Submission to the Senate Select Committee on the National Broadband Network

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Contents

About this submission

This submission aims to inform the Senate Select Committee examining the National Broadband Network (NBN) on Vodafone's experience as a global telecommunications provider. Vodafone has focused this submission on the structural and regulatory settings that would promote the greatest consumer benefit and business certainty in the development of the NBN. The submission draws on Vodafone's experience as a fixed and mobile broadband provider and Vodafone's experience of both domestic and international regulation of telecommunications.

1. EXECUTIVE SUMMARY

1.1 Vodafone is the world's largest mobile company, Europe's largest buyer of unbundled local loop access, and one of the world's leading providers of total communications services. Vodafone has a perspective on the NBN that is informed by its leading international position in mobile communications and its understanding of the manner in which next generation wireless and fixed communications networks and services will be integrated and deployed over the next 10 years and beyond.

1.2 Vodafone believes the NBN project is of fundamental importance to the economic future of Australia.

1.3 There is a clear and growing trend globally that mobile communications are replacing fixed line communications. Therefore the NBN will directly affect competition in the supply of mobile communications services, whether fixed or mobile. It is important to understand that this issue is not about fixed line communications: it is about *all* forms of telecommunications:

(a) Mobile and fixed communications use the same terrestrial infrastructure: only the extremities of the network are different in either case. Therefore both mobile and fixed forms of telecommunications will be delivered via the NBN;

(b) Fixed and mobile services are already bundled together and customers will increasingly substitute between voice and broadband on mobile and fixed networks;

(c) The architecture of mobile and fixed networks will be increasingly integrated and may incorporate transmitters located close to the home, possibly collocated with Fibre to the Node (FTTN) nodes; and

(d) The broadband services generated by the NBN will use the same core network and backhaul elements as mobile services.

1.4 Vodafone is a significant participant in the Australian communications market, has and has a direct and growing stake in the NBN and the regulatory framework.

1.5 The NBN Request for Proposals (RFP) proposes that up to $4.7 billion of Commonwealth funding will be allocated to an NBN deployment. Potential investors have been invited to make submissions on the regulatory environment in the context of their bids. Implicit in this process is the potential interplay between the regulatory environment and investment decisions and a negotiated outcome with financial sponsors of the successful bid.

1.6 The objective of the Government should be to ensure the market power of the NBN is confined to enduring bottlenecks and the NBN operator does not damage competition in communications markets.

1.7 To the extent that the successful NBN operator is associated with a vertically and horizontally integrated carrier, the market power of the NBN operator may be exercised to adversely affect competition in the delivery of other communications networks and services. Accordingly, to protect competition Vodafone is firmly of the view that structural separation between the NBN and other telecommunications services is the by far the best, and perhaps the only truly viable, option to maximise the benefits for all Australians. Failing this, and as a significantly less effective measure, the Government should institute true functional separation supported by a robust access regime.

1.8 If the NBN is not structurally separated, the owner/operator will have clear and compelling incentives to:

(a) Obfuscate the distinction between its NBN assets and its other business assets;

(b) Use the NBN assets to serve its own business, by way of economies of scale, information sharing and preferential access; and

(c) Delay and block access by challenging the judgments of regulators and courts.

1.9 In addition, the Government should seek to create the greatest possible economic value for the network by ensuring it can be fully utilised to deliver services to consumers by:

(a) providing for open and non-discriminatory access on price and non-price terms;

(b) promoting competition by requiring that any NBN operator configure its network and access arrangements to facilitate next generation mobile network infrastructure deployment and other competing infrastructure, services and applications; and

(c) enhancing business certainty by substantially reviewing Part XIC of the *Trade Practices Act 1974* (TPA).

1.10 Finally the NBN process should be subject to further consultations and submissions from interested and affected parties. It would be inappropriate for a project of such long-term economic significance to the future of the telecommunications industry if a decision on the structure of the project were made without full consultation. This is especially the case bearing in mind the level of economic investment made to date in the market and planned in the future.

2. INTRODUCTION

2.1 Vodafone Australia (**Vodafone**) welcomes this opportunity to provide its submission to the Senate Select Committee on the National Broadband Network (NBN).

2.2 The NBN, and its associated backhaul capacity, will represent significant network infrastructure for the broader communications sector in Australia, incorporating the essential access to homes and businesses and driving fibre connectivity closer to customers. The roll out of the NBN is a once in a generation opportunity to implement a model that will promote competition, innovation and encourage investment across the entire communications landscape in Australia.

2.3 It is critically important to the welfare of all Australians that:

(a) competing service providers have open and non-discriminatory access to all components of the NBN; and

(b) the market power of the NBN operator is appropriately regulated.

2.4 Mobile communications are now so integral to the day to day lives of Australian consumers that there are more mobile service subscriptions than Australia's total population, with the Australian Communications and Media Authority (**ACMA**) reporting 21.26 million mobile phone services in operation at 30 June 2007. This compares to only 10.92 million fixed line services for the same period.

2.5 It is essential that the regulation of the NBN is based on appropriate consideration of the long-term future of communications networks and services, rather than merely a short term interest in increasing the speeds of fixed line broadband services. In

considering the regulatory issues associated with the NBN it is therefore important to consider the interests of both customers and service providers over the next ten to twenty years. [1]

2.6 Australia's communications future will be determined by a combination of converged fixed and wireless networks. Therefore, a policy that favours fixed line over mobile network investment, constrains competition in the supply of mobile networks or services or allows a vertically and horizontally integrated NBN operator to favour the interests of affiliated downstream fixed and mobile businesses, may prove to be harmful to Australia's broadband development.

2.7 In this submission Vodafone provides a perspective on the NBN debate that is informed by its understanding of the manner in which next generation wireless and fixed communications networks and services will develop and integrate over the next 10 years and beyond, in Australia and internationally.

2.8 It is Vodafone's view that the decisions that the Federal Government makes now in relation to the NBN process may optimise, but could also potentially damage, broader consumer welfare benefits over the long term. In this context it is important that the exigencies of facilitating an appropriate short term outcome from the NBN Request for Proposals (**RFP**) process do not come at a significant long term cost to the competitive environment and to consumers.

Vodafone's global perspective

2.9 Vodafone Group and its subsidiaries (**Vodafone Group**) comprise the world's leading mobile communications service provider, and the second largest communications company in the world, with a significant presence in Europe, the Middle East, Africa, Asia Pacific and the United States.

(a) At 31 December 2007, the Vodafone Group had 252 million customers worldwide[2] and in Australia the Vodafone direct customer base was 3.572 million subsidiaries.

(b) In Europe the Vodafone Group is the largest acquirer of unbundled local loop access and is the fifth largest broadband provider.

2.10 In Australia Vodafone:

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[1] As noted in the RFP: *"Not only will the NBN provide the primary platform for delivering fixed high-speed broadband services, but it is also likely to provide the platform for basic services like voice as well as many other new and innovative services for decades to come. The economic and social implications of the NBN are therefore profound."*

[2] Calculated based on the registered customers of mobile telecommunications ventures in which it had ownership interests at that date, calculated on a proportionate basis in accordance with the Company's percentage interest in these ventures.

(a) has invested significantly in communications infrastructure for over 15 years and is the third largest participant in the Australian telecommunications sector; and

(b) is currently undertaking a national 3G mobile broadband rollout using High-Speed Packet Access (**HSPA**) which will provide coverage to 95% of the population, giving Vodafone a significant presence in regional and rural Australia.

2.11 As a major communications infrastructure provider in Australia and world wide, with significant knowledge and experience in the communications sector, Vodafone has a unique perspective on the regulatory issues associated with the proposed NBN, and in particular on the impact of fibre-to-the-node (**FTTN**) or fibre-to-the-home (**FTTH**) networks on mobile networks and services in the context of both current and future generations of technology.

Optimising long term consumer welfare

2.12 The NBN has the potential to provide significant benefits to the welfare of all Australians, through enhanced access to news and information, social interaction, entertainment, e-commerce, and improving productivity, the international competitiveness of Australian businesses, the delivery of essential services such as health, education and emergency services and addressing rural/regional isolation and dislocation.

2.13 The correct regulatory settings for the NBN will create a vibrant and competitive communications environment in Australia, which will encourage additional investment, and the evolution of further communication services and applications by multiple network, service and content providers.

2.14 Conversely, if an appropriate regulatory environment is not applied to the NBN, this may result in significant detriment to net consumer welfare, in comparison with optimal long term outcomes that could otherwise have been achieved. A monopoly NBN controlled by a vertically and horizontally integrated entity, could significantly constrain competition across a range of telecommunications and media services, in the absence of appropriate regulatory intervention.

2.15 If the Government does not separate the owner/operator of the NBN from other services in the market, the Government runs the very real risk of permanently damaging the ability of Australian consumers to gain access to an optimal range of telecommunications services, by creating a permanent competitive imbalance in the Australian telecommunications market.

2.16 The Government has indicated that in selecting a successful proponent it will focus on "value for money" (based on a broad range of considerations). A suitable interpretation of "value for money" would be an outcome that best optimises net consumer welfare in the long term. Vodafone submits that if, following an analysis of all the proposals, the

Government does not have a high degree of confidence that the best RFP proposal also reflects an optimal net consumer welfare outcome, then it should not pursue *any* proposal at this time.

2.17 Given the significance of the NBN to the communications industry and the community Vodafone recommends that prior to the selection of the successful NBN proposal, a further opportunity for public and industry consultation should occur. This further consultation should be conducted on the basis of the details of the relevant proposal(s). This will be necessary to ensure that the Government is aware of the potential long term implications of decisions that are made in relation to the NBN.

An opportunity to shift the emphasis from regulatory intervention to structural separation

2.18 Vodafone submits that in setting the objectives for regulation of the NBN, the Government should be aiming, not just to minimise potential competitive disruption and maintain the industry status quo, but to re-focus telecommunications regulation to provide a more appropriate balance between the need to maintain incentives to invest and innovate and the need to provide maximum services to the public, by way of allowing competitors access to essential bottleneck services.

2.19 The NBN RFP process represents a unique opportunity to move towards structural separation rather than regulatory intervention, as a primary means of achieving socially optimal levels of competition and investment.

3. THE INTERACTION OF FIXED AND MOBILE NETWORKS AND SERVICES

Government funding decisions and regulation should be underpinned by consistent principles

3.1 Vodafone does not dispute that the availability of increased data speeds on fixed line services is of significant value to consumers and to productivity. However the value of mobility cannot be overstated. Australia's future prosperity and the growth of the digital economy will be supported through a combination of fixed and wireless networks. In this environment it is important to avoid a regulatory regime that inconsistently applies the principles on which it is based. For example, by maintaining higher levels of regulation in respect of privately funded mobile networks operating in highly competitive markets, while conceding lower levels of regulation to monopoly infrastructure that has also enjoyed the benefits of Government funding.

3.2 The Government has proposed to allocate up to $4.7 billion of Commonwealth funding to support the deployment of the NBN and to grant a unique opportunity to build bottleneck fixed line infrastructure in the customer access network. By comparison, the

deployment of mobile networks, including 3G HSPDA has always proceeded on the basis of *both* competing infrastructure and private sector funding.

3.3 The provision of government funding for fixed line network infrastructure risks skewing efficient economic build/buy decisions in favour of fixed line services, to the competitive disadvantage of mobile network operators such as Vodafone, and more, importantly to the detriment of consumers who value mobility.

3.4 Vodafone's key concern is therefore to ensure that regulation of the NBN promotes and enables – rather than inhibits – the development and provision of innovative communications networks and services that may not be copper/fibre based fixed line services. In particular it is critical to ensure that appropriate regulation preserves the competitiveness of independent mobile services, which are likely to be the only true infrastructure based competition to the NBN.

3.5 In considering the regulation of the NBN there has been a tendency to focus primarily on its impact on competition in the retail provision of fixed telecommunications services and to propose measures specifically designed to address those concerns, such as the provision of wholesale services to fixed line telephony and broadband resellers. However, the NBN will also impact on the provision of mobile services as a result of:

(a) a growing shift in the marketplace from fixed services to mobile services – a trend that is gathering pace and will continue into the future;

(b) improving mobile service bandwidth and functionality, such that they are more comparable with the capabilities of fixed line services, and are ongoing complementary services to those supported by the NBN;

(c) bundling and the continued convergence of services, devices and content, driven by IP based services and consumer interest in multi-function devices; and

(d) mobile network infrastructure being increasingly integrated with fixed network architecture such that the NBN will be a vital wholesale input into the provision of 3G and LTE mobile services.

3.6 The Government's proposed NBN process could result in a vertically and horizontally integrated operator receiving a $4.7 billion subsidy (or at least funding on more attractive terms than could be achieved from financial markets). By potentially negotiating the regulatory environment with NBN proponents, the Government's decision could have far reaching impacts on associated markets by, at best, creating an uneven playing field, and at worst, facilitating anti-competitive behaviour.

3.7 The Government's investment should be directed solely to the roll out of broadband networks in areas where it would not otherwise be economic to do so, and not towards

general, co-mingled infrastructure. Further, appropriate regulatory measures must be put in place to ensure that competition in the broader communications industry is maintained.

Mobile services will remain both substitutable and complementary services to NBN services

3.8 The manner in which consumers use fixed and mobile services is complex and changing:

(a) Digitisation has made it possible to deliver the same communications services (voice, video and data) over both fixed and mobile networks.

(b) Standard 3G data rates are approximately seven times faster than a fixed line dial-up connection. This is suitable for offering a range of communications services including high-speed internet and email access, video calling, full track music downloads and mobile television.

(c) The roll out of 3G HSPA will significantly enhance the services that can be provided to customers over the Vodafone network, providing data transmission speeds of up to 1.8 Mbps (similar to DSL broadband over Australia's existing copper network for many consumers) with HSPA technology increasingly being incorporated in laptops and other sophisticated portable devices.

(d) Beyond these existing commercially deployed technologies next generation networks and services will continue this process (see below).

3.9 While Vodafone does not currently provide residential fixed line telecommunications services in Australia, Vodafone operating companies in other markets do provide these services, which are often bundled with mobile services. Forms of these bundled products will be introduced in Australia, such as the Vodafone Business One Service that was launched on the date of this submission (see below).

3.10 Importantly, Vodafone is currently is a provider of 3G mobile broadband services, which are a substitute service for some consumers as well as being a complementary service for others. Some consumers value mobility over data speeds and have fully substituted their fixed line services for mobile voice and broadband services. Other consumers value the higher speed and data capacity of fixed line networks, but want to supplement that service with mobile access services for use over a broader geographic area.

The long term impacts of fixed-mobile convergence

3.11 Fixed-mobile convergence (**FMC**) will continue to occur over the life of the NBN, driven by a number of factors including consumer demand for integrated devices and services and mobility.

3.12 The impact of FMC is particularly salient to the NBN given that the NBN will be the distribution platform for both fixed and mobile services. Therefore, even if fixed to mobile substitution did not grow, the NBN would still be crucial to the mobile economy since it would provide the core network elements that mobile services rely on. The fact that FMC is occurring, and will grow over the life of the NBN, means that:

(a) Mobile operators such as Vodafone have a crucial stake in the design and structure of the NBN; and

(b) A vertically integrated NBN operator which is not structurally separated, but also provides mobile services (such as Telstra, if it were to be selected as the NBN operator) has an even greater incentive to cross-subsidise one business to the other, co-mingle its NBN assets with other of its network assets, and delay any challenge to its practices by challenging regulatory and court decisions – all of which will block and delay the development of competitive services. In this way it will be able to advantage both its fixed and mobile businesses, at the expense of competitors and the Australian consumer.

3.13 The growth of FMC was discussed in the OECD Committee for Information, Computer and Communications Policy paper on *'Fixed-Mobile Convergence: Market Developments and Policy'* (23 March 2007). The paper refers to the following stages of FMC, many of which are already occurring:

- **Service bundling**
  - Bundle of fixed and mobile services
  - Bundle of voice (cellular) and data (Wi-Fi) services
  - Services such as single voice mailbox offered over both fixed and mobile networks
  - Offering discounts for calls made between fixed and mobile networks to specific members
- **FMC using broadband/Wi-Fi connections (cellular/Wi-Fi dual-mode service)**
  - Dual-mode services using a mobile handset and using Wi-Fi modems in the home environment to access VoIP through ADSL connections
    - ADSL through self-provision
    - ADSL through LLU (local loop unbundling)
  - Dual-mode services using handsets that do not have a handover function from one mode to another, offering each mode separately
  - Dual-mode voice service which has a handover function from one mode to another, but does not utilise a fixed voice or broadband network in the home
- **Mobile based 'dual-mode' services**
- **Network convergence**

3.14 The first stage of FMC has already occurred and the second and third stages are already being commercially implemented, with a variety of competing technologies under review for the final stages of network convergence.

Dual mode services

3.15 Vodafone is at the forefront of dual mode service developments, which relate to the combining of both fixed and mobile elements, within one handset or device. For example, in a number of international markets Vodafone currently offers DSL broadband to residential customers packaged with voice offerings that include zonal tariffs and fixed line telephony[3].

3.16 Under such zonal tariffs customers may make calls from a defined geographic area to fixed line numbers and defined mobile networks at rates similar to fixed line providers. A fixed line number lets customers receive incoming calls when in their designated Vodafone "At Home" geographic area.

3.17 In Italy, Vodafone has recently launched a dual purpose broadband access service, which is essentially a device that connects to a customer's home DSL internet connection to transmit both Wi-Fi and 3G services. Similar products will eventually be released across other regions.

3.18 On 25 June 2008, Vodafone, with Cisco and Research In Motion, announced a three-way initiative to deliver integrated business communications services in Australia, to be marketed as Vodafone Business One. Launching later this year, Vodafone Business One will combine all telecommunication services – fixed and mobile, voice and data, services and equipment – into one simple, managed solution with single-point accountability on installation, technical support and fleet management and one monthly invoice. With the announcement of Vodafone Business One, Vodafone has evolved from being a 'mobile-only' provider, to the world of full-service telecommunications services, enabling Vodafone to bring the principles of innovation and competition it has delivered in the mobile space to the fixed-line arena.

3.19 Through convergent services of this nature the services of mobile network operators and fixed network operators are already becoming blurred.

"Long Term Evolution" and fully converged fixed and mobile networks

3.20 Over the life of the NBN, the traffic carried on mobile networks is likely to increase exponentially, with the progression to 4G and beyond. The benefits of 4G will include a totally IP based network (replacing circuit switch calling) supporting mobile broadband speeds of greater than 100Mbps and more efficient use of spectrum.

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[3] These offers are provided by Arcor in Germany, ihug in New Zealand, as well as in partnership with BT in the UK, Fastweb in Italy and Melita in Malta.

3.21 Long Term Evolution (**LTE**) is a form of 4G technology which will comprise a total replacement of current 3G networks. LTE will enable seamless IP based integration between mobile networks and the NBN. LTE could also be complementary to the NBN, providing the benefits of NBN bandwidth to customer premises, without the expense of deploying FTTP solutions.

Leveraging NBN market power across mobile LTE developments

3.22 To the extent that the NBN owner is also a mobile network operator, there is potential for the NBN to be configured in a manner that, through co-location of fixed and mobile network elements, will provide the NBN owner with a competitive advantage.

3.23 The construction of the NBN will involve a substantial deployment of fibre optic cable into local communities in metropolitan and regional areas enabling the installation of broadband equipment close to homes. This same fibre and other infrastructure can be used for the deployment of mobile base stations that support high bandwidth services to homes and businesses. Vodafone would expect that if Telstra or Optus is the successful NBN operator, they would seek to deploy or enhance their mobile network deployment as an overlay network integrated with the NBN.

3.24 In effect, the FTTN will extend the fibre network that may ultimately comprise backhaul transmission for next generation wireless networks. While these fibre transmission elements are part of the fixed customer access network, they will also comprise an essential facility for the backhaul of wireless services from micro transmitters located close to customer premises. Therefore, these fibre transmission elements, and associated upstream transmission capacity connected to efficient points of interconnection, will comprise essential access services for next generation mobile networks.

3.25 If it is the case that a horizontally integrated operator becomes or is associated with the NBN operator then it is important that the NBN operator is required to provide open access to competing mobile network operators. This means more than simply supporting MVNO style resale models. The NBN must support open access to allow competing infrastructure operators to install equivalent equipment at nodes and access to dark fibre backhaul over the NBN to allow, as far as possible, a continuation of mobile infrastructure competition.

At a minimum, the Government should: (a) require access to be provided to competing infrastructure operators on open and non-discriminatory terms, including both price and non-price terms; and (b) facilitate competing wireless network infrastructure by requiring that any NBN operator configure its network to allow:

- the collection of wireless transmitters and other equipment at FTTN nodes; and

- access to dark fibre transmission between the nodes and appropriate points of interconnection;

4. THE NBN AND THE PROMOTION OF COMPETITION

4.1 Given the NBN's natural monopoly characteristics and its potential to stifle competition across a range of communications markets Vodafone wishes to address four key regulatory aspects:

(a) The impact of the ownership and operation model for the NBN;

(b) The open access arrangements for the services provided by the NBN that are needed to promote competition;

(c) Strengthening the regulatory regime by delivering increased certainty through amendments to Part XIC; and

(d) The uncertainty surrounding proponent driven regulatory change and the need to avoid any fundamental changes to the existing regulatory regime in response to RFP proposals.

Structural Separation

4.2 Structural separation is the only ownership model that will provide the Government with sufficient transparency to safeguard its investment in the NBN and ensure that the NBN is operated in a manner that meets the Government's objectives. It is also the optimum way to ensure that the NBN promotes competition.

4.3 The NBN regulatory environment provides a unique opportunity to implement such structural measures and for the Government to become a global leader in reforming the telecommunications sector in a manner which enhances economic growth and consumer welfare, as well as providing incentives for continued innovation and investment in the sector. In particular, the Government's financial interest in the NBN provides a natural opportunity to secure structural separation, by requiring the establishment of a separate entity in which it will invest.

4.4 It is relatively incontrovertible that the NBN will exhibit natural monopoly characteristics for those services which it is economically efficient for the NBN alone to provide. As a result, the NBN will act as a bottleneck for service providers that need access to those

services to compete in downstream markets. Those downstream markets include both fixed and mobile network based services.

4.5 A vertically integrated owner of a bottleneck facility has a well recognised incentive to exclude rival competitors in a vertically related market in order to leverage its monopoly power into other potentially competitive markets. The bottleneck facility owner may choose to maximise its monopoly profits by limiting access to the facility thereby avoiding the profit dissipation that may arise from competition between multiple users resulting in the devaluation of access to the facility due to a lack of exclusivity.

4.6 Consequently, if the NBN operator is associated with a participant in a downstream market then it will have both the opportunity and the commercial incentive to offer preferential pricing and services to its affiliate at the expense of independent competitors. An unconstrained vertically integrated NBN operator with commercial interests in a number of related markets may also have the incentive and ability to use the monopoly profits it generates from the operation of the NBN to cross-subsidise its operations in other wholesale and retail markets to the detriment of its competitors in those markets.

4.7 Given the inherent monopoly characteristics of the NBN, the best option to promote competition is for the owner and operator of the NBN to be a standalone supplier of wholesale network services, which does not have any interest or affiliation with any participants in downstream markets, including the suppliers of retail services over the NBN or mobile networks. An owner and operator of the NBN which adopts structural separation has an incentive to maximise the revenue it derives by maximising the use of the services provided by the NBN.

4.8 The need for structural separation to promote competition and prevent the NBN operator from using its market power to the detriment of competition in downstream markets is even more critical if Telstra were to be selected as the successful proponent of the NBN. Telstra's ownership of the NBN would substantially enhance its ability to cross-subsidise its monopoly network profits into downstream markets such as mobile, internet and fixed service wholesale and retail services.

4.9 The current regulatory regime in Parts XIB and XIC of the TPA has proved to be difficult to implement in a manner that appropriately restrains Telstra's ability to take advantage of its market power, for example:

(a) Regulatory processes around ULLS have been undertaken for the last eight years and only recently has the Australian Competition and Consumer Commission (**Commission**) been able to determine certain pricing for access seekers, and further Telstra legal challenges to these determinations are expected;

(b) Access related proceedings and subsequent appeals have often taken longer than the period of application of the relevant access terms (e.g. the relevant period for which a price is set in an undertaking or access determination has often expired before the appeal processes pursued by Telstra, resulting in continued price uncertainty); and

(c) Telstra has been able to achieve retail-wholesale price squeezes such as in relation to DSL services.

4.10 If Telstra were to be selected as the proponent of the NBN, in order to minimise both Telstra's ability and incentives to utilise its control of the NBN and associated backhaul network to entrench its dominance in downstream markets, the assets it will own and operate which comprise the NBN should be owned by a structurally separate entity. Vodafone acknowledges that very careful consideration would have to be given to the nature of the assets which were included in such a structurally separate entity, both to maximise the pro-competitive effects of separation and to ensure that the business had the right mix of assets for such an option to be not only commercially viable but also attractive as a stand alone business.

4.11 The precise identification of the assets which will need to be included in that separate entity is an issue that cannot be resolved until the final network design of the NBN is known. However, Vodafone submits that if Telstra were to be the successful bidder, those network assets would include the copper local loop, pillars, nodes and fibre to the termination point associated either with the nearest local exchange or an equivalent upstream termination point. Such an entity should also own and operate other non-contestable elements of Telstra's customer access network.

The alternative of functional separation

4.12 Without structural separation, backhaul will be a major point of regulatory argument between access seekers and the access provider, because it is crucial to the access seeker's ability to compete. No regulatory system can be as effective as structural separation in providing a clear pathway for the delivery of competitive services between the access seeker and the consumer.

4.13 However, even under a structurally separated model, access regulation will be important to ensure non-discriminatory, timely and economically efficient access to what will still be a monopoly service.

4.14 Vodafone considers that the only viable alternative to structural separation (albeit less suitable), is to implement a model of full functional separation if a vertically integrated telecommunications provider is the successful bidder, similar to that which has been implemented in the Untied Kingdom with respect to British Telecom and will be implemented in New Zealand with respect to Telecom.

4.15 The purpose of functional separation is to reduce the opportunity for discriminatory and other forms of anti-competitive behaviour by the access provider in favour of its affiliates to the detriment of third parties. Unlike structural separation, it does not require separate ownership of network assets from other assets in the business. Instead, it focuses on separating network assets and other network access related inputs within a separate business unit which then trades independently with third parties on the same terms as it trades with its affiliates

4.16 The necessary components for an effective functional separation model have been identified as:

(a) *Equality of inputs*: access seekers are able to obtain key access and backhaul products using the same processes and at the same price as the network owner's affiliated wholesale and retail businesses.

(b) *Equivalence of outcome for the supply of wholesale product.*

(c) *Effective operational separation*: clear separation from wholesale and retail arms of the business, commercial incentives aligned solely with running a network access only business and entirely separate staff and location and the distinctive brand.

(d) *Governance and compliance*: oversight by a specific board comprised of a majority of independent members who are responsible for ensuring that the functional separation is effectively implemented.

(e) Agreed key principles for competitive next generation networks.

(f) *Enforceability*: financial incentives for delivery of access services backed up by court enforceable sanctions for non-compliance.

Access to backhaul

4.17 Fixed and mobile networks often use the same backhaul, in particular in regional and remote areas of Australia. While backhaul is provided on a competitive basis between certain routes, such as between the mainland capital cities, Telstra remains the monopoly provider of backhaul transmission across large parts of Australia.

4.18 The usage of backhaul transmission will increase significantly as a result of the NBN, the evolution towards 4G mobile and increased data usage generally. However it is unlikely there will be any new entry into the backhaul transmission market on the monopoly routes. Accordingly, the vast majority of transmission routes display strong natural monopoly characteristics, meaning entry is neither desirable from a social welfare perspective nor commercially viable because:

(a) the markets served by the transmission routes are small;

(b) Australia is geographically large and individual routes span considerable areas; and

(c) there are substantial barriers to entry imposed by Telstra's economies of scale and significant share of the downstream market.

4.19 The importance of open and non-discriminatory access to backhaul transmission is therefore likely to significantly increase with the roll out of the NBN to 98% of the population. Therefore, while backhaul access has not been an area of substantial regulatory focus over the last 10 years, it is likely to be one of the most significant bottlenecks in the short term and into the next decade. The regulatory regime for the NBN must recognise the importance of backhaul infrastructure, and maintain the status of such transmission as a declared service under the existing regime.

4.20 As outlined above, the fibre component of the FTTN may itself comprise backhaul capacity serving micro-transmitters associated with nodes that form part of the long term evolution of mobile networks. Therefore, fibre transmission in the customer access network will also be an essential service that must be capable of declaration.

The regulatory regime for the NBN must facilitate the following:

- existing forms of backhaul infrastructure must continue to be regarded as an essential access service, and the status of such transmission as a declared service under the existing regime must be maintained; and
- the declaration of transmission routes to wireless transmitters and other devices that may be co-located with nodes, including those serving high bandwidth micro cells
- the expansion of the forms of declared access to include "dark fibre" access on these routes; and.
- the pricing models for backhaul capacity will require ongoing monitoring and updating to, adequately take into account revised network architecture of the NBN and changed usage patterns by both fixed and mobile networks.

Unbundled access supporting quality of service based competition

4.21 It will be important that large scale wholesale customers such as Vodafone are able to purchase unbundled wholesale access services which allow them to develop a suite of tailored products for their customers.

4.22 Standard services which seek to severely limit functionality or points of interconnection to the NBN have the potential to stifle the development of complementary mobile networks and therefore limit the availability of new services to consumers in downstream markets. The NBN infrastructure must be truly open access to allow the benefits of infrastructure competition.

4.23 Significant advances in technology are likely to occur over the life of the NBN. As a result, NBN access services cannot be statically limited to a prescribed set of services identified prior to the construction of the NBN or which are solely determined by the NBN operator. The need for a regulatory model in which open non-discriminatory access can be required for to a range of different sub-sets of NBN services, of varying levels and specifications, will only increase over time.

4.24 The current Part XIC access regime is predicated on a model where the access provider is only required to provide access to declared services to the same quality and standard as the access provider provides to itself. If the NBN operator is not vertically integrated (which Vodafone would recommend), it will not provide services to itself, therefore the standard and quality required to be provided may need to be specified in an alternative manner.

4.25

4.26 It is critical that access to the NBN be regulated in such a way that allows service and product development and innovation to be driven by access seekers. This may require amendments to the existing regulatory regime in Part XIC of the TPA to enable third parties to seek access to a service which is technically able to be provided by a facility (or facilities) but which is not currently provided by the operator of the facility either to itself or anyone else, as is possible under Part IIIA of the TPA.

Non-discriminatory access

4.27 The incentives the NBN owner will still have to seek monopoly profits can be addressed by the declaration of certain core services provided by the NBN under Part XIC of the TPA and continued ACCC oversight.

4.28 However, it will also be critical that the owner and/or operator of the NBN is prevented from engaging in discriminatory conduct relating to the non-price related terms and conditions of the supply of services, including their availability.

4.29 As an overarching principle, the owner and/or operator of the NBN should not be able to unreasonably discriminate between various access seekers as to the services it provides and the terms and conditions on which it provides them.

Strengthening the regulatory regime – delivering increased certainty through amendments to Part XIC

4.30 Vodafone submits that Part XIC of the TPA could be usefully amended to make its operation and application increasingly efficient and transparent, and to deliver substantially greater business certainty. Vodafone makes these comments based on its first-hand experience of Part XIC of the TPA, particularly having sought a full merits review to determine the wholesale price of the Mobile Terminating Access Service (**MTAS**), the practical implementation of which involves complex, extenuated and costly processes.

4.31 It is important to note that we submit these changes not as an alternative to structural separation, but as changes that are necessary even under a structurally separated model – since even a structurally separated NBN operator will be the monopoly provider of an essential service.

4.32 The current operation of the various processes for the determination of the price of access to declared services under Part XIC provides a good example of the need for greater efficiency transparency and certainty. From a practical perspective, there are three main ways in which the price of declared services may be determined under Part XIC:

(a) by way of an indicative price specified by the Commission in pricing principles for a particular declared service pursuant to section 152AQ of the TPA;

(b) as part of an access undertaking approved by the Commission pursuant to section 152BU of the TPA; or

(c) as part of an access dispute determination made by the Commission pursuant to section 152CP of the TPA.

4.33 There are five key elements of Part XIC which Vodafone believes require amendment to deliver greater certainty for all parties – including the Commission – involved in the determination of prices of declared services:

(a) clear regulatory objectives and the monitoring of outcomes;

(b) pricing principles and their effects on the negotiate / arbitrate model;

(c) the establishment of pricing principles;

(d) timeframes for the establishment and application of pricing principles; and

(e) facilitating appeals of Commission decisions on pricing principles to the Australian Competition Tribunal.

Importance of clear regulatory objectives

4.34 Vodafone asserts that it is vital that regulatory objectives associated with Part XIC processes and outcomes contribute to the object of Part XIC and promote the long-term interests of end-users (**LTIE**).

4.35 The stated objective of the regulation of MTAS was to increase competition in the fixed line market, particularly in the area of fixed-to-mobile (**F2M**) retail pricing. However, Vodafone's analysis demonstrates that the result of decreasing MTAS has not effected the competitive landscape, as measured by the market shares of Telstra's principal fixed-line competitors (which remain unmoved) and has delivered delayed and partial 'pass through' of MTAS decreases to F2M retail pricing.

4.36 Indeed the 'additional margin' generated for Telstra, which amounts to almost $1 billion over the period June 2004 to December 2008 (ie the end of the current pricing principle) and around $1.3 billion for the Australian fixed sector as a whole, is a direct cost to the LTIE. This situation is unpalatable to Vodafone, delivering unwarranted benefits to the incumbent fully-integrated operator and is contrary to the objective of MTAS regulation.

4.37 There is no requirement on fixed-line operators to pass through the MTR decrease to consumers, which has resulted in limited and delayed pass through of the MTAS decrease to F2M retail rates. Vodafone's Submission to the Australian Competition and Consumer Commission, *MTAS Principle Principles Determination, 1 July 2007 – 31 December 2008, Public Version, August 2008,* incorporated substantial input regarding this matter. That submission is at **Attachment A** to this submission. Pages 19 – 21 of Attachment A address the delayed and partial 'pass-through', evidencing that MTR decreases result in a windfall to Telstra rather than benefit to consumers. Additionally, rather than challenging Telstra's position in the market, across fixed, mobile and broadband, MTAS regulation has entrenched it.

4.38 Vodafone recommends that the objectives of regulation must be fit-for-purpose and be actively monitored. The Commission should be required to present evidence to demonstrate that the objective of the regulation is indeed being met, with such evidence encompassed in a regulatory review process, whereby critical evaluation of objectives and evidence must occur:

(a) to decide whether to continue the regulatory intervention or not, for what purpose; and

(b) to ensure that the continuation of regulatory intervention is appropriately directed and, most importantly, delivers consumer benefit and is in the LTIE.

Pricing principles and the effects on the negotiate / arbitrate model

4.39 Vodafone's experience demonstrates that pricing principles effectively set prices in the wholesale market for the relevant declared service, as we have experienced via the MTAS. The practical impact of the publication of indicative pricing principles has constrained commercial negotiations, which has resulted in access seekers increasingly notifying access disputes and relying on the arbitration process for an outcome.

4.40 While the Commission has the power to reject an arbitration where a party has failed to meet the 'unable to agree' statutory requirement, we believe that the hurdle to demonstrate this has been set extremely low. This is portrayed in the Commission's assertion that it: *does not consider that the 'unable to agree' threshold should be interpreted as a particularly high threshold*[4]. Further, the arbitration process, and its part in the regime, enables the Commission to apply the indicative prices through determining arbitrations, which reinforces the effect of indicative pricing principles as ceiling prices.

4.41 Vodafone's experience is that the majority of commercial offers for MTAS that have deviated from the pricing principles have been rejected, and as a result commercial negotiations have stalled. According to the Commission's recent report, *ACCC Telecommunications Report 2006-07*, nine access disputes concerning MTAS were commenced in 2006-07 and 14 disputes were commenced the previous year. In Vodafone's experience the negotiation process extends only to the access seeker demanding the relevant rate of the pricing principles. Failure to agree on the relevant rate of the pricing principles leads to the notification of an access dispute. In practice, arbitration has been the primary mechanism through which the price of MTAS is 'negotiated'. The pricing principle has been applied by the Commission though the arbitration process to all arbitrations to which Vodafone has been a party.

4.42 We believe that the practical effect of the pricing principles is contrary to the intention of the negotiate / arbitrate model within Part XIC, and is in fact rendering the negotiate / arbitrate model ineffective as commercial negotiation is not possible.

4.43 Vodafone believes that this is a key element which must prompt a critical review of Part XIC to promote efficiency and certainty for all parties regarding the access pricing of declared services.

Establishment of pricing principles

4.44 Due to the regulatory framework of Part XIC, there is an opportunity for lack of efficiency and transparency in the manner in which access prices are determined in certain circumstances, and an apparent disparity in the rigour applied in considering

[4] Australian Consumer and Competition Commission, *Resolution of Telecommunications Access Disputes – a guide*, March 2004, p.8.

and determining pricing principles,and .those required to assess undertakings to pursue an amended price. The Commission can set an indicative price for a declared service in pricing principles issued under section 152AQ of the TPA. As described above, that indicative price then becomes the de facto price in the industry.

4.45 However, in determining indicative prices the Part XIC framework does not apply the same rigorous assessment as would be applied in the context of an access undertaking. The TPA specifies six criteria about which the Commission must be satisfied before accepting that an undertaking is reasonable (section 152AH), and the Commission has generally set an unreasonably high threshold for the evidence required in order for the Commission to be so satisfied. If there is anything found to detract from the position then the Commission will reject the undertaking. However there are no specific criteria about which the Commission must be satisfied prior to issuing pricing principles.

4.46 While Vodafone does not support the retention of the undertaking process, we believe that should the current undertaking process be retained under Part XIC, it must be supported by rigorous criteria which should be developed and subjected to public scrutiny in issuing pricing principles.

Timeframes for the application of pricing principles

4.47 In Vodafone's experience, it is not unusual for the indicative prices specified in pricing principles to only apply for a limited period of time such as between six and 18 months. In some cases, final pricing principles have been set well into the period for which they apply, and there is a requirement to be backdated. For example, the most recent MTAS pricing principles were finalised on 28 November 2007, five full months into the applicable 18 month period of application of the price (being from 1 July 2007 to 31 December 2008). At the time of submission of this document, a pricing principle has not yet been established for the period of 1 January 2009 onwards.

4.48 This serves to illustrate the significant business uncertainty faced by operators, that may be forced to 'guess' what the wholesale rate will be and apply it to the forecasting process. The result is that the business is subjected to a material risk profile, not of its own doing, which may well prove to be detrimental to a business's operating budget, financial health and sustainability.

4.49 This lack of forward looking prices is clearly unsatisfactory for businesses as it creates uncertainty, both in terms of their future costs and potential revenues.

4.50 Such short durations also appear to be completely unnecessary in the absence of circumstances where the cost to the access provider or the demand for the service is highly unpredictable beyond the short term. Both access providers and access seekers have a legitimate business interest in certainty regarding access prices for a reasonable

period of time so they can be incorporated into forecasting, strategic planning and business models.

4.51 For this reason Vodafone recommends that indicative pricing should be provided for longer periods of time, for example 3 years, with the provision of adequate time between consultation and determination of the pricing principle and their taking effect, to enable businesses to incorporate revised access prices into their strategic planning and forecasting processes.

Undertaking process – Commission as appeal body to its pricing principles

4.52 Notably, the Commission's pricing principles are not the subject of an application for full merits review to an independent body such as the Australian Competition Tribunal (**ACT**). Further, any indicative price determined by the Commission then becomes a factor which the Commission can have regard to in determining whether an undertaking is reasonable.

4.53 It is not until a party lodges an appeal of an undertaking decision by the Commission to the ACT that a body independent of the Commission is able to examine the appropriateness of the matter of the undertaking – not of the pricing principles.

4.54 An appeal to the ACT as the first point of independent review is a full merits review of the undertaking. The ACT effectively stands in the shoes of the Commission at the time the Commission made the decision to reject an undertaking. The ACT can only review the materials that were before the Commission at the time the Commission made its decision.

Vodafone's recommendation for improved certainty and efficiency of declared services

4.55 Vodafone believes that the Commission should be specifically required to consider the legitimate business interests of access seekers and access providers in certainty of access prices when determining:

(a) the duration of any pricing principles under Part XIC; and

(b) the date the new access prices contained in the pricing principles or determination come into effect.

4.56 Therefore, to best promote certainty and efficiency, Vodafone supports refining the current sequential negotiate / arbitrate / pricing principle/ undertaking / appeal access model in Part XIC, to establish a simpler two stage model in which the Commission sets the access price/s for declared services for a fixed period such as 3 years – with substantially strengthened criteria for assessment – with such a decision being subject to a single merits review by the Australian Competition Tribunal.

4.57

Changes to the regulatory regime that may be proposed by proponents

4.58 The RFP requires proponents to identify any changes they may want to the current telecommunications regulatory regime. While at least one proponent has publicly identified potential changes to the regulatory regime as part of previous special access undertaking filing, others such as Telstra have declined to publicly identify the nature and extent of the changes they will seek to current regulatory regime.

4.59 Vodafone is in principle opposed to any proposal by a proponent to exempt the NBN from the key aspects of the current regulatory regime.

4.60 Vodafone is also opposed in principle to any proposal for overbuild protection in respect of the NBN. Vodafone is concerned that there is too great a risk that, no matter how tightly worded, a legislated overbuild protection would have unintended consequences in stifling innovation and competition from other networks, including mobile, particularly given the trends towards convergence.

4.61 Vodafone's position in respect of Universal Service Obligations (**USO**) is set out in our previous submission of November 2007 to the USO Review, at **Attachment B** of this submission.

4.62 It is difficult for Vodafone, or any other party, to make meaningful submissions as to the potential impact of any other changes to the regulatory regime in the absence of concrete information as to the nature of the proposals. In light of the importance of the structure of the regulatory regime to achieving the Commonwealth's objective of promoting competition, Vodafone submits that the Commonwealth should provide an opportunity for interested parties to review and comment upon the changes to the existing regulatory regime proposed by various proponents, prior to the Expert Panel making a final decision.

Conclusion

4.63 Vodafone reiterates its belief that the NBN project is crucial to the medium and long-term future of Australian communications and the Australian economy generally. It will also significantly impact the economic future of all players in the Australian telecommunications market – which in turn will significantly impact the welfare of all Australians.

4.64 Given its importance, Vodafone believes there is very little justification for not choosing a structurally separated model under which the owner/operator of the NBN is structurally separate from any owner/operator of other telecommunications services.

4.65 However, even a structurally separated NBN will be a monopoly provider of an essential service, and will need to be subject to improved regulation relative to the current regime.

4.66 Therefore, Vodafone submits that the Government should follow a 2-step process in relation to the NBN project:

(a) Impose structural separation so that the NBN owner/operator may not be structurally related to a provider of telecommunications services; and

(b) Refining the current sequential negotiate/arbitrate/pricing principle/undertaking/ appeal access model in Part XIC, to establish a simpler two stage model in which the Commission sets the access price/s for declared services for a fixed period such as 3 years – with substantially strengthened criteria for assessment – with such a decision being subject to a single merits review by the Australian Competition Tribunal.

Attachment A

Vodafone Submission to the Australian Competition and Consumer Commission, *MTAS Principle Principles Determination, 1 July 2007 – 31 December 2008, Public Version, August 2008*

Attachment B

Vodafone Submission to USO Review, November 2007

Attachment C

Strengthening Part XIC of the Trade Practices Act

Attachment D

Submission to the Australian Competition and Consumer Commission

Vodafone Australia Limited ACN 056 161 043

MTAS Pricing Principles Determination

1 July 2007 to 31 December 2008

PUBLIC VERSION

August 2007

1. Overview

The *MTAS Pricing Principles Determination 1 July 2007 to 31 December 2008 Report* (the draft pricing principles) shows that the Australian Competition and Consumer Commission (the Commission) does not have the sufficient evidence to make any final determination that mobile termination access service (MTAS) rates be reduced below 12 cents per minute (cpm) – to 9cpm or any other figure.

In these circumstances, Vodafone submits that the Commission should:

- maintain the MTAS rate at 12cpm until it has undertaken a robust and open TSLRIC+ modelling process that properly reflects the market realities of providing MTAS in Australia;
- make no retrospective adjustments to MTAS; and
- examine the operation of the Telstra fixed services price basket to ensure benefits of any MTAS reductions are fully and immediately passed through to end-users.

1.1. Modelling process

In this submission Vodafone considers the process by which the Commission has included an indicative price for MTAS of 9cpm in the draft pricing principles. We demonstrate that:

- the Commission recognises that it must produce a robust TSLIC+ model that properly reflects the market realities of providing MTAS in Australia before contemplating reductions in MTAS below 12cpm;
- the Australian Competition Tribunal (the Tribunal) explicitly considered the modelling requirements in Australia, and provided guidance that where cost modelling is undertaken in an attempt to determine an appropriate benchmark operator, that modelling must have regard to the market realities of operating a mobile network in Australia. The Commission must have regard to the guidance of the Tribunal yet has failed to do so in the draft pricing principles;
- the Commission does not have the data necessary to produce a robust cost model for the Australian market because it not does have the required operator-specific actual cost data which is essential to that process; and
- the Commission cannot rely upon publicly available data as a substitute for operator-specific actual cost data.

1.2. Modelling outputs

The deficiencies of the WIK model are revealed by comparing the results with evidence from other MTAS models, including those from Israel and South Korea which the Commission claims serve to validate the WIK results – a further examination shows that this is not the case.

1.3. Modelling faults

We then show that the WIK model contains some fundamental errors:

- the Tribunal provides guidance that the modelling of an efficient operator in the Australian market must have regard to the realities of that market and the actual evidence in relation to it;
- the WIK model is therefore deficient in that it only models the costs of a 2G-only operator, and no such operator could enter the Australian market;
- the Commission disregards lower market shares as upper bounds for efficient entrants, and rather run results at 25% and 31% market share. Again, this is not consistent with the Tribunal's guidance on cost modelling that is undertaken in an attempt to determine an appropriate benchmark operator;
- the WIK model contains fundamental structural errors in the treatment of routing factors which means that the unit costs of each service are understated. Correcting for this error increases unit costs in the model by 60%; and
- the WIK model fails to correct errors previously identified in Vodafone's initial submission on the WIK model made in March 2007. The failure to address such errors confirms that the model is unrealistic and wholly unreliable as a basis for determining pricing principles for MTAS on mobile networks in Australia.

1.4. Long term interests of end-users – pass through

In addition to producing a robust cost model, the Commission must have regard to the objective of Part XIC – which is to promote the long-term interests of end-users (LTIE)[1]. We show:

- the Commission relies upon the reduction in F2M prices as being particularly important in the promotion of LTIE in this context;
- the Commission and Vodafone acknowledge that F2M prices have fallen as a result of the regulated reduction of MTAS, but also recognise that the degree of 'pass through' has been partial;
- the Commission claims that the degree of 'pass through' can be expected to increase as MTAS rates are reduced. We show that there is no evidence to support this claim. Vodafone holds that the degree of 'pass through' could increase if the Commission were to change the way in which Telstra's F2M call prices are regulated, and believes that the LTIE would be promoted significantly more than by reductions in MTAS;
- in the meantime, we show how MTAS reductions mean that Telstra can 'exceed' its fixed services retail price basket whilst still retaining most of the cost savings which it makes in its own fixed network. MTAS regulation therefore removes the need for Telstra to reduce its own network costs in order to meet the price cap and denies end-users these benefits; and
- in these circumstances the Commission must demonstrate that the LTIE is promoted even if current partial levels of pass through are maintained, since there is no evidence to suggest that these will increase.

[1] Vodafone notes that failure to do so may mean that in determining the pricing principles under section 152AQA, the Commission has failed to take into account a relevant consideration in its decision-making

1.5. Long term interests of end-users – waterbed

If the Commission is to rely upon partial pass through promoting LTIE, then it must show that the regulation of MTAS has no impact on other prices, and that there is no detrimental effect on long-term competition in telecommunications markets. The Commission makes no serious attempt to do this. We show:

- the Commission incorrectly claims that 'the waterbed' does not operate in Australia. The Commission claims that the fact that Australian mobile call charge and access prices are falling refutes the waterbed. The Commission also states that the Tribunal supports its view. Vodafone does not deny that Australian mobile access and call prices have fallen while MTAS rates have fallen. However, we reject the Commission's conclusion that the waterbed does not operate in Australia and show that the Commission has misunderstood the Tribunal's position;
- we present robust empirical evidence to show that the Commission must assume at least a 50% waterbed;
- we then model the LTIE using both a Vodafone model and the model employed by the New Zealand regulator to assess termination rate setting in New Zealand. We find that if we ignore any adverse impact on LTIE arising from the operation of the Telstra fixed service price cap then the LTIE gain is at best $18 million. More plausible assumptions suggest that the draft pricing principles will undermine the LTIE to the value of more than $100 million; and
- there is no evidence to suggest that a further reduction in MTAS will promote competition in the Australian market in the longer term. On the contrary, we show that the position of the integrated fixed-mobile operators will be further strengthened relative to mobile-only competitors.

1.6. Network externalities

Finally, our comments above have considered the impact of the Commission's proposals on LTIE, assuming that those proposals had no impact upon the number of Australian mobile and fixed telephone users despite it changing the prices that they paid for the services that they consume. As such, the arguments presented in the previous section are not dependent upon the Commission's approach to a network externality surcharge (NES). Vodafone notes the Tribunal's comments that the existence of network externalities is an empirical question. Market research undertaken for Vodafone demonstrates:

- 44% of Australian mobile subscribers are unwilling to pay more than $110 for a replacement handset;
- 61% are unwilling to pay more than $150; and
- this demonstrates that there are clear welfare benefits from the introduction of a NES in Australia, and large risks of not doing so.

2. The modelling process and modelling requirements

In proposing to determine pricing principles that will include a reduction in the indicative price of MTAS from 12cpm to 9cpm, the Commission is disregarding its commitment to do so only after robust modelling demonstrated that the cost of providing MTAS in Australia was less than 12cpm[2].

Vodafone shows in this section that the WIK model does not accord with the reality of the Australian mobile market, and that the modelling process run by the Commission has meant that this cannot be the case.

We also show that the WIK model does not follow accepted methodology for developing a TSLRIC+ regulatory model. This is further explored in Section 3 and in the Analysys Report at Annex A – where the WIK model is considered in more detail.

In this Section we show:

- the Commission recognises that it must produce a robust TSLRIC+ model before contemplating reductions in MTAS below 12cpm;
- the Tribunal has explicitly considered the modelling requirements in Australia and stated repeatedly that modelling must have regard to the market realities of operating a mobile network in Australia. The Commission must follow the guidance of the Tribunal[3] yet has failed to do so in the draft pricing principles;
- the Commission does not have the data necessary to produce a robust cost model for the Australian market because it does not have the required operator-specific actual cost data which is essential to undertake that process successfully; and
- the Commission cannot rely upon publicly available data as a substitute for operator-specific actual cost data.

2.1. WIK model does not estimate the forward looking efficient cost of MTAS in Australia

The Commission has consistently stated that it would not reduce the regulated termination rate below 12cpm in the absence of a TSLRIC+ model of providing termination services in Australia demonstrating that efficient costs fall below 12cpm:

> *Over the longer term, however, the Commission wishes to stress that before it would reduce the price of MTAS below the upper end of the range of best estimates available to it [5-12 cpm] of the TSLRIC+ of providing the MTAS, the Commission would develop a more detailed estimate…This could be via developing a model to specifically model the TSLRIC+ of providing MTAS in Australia or via a detailed international benchmarking exercise.[4].*

[2] We refer to the *Draft MTAS Pricing Principles Determination 1 July 2007 to 31 December 2008,* published by the Commission in June 2007, throughout this submission as the 'draft pricing principles'.

[3] As the ultimate outcome of access arbitrations (in which the pricing principles must be taken into account in making a final determination) and access undertakings is the same – which is to set the terms and conditions of access to a declared service.

[4] *Mobile Services Review: Mobile Terminating Access Service, June 2004,* p.211.

Vodafone notes that the Commission has not attempted a detailed international benchmarking exercise and so must rely wholly on the WIK model to meet the commitment made[5]. However, the WIK model does not estimate the cost of providing MTAS in Australia.

One reason for the model's deficiencies is that many of the criticisms raised by Vodafone's initial submission on the WIK model from March 2007 have not been addressed by the Commission in the draft pricing principles. We revisit these points in this submission.

We have also asked Analysys, a well known consulting firm with experience of over 20 such modelling exercises around the world, to undertake a thorough review of the WIK model.[6] Their findings appear at Annex A. Analysys identify at least one fundamental flaw in the model and numerous other errors.

Therefore, Vodafone reiterates that it is inappropriate for the Commission to use the outputs of the WIK model as evidence that the forward looking efficient cost of providing MTAS in Australia is below 12cpm. The use of such outputs in determining pricing principles is not in the LTIE and therefore is inconsistent with the object of Part XIC.

2.1.1. The Commission has not followed the Tribunal's guidance in its modelling

The Tribunal has delivered two recent decisions addressing the estimation of the cost of providing MTAS in the context of reviewing Commission decisions relating to ordinary access undertakings. In the draft pricing principles the Commission has failed to have regard to the Tribunal's guidance. This is despite the Commission's claim that:

> *The Commission's view about these methodological and empirical issues has been affirmed on multiple occasions by other judicial bodies[7].*

The Tribunal has rejected several methodological and empirical points on which the Commission attempts to rely in the draft pricing principles and that also underpin the WIK model. These include:

- the Commission's refusal to calibrate the WIK model outputs against real world operator data (addressed in this section);
- the approach to determining the market share of a benchmark efficient operator (addressed in Section 3); and
- the refusal to recognise that efficient entry as a stand alone 2G operator is no more possible in Australia than in any other market today (addressed in Section 3).

The Tribunal stated in the decision on the Vodafone case that the determination of a appropriate benchmark operator to assist in the assessment of the forward looking cost of providing MTAS requires that regard be had to the market realities of operating a network in

[5] The Commission's reliance upon Israel and Korea and dismissal of the UK and Netherlands for international benchmarking purposes is considered later in this section.
[6] We note that WIK appear to have built a single mobile cost model in Paraguay prior to their engagement by the Commission.
[7] Draft pricing principles, p.6.

Australia, rather than relying upon a theoretical modelling exercise[8]. These market realities include consideration of evidence as to the actual costs incurred in Australia and the challenges which even the most efficient firm would face[9]. A more detailed discussion of the implications of the Vodafone decision is contained in Vodafone's initial submission.

We note that the Tribunal's decision in the Optus case also provides guidance in the on matters such as waterbed and network externality surcharge (NES). These are referred to in section 5.

2.1.2. The Commission has not sought and does not have the data necessary to produce a robust cost model,

The Commission states that operators have failed to provide operator-specific cost data, and that in the absence of such data, the assumptions made in the WIK model are reasonable[10].

Vodafone rejects both aspects of this claim. We do not accept that the absence of operator-specific data implies the WIK model inputs are reasonable. Nor do we accept that operators have declined to provide operator-specific data.

On the contrary, the Commission has repeatedly rejected Vodafone's offer to provide Vodafone-specific information during the development phase of the WIK model[11]. This accompanied our repeated requests that WIK be required to undertake a 'real world' calibration of the model.

The Commission replied by saying that there would be an opportunity after the development of the cost model for operators to provide inputs to the Commission. The Commission provided four weeks for operators to access the cost model, analyse the model, collect relevant data, and submit responses. Vodafone provided confidential operator-specific data to the Commission in its initial submission (see Table 1).

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[8] Australian Competition Tribunal, *Application by Vodafone* [2007] ACompT1, para 83 (discussing efficient market shares).

[9] Ibid. para 116-8 (discussing need to produce actual data).

[10] For example, it is noted that 'interested parties have largely remained silent on the reasonableness of equipment prices used' and that in the absence of such data, the Commission 'considers the price of equipment used in the WIK Model is reasonable'. Draft pricing principles, p.82.

[11] Vodafone raised the need for the WIK model to be calibrated against specific Australian network information in a letter to the Commission in early September 2006. In October 2006, Vodafone repeated the offer to provide data and provided a confidentiality agreement to the Commission so as to facilitate the provision of commercial-in-confidence material which Vodafone felt was vital in the development of an appropriate cost model to WIK. The Commission rejected Vodafone's offer of entering into a confidentiality agreement during the development of the WIK cost model.

Table 1 Asset prices in initial submission

Cost category	*Data submitted*	*Page reference in Vodafone initial submission*[12]
Macrocell site acquisition and lease preparation	[cic]	[cic]
Omni-sector macrocell equipment	[cic]	[cic]
Tri-sector microcell equipment	[cic]	[cic]
MSC and BSC software	[cic]	[cic]
HLR software	[cic]	[cic]
Voicemail server	[cic]	[cic]
STP	[cic]	[cic]

The draft pricing principle acknowledges the receipt of the information submitted by Vodafone in the initial submission[13]. However, it does not say if, and how, this data was used. The outputs in the WIK model indicate that the Commission did not have regard to the highly relevant operator-specific data Vodafone made available to the Commission as part of the Commission's process of estimating the cost of providing MTAS.

In June 2007 Vodafone offered to supply further information regarding our costs, and asked the Commission to list the data requiring confirmation. As yet we have not received a response.

2.1.3. 'Publicly available' information is no substitute for actual data

The Commission has stated that the WIK model can be populated using 'publicly available data'. In practice, this often means data recycled from modelling exercises undertaken by consultants in other jurisdictions at other points in time.

Actual cost data is highly confidential and, as such, is not publicly available. The recent report from Ofcom contains a large number of confidential Annexes in which operator-specific confidential cost data is presented. OPTA has also required operators to submit confidential data. Analysys show in Annex A that it is standard practice by regulators charged with the responsibility of determining prices for access to telecommunications services to seek and obtain operator-specific confidential cost data when undertaking cost modelling exercises.

Vodafone has already indicated its willingness to enter into appropriate non-disclosure agreements with WIK-Consult, to facilitate calibration of the WIK model, which the Commission has rejected.

The lack of realism in the results of the WIK model arises directly from the Commission's approach to the modelling process. Even before we engage in a detailed consideration of the model itself, the deficiencies of the WIK model are easily revealed by comparing the results of the WIK model with the outputs from other models, including those from Israel and South Korea which the Commission claims serve to validate the WIK results – a further examination of which shows this not to be the case.

[12] Vodafone Australia, *Submission to ACCC, WIK Mobile Network and Cost Model*, March 2007.
[13] Draft pricing principles, p.89.

2.2. The international benchmarking data confirms that the WIK results are too low and that the model outputs are unreliable and counter-intuitive

As part of its decision on the Optus MTAS ordinary access undertaking in 2006, the Tribunal concluded that international benchmarking is of limited use in assessing the reasonableness of costs submitted in an undertaking since:

> *… it would be necessary to know much more about the regulatory environment within which they were determined, the state of the relevant markets and the socio-economic environment in which the mobile services were operative*[14]

Vodafone notes that the Commission has not provided any information regarding the suitability of the results in section 5.2.1 of the draft pricing principles. In this discussion, the Commission appears to be under the impression that models calibrated using top-down accounting data are in some way inferior to the bottom-up engineering models of the type developed by WIK. Vodafone believes that this impression is a mistake, and we remain of the view that without calibration against actual costs, the WIK model remains a theoretical construct.

Indeed, the Commission has previously acknowledged the importance of calibration with actual cost data – noting that the reconciliation of a bottom-up model with a top-down model 'is likely to further strengthen the credibility of the model results'[15].

The theoretical approach and lack of market reality in the WIK model is the reason why Western European regulators have *not* adopted a purely bottom-up approach. As a result, the Commission is forced to choose Israel and South Korea as 'best practice' benchmarks and to ignore the European models. This introduces selective bias into the benchmarking which invalidates any claims that the WIK outputs are in any sense 'realistic'.

Aside from relying on a bottom-up approach, there are many other reasons why mobile costs in Israel and South Korea are low. These reasons are not relevant to the provision of MTAS in Australia. It is in fact far more likely that mobile costs in Australia will be equal or above those in Western Europe, and *significantly above* those in Israel and South Korea.

Table 2 lists some of the relevant comparative metrics.

[14] Australian Competition Tribunal, *Application by Optus*, [2006] ACompT 8, November 2006, para 297.
[15] Australian Competition and Consumer Commission, *Assessment of Vodafone's Mobile Terminating Access Service (MTAS) Undertaking – Final Decision*, p.29.

Table 2 Comparative metrics

	Australia	Israel	South Korea	UK	Netherlands
Minutes per sub per month	139	333	222	164	111
Pop per km^2	2.7	316.1	499.5	251.6	489.1
NRA cost model estimates (excluding externality & 3G spectrum in UK)	5.2-5.5c	5.5c	4.5c	8.9c	8.6c*

Source: Wireless-Intelligence (Q1 2007) & CIA World FactBook (note that OPTA cost model outputs shown here were not the basis for subsequent regulated rate decisions – where rates were set at levels significantly above the cost outputs).*

Considering this data in more detail:

- The Commission is already aware of the importance of traffic density levels in a mobile cost model. A measure of traffic density is minutes of use per subscriber. Wireless-Intelligence reports minutes of use per subscriber for Israel and South Korea to be respectively 333 and 222 minutes per subscriber per month (defined as outgoing plus incoming, with on-net calls counted as one minute). Wireless-Intelligence does not report results for Australia, but based on available figures we estimate average minutes per use in the Australian market, under the same definition, to be 139 minutes per subscriber per month (using the Commission's estimate of 38,577 million mobile minutes per annum counting both ends of on-net, reducing to 34,660 by eliminating double counting of on-net, dividing through by 20.783 million subscribers and expressing as a monthly average). This is almost 60% of the level in South Korea and 40% of the level in Israel, but comparable to levels in the UK and Netherlands. This suggests that Australian costs are higher than the Commission's benchmarks.
- Higher traffic levels in Israel and South Korea will also be accompanied by a more even traffic profile – since there is a limit to how much one person can use a mobile in the peak period. This drives further cost differences between Australia and the Commission's comparators. Here the Commission may be tempted to suggest that traffic is under the control of the operators, and so Australian operators should be able to achieve traffic levels similar to those in Israel and South Korea. But this is not what the WIK model assumes. The WIK model uses actual Australian traffic levels, yet still produces costs similar to those in Israel and South Korea.
- The data also shows the very high levels of population density in both Israel and South Korea – which are comparable to UK and Netherlands respectively. At these levels of population density one would expect a high proportion of the costs to be capacity related rather than coverage related. Australia, however, is fundamentally different with significant areas, and even regions, dimensioned purely for coverage purposes. We would therefore expect costs in Israel and South Korea – and the UK and Netherlands – to be significantly lower than in Australia.

The fact that the WIK model estimates similar costs levels to those In Israel and South Korea, despite far more onerous coverage and lower traffic volumes, should cast immediate doubt on the credibility of the WIK model and further, whether any reliance on such outputs could be said to be consistent with the LTIE.

3. The WIK model

Vodafone contends that the WIK model is fundamentally unfit for purpose. Our ability to fully verify the model is constrained by the lack of access to the source code of the model. The Commission has maintained that access to the source code is unnecessary, but fails to give adequate reasons for non-disclosure. We therefore reiterate our concern with the development of price setting regulation that is based on a non-open-source model.

Regardless of the lack of full verification of the model, it is clear that it fails to produce efficient MTAS prices. In this section we show:

- the Tribunal provides guidance that the modelling of an efficient operator in the Australian market must have regard to the realities of that market and the actual evidence in relation to it;
- the WIK model is therefore deficient in modelling the costs of a 2G-only operator, since no such operator has or could enter the Australian market and compete against operators with converged 2G/3G networks;
- the Commission disregards lower market shares as the upper bounds for efficient entrants, and rather runs results at 25% and 31% market share. Again, this is not consistent with the Tribunal's guidance;
- the WIK model contains fundamental structural errors in the treatment of routing factors which means that the unit costs of each service are understated. Correcting for this error increases unit costs in the model by 60%; and
- the WIK model fails to correct errors already identified by Vodafone in the initial submission. The failure to address such errors means that the model remains unrealistic and unreliable as a basis for setting pricing principles.

More detailed comments provided by Analysys regarding the WIK model are in Annex A.

3.1. The WIK model is wrong to model the costs of a 2G-only operator, since no such operator could enter the Australian mobile markets. today

The draft pricing principle states that the MTAS price should be set on the basis of the most cost efficient delivery technology for voice services[16]. The Commission assumes that this is 2G technology and believes that the cost of providing MTAS should not be impacted by the network over which it is delivered.

Vodafone contends that this view is incorrect because:

- mobile operators must offer a portfolio of voice and data services in order to compete for and retain customers. This is the case even if customers do not in fact subsequently consume these services in large quantities. Data services are particularly important in the acquisition and retention of higher value customers which are critical to sustainable commercial activities in the mobile market. It is therefore the efficient provision of this portfolio of services that determines the choice of efficient technology;

[16] Draft pricing principles, p.9

- This explains why no Australian network operator is pursuing 2G only, and nor is any market leading MNO in any major OECD market embarking on a 2G only strategy so far as Vodafone is aware. Even the small number of MNOs without 3G licences (e.g. TeliaSonera in Sweden) have secured network sharing agreements in order to gain the 3G network capability needed to compete effectively;
- Vodafone's marketing plans anticipate that the ability to access 3G services will be critical to acquiring and retaining the most profitable mobile customers in future, even if the revenue generated from 3G services themselves is modest, and such services are provided on a stand alone basis 'at a loss'. Customers for whom access to 3G services is not critical – and who might subscribe to a 2G only provider – are unlikely to generate insufficient revenue to sustain a viable stand alone mobile business; and
- Vodafone Australia today has greater 3G device penetration amongst its customer base than operators in the Dutch market (where OPTA took 3G costs into account) and very similar levels of 3G device penetration to the UK (where Ofcom also explicitly modelled 3G)[17]. Vodafone forecasts non-messaging data revenue growth – for which 3G is required – will exceed 100% per annum in Australia in the next three year period.

Vodafone submits that a 2G/3G network cost base is the only one that can be considered for regulatory purposes when setting MTAS prices on Australian mobile networks during the term of the draft pricing principles. The Commission has provided no evidence as to why Australia is different, or why the Australian operators are mistaken in building 3G networks, and operating converged 2G/3G networks today. A model based upon market realities is a 2G/3G model will model an operator with a converged 2G/3G network.

The Commission's assumption that the costs of 2G and 3G are the same, and/or that one is necessarily greater than the other for carrying voice traffic, is misplaced. This is an empirical matter. As we show below, it is quite possible that 3G costs are higher in the short term, and lower in the long term, and the costs of migration between technologies in a combined network (e.g. necessary spare capacity on both networks during dual running) imposes additional costs that must be bourn by the industry in any efficient migration between technologies.

3.1.1. Other regulators recognise that efficient benchmarks require modelling of 2G and 3G networks over time

This issue of what network – that is, a 2G network, a 3G network, or a converged 2G/3G network – should be modelled was considered at length by Ofcom, initially in its September 2006 Consultative document. Here Ofcom initially considered a 2G only approach to modelling and concluded: [18]

9.21 In considering this approach [2G only], however, it is important to recognise the potential impact on investment incentives if MNOs are unable to recover their efficiently-incurred costs, for example if the cost of supplying 3G termination is above the cost of 2G. In addition Ofcom is mindful of the concern raised by Vodafone and T-Mobile in their responses to the March 2006 Consultation, that a decision to set charges for 2G and 3G termination simply on the costs of present 2G costs, may

[17] Ofcom, *Mobile Call Termination Statement*, 27 March 2007, [[9.35] – [9.56].
[18] Ofcom, "Mobile Call Termination, Proposals for Consultation', 13 September 2006 at http://www.ofcom.org.uk /consult/condocs/mobile_call_term/new_mobile.pdf

present a risk that MNOs will under-recover costs in a phase in which they are running two networks in parallel.

Ofcom also concluded that reliance on 2G costs only would have detrimental effects on incentives for efficient investment, with consequential losses in consumer welfare[19].

Ofcom produced three models: 2G only, 3G only and 2G/3G, but the final statement in March 2007 reported results only from the 3G only model (for H3G) and the 2G/3G model (for the other four UK operators). However, the September 2006 Consultative Document reported comparative results from all models, excluding 3G license fees, in Figure 1 shows the relative magnitudes of the cost estimates by technology, excluding license fees.

Figure 1 Ofcom estimates of relative voice termination costs by technology

2008/9 to 2011/12	
Highest cost:	2G voice termination on 2G/3G network
	Blended 2G/3G voice termination on 2G/3G network
	2G voice termination on 2G network
	3G voice termination on 2G/3G network
Lowest cost:	3G voice termination on 3G network
2012/13 onwards	
Highest cost:	2G voice termination on 2G/3G network
	2G voice termination on 2G network
	Blended 2G/3G voice termination on 2G/3G network
	3G voice termination on 2G/3G network
Lowest cost:	3G voice termination on 3G network

Source: Ofcom, "Mobile Call Termination: Proposals from Consultation", September 2006, Figure A13.10

The conclusions of the Ofcom model are that, up until 2011/12, while voice termination costs on a 3G network are below those on a 2G network, a combined 2G/3G network is more costly than both. In particular, blended 2G/3G voice termination on a 2G/3G network is more costly than either a 2G only or a 3G only network. Beyond 2011/12 the position changes, and the combined 2G/3G network becomes lower cost than a 2G only network, thus justifying the MNOs decision to migrate to 3G technology for the longer term cost saving – as well as ability to provide new services.

This does not mean that the 2G/3G network should be treated as 'inefficient'. It is the only technological choice available for a 2G operator that wishes to achieve the long term benefits, in terms of both cost base and service capability, of a 3G network.

If the costs of developing and operating a converged 2G/3G network are not recognised in Australia this would not be in the LTIE – and in particular would not promote the objectives of encouraging the economically effective use of, and the economically efficient investment in the infrastructure by which listed services are supplied, and any other infrastructure by which listed

[19] Ibid para 9.76. In doing so, they also accepted the 'waterbed effect' which we address later in section 4.

services are, or are likely to become, capable of being supplied. Further, if such costs are not taken into account, this would result in insufficient regard being had to the legitimate commercial interests of mobile network operators.

3.1.2. It is also critical that the Commission recognises that 'efficiency' is a concept that applies over the lifetime of the investment, and that incentives today determine investment in the future

The Commission makes specific reference to efficient investment in the draft pricing principles[20]. Figure 1 from Ofcom illustrates the 'heads you win, tails I lose' that would result from setting a termination rate on the basis of a 2G only model in the period up to, say 2011/12, and a 3G model after that date – as the Commission's approach would suggest. In these circumstances the actual cost incurred by 2G/3G operators – which is still the efficient cost given the need for transition between network technologies – would never be recovered.

3.1.3. The Commission's attempts to dismiss Ofcom's results as exceptional are misplaced

The Commission's claim that Ofcom's inclusion of 3G technology in its cost model was for market specific reasons is wrong[21]. It is true that 3G spectrum costs in the UK were significantly higher than in most other countries. However, this was not the reason that Ofcom included 3G technology in the cost model. As shown above, Ofcom's concern was that the migration from 2G to 3G technology had important implications for the cost of an efficient operator. These concerns should also be at the forefront of the Commission's mind given the current state of the market in Australia.

The Commission appears to place reliance on the letter from the EC (European Commission) to Ofcom to support the view of Ofcom as a maverick regulator in respect of its decision to model a 2G/3G network.[22] This is a misleading interpretation of the EC's letter, which focused solely on the valuation of the 3G spectrum fee and said nothing about the modelling of 3G costs generally. The EC in no way criticises Ofcom's decision to model a 2G/3G network and Ofcom rightly proceeded on this basis[23].

3.2. Appropriate market share benchmark

The decision of the Commission to run results at 25% and 31% market share in the WIK cost model, and to ignore lower market shares as being the upper bound for efficient entrants in the Australian market is flawed. Again, this approach is not consistent with the guidance provided by the Tribunal.

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[20] Draft pricing principles, p.8

[21] Draft pricing principles, p 10.

[22] European Commission, 'Commission asks UK regulator not to use Inflated 3A Auction Costs in Termination Rates for Mobile Operators", 27 November 2006 at http://europa.eu/rapid/pressReleasesAction.do?reference=IP/06/1628&format=HTML&aged=0&language=EN&guiLanguage=en

[23] OPTA also recognised the importance of modelling the transition between 2G and 3G technologies. However, since OPTA focused on a 2G cost base, this was handled by explicitly including in the traffic volumes of the model a de-commissioning of the 2G network. See 'Response to Industry Group on LRIC model conceptual design, Report to OPTA', Analysys, 31 March 2006.

In modelling realistic outcomes, the Tribunal provided guidance on the question of the market share achievable by an efficient entrant. The WIK model considers two possible scenarios, one with 25% market share and another with 31% market share. The Commission notes that:

> *The 25 per cent market share scenario is based on the assumption that it is theoretically possible for all four MNOs to achieve similar market shares in a competitive market.*[24]

The appropriateness of the 25% benchmark was directly addressed by the Tribunal in the Vodafone decision. The Tribunal said that no convincing case had been made that a 25% market share was 'achievable'[25].

Vodafone submits that Vodafone's current market share of 17% serves as an efficient benchmark in light of the Tribunal's guidance. This reflects the market reality that after more than 10 years in the market, the third mobile player – offering innovative and competitively priced services in the Australian market and with access to the resources of an international group – retains a market share of around 17%. Hutchinson, the other non-integrated firm, has failed to attain market share in excess of 10%.

L ater in this submission Vodafone explains why the current regulatory framework in Australia – in combination with the prevailing market structure in which the two leaders in the mobile market are also integrated fixed-mobile players – serves to constrain the development of efficient mobile-only firms.

The Commission has made no proposals to change the regulatory framework and must therefore model the prospects of efficient entrants in light of it. The evidence to date shows that the prospects for these entrants are significantly constrained as a result – and lower than in other international markets. Only if the Commission changes the regulatory framework so as to remove these competitive barriers would the Commission be entitled to consider whether an efficient market share target in excess of that achieved by Vodafone to date may represent an appropriate 'benchmark operator' share.

3.3. The WIK model has a fundamental flaw in the treatment of routing factors which understates unit costs by approximately 60%

This issue is of fundamental significance and is addressed in detail by Analysys in their report at Annex A. Vodafone contends that it must cast doubt on the overall credibility of the model – not all aspects of which we have been able to verify in the absence of an open source version.

As Analysys explain[26], the WIK model is very unusual in treating Busy Hour Demand as an exogenous input in the model. In other models the routing factors constitute an exogenous input which then drives both Busy Hour Demand and the unit costs of each network asset (i.e. Busy Hour demand/asset utilisation).

As a result of this unconventional approach, it appears that the model as presently constructed incorrectly converts Busy Hour demand (which in the WIK case implicitly embodies the use of routing factors to determine utilisation) into unit costs (which require a further consideration of routing factors). The WIK documentation is not sufficiently clear to be sure exactly what occurs,

[24] Draft pricing principles pp.39 and 42.
[25] Op cit., *Application by Vodafone*, para 80.
[26] Analysys, Annex A, pp.23-5.

but after extensive testing it appears to Vodafone and Analysys that routing factors in the WIK model are effectively applied 'multiplicatively' since they are effectively included in the traffic data input into the model. In other words, routing factors are compounded in the computations so that for example, that on-net calls with a routing factor 2 are in fact accorded a routing factor of 4 in the WIK model. The result of this fundamental error is that traffic volumes for on-net minutes are effectively double-counted.

Extensive checks by Analysys and Vodafone confirm that this represents a very serious structural problem in the model which, if corrected, would increase the unit costs of all services, including MTAS, by approximately 60%.

3.4. The WIK model fails to correct errors already identified by Vodafone in the initial submission, all of which serve to make the model unrealistic and unreliable as a basis for setting pricing principles

In Vodafone's initial submission we raised the following key errors in the WIK model:

- traffic distribution error;
- WACC
- site sharing assumption;
- asset prices;
- routing errors;
- failure to include voicemail capability;
- failure to include signalling transfer points;
- failure to account for network resilience; and
- OPEX and common cost mark-up.

Vodafone notes that the Commission has addressed the traffic distribution, WACC and HLR routing errors in the draft pricing principles. The other errors, however, remain unaddressed[27].

Vodafone raised the lack of traffic profiling in the WIK model. The Commission has replied that the approach taken in the WIK cost model is reasonable because the over-estimation for urban areas is cancelled out by the under-estimation in rural areas[28]. The Commission has provided no evidence to support this claim. The review of the WIK model by Analysys confirms the two main flaws in WIK's methodology, namely that the average subscriber generates constant amount of traffic regardless of location; and that subscribers of an operator are evenly distributed throughout its coverage. Neither of these is true in the real world. Adjusting for these errors would result in a more uneven distribution of traffic and consequently a higher numbers

[27] Vodafone also notes the Commission's response regarding network resilience. The Commission claims that a proxy for equipment quality is asset price – ie. the more expensive, the better quality. Vodafone highlights that the WIK cost model under-estimates the actual cost of assets. If the Commission's assertion were correct, this implies that the WIK model uses assets of lower quality than deployed in reality. Vodafone reiterates our comments that the quality of assets is largely irrelevant for network resilience, as no network would tolerate a single point of failure.

[28] Draft pricing principles p.126.

of TRXs (and possibly BTS and BSCs). Analysys notes that this could have been avoided if the WIK cost model had been calibrated against real world networks[29].

3.4.1. Asset Prices

Vodafone provided actual prices in our initial submission and we are now able to provide a greater range of actual replacement costs for the assets listed in the WIK model. The cost data included in the table below comes from the latest standard price estimate received by Vodafone Australia from the relevant vendors.

Table 3 Asset Prices

Asset type	*WIK model*	*Vodafone actual*
	Capex A$	*Capex A$*
Macrocell: site acquisition and preparation and lease	134,000	[cic]
Macrocell: equipment (omni sector)	98,000	[cic]
Macrocell: equipment (2 sector)	110,000	[cic]
Macrocell: equipment (3 sector)	121,000	[cic]
Microcell: site acquisition and preparation and lease	86,000	[cic]
Microcell: equipment	61,000	[cic]
Picocell: site acquisition and preparation and lease	69,000	[cic]
Picocell: equipment	46,000	[cic]
Macrocell: additional TRXs	8,000	[cic]
BSC: base unit	2,903,000	[cic]
BSC: Software (full-rate AMR)	**725,000**	[cic]
MSC: processor	3,166,000	[cic]
MSC: software	**922,000**	[cic]
MSC: buildings (building preparation)	2,052,000	[cic]
MSC: BSC-facing port increment	3,000	[cic]
MSC: interconnect-facing port increment	3,000	[cic]
MSC: switch-facing port increment	3,000	[cic]
HLR	2,721,000	[cic]
SMSC	1,821,000	[cic]
Remote switching sites (BSC and RNC)	**150,000**	[cic]

We highlight in bold the three key assets where the Commission underestimates the actual cost. As indicated in our initial submission, software prices for both BSC and MSC are substantially greater than the price assumed in the model. Adaptive multi-rate (AMR) software for each BSC costs around **[cic]**. Software for each MSC costs around **[cic]** for the services provided by the MSC. In addition, remote switching sites cost significantly more than the WIK model assumes.

[29] Analysys, Annex A, p.21.

3.4.2. RAN design

In addition to significantly underestimating the cost of network assets, Vodafone notes that the actual number and type of BTS deployed differ from that assumed in the WIK cost model (Table Error! Not a valid link.). Vodafone notes that these issues are also raised by Optus in its initial submission.

The WIK cost model seems to assume that coverage can be achieved in urban areas with a deployment of microcells and that picocells are used to increase capacity. This is not the case. Coverage is provided first by a macrocell layer, with additional microcell layers added for capacity. This error in the WIK model has significant effect on the cost of MTAS since picocells (which the model overestimates) are significantly cheaper than micro and macrocells (which the WIK model underestimates).

Table 4 RAN Assets

	WIK model (17% operator)	*Vodafone*
Macrocell sites	1717	[cic]
Microcell sites	543	[cic]
Picocell sites	316	[cic]
Total sites	2576	[cic]

As a result, the total cost of BTS sites in the WIK model is [cic]. Reflecting the BTS sites in Table Error! Not a valid link., this cost increases to [cic].

Further, if the actual market prices are used (Table Error! Not a valid link.), the cost of BTS sites increases from [cic].

4. The long term interests of end-users

Vodafone understands that all parties accept that the regulation of MTAS must contribute to the object of Part XIC and promote the long term interests of end-users (LTIE). The question is therefore whether the Commission has presented evidence to demonstrate that this is indeed what has occurred in the past – and that it might reasonably be expected to occur in the future. Without any benefit to LTIE, we believe that further decreases to MTAS rates cannot proceed.

Despite the Commission's assertions, the answer to this question is complex. This section addresses the treatment of two key issues:

- pass through – which determines the impact on fixed-to-mobile (F2M) prices (and other fixed services prices) paid by end-users; and
- the waterbed – which determines the impact on other mobile prices.

These issues must be addressed even if we were to accept the Commission's assertion that there are no marginal mobile subscribers in Australia and that there is therefore no need to consider the NES. We consider the evidence for an NES in Section 5.

The Commission is almost alone amongst regulators in developed markets who have recently proposed MTAS reductions and not attempted any quantification of the relative costs and benefits for end-users which might be expected to result from their actions. We do so here.

4.1. The pass through argument

- All parties agree that a regulated reduction in MTAS does not promote LTIE unless we can demonstrate that there are consequential changes in the retail prices paid by end-users for telecommunications services[30];
- The Commission relies upon the reduction in F2M prices as being particularly important in the promotion of LTIE in this context[31];
- The Commission and Vodafone agree that F2M prices have fallen as a result of the regulated reduction of MTAS, but both also agree that the degree of 'pass through' has been partial;
- The Commission contend that the degree of 'pass through' can be expected to increase as MTAS rates are reduced. Vodafone contends that there is no evidence to support this claim and that the timing of price movements ensures that no 'pass through' at all is likely to occur for significant periods;
- Vodafone accepts that the degree of 'pass through' could increase if the way in which Telstra's fixed call prices are regulated were to change. Specifically, this would ensure that end-users actually benefit from any non-MTAS efficiency gains which Telstra makes in its own network, much of which Telstra appears to retain at present; and

[30] The Commission makes vague references to 'improved competition and encouragement of efficiency in investment' (draft pricing principles, p.8), but there appears to be broad agreement that these must translate into lower prices or higher quality. The Commission's central case is clearly that the LTIE is lower prices.
[31] see draft pricing principles, p.23 'The Commission considers that retail (F2M) price reductions are important…'.

- Vodafone contends that in these circumstances the Commission must demonstrate that the LTIE is promoted even if current partial levels of pass through are maintained, since there is no evidence to suggest that they will increase.

4.1.1. The Commission and Vodafone agree that F2M prices have fallen as a result of the regulated reduction of MTAS, but both also agree that the degree of 'pass through' has been partial

It is common ground between Vodafone and the Commission that 'there is still opportunity for integrated operators such as Telstra and Optus to reduce retail F2M prices further … in line with reductions in MTAS'[32].

Vodafone agrees with the Commission that F2M prices have fallen by more than 12% over the first two years of the previous pricing principles – the data from the Market Indicator Report 2005-6 suggests 14% overall. However, the benefits for end-users have varied significantly: F2M prices fell by 10.9% for residential end-users but actually increased by 7% for small business customers.

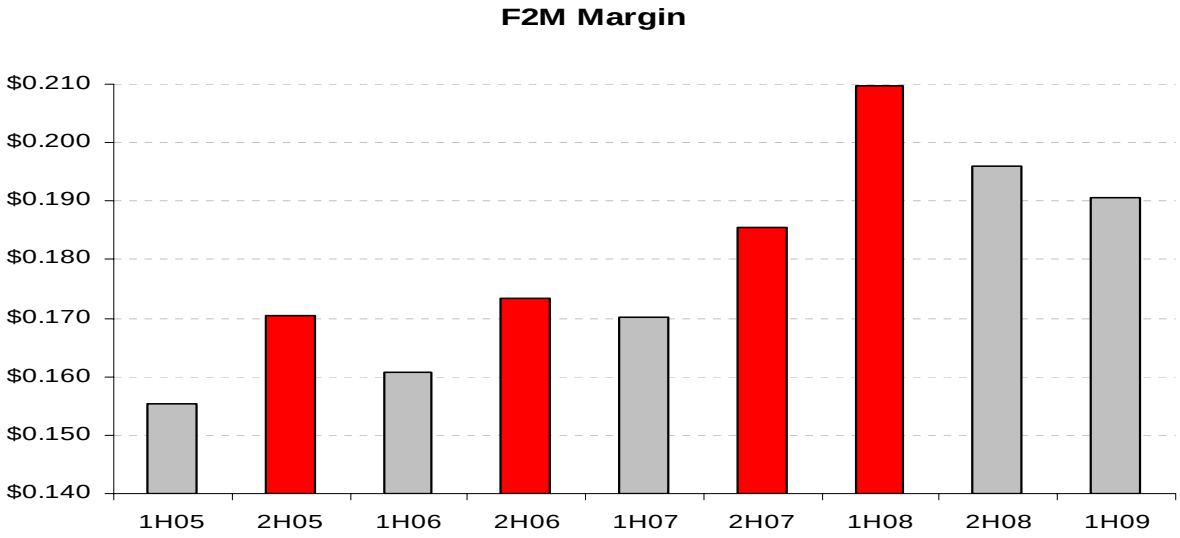
Overall, MTAS fell by 42% under the last pricing principles, suggesting that around one third of the reductions were passed through to end-users. Clearly some end-users have benefited more than others.

4.1.2. The Commission contends that the degree of 'pass through' can be expected to increase as MTAS rates are reduced. Vodafone contends that there is no evidence to support this claim.

As Graph 1 shows, the absolute margin retained by Telstra from F2M calls during the period of the pricing principles to date has been expanding instead of contracting. The Commission claims that pass through will increase (i.e. F2M margins will contract) as MTAS are lowered. The evidence shows otherwise.

[32] ibid.

Graph 1 F2M Margin



Source: Telstra half year & full year financial reports; Vodafone analysis.

Although the absolute margin does reduce slightly over each regulated period, it has always remained at a level above that of the previous regulated period. In other words, each regulated MTAS price reduction has so far served to increase rather than reduce Telstra's F2M margin. Over the period July 2004 to June 2007, Vodafone estimates that Telstra has retained $372m in 'additional' F2M margin relative to margin it would have earned if margins had remained stable (at 42.5%) over the same period.

The ability on the part of Telstra to maintain and expand F2M margins is consistent with Vodafone's previous submissions which demonstrated that competition in the F2M market has been unaffected by the regulation of MTAS and that the market shares of Telstra's principal competitors remain unmoved or, in the case of Primus and AAPT, actually reduced during the period[33].

The Commission may hope that competition in the F2M market will increase as a result of further reductions in MTAS, but the evidence submitted by Vodafone shows that the contrary is the more reasonable expectation. If Telstra is able to maintain its historic trend in terms of expanding F2M margins then Vodafone estimates that it will retain over $570m in 'additional margin' over the 18 month period to which the draft pricing principles applies.

The 'additional margin' generated for Telstra, which amounts to almost $1 billion over the period June 2004 to December 2008 (i.e. the end of the draft pricing principle) and around $1.3 billion for the Australian fixed sector as whole, is a direct cost to the LTIE.

We discuss below the implications that this has for long term competition and for other matters to which the Commission must have regard.

[33] op cit. *Vodafone initial submission*, p.5.

4.1.3. Backdating in any access arbitrations on the basis of the MTAS pricing principles will not be in the LTIE

The incomplete nature of 'pass through' will be further undermined in the event that the Commission applies the indicative price in the final pricing principles determination for MTAS (if this is a price below 12cpm) in any access arbitration, which is backdated to 1 July 2007.

With the draft pricing principles not expected to be finalised before the end of August, there is no evidence of any reductions in retail F2M prices having been made since 1 July 2007, on the reliance of the draft pricing principles or otherwise.

In these circumstances, Telstra – and other fixed line operators – will obtain a 'windfall' in terms of lower costs through the backdating of any access arbitration, but there is no provision of such payments to be shared retrospectively with F2M callers who will have faced prices based on the higher MTAS rates prevailing at the time. This ensures that end-users will not obtain even partial benefits for many months of the proposed MTAS decrease.

It is clear that backdating any MTAS decrease in access arbitrations to 1 July 2007 is not in the interests of end-users. Thus, even if the Commission considers some adjustment to the MTAS rate is required, any such adjustment must only take effect in any access arbitration after the release of the final pricing principles if it is to promote the LTIE.

4.1.4. The Commission has no plans to change its approach to the regulation of Telstra's fixed call prices yet the current arrangements weaken incentives for Telstra to maximise the efficiency of its fixed network and/or derive end-users of the benefits of such efficiencies

A change in historic trends on pass through can only be assumed if the Commission can identify some exogenous factor which will change market behaviour. Regulation would be one such factor – which has not been done in the draft pricing principles.

Vodafone believes that the current regulation of Telstra's fixed call basket operates against the LTIE. Price control baskets – such as that applied to Telstra – are intended to provide incentives for operators to pursue cost efficiencies and to allow end-users to share in a significant proportion of those gains[34]. However, in the present case, Telstra is not required to reflect changes in input costs, such as MTAS, in its output prices for the purposes of complying with the basket. This means that even if partial pass through produces lower F2M prices for Telstra customers and even if the remaining MTAS benefits are passed through in full via reductions in other services in the basket, Telstra is *still able* to retain its non-MTAS cost efficiencies whilst appearing to exceed its overall basket obligations. Telstra's customers may appear to be getting a good deal, but they are in fact being deprived of most of the efficiency gains which Telstra itself is making in its own activities.

[34] They are also intended to provide positive incentives to Telstra management. In this case, Telstra's management need produce only very modest cost efficiencies in the Telstra network since they can rely upon the Commission to deliver large exogenous cost reductions through MTAS regulation which they can then use to meet price control obligations. Telstra therefore has less incentive to improve the performance over which it has direct control than those incumbents who are obliged to adjust their basket to reflect exogenous efficiency gains.

An initial examination of Telstra price cap performance for the half year to December 2005, published in August 2006[35], shows Telstra exceeding its cap for the basket of local, trunk (including F2M) and international calls. For the half year Telstra was required to reduce prices by 1.05% and in fact reduced prices by 4.44%. Prices fell by almost 6% for the full year.

At first sight, this suggests that Telstra's customers are being well served by the combination of the price control basket and other competitive factors.

However, closer examination of the data suggests otherwise. Data for the full year suggests that F2M calls represent at least 42% (by weight) of the PSTN calls basket[36]. The input cost for F2M calls (i.e. the reduction in MTAS) fell by at least 16% during this same period[37], suggesting that the weighted input (exogenous) cost reduction for the calls basket as a whole was at least 6.72%. Full 'pass through' would mean that a 6.7% reduction in input costs should translate into approximately a 3.5% reduction in end-user fixed prices (since MTAS represents about 50% of the F2M end-user price). With CPI at around 2.5%, this means that Telstra can reduce fixed prices in the basket by 1% per year *without having to make any efficiency gains within its own network*. The latest Telstra price cap for the fixed calls basket only requires Telstra to reduce prices by 0% (i.e. CPI-CPI)[38]. In other words, the reduction in MTAS has such a significant impact upon the performance under the overall basket that Telstra has to do nothing else in order to exceed the current fixed services cap.

We find it hard to believe that Telstra will have been unable to improve its own network cost performance over the current period[39]. The reality is that Telstra has done better than this, but that end-users are likely to have been denied the benefits.

In order to conclude that these arrangements do not operate against the LTIE, the Commission would have to maintain either that Telstra generates no other significant cost efficiencies for itself, or that it is unconcerned that the benefits of these efficiencies are not passed on to end-users. In our view neither position is sustainable.

Given that the Commission has not contemplated changes in F2M regulation – despite the strong case for doing so – the Commission must rely on the claim that the LTIE is promoted even if current partial levels of pass through are maintained. This brings us on to the next step in the argument:

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[35] See http://www.accc.gov.au/content/item.phtml?itemId=769049&nodeId=9870a362f6d281eb9769f350dae6b923&fn=PCAP%20report_telstra_August06.pdf

[36] See ACCC, *Telecoms Competitive Safeguards 2005-6;* http://www.accc.gov.au/content/item.phtml?itemId=788067&nodeId=b3d4690165421731a5b2066d040417d8&fn=ACCC%20telecommunications%20reports%202005-06.pdf, p. 83.

[37] We ignore reductions in the costs of the Telstra network itself, which are also likely to have been significant.

[38] Seehttp://www.dcita.gov.au/communications_for_business/funding_programs__and__support/connect_australia/new_telstra_retail_price_controls

[39] Typical X values for fixed calls baskets in Europe would be around 4-5%p.a.

4.2. The waterbed debate

The debate surrounding the waterbed and its implications for the draft pricing principles and the LTIE is as follows:

- the Commission must rely upon partial pass through promoting LTIE. It could do this if it can show that the regulation of MTAS has no impact on prices in other telecommunications markets;

- the Commission attempts to do this by claiming that 'the waterbed' does not operate in Australia. It claims that the Tribunal supports its view on this point. It also claims that the fact that Australian mobile call charge and access prices are falling refutes the waterbed;

- Vodafone does not deny that Australian mobile access and call prices have fallen whilst MTAS have fallen. However, Vodafone rejects the Commission's conclusion that this allows them to disregard the waterbed. Further Vodafone believes that the Commission have misunderstood the Tribunal's position. Finally, the Commission's reference to F2M pass through also confirm that it misunderstands the waterbed[40];

- Vodafone presents the most robust empirical evidence to date to show that the Commission must assume at least a 50% waterbed;

- Vodafone then models the LTIE, taking into account both the partial pass through and waterbed effects. We use both a Vodafone model and a model employed by the New Zealand regulator to assess termination rate setting in New Zealand. We find that if we ignore any adverse impact on LTIE arising from the operation of the Telstra fixed service price cap then the LTIE gain is at best $18 million. More plausible assumptions suggest that the Commission's proposals will undermine the LTIE by more than $100 million per year; and

- there is also no evidence to suggest that a further reduction in MTAS will promote competition in the Australian market and every reason to suppose that the position of the integrated fixed-mobile operators will be further strengthened relative to their mobile-only competitors.

4.2.1. The Commission must rely upon partial pass through promoting LTIE. It could do this if it can show that the regulation of MTAS has no impact on other prices. It attempts to do this by claiming that 'the waterbed' does not operate in Australia.

The Commission appears to believe that provided the retail prices of mobile services have been falling, the 'waterbed' cannot be operative.

[40] Draft pricing principles, p.26. The Commission presumably believes that if Telstra were to increase F2M prices in response to reductions in MTAS then this would demonstrate the 'waterbed'. Since F2M prices have no direct impact on the lifetime value of mobile customers (other than to reduce it if F2M prices are increased), Vodafone sees no reason why Telstra would seek to adjust F2M prices to ensure that marginal mobile customers remain profitable.

The LTIE test requires the Commission consider whether the regulatory actions that it proposes to take under Part XIC will promote the LTIE, and to what extent these interests will be promoted. Most other regulators around the world are subject to similar statutory considerations in the exercise of their regulatory powers. In this case, it is quite possible – indeed likely given the expansion of the market – that retail prices for mobile services will be falling whether or not MTAS rates are regulated, but that they would fall further and faster in the absence of regulation. Vodafone does not think this statement is controversial. It is the view taken by other regulators such as the UK's Competition Commission, which expected mobile prices to fall, but at about half the rate anticipated in the operators' business plans, as a result of regulation[41]. It is perfectly possible for the waterbed to operate fully *and* for mobile prices to be falling in Australia. The Commission's suggestion that one disproves the other is incorrect.

4.2.2. Vodafone believes that the Commission has misunderstood and misquoted the Tribunal

The Commission cites the Tribunal in support of its claim that the waterbed effect does not exist in Australia:

> *… we do not consider that Optus would be strongly constrained in setting its DGTAS price by competition in the retail market. The mobile operators could set their termination charges on a reciprocal basis at above cost while still competing vigorously in the retail market. Indeed, it was accepted that that is what they do.*[42]

The Tribunal is here considering bi-lateral negotiations between mobile operators in the setting of MTAS and the question as to whether mobile operators might be expected to set efficient inter-mobile MTAS in the absence of regulation. This question has nothing to do with the presence or otherwise of a waterbed effect. Even if mobile operators were to set efficient inter-mobile MTAS (which in any event the Tribunal doubts), the Tribunal confirmed the Commission's view that MTAS should be regulated and that their levels should be reduced. The question is then what happens to other mobile prices in the presence of such regulation. The quote cited offers no assistance in this context.

A careful reading of the Tribunal's decision shows that the Tribunal did recognise and discuss the interplay between MTAS and other mobile prices which is the essence of the waterbed. At para 83 of the Optus decision it notes:

> *When competing with each other, mobile service providers take into account all their sources of revenue. It is a feature of the Australian market that providers offer retail customers a bundle of services in which usage charges subsidise charges for handsets and for access to the network (where access means connection and thus the ability to make and receive calls, while usage is the actual making and receipt of calls). Thus some components of the mobile service provided to the customer may be supplied below cost and some components above cost. If Optus' DGTAS is supplied at a price which exceeds the efficient costs of supply of that service, it does not necessarily follow that such price is unreasonable. The interactions between the*

[41] The Competition Commission concluded 'in our view there will be a waterbed effect' and then modelled various waterbed effects, see p.2130 et seq at http://www.competition-commission.gov.uk/rep_pub/reports/2003/fulltext/475c2.pdf. The New Zealand Commerce Commission has more recently made similar assumptions in its welfare modelling, see para 62, Commerce Commission Final report at http://www.comcom.govt.nz/IndustryRegulation/Telecommunications/Investigations/MobileTerminationRates/ContentFiles/Documents/Mobile%20Termination%20Reconsideration%20Final%20Report%2021%20April%202006%20.pdf

[42] op cit., *Application by Optus* para 84-85.

provision of the DGTAS and of the retail services need to be examined. Such a price may not be unreasonable where the overall charge for all the relevant services does not exceed the efficient costs of supply of those services.

And at para 90:

It is sufficient for present purposes to note that any consideration of the reasonableness of the pricing of a mobile network operator's terminating access service must take into account the pricing of the bundled retail services and the market within which the bundled service is supplied.

This is the waterbed which the Commission ignores. Moreover, the Tribunal then goes on to consider the case for a NES in Australia. We address this below, but it is sufficient to note here that any such surcharge can *only* be justified if the interplay between MTAS and other mobile prices (i.e. the waterbed') is accepted (otherwise a surcharge would have no impact upon marginal subscribers and would be detrimental to LTIE). The Tribunal concluded on this point at para 291:

We do not rule out the possibility that taking account of externalities may be a valid part of coming to a reasonable price.

4.2.3. Vodafone presents the most robust empirical evidence developed to date to show that the Commission must assume at least a 50% waterbed

The theoretical basis for the waterbed has been extensively discussed and is not in dispute. It derives from the assumption that mobile firms will be profit maximising and will seek to ensure that the lifetime value of customers they acquire will be positive[43]. The Commission provides no evidence to suggest that Australian mobile firms are not also profit maximising – and its discussion of the recent performance of the industry suggests quite the opposite[44].

The magnitude of the 'waterbed' has been more controversial, both in theory and practice. Professor Jerry Hausman has shown – and the New Zealand Commerce Commission has accepted – that it must be at least 50%, even under monopoly conditions. This is now supported by robust empirical evidence after recent work undertaken by Professor Valletti and Dr Genakos on the waterbed, which is attached at Annex B to this submission. The data used by the authors includes data from Vodafone in the Australian market.

Since the Commission cannot assume no waterbed, the question of whether the Commission's proposal to reduce MTAS to 9cpm promotes the LTIE is an empirical one. The Commission discussed the waterbed briefly in its MTAS decision of June 2004[45]. The Commission challenged the figures presented by Optus and pointed to other externalities that exist to counterbalance the effects. But this shows that this issue requires careful empirical consideration. It does not entitle the Commission to conclude that the waterbed can be ignored, as in the draft pricing principles.

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[43] For a summary, see Genakos and Valletti (Annex B).

[44] see draft pricing principles, pp.53-4.

[45] The Commission refers to this as the 'fixed line externality' at p.157 et seq. *Mobile Service Review, Final Decision*, June 2004. This suggests some misunderstanding about the difference between the debate on the waterbed and that concerning Network Externality Surcharges (NES), which we explain in Section 5.

The draft pricing principles fails to recognise the debate and evidence, since June 2004 particularly that arising from the New Zealand Commerce Commission enquiry (which concluded in 2006), the later findings of Ofcom, and the results of the work by Hausman and Wright which specifically refer to data for the Australian market.[46]

4.3. Calculating the LTIE

The draft pricing principles make no attempt to quantify the LTIE arising from the proposed measures. The Commission instead assumes that lower F2M retail prices will increase consumer welfare (which we do not dispute); and that there are no other adverse consequences for LTIE to which is must have regard (which we do dispute). The Commission has not given due attention to balance these competing considerations in order to determine whether the LTIE test is met by the proposals.

We do so in this section, using both a Vodafone welfare model[47] and by running the model developed by the New Zealand Commerce Commission. The modelling which Vodafone presents here is not intended to provide a precise measure of the LTIE under particular scenarios, but it is intended to demonstrate to the Commission the work that it is required to undertake, and that other regulators have undertaken, in order to satisfy itself that reductions in MTAS promote the LTIE under reasonable assumptions. It reveals that:

- employing the same welfare model as the New Zealand Commerce Commission (and thereby ignoring any additional negative impacts of the Telstra fixed services price cap which are unique to Australia), the LTIE impact of the Commission's proposals lies in the range of +/- $13 million over the eighteen month period

- employing the Vodafone welfare model for an eighteen month period, we can show that very conservative elasticity assumptions (0.1) – lower than anything found in any real world telecommunications market with which Vodafone is familiar – result in de minimus ($5 million) LTIE gains and more realistic elasticity assumptions (0.5) serve to reduce consumer welfare by more than $100 million.

4.3.1. Key assumptions

We assume an MTAS reduction from 12cpm to 9cpm, applied to 10.2 billion F2M calls as the forecasted volume for the period of the draft pricing principles).

Vodafone has explained above that the Commission cannot assume that the degree and pace of pass though will increase during the pricing principle period. To capture the effect of delayed pass through, we apply the average level of pass through for the period of the draft pricing principles (at 56%[48]). This is a conservative assumption, as we have shown that the trend is for Telstra to expand its F2M margins through delaying pass through of MTAS decreases and we have ignored the lack of retrospective pass through.

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[46] The draft pricing principles note that Vodafone submitted the Hausman/Wright paper, but fails to refer to a key conclusion from the paper, namely that cost-based regulated rates are likely to operate against the LTIE relative to alternatives (whether regulated or unregulated). The paper itself can be found at http://econ-www.mit.edu/faculty/download_pdf.php?id=1366

[47] Copies of the Vodafone welfare model are available to the Commission on request.

[48] This is the average level of pass through for the eighteen months of the draft pricing principles, given F2M price decreases consistent with observed trends.

We have also explained that a reduction in MTAS input costs allows Telstra to meet its price cap basket commitments without reducing the prices of other services, to the extent to which it would otherwise be required to do. In the absence of proposals to change the way in which Telstra's fixed service price controls work, and in the absence of significant changes in the competitive conditions on the fixed services market – for which there is no evidence – Telstra would be expected to continue to retain some of the cost efficiencies which it would otherwise be required to pass on to its end-users. As discussed above, if we assume conservatively that Telstra can access non-MTAS cost efficiencies for the provision of fixed calls of around 4% per year, it then appears that only about 2% of these gains are currently being passed to end-users. In the absence of MTAS regulation, we assume that a further 2% of cost efficiencies would be delivered to fixed users via the existing price basket arrangements during the eighteen months of the draft pricing principles.

Vodafone has shown that a waterbed effect exists in Australia. The precise quantity is unknown, so we model the most conservative assumption possible of 50%.

Our modelling then requires assumptions about elasticities. These are run as explicit sensitivities in the Vodafone model. We use those employed by the Commerce Commission in running their model.

We ignore any welfare losses arising from Telstra's loss of incentives to realise or to pass through efficiency gains which it makes in its own fixed network which arise because it can readily meet its fixed services price cap commitments by only partially passing through MTAS cost reductions. This would further increase LTIE losses.

4.3.2. LTIE results

The results using the same welfare model employed by the New Zealand Commerce Commission (Table 5) show that consumer welfare gains/losses to lie in the range +/- $13 million for the period of the draft pricing principles:

The results from the Vodafone model show that very conservative elasticity assumptions (0.1) – lower than anything found in any real world telecommunications market with which Vodafone is familiar – result in de minimus ($5 million) LTIE gains and more realistic elasticity assumptions (0.5) serve to reduce consumer welfare by more than $100 million (table Error! Not a valid link.).

Table 5 New Zealand Commerce Commission Welfare Model

Linear demand							
BENEFITS		2006		**2007**		**2008**	
				1		2	
Increase in consumer surplus from reduced FTM prices							
FTM allocative efficiency gain	$	-	$	1,581,687	$	4,172,327	
FTM transfer of excess returns	$	-	$	53,661,224	$	109,038,518	
Total increase in consumer surplus	**$**	**-**	**$**	**55,242,911**	**$**	**113,210,845**	
DETRIMENTS							
Direct regulatory costs	$	-	-$	2,142,857	-$	2,142,857	
Reduction in consumer surplus from reduced mobile subscription							
FTM consumer surplus loss	$	-	-$	571,451	-$	1,074,760	
MTM consumer surplus loss	$	-	-$	1,799,491	-$	3,422,344	
Mobile subscriber consumer surplus loss	$	-	-$	47,887,666	-$	97,261,511	
Total reduction in consumer surplus	$	-	-$	50,258,608	-$	101,758,615	
Total Detriments	**$**	**-**	**-$**	**52,401,465**	**-$**	**103,901,472**	
NET BENEFIT (CW model)	**$**	**-**	**$**	**2,841,445**	**$**	**9,309,372**	
Constant elasticity demand							
BENEFITS		2006		**2007**		**2008**	
				1		2	
Increase in consumer surplus from reduced FTM prices							
FTM allocative efficiency gain	$	-	$	435,223	$	1,845,497	
FTM transfer of excess returns	$	-	$	53,661,224	$	109,038,518	
Total increase in consumer surplus	**$**	**-**	**$**	**54,096,447**	**$**	**110,884,015**	
DETRIMENTS							
Direct regulatory costs	$	-	-$	2,142,857	-$	2,142,857	
Reduction in consumer surplus from reduced mobile subscription							
FTM consumer surplus loss	$	-	-$	2,561,564	-$	4,816,224	
MTM consumer surplus loss	$	-	-$	7,733,189	-$	14,438,771	
Mobile subscriber consumer surplus loss	$	-	-$	47,883,443	-$	97,240,471	
Total reduction in consumer surplus	$	-	-$	58,178,195	-$	116,495,466	
Total Detriments	**$**	**-**	**-$**	**60,321,052**	**-$**	**118,638,323**	
NET BENEFIT (CW model)	**$**	**-**	**-$**	**6,224,606**	**-$**	**7,754,309**	

Table 6 Vodafone welfare model for MTAS in draft pricing principles

	Price elasticity		
	0.0	0.1	0.5
Now			
MTAS price ($)	0.120	0.120	0.120
F2M price ($)	0.300	0.300	0.300
F2M minutes (mill)	10,200	10,200	10,200
Other mobile revenues ($mill)	16,000	16,000	16,000
Terminating voice revenues ($mill)	1,224	1,224	1,224
F2M revenue ($mill)	3,060	3,060	3,060
F2M revenue within basket	43%	43%	43%
Telstra market share	78%	78%	78%
Other fixed revenue ($mill)	4,056	4,056	4,056
Pass-through	56%	56%	56%
Mobile waterbed	50%	50%	50%
	-153	-150	-140
Fixed waterbed	0%	0%	0%
New			
MTAS price ($)	0.090	0.090	0.090
F2M price ($)	0.283	0.283	0.283
F2M minutes (mill)	10,200	10,259	10,498
Other mobile revenues ($mill)	16,000	16,000	16,000
Terminating voice revenues ($mill)	918	923	945
F2M revenue ($mill)	2,889	2,905	2,973
Price change			
MTAS	–25%	–25%	–25%
Mobile price	1%	1%	1%
F2M	–6%	–6%	–6%
Fixed price increase	0%	0%	0%
End-user welfare change ($mill)			
F2M	171	172	174
Mobile prices	–153	–167	–277
Loss of non-MTAS efficiency gains	0	0	0
Total welfare change ($mill)	18	5	–103

4.3.3. Other LTIE implications are not captured by modelling – investment incentives and error costs

Even if the Commission disregards the impact on non-F2M prices under the current price cap arrangements, Vodafone submits that the $18 million impact on end-user welfare over 18 months is not significant enough to erode the very real risk of damaging future investment and competition as a result of setting MTAS too low.

The Commission has acknowledged that the welfare gains from further reductions in MTAS are reduced as the rate approaches the efficient cost of provision, while the prospect of significant error costs increases.

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The error costs and damage to future investments has been recognised by both Ofcom and OPTA:

- OPTA notes that a potential dynamic effect of lower MTAS is 'less investment or the departure of mobile providers'[49] and that it must take this into account in assessing the welfare benefit of the regulated rate. OPTA concluded that a reduction to the modelled rate of 5.6 Euro cpm rather than 7 Euro cpm did not produce a welfare benefit significant enough to offset the negative dynamic effects of lowering the rate; and
- Ofcom notes that there is an asymmetry in the risks of setting a MTAS rate that turns out to be too low. Ofcom also note that a rate that fails to recover efficient costs of providing MTAS will have a negative impact on investment. Consequently, Ofcom say that MTAS should not be set so close to costs 'as to impact adversely prospects for investment', particularly given the uncertainty about future traffic on 2G and 3G networks[50].

4.3.4. The proposals have an adverse impact on competition in Australia

Thus far we have considered the impact of the proposals on prices but have ignored the longer term consequences for competition and investment in the Australian communications market. The Commission concludes that the mobile industry has remained profitable in the face of MTAS regulation, and concludes that competition is not adversely affected by reductions in MTAS[51].

Vodafone submits that this analysis is simplistic. The key issue is is not the short term performance of the industry. The key issue is the relative performance of firms in the relevant markets and their competitive prospects over the longer term. The key consideration here – which distinguishes the relative prospects for different firms – is the 'windfall' which accrues to Telstra as a result of partial F2M pass through of MTAS reductions.

It might be possible – although we note the Commission does not do so – to argue that this 'windfall' is redistributed to end-users by Telstra either in the form of:

- lower fixed prices than would otherwise be the case; and/or
- lower mobile prices than would otherwise be the case.

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[49] OPTA, *Mobile Call Termination Market Analysis – draft decision*, para.655.
[50] Ofcom, *Mobile Call Termination Statement*, March 2007 p.166.
[51] Draft pricing principles, pp.53-4.

In the latter case, this might take the form of the Commission's claim that the waterbed has been moderated in Australia.

As noted previously, there is no evidence to support such a claim. A careful analysis of the Telstra fixed services price basket shows that even if some of the windfall is recycled into lower fixed services prices, this allows Telstra to retain non-MTAS cost efficiencies (i.e. Telstra derives its windfall from other sources which it could not do in the absence of MTAS regulation). Nor is there evidence to suggest that mobile prices have fallen faster or further in Australia than we might have expected, and the Commission does not claim that they have. Vodafone further notes if Telstra were to use the 'windfall' in this way, the implications for competition in the mobile sector would operate strongly against the LTIE.

It is easy to see this by considering the impact of MTAS reductions for the integrated and non-integrated firms in Table 7:

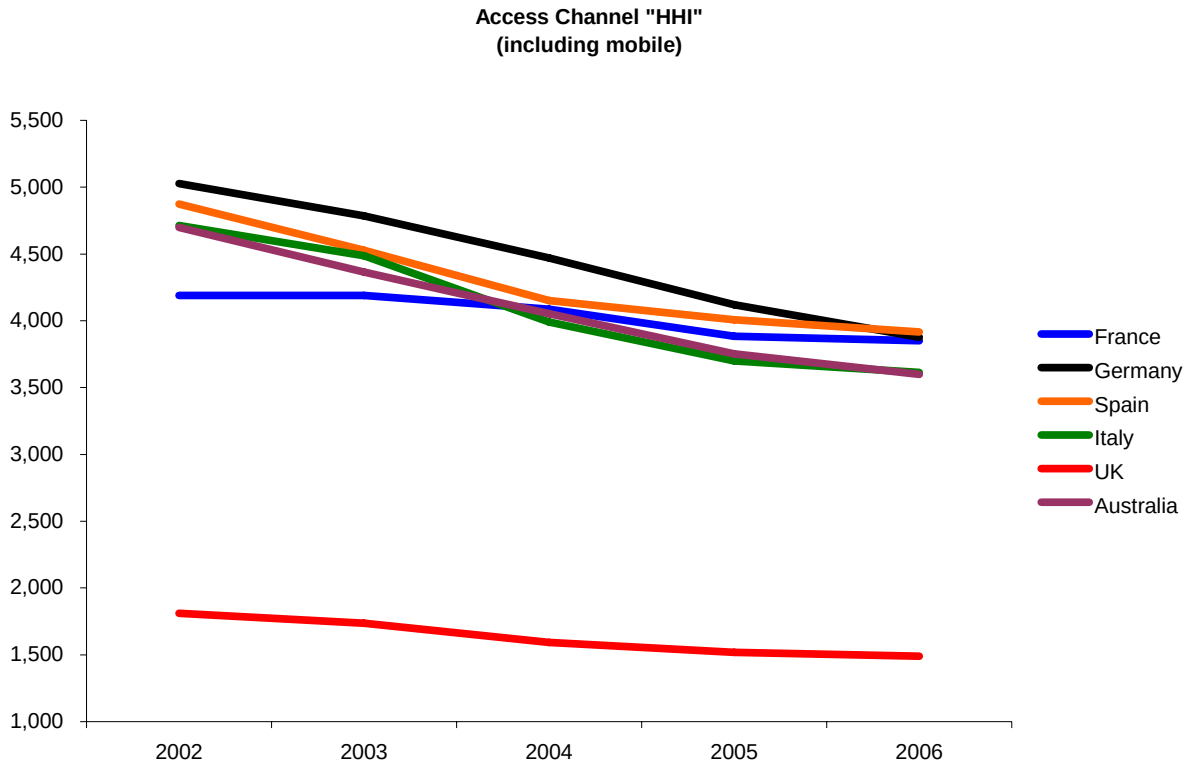
Table 7 Impact of MTAS reductions

Integrated firm	*Non-integrated (mobile only) firm*
Loss to mobile arm from lower MTAS revenue	*Loss* to mobile arm from lower MTAS revenue
Gain to mobile arm from waterbed	*Gain* to mobile arm from waterbed
Gain to fixed arm from lower MTAS and only partial pass through ('windfall')	
Neutral to fixed arm since lower F2M revenues can be offset by other fixed prices within the basket (or by less pass through of non-MTAS cost efficiencies)	

The gains and losses to the integrated firms, particularly Telstra, are the same as those for the non-integrated firm such as Vodafone, with the exception of the partial pass through gain which we demonstrated earlier to be in the order of $1 billion over the period of MTAS regulation. The impact on long term competition in the Australian mobile and fixed sectors which arises from a regulatory transfer of $1 billion to the dominant firm is difficult to quantify, but is likely to be substantial. It exceeds, for example, the cumulative capital expenditure undertaken by Vodafone in the Australian market during the same period. If Telstra were to apply these funds to keep mobile prices low, while Vodafone and other non-integrated firms are unable to access similar cross-subsidies, then it would make many mobile customers unprofitable for Vodafone.

This is not mere speculation. As Graph 2 below shows, when we consider Herfindahl-Hirschman Index (HHI) across 'all channels' that an incumbent operator might control (i.e. fixed, mobile and broadband combined) Telstra remains as dominant across most sectors of the Australian telecommunications market as, for example, Telecom Italia in Italy (where Telecom Italia's F2M pass through is directly regulated).

Graph 2 Herfindahl-Hirschman Index (HHI)



Source: Vodafone analysis

The Commission claims that mobile operators are profitable and therefore do not appear to be suffering adverse consequences of MTAS reductions[52]. Vodafone disagrees with this simplistic view.

We note that Vodafone's Australian operations remain relatively unprofitable compared to similar operations in other markets where Vodafone has been present for more than 5 years (and many where Vodafone is a more recent entrant). Vodafone Australia's most recent results suggest an EBITDA margin of [cic]. This is about [cic] the average Vodafone Group EBITDA margin of [cic] for the year 2006/7. At a minimum, this suggests that competing with integrated carriers in the Australian environment is particularly challenging relative to other markets where Vodafone undertakes operations which are otherwise very similar. The foregoing analysis of MTAS regulation begins to explain why this might be the case.

There is, in short, no evidence to suggest that a further reduction in MTAS will promote competition in the Australian market and every reason to suppose that the position of the integrated fixed-mobile operators will be further strengthened relative to their mobile-only competitors.

[52] Ibid., pp.52-4.

5. Network externalities

The previous section considered the impact of the Commission's proposals on LTIE, assuming that those proposals had no impact upon the number of Australian mobile and fixed telephone users but that it changed the prices that they paid for the services that they consume. As such, the arguments presented in the previous section are not dependent upon the Commission's approach to NES.

On the other hand, it is also clear that the Commission's position on waterbed – that it does not exist – may have led the Commission to assume that NES could also be disregarded.

Vodafone accepts that if there is zero waterbed then there is no case for NES. However, Vodafone has illustrated above that the Commission is incorrect to assume a zero waterbed and that a waterbed of at least 50% is the more plausible assumption. In these circumstances, the Commission must give the NES serious consideration.

5.1. The Tribunal accepts that the case for NES is an empirical matter

The Commission has rejected NES in the past and does so again in the draft pricing principle[53] for two reasons:

- doubt that the benefits from subsidising marginal subscribers in order to keep them on the network are very large – either because there are few marginal customers or because the externalities they generate are small or both; and
- doubt whether, even if the benefits are keeping marginal customers are significant, these benefits should be accessed through an NES – as opposed to some other form of subsidy.

The Tribunal accepted that externalities might validly be taken into account, but noted the lack of empirical data which might allow them to do so with any degree of confidence. Vodafone is disappointed that the Commission has made no attempt to gather any data to validate its assertion that the benefits of marginal subscribers are modest. Vodafone has therefore done so and presents the results below.

5.2. The Commission assumes there is no case for NES – its assumptions are unfounded and refuted by the available evidence

The Commission is mistaken to believe that the waterbed only exists if mobile prices rise in absolute terms and it is also mistaken to suggest that marginal customers do not exist in markets which have high levels of mobile penetration. As we show below, and as the Tribunal emphasised, the existence or otherwise of marginal subscribers is an empirical matter.

The most robust time-series data presented on this issue has been provided in the UK[54]. In 2002, with mobile penetration in the UK at 68%, the Competition Commission found that 34% of existing mobile subscribers were marginal and that 23% of non-subscribers were marginal[55].

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[53] Op cit., pp.17-8.

[54] Although the New Zealand Commerce Commission also recognised that mobile customers would leave the network if MTAS were reduced in its welfare modelling.

[55] See Annex 8.1 and 8.2 at http://www.competition-commission.gov.uk/rep_pub/reports/2003/fulltext/475a8.1.pdf

In 2006, with mobile penetration at 81% in the UK (higher than Australia at that time), Ofcom found 34% of existing subscribers and 14% of non-subscribers to be marginal. There is no reason to assume, as the Commission does, that marginal subscribers disappear in markets with high levels of mobile or fixed penetration.

If we accept this, the Commission might reply that the loss of a potentially large number of marginal fixed subscribers arising from higher MTAS would counterbalance any gain from retaining marginal mobile subscribers on the network. Vodafone does not accept that there is any intuitive reason to suppose that fixed subscribers are more or less sensitive to subscription price changes than mobile subscribers, but in any event the Commission must take into account the fact that the positive network externalities of marginal fixed subscribers are already captured in the Universal Service Obligation – for which Telstra receives a subsidy of circa $150 million per year.

Finally, the Commission suggests that the positive externalities can be captured without any NES on MTAS, either by internalisation on the part of subscribers themselves (e.g. by other subscribers buying handsets for marginal customers[56]) or by 'targeting' on the part of the operators. Whilst Vodafone does not dispute that these effects might moderate the case for an NES and need for the NES to be taken into account (as they are by Ofcom when modelling 'leakage'), the Commission has no grounds at all for assuming that these factors render the case for an NES null and void.

5.3 Estimating the number of marginal mobile subscribers in Australia

Vodafone engaged a market research firm to estimate mobile subscribers' willingness to pay for a replacement handset – either to renew contract, or to replace broken or stolen handset.Vodafone engaged a market research firm to estimate mobile subscribers' willingness to pay for a replacement handset – either to renew contract, or to replace broken or stolen handset. The report is attached at Annex C.

An online interview approach was used for this study. To ensure robustness and the ability to explore the results by carrier a sample size of 1,000 interviews was undertaken. Quotas were set to ensure the sample is nationally representative in terms of:

- Age;
- Gender;
- State;
- Socio-economic class;
- Network; and
- Pre-pay vs post pay.

The quotas were floors rather than being definitive – to allow refinement by weighting, if required. The data was post weighted to age, gender, state, socio-economic class, network and pre-paid vs post paid to ensure a representative base sample for decision and forecasting purposes.

[56] Although UK's Competition Commission found that only 3.6% of the population had a mobile bought for them – whilst around ten times (34%) that number were marginal – see para 8.117.

A mobile subscriber is defined as someone who selected the mobile phone network *and* purchased the mobile handset. It does not include users whose employer selected the network or the mobile phone.

The interview contained questions regarding current usage patterns, current spend on mobile phones (including usage), attitudes towards replacing the current phone – including the price subscribers' are willing to pay.

For assessing the NES, a marginal subscriber is someone who is not willing to pay for the total cost of a standard handset. That is, without subsidised entry to the network, the subscribers would not renew or continue membership.

The results of the survey indicate that the *most* mobile subscribers would be willing to pay for a replacement handset is $178. This varies for age groups, with 18-24 year olds willing to spend twice as much as 55-65 year olds.

The survey results show that 44% of mobile subscribers would not be willing to pay more than $110 to replace their current handset. And 61% would not be willing to pay more than $150.

Vodafone notes that Ofcom defined as marginal, subscribers who were not willing to pay more than £70 – equating to $166 at current rates. As noted above, Ofcom found 34% of subscribers unwilling to pay that much. The Australian research shows that 61% would be unwilling to pay that much. This implies that there are more marginal subscribers in the Australian market than in the UK mobile market today.

This empirical work shows that there is a significant proportion of marginal subscribers to mobile networks – and lower MTAS rates is likely to result in fewer mobile subscribers. Vodafone submits that there are clear welfare benefits from the introduction of a NES in Australia (and large risks of not doing so).

Annex A – Analysys review of WIK model

Annex B – Valletti and Genakos (2007)

Annex C – NES Market Research

Submission to the Department of Communications, Information Technology and the Arts

vodafone

Vodafone Australia Limited ACN 056 161 043

Telecommunications Universal Service Obligation (USO) Review
Issues Paper

November 2007

Executive Summary

Vodafone welcomes the opportunity to comment on the design and operation of the telecommunications Universal Service Obligation (USO), specifically how the protections under the USO should operate in the future. Vodafone appreciates that the review has a broad focus and encourages comment on different approaches and models to best deliver these protections in a rapidly changing industry. It is in this context that we make our submission.

In summary, our submission addresses the following issues:

- the context of the current review;
- the focus of the USO – should it be narrowed or broadened;
- the USO as a consumer safety net;
- identifying those households that do not have access to metro-equivalent voice services;
- the delivery of the Standard Telephone Service (STS) under the USO;
- the role of the Customer Service Guarantee (CSG); and
- funding the USO scheme.

In addressing these issues, Vodafone submits the following:

- focusing the application of the USO is in the long-term interest of rural end-users, and is consistent with the Regional Telecommunications Inquiry (RTI) recommendations and the Government's policy framework[1];
- the USO is a social policy construct and should be considered a consumer safety net – a guarantee that households have access to a basic telephone service where such services are not provided commercially;
- the Broadband Connect funding scheme means that the USO should only apply to the 1 per cent of households that are not to be covered by the OPEL network;
- the USO provider be limited to supplying only basic telephony, and ensure that USO funds are not used to cross-subsidise services in competitive markets, such as mobiles;
- the USO provider should be free to choose the most effective and efficient technology through which to provide the basic telephone service to 1 per cent of rural households;
- if the current USO system is retained, Vodafone strongly disagrees with any move to place an obligation on mobile or broadband service providers to provide services to all Australian households – or to extend the obligations beyond households to general coverage;
- the CSG should not be extended to networks that are competitively supplied;
- the CSG – or similar obligations – should be placed on the OPEL network. This will ensure that rural consumers are protected against substandard network service;
- as the USO is a social policy construct, the USO should be funded via consolidated revenue, possibly via general taxation – however it should not be funded by industry levies; and
- if the USO is to continue to be cost-recovered it must be recovered solely from Telstra – cost recovery theory dictates that it should be recovered from the beneficiary of the scheme.

[1] see *USO Review Issues Paper, p.5.*

The context of the current review

The purpose of the USO is to enable all people in Australia, wherever they reside or carry on business, to have reasonable access on an equitable basis to:

- standard telephone services;
- payphones; and
- prescribed carriage services (none have been prescribed).

Vodafone notes that the purpose of the USO scheme is focused on households or places of business. It is not intended to apply beyond household connections to reasonable access to roaming coverage.

When the USO was designed, it was the only substantial mechanism through which the Government assisted regional and rural areas to have access to basic telephone services. Since then, however, several significant Government funding arrangements have assisted the development of mobile, satellite and broadband services.

Vodafone notes the comments from the 2002 Regional Telecommunications Inquiry that:

> *The current USO approach was developed to underpin the supply of basic telephone services in a monopoly environment. It was premised on there being a single telephony provider who would internally cross-subsidise the cost of providing a limited range of services, regardless of location. While it has been carried over into the new competitive environment, experience suggests the model is poorly suited to an increasingly competitive market place, a wide range of products and diverse consumer demand. The USO, and the basic, minimum standard of service it provides for, now seems at odds with the rapidly expanding telecommunications needs of Australians. (p.207)*

Vodafone submits that the USO needs to be reviewed within the complete context of the Government's assistance for rural and regional telecommunication services, including:

- the telecommunications policy framework;
- the development of a competitive market as the primary strategy for delivering improved services and lower prices;
- a comprehensive set of regulatory safeguards for consumers; and
- targeted funding to support improvements in advanced services, particularly in rural and regional areas, where the market has not been fully effective.

The focus of the USO – should it be narrowed or broadened

Vodafone submits that to maintain the effectiveness of the USO, the scope of the scheme needs to become more focused. Vodafone does not support increasing the scope of the USO – as currently defined – beyond fixed-line services, or increasing the cost to industry.

As above, the main objective of the USO is to ensure that all Australians have access to a basic telephony service, regardless of where they reside or work. Historically, this has resulted in the USO applying to a large number of households in rural and regional Australia. However, Vodafone believes that due to an increase in the level of competition and the introduction of Government programs for supply of telecommunications services to rural households, the potential use for the USO has been significantly reduced as the objective has been / is being met via various mechanisms.

Vodafone believes that the long term interest of rural and regional end users will be promoted by ensuring that the USO complements recently announced major funding agreements such as the Broadband Guarantee Fund and the OPEL rollout.

Such an approach is consistent with the Government's policy framework of delivering improved services and lower prices through the development of a competitive telecommunications market. That is, the Government's first priority is to encourage the market to supply telephone services to rural and regional consumers. The USO should only apply where the market fails to supply services.

We also note that this is consistent with the finding of the RTI – which has been accepted by the Government – that the USO is not an effective mechanism to provide broad consumer access to an increased range of services into the future[2]. Vodafone agrees that the legacy nature of the USO, the method of delivery, and costing and funding of the USO results in minimal innovation in terms of delivery.

Vodafone submits that focusing the application of the USO is in the long-term interest of rural end-users, and is consistent with the RTI recommendations and the Government's policy framework.

Given existing commercial and Government-funded networks, the USO should be considered a consumer safety net

In the context of targeted Government subsidies, and given the significant changes in the telecommunications industry since the introduction of the USO, Vodafone believes that the USO should be a basic consumer safety-net guaranteeing access to a standard telephone service to households where the market does not provide alternative telecommunication services (including PSTN, mobile, satellite or VOIP services). This is consistent with the concept of 'provider of last resort'.

To ensure that the USO is targeted to where it will be of most benefit to consumers, the USO should only be available where it has been demonstrated that the market has not provided alternative telephone services to households. Vodafone believes that it should not be available where households have access to commercial services and it should not be offered on more favourable commercial terms than market-based offerings. Such an approach will ensure that the USO is consistent with the Government policy of providing targeted assistance.

Vodafone believes that the core question that must be addressed by the review is what households do not have access to telecommunications services and therefore would need to rely on the USO safety net. Vodafone notes that this analysis must take into account existing Government subsidies for other technologies.

Vodafone submits that the USO be considered a consumer safety net – a guarantee that households have access to a basic telephone service where such services are not provided commercially.

[2] Finding 7.3.

What areas do not have access to metro-equivalent voice services?

The first question, therefore, in assessing the future role of the USO is to identify those Australian households that do / will not have access to market-supplied telephone services.

Since the 2004 USO Review, several Government programs have been introduced, providing telecommunications services to rural and regional areas, including:

- Broadband Connect Fund;
- Satellite Phone Subsidy Scheme;
- Australian Broadband Guarantee; and
- Preservation of the $2 billion Communications Fund.

These programs ensure that 99 per cent of households will receive wholesale broadband services, and the remaining 1 per cent will receive subsidies to offset the cost of satellite technologies ($2750 per household for broadband and $1200 for satellite phone).[3]

The recently announced winner of the $958 million broadband connect fund – OPEL joint venture between Optus and Elders – will cover almost 9.5 million households by June 2009 through:

- 1,361 WiMAX sites;
- 312 exchanges will also be enabled with ADSL2+ broadband and another 114 exchanges being enabled by Optus on a fully commercial basis; and
- 15,000km of fibre optic backhaul to extend the broadband highways that link rural areas back to major city centres.

Vodafone notes that the Government and OPEL have committed to providing equitable wholesale access to the network. The Government notes that:

> *OPEL will offer a suite of wholesale services, including end-to-end broadband services for resellers, as well as various other options for wholesale broadband, voice services and bundled products ... OPEL Networks will assist regional ISPs and service providers to link into its network, through its extensive spur transmission links, or where necessary through building additional connecting links. (15000 backhaul fibre links).*[4]

Vodafone submits that the Broadband Connect Fund has significant implications for the role of the USO. The Government has made it clear that under this scheme, by June 2009, 99 per cent of households will have access to a wholesale broadband network either through ADSL or WiMax technologies. This means that rural consumers should be serviced by several different retail service providers, providing broadband and voice services to premises. Multiple providers will ensure that rural consumers are charged prices equivalent to, or better than, metro consumers.

Vodafone submits that households who will have access to the OPEL network should not need to rely on the USO scheme to ensure basic telephony – as their household will be connected commercially via OPEL's wholesale network. This means that rural consumers will have access to numerous commercial service providers rather than relying on one monopoly USO provider. Vodafone believes that this arrangement can only benefit rural consumers. We also note that this outcome is consistent with the policy framework of the Government through the use of commercial networks to provide advanced

[3] http://www.minister.dcita.gov.au/__data/assets/pdf_file/69976/Fact_sheet_OPEL_Network.pdf
[4] http://www.broadbandnow.gov.au/opel.htm

telephone services.

Vodafone submits that the Broadband Connect funding scheme means that the USO should only apply to the 1 per cent of households that are not to be covered by the OPEL network.

The delivery of the STS under the USO

As mentioned above, Vodafone believes that the USO should be treated as a consumer safety net, so that consumers who do not have access to market based telecommunications services have a guarantee to a basic telephone service.

Vodafone submits that the USO be used only to fund basic telephone services – the concept of STS should not be expanded to take into account advanced services that could be provided through different types of networks. Vodafone also notes that this is consistent with the RTI finding 7.3, which states that the USO is not an effective mechanism to provide broad consumer access to an increased range of services into the future. The Government has accepted this finding.

As noted in the Issues Paper, a STS is typically delivered over the PSTN network. However, Vodafone notes that in rural and regional areas, this may not be the most cost effective network over which to provide telecommunications services to households. For instance in many remote areas in developing countries telecommunications providers are building base stations to support a mobile network rather than digging trenches in areas where it is not cost efficient to do so.

Vodafone notes that given the deployment of the OPEL wholesale network, 99 per cent of households will have the choice of several service providers, most likely at metro-equivalent charges. In addition, 98 per cent of the population is covered by the Telstra Next G network. Based on these two networks alone, at least 98 per cent of the population will have a choice of retail providers and technologies through which to acquire telephony services.

Consequently, the USO – and the STS provided under it – is only relevant to the 1 per cent of households which do not have access to market based telecommunications services. Vodafone believes the relevant question is what is the most efficient and effective way to deliver the basic STS to these households. A requirement to provide a STS over a copper PSTN network would greatly increase the cost of the USO.

Vodafone believes that the efficiency and efficacy of the USO can be enhanced by enabling the USO provider to choose the least-cost technology through which to provide the basic telephony service to the relevant 1 per cent of households. However, consistent with the intent of the USO, the USO provider should only provide basic telephony services through the USO regime.

Vodafone does not support the use of USO funding to cross-fund the deployment, or enhancement, of mobile (2G or 3G) networks. This includes increasing coverage to infill areas inside the 99 per cent of households subject to competitive supply of services, or to guarantee that consumers are guaranteed coverage outside their household. The use of such funding in this manner would distort the competitive supply of mobile networks, and would likely damage the level of competition. Vodafone notes that such an outcome would be inconsistent with the policy objectives of the Government to develop competitive markets.

Vodafone strongly disagrees with any move to place an obligation on mobile or broadband service providers to provide services to all Australian households – as per the current USO obligations on the USP. If the Government decides not to update the USO requirements to make it a consumer safety net under the terms outlined above, then the requirement to provide a STS to all households should continue to only apply to PSTN services.

Vodafone submits that the USO provider be limited to supplying only basic telephony, and ensure that USO funds are not used to cross-subsidise services in competitive markets, such as mobiles.

Vodafone believes that the USO provider should be free to choose the most effective and efficient technology through which to provide the basic telephone service to the most remote 1 per cent of households.

If the current USO system is retained, Vodafone strongly disagrees with any move to place an obligation on mobile or broadband service providers to provide services to all Australian households, or to use USO funding to improve coverage of mobile phone networks.

The role of the CSG

Vodafone supports the primacy of competition to ensure that consumers receive high-quality services and highly innovative products. However, this is not to say that there is no role for mandated minimum service levels. Vodafone believe there are two broad situations where minimum service levels should be applied:

- monopoly network provider; and
- government subsidised networks.

We recognise that there is a role for regulated minimum standards where services are provided over a monopoly network. In this limited case, Government mandated standards can lead to a welfare enhancing outcome. This in part explains the imposition of the CSG on the USO provider: in the absence of standards, when consumers experience substandard service levels, they have no option but to remain on the USO provider's network.

In addition, Vodafone believes that where firms receive Government funding to roll-out a network, the Government should also impose minimum service levels. Typically, Government assistance for network deployment occurs only where the market is unable to provide services on commercial basis. Consequently, consumers are unlikely to be serviced by several networks. For example, under the OPEL funding, there will be *one* wholesale network provider. That is, while consumers may have access to multiple service providers, all services will be provided over the same network – and retail providers may be unable to influence the customer performance of network-level elements.

Vodafone submits that minimum customer service guarantees should be applied to the USO provider and to the OPEL network. The nature of the guarantees would need to reflect the technology used in each network.

Vodafone submits that the CSG should not be extended to networks that are competitively supplied.

Vodafone submits that the CSG – or similar obligations – should be placed on the OPEL network. This will ensure that rural consumers are protected against substandard network service.

Funding the USO scheme

Vodafone supports continuing the decreasing trend in the cost of the USO. We believe that the cost of the USO will be substantially reduced by ensuring that it is focused to the households that need access to the consumer safety net – that is, households that are not covered by commercially supplied networks, and / or networks funded by Government.

Currently, the cost of the USO is recovered from the Industry. Vodafone notes that the Telstra, Optus and Vodafone contribute 91 per cent of the total USO fund. Vodafone believes that an assessment of the appropriateness of this approach needs to examine whether the USO scheme meets the Government's cost-recovery guidelines.

The Australian Government's cost recovery guidelines[5] state that a program should not be cost recovered where it is not efficient or cost effective to do so. There are several reasons why the cost of a regulation should be recovered directly from industry. These include:

- enhancing efficiency;
    - users will better recognise the cost of providing the service and can adjust their consumption in line with their willingness to pay for the service;
    - government agencies receive price signals about which products and services are in demand and which are not;
- increase equity by making the beneficiaries of government services pay for the cost of providing services.

Vodafone submits that recovering the cost of the USO from the industry does not increase the efficiency of its delivery, nor is it more efficient than funding the USO through consolidated revenue. Importantly, under the current funding arrangements, all parties bearing the cost burden – except Telstra – do not benefit from the scheme.

One possible justification for an industry levy is that firms will pass on the burden of the levy onto consumers – therefore telecommunications consumers will in effect pay for the USO subsidy.

In reality, however, the level of competition in the retail mobile markets results in mobile-only operators – Vodafone and Hutchison – incurring the incidence of the USO levy so that the cost burden falls disproportionately hard on mobile-only providers. Economic principles state that the incidence of the USO charge does not fall onto end-users when firms operate in competitive retail markets – the retail mobile market. However, integrated operators are able to pass the USO cost onto consumers in markets that are less competitive, such as the fixed-line market.

There are two main beneficiaries of the USO scheme: Telstra as the USO provider, and rural end-users. While cost recovery principles state that the beneficiary-pays principles generally should be applied, it does not apply where it is against stated Government policy. Vodafone notes that making rural households pay more for the right to have metro-equivalent services is against the policy intent of the Government. However, Vodafone believes that there is little justification for Telstra to be funded for a

[5] See the Department of Finance's website – http://www.finance.gov.au/finframework/cost_recovery.html

service that it receives significant benefits – indeed as a beneficiary of the USO scheme, Government guidelines dictate that it should pay for the service.

We consider that the regime, as currently structured, gives Telstra significant competitive advantages. Firstly, we do not believe that the provision of USO services requires specific funding from either the Government or industry. While we acknowledge that Telstra does incur real costs in providing services to meet the USO requirements, we consider that these costs need to be weighed against the benefits that Telstra receives from providing service to these customers. These include direct revenues from telecommunications products and services purchased by USO customers – as well as the important intangible benefits that Telstra receives from providing these services (eg. the enhancement of Telstra's brand). We consider that the benefits received from providing the USO would largely offset the costs incurred. As a result, the current USO regime represents a transfer of wealth from industry participants to Telstra, as the provider of USO services.

If the Government judges that USO costs do outweigh the benefits that accrue to Telstra, then the question arises as to how such costs should be funded. At present the industry funds the USO. However, Vodafone believes it is inappropriate for the Government to impose on industry a specific upfront tax to deliver a social policy outcome. If the Government considers that the market is unable to deliver certain social policy outcomes, then the most appropriate approach would be to contract with the industry to provide the service and fund this using consolidated revenue.

Since the USO is a consumer safety net – guaranteeing all consumers that at a minimum they will have access to a basic telephone service – Vodafone submits that efficiency dictates that it is funded through the general taxation system.

Vodafone submits that the USO be funded by the Government through general taxation.

Vodafone submits that if the USO is to continue to be cost-recovered it must be recovered solely from Telstra – Government guidelines state it should be recovered from the beneficiary of the scheme.

Issue	Vodafone Experience	Suggested reform
Access Undertaking	The Commission issued its Mobile Markets Review to investigate MTAS in 03; on 30 June 04 the Commission issued its final decision to declare MTAS, and also issued pricing principles to apply from 1 July 04 to 30 June 07. On 23 March 05 Vodafone lodged an Undertaking relating to MTAS; on 31 March 06 the Commission rejected the MTAS Undertaking; on 22 May 06 Vodafone lodged an application for the review of the Commission's decision regarding the Undertaking to the Australian Competition Tribunal (ACT). That matter was heard by the ACT in September 06 and a decision was handed down on 18 January 07. As is evident, the timeframes, human capital and expenditure required to proceed through the current Part XIC process are substantial and potentially detracting.	**Within the context of Vodafone's overall recommendation to refining the current sequential negotiate / arbitrate / pricing principle / undertaking / appeal access model in Part XIC, we do not support the retention of the Access Undertaking process.**
Undertaking process – Commission as appeal body to its pricing principles	Notably, the Commission's pricing principles are <u>not</u> the subject of an application for full merits review to an independent body such as the ACT. Further, any indicative price determined by the Commission then becomes a factor which the Commission can have regard in determining whether an Undertaking is reasonable. It is only when a party appeals of an Undertaking decision by the Commission to the ACT that a body independent of the Commission examines the appropriateness of the matter of the Undertaking. An appeal to the ACT is the first point of independent review, and is a full merits review of the Undertaking – not the pricing principles.	The Commission sets the access price/s for declared services for a fixed period, such as 3 years, with substantially strengthened criteria for assessment and establishment of the access price – **with such the access price for the declared service being subject to a full merits review by the Australian Competition Tribunal.**

Recommendation

To best promote certainty and efficiency, Vodafone recommends refining the current sequential negotiate/arbitrate/pricing principle/undertaking /appeal access model.

We recommend and support the establishment of a simpler two stage model for Part XIC, in which the Commission sets the access price/s for declared services for a fixed period such as 3 years – with substantially strengthened criteria for assessment and establishment of the access price – with such a decision being subject to a full merits review by the Australian Competition Tribunal.

Issue	Vodafone Experience	Suggested reform
Timeframes for the establishment and application of pricing principles	In Vodafone's experience, it is not unusual for the indicative prices specified in pricing principles to only apply for a limited period of time such as between six and 18 months. In some cases, final pricing principles have been set well into the period for which they apply, and there is a requirement to be backdated. For example, the most recent MTAS pricing principles were finalised on 28 November 2007, five full months into the applicable 18 month period of application of the price (being from 1 July 2007 to 31 December 2008). At the time of submission of this document, a pricing principle has not yet been established for the period of 1 January 2009 onwards. This serves to illustrate the significant business uncertainty faced by operators, that may be forced to 'guess' what the wholesale rate will be and apply it to the forecasting process. The result is that the business is subjected to a material risk profile, not of its own doing, which may well prove to be detrimental to a business's operating budget, financial health and sustainability. This lack of forward looking prices is unsatisfactory for businesses as it creates uncertainty, both in terms of their future costs and potential revenues. Such short durations also appear to be completely unnecessary in the absence of circumstances where the cost to the access provider or the demand for the service is highly unpredictable beyond the short term. Both access providers and access seekers have a legitimate business interest in certainty regarding access prices for a reasonable period of time so they can be incorporated into forecasting, strategic planning and business models.	The Commission sets the access price/s for declared services for a fixed period – **such as 3 years** – with substantially strengthened criteria for assessment and establishment of the access price. **The must be accompanied by the provision of adequate time between consultation and determination of the pricing principle and their taking effect, to enable businesses to incorporate revised access prices into their strategic planning and forecasting processes.**

Issue	Vodafone Experience	Suggested reform
Pricing principles and the effects on the negotiate / arbitrate model	The practical effect of the pricing principles is contrary to the intention of the negotiate/arbitrate model within Part XIC, and is in fact rendering the negotiate/arbitrate model ineffective as commercial negotiation is not possible. Pricing principles effectively set prices in the wholesale market for the relevant declared service, as we have experienced via the MTAS. The practical impact of the existence of pricing principles has constrained commercial negotiations. The arbitration process, and its part in the regime, enables the Commission to apply the indicative prices through determining arbitrations, which reinforces the effect of indicative pricing principles as ceiling prices. In practice therefore, arbitration has been the primary mechanism through which the price of MTAS is 'negotiated'.	Vodafone believes that this is a key element which must prompt a critical review of Part XIC to promote efficiency and certainty for all parties regarding the access pricing of declared services. Specifically, we recommend that for declared services the negotiate/arbitrate model be replaced with **a true price setting regime**
Establishment of pricing principles	Due to the regulatory framework of Part XIC, there is an opportunity for lack of efficiency and transparency in the manner in which pricing principles are determined; and an apparent disparity in the rigour applied in determining pricing principles, and those required to assess Access Undertakings (Undertaking) to pursue an amended price. The Commission can an indicative price for a declared service in pricing principles issued under section 152AQ of the TPA, which becomes the de facto price. However, in determining indicative pricing prices the Part XIC framework does not apply the same rigorous assessment to establishment pricing principles as would be applied in the context of an Undertaking. The TPA specifies six criteria about which the Commission must be satisfied before accepting that an Undertaking is reasonable (section 152AH), and the Commission has generally set a very high threshold for evidence to be so satisfied. If there is anything found to detract from the position then the Commission will reject the Undertaking. However there are no specific criteria about which the Commission must be satisfied prior to issuing pricing principles.	**The Commission sets the access price/s for declared services with substantially strengthened criteria for assessment and establishment of the access price** – such as the criteria specified by the TPA which the Commission currently applies to assessment of Access Undertakings.

Attachment C

Strengthening Part XIC of the Trade Practices Act

To make its operation and application increasingly efficient and transparent, and to deliver substantially greater certainty for all parties.

Issue	Vodafone Experience	Suggested reform
Importance of clear regulatory objectives and monitoring outcomes	The stated objective of the regulation of mobile termination (MTAS) was to increase competition in the fixed line market, particularly in the area of fixed-to-mobile (F2M) retail pricing. There is no requirement on fixed-line operators to pass through the MTAS decrease to consumers, which has resulted in limited and delayed pass through of the MTAS decrease to F2M retail rates. The result of decreasing MTAS has not effected the competitive landscape, as measured by the market shares of Telstra's principal fixed-line competitors (which remain unmoved), and has delivered delayed and partial 'pass through' of MTAS decreases to F2M retail pricing. MTAS decreases result in a windfall to Telstra rather than benefit to consumers. As a result, the 'additional margin' generated for Telstra is a direct cost to the long term interest of end users (LTIE). This situation delivers unwarranted benefits to the incumbent fully-integrated operator and is contrary to the objective of MTAS regulation.	**The objectives of regulation must be fit-for-purpose and be actively monitored. The Commission should be required to present evidence to demonstrate that the objective of the regulation is indeed being met, with such evidence encompassed in a regulatory review process, whereby critical evaluation of objectives and evidence must occur:** - **to decide whether or not to continue the regulatory intervention, and for what purpose; and** - **to ensure that the continuation of regulatory intervention is appropriately directed and, most importantly, delivers consumer benefit and is in the LTIE.**