2.320]

- A.16 This argument logically extends to any change in competitive strategy as a result of setting MTRs at LRIC+. For instance, if it made a particular customer group more attractive than under marginal cost pricing then competition is distorted. MNOs are no longer competing solely on the efficiencies of their networks, and customers are no longer attractive based on their marginal revenue and costs.

Allocative efficiency impacts

- A.17 Ofcom concluded that allocative efficiency alone did not provide a clear answer as to whether pure LRIC or LRIC+ was to be preferred. Ofcom considered whether a move to pure LRIC would shift patterns of usage, subscription and ownership. It concluded that a move to pure LRIC seemed unlikely to trigger a substantial reduction in ownership and was likely to generate a limited increase in usage.⁷⁸
- A.18 As a general rule, allocative efficiency is maximised where goods are priced at marginal cost. Any price set above marginal cost is a distortion that reduces efficiency. In the mobile sector, an assessment of allocative efficiency is more complicated given the large fixed and common costs. In order to remain viable, MNOs need to allocate these fixed and common costs across one or more of the services they offer.
- A.19 In theory, the optimal result is achieved when common costs are allocated in a manner that minimises the total distortion across all services. Such allocation would be based on Ramsey pricing principles, in which bigger mark-ups are placed on services that are more inelastic. However, in practice, there are significant information problems when attempting to do so through regulated charges. Moreover, Ramsey principles require that *every service* is priced in such a manner. Where only one service is regulated, no such result is guaranteed even if the proper mark-up can be calculated.⁷⁹
- A.20 The position of Ofcom was that MNOs can recover a contribution to common costs from retail fees (fixed monthly fees) without as much distortion compared with the distortion caused by a surcharge on MTRs (where there is no price discrimination).⁸⁰ With significant levels of price discrimination, together with non-linear pricing, MNOs are able to recover all common costs from the retail market without causing significant inefficiencies.
- A.21 Ofcom also considered it is not that MTRs set at LRIC maximise allocative efficiency, but rather that there is not sufficient evidence to prefer either LRIC+ or LRIC based purely on efficiency grounds.⁸¹ The UKCC concluded that detailed empirical evidence is needed in order to make a decisive conclusion on this issue. No party to the UK appeal did so. In order to overturn Ofcom's views, it would need to be shown that the optimal level of MTRs did actually lie at or above LRIC+. It is possible that the optimal level lies closer to LRIC+ than LRIC, but there is no evidence to demonstrate this. It is equally possible that the optimal level is closer to LRIC.
- A.22 The UKCC agreed with Ofcom that there is not sufficient evidence to prefer either LRIC+ or LRIC based purely on efficiency grounds.⁸² The mere possibility that efficient level could be higher than LRIC+ is not sufficient to conclude that LRIC+ is more efficient than LRIC, or even that it is as efficient.⁸³

⁷⁸ Ofcom 2011 MTC Statement, [8.43-4]

⁷⁹ UKCC 2012, [2.525-9]

⁸⁰ UKCC 2012, [5.536]

⁸¹ UKCC 2012, [2.545]

⁸² UKCC 2012, [2.578]

⁸³ UKCC 2012, [2.580]

Assessment of likely impact on usage and subscription charges

- A.23 As noted above, MNOs have regard to CLVs when setting prices. It was also common ground that pre-pay customers as a whole are net receivers of calls and that post-paid callers as a whole are either neutral or net makers of calls. And within both groups, the ratio of outbound to inbound tends to be larger among heavier users.
- A.24 The clear implication of this is that pre-paid users (as a group) will become less profitable as a result of MTR cuts, while the profitability of post-paid users (as a group) will be unchanged or slightly enhanced. And MNOs would offer more favourable terms to users that have become more valuable and worse terms to users that have become less valuable.⁸⁴
- A.25 The UKCC rejected arguments that MNOs would increase prices for high-end users in order to keep unprofitable pre-paid users on the networks. Moreover, the UKCC rejected arguments that there would be any price rise for post-paid high users. Where the CLV increases as a result of lower MTRs, one would expect MNOs to lower prices for that group.⁸⁵
- A.26 The UKCC concluded that:
- ... prices will rise for pre-pay customers as a whole (especially low-usage customers) and for low-usage post-pay customers, while prices for high-usage post-pay customers will tend to fall.*⁸⁶
- A.27 As a result, MNOs are likely to do one of two things:
- (a) Reduce acquisition expenditure (including handset subsidies) to reflect the lower CLV of new pre-pay users; and
 - (b) Increase prices to increase the CLV of new and existing pre-pay users. Any price rise is unlikely to be seen through basic pricing but rather through two-part tariff elements (such as bolt-ons or bonus credits). This can also be achieved by altering expiry time of unused credit.
- A.28 Ultimately, the question is how these price changes are likely to impact on mobile ownership and subscription. Ofcom was of the view that the magnitude of any price change is unlikely to be sufficient to alter consumers' decisions on whether to have a mobile phone.
- A.29 Both Ofcom and the appellant MNOs provided survey and other data to UKCC as evidence of the likely consumer response to price increased as a result of lower MTRs. The UKCC commenting that it considered that certain groups will be at risk of giving up mobile subscriptions and that those will generally be low users. Whereas high users could scale back their usage to compensate for price increase, low users would not be less able to do so; and as a result are more likely to become inactive or forego mobile subscriptions altogether.⁸⁷
- A.30 The UKCC concluded that on the evidence before it, it could not find compelling evidence that there are groups of users whose net income from MTRs forms a large proportion of the revenue that MNOs earn from having them as subscribers. This suggests that any price increase for these customers would likely be modest relative to the level of other charges already being paid.⁸⁸ Ultimately, this is an empirical question that the ACCC must answer

⁸⁴ UKCC 2012, [2.626]

⁸⁵ UKCC 2012, [2.632]

⁸⁶ UKCC 2012, [2.634]

⁸⁷ UKCC 2012, [2.736]

⁸⁸ UKCC 2012, [2.742]

before it can be of the view that a move from LRIC+ to LRIC would have a sufficiently large impact on charges to warrant subscribers to leave networks.

- A.31 Further, the UKCC looked at whether MNOs would have an incentive to *remove* low usage pre-paid subscribers from their networks following a decrease in MTRs. The UKCC acknowledged that there will no doubt be a proportion of low users who are loss making. However, the marginal costs of keeping a SIM on a mobile network are very low, and every activity undertaken by pre-pay user should have a positive margin (above marginal cost). These same customers may well be loss-making if they are required to make a contribution towards overheads or acquisition costs, but this is not sufficient economic rationale for MNOs to try and remove the users from their networks *once acquired*. It is more likely that MNOs will avoid acquiring these users in the future by reducing acquisition costs, and/or charging higher upfront fees.⁸⁹
- A.32 In relation to how changes in usage and subscriber numbers impact allocative efficiency, the UKCC concluded:
- (c) Most of the evidence of impact of MTRs on usage and subscriber numbers is not robust, and not aimed at the difference between LRIC+ and LRIC;
 - (d) It is not clear how a decline of subscriptions relates into a loss of users;
 - (e) The loss of subscriptions that was subsidised by MTRs being above marginal costs is not necessarily allocatively inefficient; and
 - (f) To the extent that lower MTRs leads to loss of some 'efficient' users this has to be offset against other effects of higher MTRs, such as higher FTM prices.
- A.33 As a result, the UKCC again confirmed that Ofcom was correct to conclude (although not always correct in its arguments as to why) that allocative efficiency grounds do not provide a clear answer as to whether LRIC+ or LRIC is to be preferred.⁹⁰

Dynamic efficiency impacts

- A.34 Ofcom noted that dynamic efficiency was primarily concerned with incentives to invest and innovate. When assessing impact of move to pure LRIC, Ofcom noted that losses faced by MNOs from the adoption of pure LRIC depended on the waterbed effect which allowed them to recover money from the retail side of the market. Ofcom concluded that if there was an effect of lower MTRs on incentives for MNOs to invest it was likely to be small.⁹¹
- A.35 The UKCC concluded that they did not see any evidence to persuade them that the level of MTRs is likely to affect significantly MCPs' incentives to invest. The UKCC agreed with Ofcom that MNOs incentives to invest are driven by many factors other than the level of MTRs, especially because many of the assets used to provide termination are also used to provide other services.⁹² To this end, Optus further notes that the main driver of investment in network infrastructure (for both coverage and capacity) is the significant level of data usage in Australian market. We agree that changes to the level of MTRs as a result of adopting LRIC rather than LRIC+ are likely to be small, if any.
- A.36 It was concluded that there is likely to be little impact on dynamic efficiency from choosing LRIC over LRIC+.

⁸⁹ UKCC 2012, [2.748-9]

⁹⁰ UKCC 2012, [2.823]

⁹¹ Ofcom 2011 MTC Statement, [A3.102]

⁹² UKCC 2012, [2.839]