



**Application for the authorisation of the
HFC subscriber agreement between
NBN Co and SingTel Optus**

AN EXPERT REPORT PREPARED FOR NBN CO AND SINGTEL
OPTUS

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Executive Summary

- 1 NBN Co Limited (NBN Co) lodged applications for authorisation pursuant to section 88(1A), 88(1) and 88(8) of the *Competition and Consumer Act 2010 (CCA)* of certain provisions of the HFC Subscriber Agreement between SingTel Optus Pty Ltd and other Optus entities (Optus) and NBN Co dated 23 June 2011 (HFC Agreement).
- 2 Frontier Economics has been retained by lawyers for NBN Co and Optus to provide an independent expert report on the possible public benefits and detriments of aspects of the HFC Agreement as submitted to the ACCC for authorisation.

The HFC Agreement must be viewed within the broader context of the competition benefits being generated by the NBN

- 3 Any assessment of the public benefits and detriments of the HFC Agreement must be made having regard to the broader context within which this agreement is being made. The HFC Agreement is part of a series of arrangements being implemented that are associated with the establishment of a national broadband network (NBN). This network is being developed partly as a response to concerns about the likelihood of private investment funding a broadband network to provide nationwide coverage to the vast majority of Australian at affordable prices. Importantly, the network is being designed so that the network operator will be a wholesale-only supplier of access to its network, and will be subject to strict non-discrimination requirements.
- 4 The decision to make the operator of the NBN (NBN Co) a wholesale-only provider of services is a response to concerns many industry participants and the ACCC have regarding the incentives facing a vertically integrated provider of wholesale and retail fixed line telecommunications services. In particular, it is considered that a vertically integrated firm has an incentive to disfavour its retail competitors relative to its own retail operation when determining the terms and conditions of access to the wholesale services it will provide to them, and which they are reliant upon to compete in downstream markets against it. It is expected, therefore, that the development of the NBN will be associated with a material promotion of competition in retail telecommunications markets. It follows that anything necessary for the creation and on-going operation of the NBN will be necessary for the achievement of this objective.
- 5 The fact that NBN Co will be a wholesale-only operator also means that it should have little incentive to enter into terms and conditions with individual retail service providers (RSPs) that favour one RSP over others. That is, it is commonly understood in economics that an upstream monopolist will generally prefer to have as much competition in downstream markets as possible. This is because anything that limits competition in downstream markets will have the

effect of raising the price of final goods sold to consumers, and thereby limit demand for final goods and services sold utilising access to the NBN. In turn, this will reduce the ‘derived demand’ for NBN Co services – thereby limiting the extent to which it can expect its operations to be profitable. For this reason, we do not expect it to be in NBN Co’s interests to enter into terms and conditions with any party – including Optus – that will have the effect of lessening competition in downstream retail markets.

Optus will likely continue to service some of its customers using its HFC network in the absence of the HFC Agreement

- 6 Whether or not the HFC Agreement is necessary for the NBN to proceed is not clear. It is our view that, in the absence of the HFC Agreement, two things are likely to occur:
 - One, the Government will still proceed with the deployment of the NBN; and
 - Two, Optus will still wish to compete to provide retail broadband services to consumers. However, in the absence of the HFC Agreement it will – at least in the short-term – be unlikely to serve its retail customers via a combination of the continued use of its HFC network and the acquisition of services provided over the NBN.
- 7 In the medium-to-long term, however, we believe Optus will eventually migrate all of its consumers to the NBN. This is because without additional substantial investment, Optus will be unable to provide a quality of service over its HFC network to match that available over the NBN. However, legislative arrangements associated with the creation of the NBN will limit the ability of Optus to use any network extensions or upgrades to provide retail services to consumers. These differences in the quality of services offered over the two networks will become more stark over time if, as expected, consumer demand for data-rich services increases.
- 8 While it is possible that Optus could offer a ‘cheap and cheerful’ service offering compared to those provided by other RSPs using the NBN, the ability to offer compelling discounted offerings may be limited as a result of regulatory oversight.
- 9 Over time, therefore, we believe competition will force Optus to migrate all of its customers from its HFC network to the NBN in the absence of the HFC Agreement. The main effect of the HFC Agreement, therefore, is to increase the speed with which this will occur.

Terms relating to migration payments; deactivation and decommissioning of the HFC network; and a 15-year commitment to the use the NBN are unlikely to substantially lessen competition

10 Our analysis of events likely to occur in the absence of the HFC Agreement leads us to conclude that:

- Terms providing that NBN Co will pay a fee for each HFC subscriber that Optus migrates from its HFC network to the NBN are likely to help create benefits for NBN Co because they will:
 - reduce costs as a result of a more orderly migration to the NBN; and
 - enable it to receive higher and more certain revenues from connecting customers to the NBN. In turn, this will reduce the costs to NBN Co of raising debt in order to fund future operations.

Where these factors lead to reduced costs for NBN Co, these will likely be passed through to consumers in the form of lower prices. This is because legislative arrangements associated with the NBN mean that NBN Co will be heavily regulated in terms of the prices it can charge RSPs. Against this, migration payments are unlikely to lessen competition in downstream markets because they represent ‘one-off’ payments made to Optus whenever a consumer is migrated to the NBN. In this respect, they will have no on-going effect on the marginal costs or revenues Optus faces when providing services to consumers over the NBN. It is well understood in economics that firms make their pricing and output decisions based on the marginal costs they face, and not with regard to one-off fixed costs. To the extent that migration payments do not effect the ongoing marginal costs of providing services over the NBN, they will not effect competition between RSPs (including Optus) using the NBN.

- Terms requiring Optus to deactivate and decommission its HFC network after it migrates its customers to the NBN are unlikely to substantially lessen competition in any relevant markets. In the first instance, we believe it is highly unlikely that, in the absence of the HFC Agreement, any party would wish to acquire the HFC network in order to provide wholesale services in competition with NBN Co. This is due to the current geographic and technical limitations of the HFC network with respect to providing wholesale services, and the high sunk costs that would need to be incurred for it to compete with the NBN. Further, limitations of the existing HFC network relative to the NBN will, when combined with provisions in the NBN Access Act and the Telecommunications Act that limit the extent to which a firm can upgrade or extend a network to provide retail services, reduce the extent to which the HFC network can be used by Optus to provide retail services in competition with those provided over the NBN in the medium-to-long term.

Against this, the deactivation and decommissioning clauses in the HFC Agreement will give rise to at least three types of public benefits. They will:

- eliminate productive inefficiencies that arise from running two networks (the NBN and Optus' HFC network) side-by-side to provide services to consumers;
 - ensure services are provided to consumers over that network (the NBN) that is likely to involve a lower marginal cost of production; and
 - lead to improved visual amenity and safety due to the removal of overhead cabling and wires.
- Terms requiring Optus to make a 15-year commitment to only use the NBN for fixed line services for mass market operations in the HFC footprint are consistent with common business practice in relation to services provided over infrastructure that involves incurring large up-front sunk costs. They are also likely to create a number of economic efficiency benefits due to reduced uncertainty in cash flows for NBN Co and reduced transaction costs from alternative arrangements involving more frequent and piecemeal contracting. We also believe they are unlikely to substantially lessen competition as Optus would not agree to enter into such an agreement if it expected an alternative infrastructure provider might emerge over the 15-year term of term of this agreement that would provide it with a better way to service its customers.

Cherry picking is possible in the absence of the HFC Agreement

- 11 Finally, our report finds that in the absence of the HFC Agreement, it is conceptually possible that Optus could provide retail services using its HFC network that might threaten NBN Co's ability to both:
- cover its costs (inclusive of a normal profit) of building and operating the NBN; and
 - meet its uniform pricing obligations for consumers in differing geographic areas (and with respect to services provided over different network technologies).
- 12 In this respect, it is possible that Optus could use its HFC network to 'cherry pick' low-cost-to-serve customers in its HFC serving area in a way that could either threaten NBN Co's ability to recover the costs of building and operating its network, or lead it to increase prices for all those consumers it serves.
- 13 Whether or not this will be significant is still hard to tell. To the extent that the deactivation and decommissioning clauses in the HFC Agreement are unlikely to substantially lessen competition in retail markets for broadband telecommunications services, it seems unlikely that cherry picking via the HFC network will pose a significant threat to NBN Co's ability to earn sufficient revenues to cover its costs and/or meet its uniform pricing obligations. In

contrast, however, if the decommissioning and deactivation clauses were expected to significantly lessen competition in retail markets, it is to be expected the risks to NBN Co's ability to recover its costs and/or maintain uniform pricing will be greatest. In that sense, the two concerns go hand in hand – if the ACCC fears that the deactivation and decommissioning clauses in the HFC Agreement are likely to substantially lessen competition in the markets for broadband services, it must also accept that any such competition it might seek to protect would carry a substantial risk of undermining Government policies to set uniform access charges for services provided by NBN Co and for NBN Co to be a commercial entity capable of earning sufficient revenues to cover its costs of building and operating the NBN.

1 Introduction

1.1 Background and Instructions

- 14 NBN Co Limited (NBN Co) lodged applications for authorisation pursuant to section 88(1A), 88(1) and 88(8) of the *Competition and Consumer Act 2010* (CCA) of certain provisions of the HFC Subscriber Agreement between SingTel Optus Pty Ltd and other Optus entities (Optus) and NBN Co dated 23 June 2011 (HFC Agreement).
- 15 Under section 90 of the CCA, the ACCC may not grant the applications authorisation unless it is satisfied in all the circumstances that the relevant provisions and proposed conduct are likely to result in a public benefit that outweighs any likely public detriment, including any likely public detriment constituted by any lessening of competition.
- 16 Frontier Economics has been retained by lawyers for NBN Co and Optus to provide an independent expert report on the possible public benefits and detriments of aspects of the HFC Agreement as submitted to the ACCC for authorisation.
- 17 Specifically, we have been instructed to provide an assessment of the following matters:
- The payment of a fee by NBN Co to Optus for each subscriber migrated to the NBN over a 4-5 year timescale
 - Terms requiring Optus to progressively deactivate and decommission the HFC network within 18 months of the national broadband network (NBN) being completed in each HFC serving area (excluding those parts of the HFC network that provide ongoing support for Optus' mobile infrastructure and business customers)
 - The 15-year commitment by Optus (from the date the NBN is first available in an HFC serving area) to only use the NBN for fixed line services for mass market customers within the HFC footprint, along with a first right of refusal to build any point-to-point fibre that Optus may require within that area.
- 18 Further, we have been instructed to specifically consider and address the likely impact of the continued offer by Optus of services on the Optus HFC network to those customers who are within the HFC network coverage area on NBN Co's profitability and/or its ability to offer uniform national wholesale prices in a hypothetical future in which the NBN proceeds without the HFC Agreement.

1.2 Report authors

19 This report has been written by Richard York, with the assistance of Warwick
Davis and Stephen Farago.

20 I confirm that all the opinions expressed in this report are my own, and are
wholly or substantially based upon my expert specialised knowledge.

21 I am familiar with the Practice Note for Expert Witnesses in Proceedings in the
Federal Court of Australia dated 1 August 2011. I have read, understood and
complied with this Practice Note.

22 I have made all the inquiries that I believe are desirable and appropriate and that
no matters of significance that I regard as relevant have, to my knowledge, been
withheld from the ACCC.

1.3 Structure of this report

23 This report is structured so that:

- Section 2 provides background information describing how competition has developed in Australian telecommunications markets over time, and the nature of the recent reforms by the government in this area and the impacts this is likely to have on Optus' ability to compete with other retail service providers (RSPs) in the future
- Section 3 sets out our views on the relevant counter-factual for assessing the authorisation application in accordance with section 90 of the CCA
- Section 4 considers the public benefits and detriments associated with the payment of a fee by NBN Co to Optus for each subscriber migrated to the NBN over a 4-5 year timescale
- Section 5 considers the public benefits and detriments associated with terms requiring Optus to progressively deactivate and decommission the HFC Network within 18 months of the NBN being completed in each HFC serving area
- Section 6 considers the public benefits and detriments associated with the 15-year commitment by Optus (from the date the NBN is first available in an HFC serving area) to only use the NBN for fixed line services for mass market customers within the HFC footprint, along with a first right of refusal to build any point-to-point fibre Optus may require within that area
- Section 7 considers the likely impact of the continued offer by Optus of services on the Optus HFC network on NBN Co's profitability and/or its ability to offer uniform national wholesale prices in a hypothetical future in which the NBN proceeds without the HFC Agreement.

2 The NBN represents major structural change

24 In this section of the report we show how:

- The building of the NBN, in conjunction with enabling legislation (including changes to the CCA), has been designed to promote competition by changing the structure of telecommunications markets and addressing perceived shortcomings in the design of previous telecommunications regulatory arrangements
- NBN Co does not have an incentive to enter into arrangements with any particular retail service provider (RSP) – including Optus – that would have the effect of reducing competition in downstream telecommunications markets.

2.1 Previous legislative arrangements introduced only limited competition

25 Prior to the late 1980s, telecommunications services were provided exclusively by three non-competing Government owned entities:

- Telecom Australia, which was responsible for the provision of local and national long distance telecommunications services;
- The Overseas Telecommunications Commission (OTC), which was responsible for the provision of international telecommunications services; and
- AUSSAT, which owned and operated a national satellite system that was used by the above two entities.

26 In the late 1980s, however, the Australian government introduced a number of policy changes designed to introduce greater levels of competition into telecommunications markets. In particular:

- An independent telecommunications regulator AUSTEL was established;
- Competition by private businesses was permitted in the supply of value added-services, customer equipment, cable installation and ‘private networks’; and
- AUSSAT was permitted to compete with OTC in the provision of some overseas telecommunications services.

27 In the early 1990’s, Telecom Australia and OTC were merged to form AOTC, an entity that subsequently became Telstra. AOTC/Telstra emerged as a fully integrated incumbent operator of a ubiquitous fixed public switched telephone

network. It was also granted a licence to operate a mobile network. At the same time a tender was issued for a second general carrier licence and a second mobile licence. These were awarded to Optus Communications, which as part of this process acquired AUSSAT. In late 1992, a third mobile licence was awarded to Vodafone. It was in this context that Optus commenced the roll-out of its HFC network in the metropolitan areas of Australia in early 1995.¹

28 After this period of managed entry during the early 1990s, Australian telecommunications markets were then opened to full competitive entry by alternative carriers and carriage service providers in July 1997. This included the facilitation of competitive entry via a telecommunications specific access regime set out in Part XIC of the CCA, which was administered by the ACCC.

29 A key element of the structure of Australia's telecommunications industry through the period of these reforms was that Telstra was able to continue to operate as a vertically integrated provider of both retail and wholesale telecommunications services. Telstra is also horizontally integrated across a number of telecommunications markets, including in relation to fixed-line telecommunications services; mobile telecommunications services; and media and content services.

30 Further, the nature of telecommunications network infrastructure meant it was uneconomic to efficiently duplicate large elements of Telstra's existing network. Therefore, to promote competition in downstream markets, Telstra's retail competitors required access to certain wholesale services provided over its network infrastructure. Arguably, this vertically-integrated structure has created incentives for Telstra not to provide access to wholesale services provided over its network on terms that enable its competitors to effectively compete against it. The access regime contained in Part XIC of the CCA (and earlier under the *Telecommunications Act 1991*) was therefore seen as crucially important, as it enabled Telstra's retail competitors to acquire access to wholesale services provided over its network on terms and conditions that could be set by the ACCC (and earlier by AUSTEL).

2.1.1 The Part XIC access regime achieved only limited success

31 The access and associated pricing regime introduced into Part XIC of the CCA had a degree of initial success in eroding Telstra's retail market share in fixed telecommunications markets. However, even during the early years of the operation of the regime, the ACCC was noting its concerns about the limited

¹ S. Farago, Telecommunications market structure, regulation and competition in Australia, Paper prepared for the APEC Seminar on Regulation and Competition in the Telecommunications Sector, 11-12 September 2003, pp. 1-2.

extent of competition in Australian telecommunications markets. For instance, in 2003 it noted that:

To date, the success of the telecommunications access regime in introducing competition to the industry has been mixed. Consumer choice has improved, prices have fallen and consumer satisfaction with competition and services is generally high.

Nevertheless, Telstra still possesses significant market power in many telecommunications markets ... and continues to be the major supplier in all major telecommunications markets ...

Of particular concern is Telstra's control of inputs essential to providing downstream services. Few of Telstra's competitors have any real alternative to using Telstra's network services as an input for providing their own services, and many are simply competing at the retail level by reselling Telstra's services. In the last two years, Telstra's market share in most markets has plateaued or even increased (in the pay TV market) because of some market consolidation and a levelling or reduction of competitive pressures.²

32 By the latter half of the last decade, a number of concerns were continuing to be raised about the state of competition in Australia's fixed and broadband telecommunications markets. Some of these are set out below.

Telecommunications markets were concentrated, and Telstra's market share remained high

33 During the last half of last decade, Telstra's retail market share in fixed telecommunications markets had stabilised at fairly high levels. In particular, it maintained a market share in fixed voice telephony of around 70 per cent and for broadband services of around 45 per cent.³

34 The Government's Explanatory Memorandum with respect to the Telecommunications Legislation Amendment (Competition and Consumer Safeguards) Bill 2010 also noted that market share data from the ACCC's 2009 Competitive Safeguards report actually showed increases in Telstra's market share in retail fixed voice and broadband services over the period 2005-06 to 2007-08.⁴

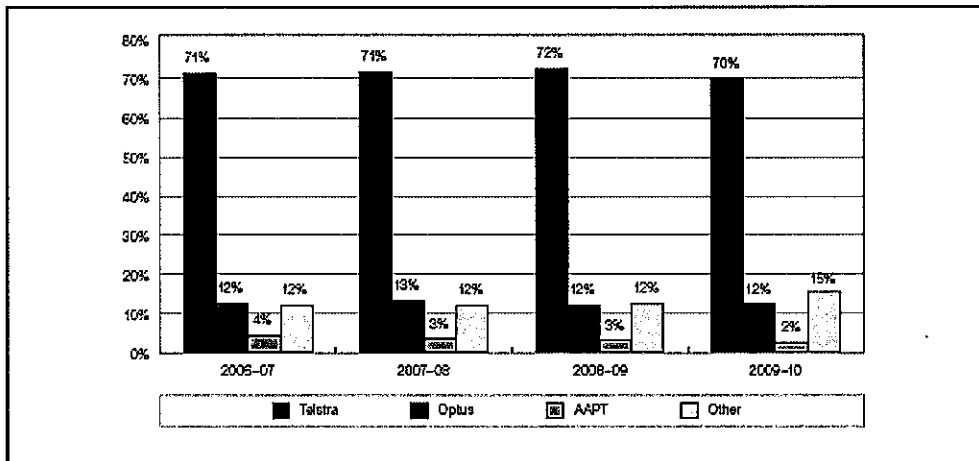
35 That said, recent data from the ACCC's 2011 Competitive Safeguards report, shown in the figures below, shows some slight erosion of Telstra's market share between 2008-09 and 2009-10. Nonetheless, market share data points to Telstra's continuing position of strength in the markets for retail fixed-line services.

² ACCC, *Emerging market structures in the communications sector*, June 2003, pp. 28 – 29.

³ SingTel Optus submission paras 5.4, 5.9 and NBN Co Submission paras 62-63, 66.

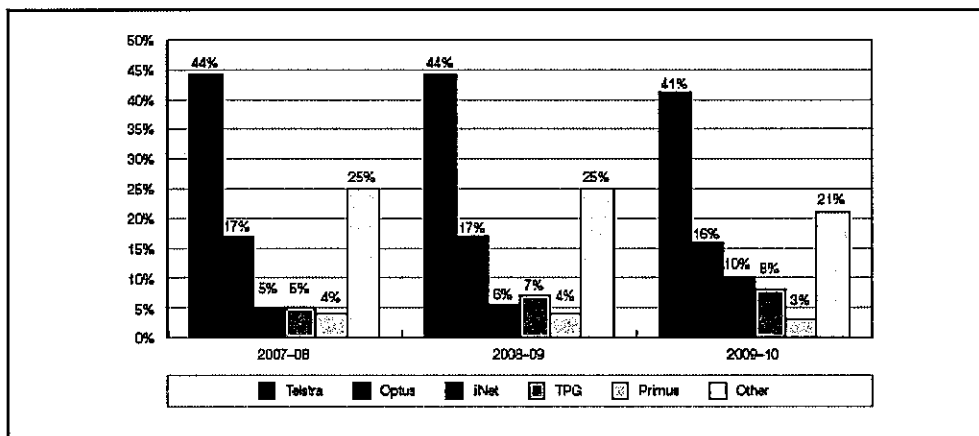
⁴ See Explanatory Memorandum, pp. 22-24.

Figure 1: Fixed voice service shares by subscriber numbers 2006-07 to 2009-10



Source: ACCC Competitive Safeguards report 2009-2010, p. 20.

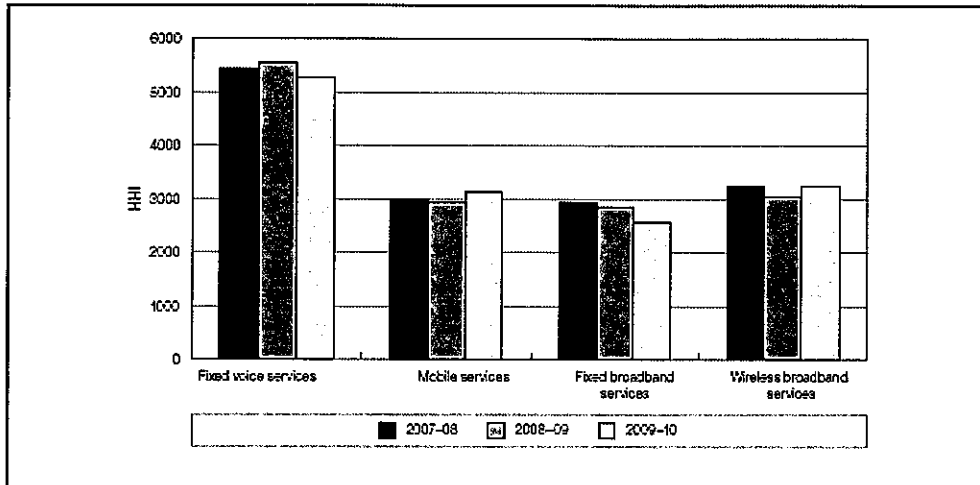
Figure 2: Fixed broadband (DSL plus HFC) market share 2007-08 to 2009-10



Source: ACCC Competitive Safeguards report 2009-2010, p. 34.

The NBN represents major structural change

Figure 3: Concentration levels by HHI various telecommunications services 2007–08 to 2009–10



Source: ACCC Competitive Safeguards report 2009-2010, p. 82.

Infrastructure based competition seemed unlikely

36 One of the key features of the fixed network competitive landscape is the almost complete absence of the growth of alternative network competition in the customer access network (CAN) – the fixed-line network of copper wires and aggregation points that connect residential and business consumers to the broader telecommunications network. For instance, as at June 2010, Telstra’s wholesale and retail access lines still accounted for close to 90% of all fixed telephony lines.⁵

37 In recent years, the ACCC has expressed its pessimism about the prospect of future infrastructure competition for fixed network services emerging in Australia. For instance, the ACCC noted in its 2009 Competitive Safeguards report to the Minister that:

It is becoming increasingly evident that the CAN is (and will remain) an enduring bottleneck, emphasising how critical it is for the access seekers to be able to obtain access to the CAN at reasonable prices.⁶

38 More recently, the ACCC made the following comments about infrastructure competition, including explicit reference to a scenario in which the NBN replaces Telstra’s CAN:

...over the last ten years it has become clearer that Telstra’s copper customer access network (CAN) has more of the character of an enduring bottleneck, rather than a network subject to bypass through technological and market developments and that there has been little evidence of successful competitive

⁵ SingTel Optus submission, para 5.7.

⁶ ACCC, *Telecommunications Competitive Safeguards for 2007-2008*, pp. 11-12.

infrastructure deployment. In other words, the copper CAN is likely to be an enduring bottleneck...

The ACCC considers that this is more so given the Government's decision to proceed with the NBN, with significantly greater service potential than the copper CAN.⁷

39 The ACCC's lack of confidence in the likelihood of alternative fixed-line infrastructure investment is also reflected in recent changes to its approach to pricing fixed-line telecommunications services. In its role as competition regulator, the ACCC from 1997 until around two years ago repeatedly expressed its desire to promote efficient 'build' versus 'buy' decisions by potential entrants. That is, it sought via its access pricing principles, and the setting of access prices, not to bias the decisions of entrants in favour of infrastructure-based entry or access-based entry. This was one of the key rationales for the use of the total service long run incremental cost (TSLRIC) pricing methodology for pricing most of Telstra's telecommunications access services.

40 The idea behind this was that an access price determined on the basis of TSLRIC would reflect the build costs that an efficient new entrant should incur to enter the market. Therefore, to the extent that its actual costs of entry via building its own network were higher than this, it would be a more efficient outcome for the economy if the new entrant bought access services from the incumbent access provider.

41 In more recent pricing principle determinations, however, the ACCC has strongly indicated it no longer considers entry as a rationale for setting access prices to ensure neutrality between build and buy decisions faced by access seekers – now coming down more in favour of buy given the much higher than efficient prices necessary to promote build.

42 In its last review of pricing principles before the new telecommunications pricing regime was introduced (noting that the ACCC has broadly carried over these principles for determining prices under the new pricing regime) the ACCC stated:

...it is now less clear that the build/buy rationale for TSLRIC+ pricing remains as strong, particularly for fixed-line services. Telstra's copper customer access network (CAN) displays enduring bottleneck characteristics, rather than being a network likely to be bypassed through technological and market developments.⁸

⁷ ACCC, *Pricing principles and indicative prices for LCS, WLR, PSTN OTA, ULLS, LSS 1 August 2009 to 31 December 2010*, December 2009, p. 10.

⁸ ACCC, *Pricing principles and indicative prices for LCS, WLR, PSTN OTA, ULLS, LSS 1 August 2009 to 31 December 2010*, December 2009, pp. 1-2.

The ACCC believes structural separation is necessary

43 In recognition of the incentives a vertically integrated competitor has to deny access to its competitors, or to provide access in ways that limit their ability to effectively compete in downstream markets, past Australian governments have introduced a number of forms of ‘separation’ of Telstra. These forms of separation seek to achieve more competitive market outcomes, and have included:

- An accounting separation regime, whereby Telstra was required to keep a “chart of accounts and cost allocation manual” which required horizontal separation of Telstra’s retail services, and the reporting of retail revenue and historical cost information for each of Telstra’s retail businesses.⁹
- The introduction of record keeping rules, which required Telstra to keep vertically separated accounts on an historical and current cost basis, and to report revenues and costs for Telstra’s retail and wholesale services.¹⁰
- An operational separation regime, whereby Telstra was required to maintain three separate business units (wholesale, retail and key network services), and to operate these business units substantially separate from each other.¹¹

44 Despite these measures, the ACCC has long held concerns about the effectiveness of these regimes, and their ability to ensure competitive telecommunications markets in Australia. For instance, in 2002 the ACCC noted that:

... access regulation alone may not be sufficient to curb market power in converging markets such that it may be necessary to consider whether structural separation of ownership inputs ... is required.¹²

45 More recently, the ACCC has noted that:

... the current operational separation regime aimed at promoting equivalence is ineffective and does not address Telstra’s incentive and ability to discriminate against its competitors.¹³

⁹ Explanatory Memorandum, *op. cit.*, p. 16.

¹⁰ *Ibid.*

¹¹ *Ibid.*, p. 17.

¹² ACCC, *ACCC Telecommunications Reports 2000-01: Report 1 – Telecommunications competitive safeguards*, 2002, p. 18.

¹³ ACCC, *Submission to the Department of Broadband, Communications and the Digital Economy “National Broadband Network: Regulatory Reform for 21st Century Broadband”*, June 2009, p. 18.

46 This has led the ACCC to conclude that some form of structural separation is needed to overcome the problems of vertical integration in the telecommunications sector. For instance, the ACCC has noted that it considers:

... that structural separation is the only regulatory arrangement that will in practical terms address Telstra's incentives and ability to discriminate against its competitors and thereby ensure equivalence.¹⁴

47 The ACCC's long advocated option of structural separation of the wholesale and retail providers of fixed line telecommunications services in Australia is now being realised with the creation of the wholesale only NBN.

2.2 The NBN is designed to promote competition in retail markets

48 It is within this context that the national broadband network (NBN) is being built, alongside other major regulatory reforms in the telecommunications industry.

49 The over-riding feature of the NBN is that it will remove from Australian telecommunications markets the existence of a vertically integrated provider of both wholesale and retail fixed line telecommunications services given NBN Co will only be able to provide wholesale services to its customers. Further, the NBN will be an open-access network in the sense that it will be available to any retail service provider (RSP) to acquire wholesale services from it. The terms and conditions of access will also be subject to strict non-discrimination requirements.

50 Importantly, the structural reforms envisaged for the industry are specifically designed to promote competition in retail telecommunications markets by removing the ability of an owner of fixed-line telecommunications infrastructure to use control over access to its network to limit competition against it in downstream markets. In this regard, the Explanatory Memorandum to the *Telecommunications Legislation Amendment (Competition and Consumer Safeguards) Bill 2010* noted that:

Operating as a wholesale-only provider, the NBN Company (NBN Co) will solve the current structural issues in the telecommunications sector where the vertically integrated incumbent owns the only ubiquitous fixed-line network in Australia, and competes against its wholesale customers in downstream retail markets. NBN Co will have less incentive to unfairly discriminate between access seekers. It will also be required to operate on an open access basis and provide equivalent terms and conditions of access to all access seekers.¹⁵

¹⁴ *Ibid.*, p. 31.

¹⁵ *Telecommunications Legislation Amendment (Competition and Consumer Safeguards) Bill 2010 – Explanatory Memorandum*, at p. 9.

The NBN represents major structural change

- 51 The advent of the NBN, therefore, means that the fixed telecommunications services market in Australia is to be transformed from one in which Telstra is the overwhelmingly dominant (and regulated) wholesale and vertically integrated retail provider, to one in which NBN Co will be the dominant (and regulated) wholesale only provider. This transformation can be expected to lead to a vast improvement in both overall regulatory efficacy and competitive conditions at the retail level to that which has existed previously. It will finally address the problem of anti-competitive discrimination at its root cause. This should not be overlooked by the ACCC in assessing the competitive effects of the proposed agreement.
- 52 These changes to government policy and industry structure also have two major implications for the extent to which the HFC Agreement is likely to result in a public benefit that outweighs any likely public detriment, including any likely public detriment constituted by any lessening of competition.
- 53 First, terms and conditions associated with the proposed arrangements that are necessary for the implementation and survival of the NBN will therefore be necessary for the promotion of competition outlined above. Whether or not the HFC Agreement is necessary for the NBN build to go ahead (and for the network operation to continue to be viable) is unclear. However, we do believe the HFC Agreement is likely to increase the speed with which customers will migrate to the NBN, and therefore bring forward the economies of scale likely to emerge from the operation of the network earlier than would otherwise be the case. It is also likely to reduce the period over which duplication of network infrastructure will occur, with consequent reductions in the period over which telecommunications services are inefficiently provided in Australia.
- 54 Second, and perhaps more importantly, NBN Co – as a monopoly provider of wholesale fixed-line services – will have no incentive to agree to terms that will advantage one downstream RSP over another. It is commonly recognised in economics that where a monopoly exists in an upstream market, it will generally prefer to supply services into as competitive a downstream market as possible.¹⁶ The reason for this is that the demand for an upstream monopolist's services is derived from the demand for those retail services supplied in downstream markets by the upstream monopolist's wholesale customers. It follows, therefore, that any reduction in competition in downstream markets will be likely to lead to

¹⁶ An exception to this general principle may exist where an upstream monopolist seeks to deny cheaper prices to one group of wholesale customers relative to those it charges to another. In this instance, an upstream monopolist may choose not to supply certain smaller downstream customers in order to maintain a credible position to only supply services to high volume customers at monopoly prices. See, for instance, *Virgin Blue Airlines Pty Limited (2006)*, ATPR 42-092 at pars 301-303. In this instance, however, NBN Co will have no ability to operate in this way as legislative arrangements associated with the deployment of the NBN will prevent it from either denying access to smaller RSPs, and pricing of services provided over the NBN will be subject to strict non-discrimination requirements.

an increase in prices in downstream markets, with a consequent reduction in the level of final goods bought and sold. In turn, this reduces the derived demand for the upstream monopolist's services, with a consequent reduction in its profits.

- 55 The notion that an upstream monopolist will not wish to have a reduced level of competition in downstream markets in which it does not compete is well accepted in economics, and captured by the theory of "double marginalisation".¹⁷ In this respect, "marginalisation" refers to the idea that a monopolist will seek to maximise profits by equating marginal cost and marginal revenue, and in so doing create a positive profit margin between the price and marginal cost of providing a service. Doing so, however, leads to a lower level of output than that expected in competitive markets, and a level of prices above marginal cost. Where monopolists exist in vertically-related upstream and downstream markets, each will undertake the same profit-maximising exercise – only in these circumstances, the downstream monopolist's marginal cost per unit will be influenced by the price it pays per unit to the upstream monopolist. In this case, therefore, a second exercise of equating marginal revenues and costs will lead to a further increase (or "double margin") in prices above underlying costs, and a further reduction in demand for the product – including the derived demand for the upstream monopolists product. It is this further reduction in demand in the final goods market that leads to a reduction in profits for the upstream monopolist.
- 56 It follows that in entering into the Agreement with Optus, it is not in NBN Co's commercial interest to restrict downstream retail competition. In fact, it is in NBN Co's interest as an upstream monopolist to promote as much retail competition in downstream markets as possible. This is because greater retail competition will lead to a greater quantity of retail services sold, which will in turn increase the quantity of upstream access services sold by NBN Co. This will increase the prospect of NBN Co being profitable, or at least reducing the extent to which it may be unprofitable.

¹⁷ See, for instance, J. Tirole, *The Theory of Industrial Organization*, MIT Press, 1988, pp. 174-175 and S. King and R. Maddock, *Unlocking the Infrastructure: The Reform of Public Utilities in Australia*, Allen and Unwin, pp. 90-94.

3 The relevant counterfactual

57 In examining the likely benefits and detriments of the terms contained in the HFC Agreement, it is necessary to consider the likely situation both with and without the HFC Agreement.

58 It is important to note that the ACCC's task here is not to determine whether the government's policies being implemented with respect to the NBN are consistent with those that would best promote economic efficiency. In this respect, it is possible that minds may differ as to whether the NBN (and the arrangements associated with its implementation) – being implemented by the existing Government – represent ideal government policy. However, the task of the ACCC in this instance is not to stand in judgement of the NBN. Rather, it is to consider whether, in the circumstances (including in the face of existing legislative arrangements), the HFC Agreement is likely to result in a public benefit that outweighs any likely public detriment, including any likely public detriment constituted by any lessening of competition. This does not involve consideration of a hypothetical counter-factual that might involve alternative policy and legislative arrangements that may be argued to deliver an alternative or improved level of public benefit. Our consideration of the factual and counter-factual associated with the HFC Agreement has been undertaken on the basis of existing government policy and legislative arrangements.

59 Both Optus and NBN Co are of the view that a possible counterfactual is that there is no deal between NBN Co and Optus to migrate its customers to the NBN.¹⁸ In this counterfactual, Optus is likely to continue to operate its HFC network, at least in the short term.

60 Some uncertainty remains about whether the counterfactual is that the Telstra and NBN Co Definitive Agreements are implemented, and whether this will affect the roll out of the NBN. One possibility is that the Definitive Agreements are implemented and the NBN is deployed in its current proposed form. Another is that the Definitive Agreements are not implemented, but the NBN proceeds anyway. A further scenario is that the Definitive Agreements do not proceed and the NBN either stops or changes in scope. The various scenarios seem to add considerable complexity to the analysis.

61 We believe that if the HFC Agreement does not proceed, two things will happen. First, we believe the build of the NBN will continue. In the absence of a change of government, it appears to us that the current government is committed to proceeding with the deployment of the NBN. In this regard, we are not aware of any statements made by the Government to the effect that the NBN will not proceed if the HFC Agreement is not authorised. That said, it is possible that

¹⁸ Optus submission, p. 10, NBN Co submission, p. 24.

NBN Co or the Government will choose to reprioritise or delay the rollout of the NBN to certain geographic areas due to the HFC Agreement not proceeding.

62 Second, in these circumstances, we believe that Optus will continue to provide broadband services to retail consumers. Failure to do so will significantly reduce its ability to effectively compete in fixed line telecommunications markets due to the growing importance of broadband to fixed-line consumers. However, we believe it will service these consumers via a combination of:

- the use of its HFC network; and
- acquisition of services provided by NBN Co. This is especially the case for those customers that it presently serves using access to Telstra's copper network.

63 Optus will choose which consumers to provide using each technology in order to best maximise its profits. In this regard, we think the marginal costs of providing some consumers with certain types of low-spend broadband services via its HFC network may be lower than the prices set by NBN Co for access to the NBN. That is, while the marginal costs of providing services over the NBN are likely to be lower than those of providing a similar level of services over an HFC network (see paragraphs 112-114 below), the nature of NBN Co's charging arrangements mean it is likely to set prices that seek to recover more than the marginal cost of providing wholesale broadband access due to the need to recover the fixed and common costs of providing services over the NBN. For those consumers willing to consume a lower quality broadband service offering, Optus may find it faces a lower cost in continuing to provide services to some of these consumers over its existing HFC network than over the NBN.

64 Over time, however, we believe Optus will in the counter-factual eventually migrate all of its customers to the NBN. This is because in the absence of substantial investment of its own in sunk network infrastructure assets, Optus will be unable to provide a quality of service over its HFC network to match that available over the NBN. While it is possible Optus could offer a more "cheap and cheerful" service offering that provided low-price alternative broadband service offerings to those provided by RSPs using the NBN, the ability to offer compelling discounted offerings will be limited to some extent by the fact that services provided over the NBN will be subject to price regulation by the ACCC. Further, over time, it is likely that consumers will wish to take advantage of the increased download speeds available over the NBN as more data-rich applications are developed for use with the NBN.

The relevant counterfactual

65 Where consumers have available to them services provided by other RSPs over the NBN (who in turn will be able to acquire access to these services at regulated prices), consumers will increasingly demand that Optus provide a similar quality of service offering to them, or they will choose to acquire services provided by its rivals. In the face of such competitive threat, Optus will have two options available to it:

- Increase its investment in its HFC network to increase the quality of services it can provide over this network to approach those provided over the NBN. However, doing so will come at a considerable sunk cost. Incurring this sunk cost will likely be unattractive to Optus.
- Migrate customers to the NBN. Doing so is likely to have some appeal to Optus because using the NBN will involve substantially less fixed costs than upgrades or expansions to its existing HFC network.

66 Over time, therefore, we believe competition would force Optus to migrate its customers from its HFC network to the NBN in the absence of the HFC Agreement. The main effect of the HFC Agreement, therefore, is to increase the speed with which this will occur. While the HFC network may be used to provide some services to consumers for some period of time in the absence of the HFC Agreement, we believe the number of consumers served by the HFC network will gradually decline over time.

4 Migration payments

67 We are instructed that, under the HFC Agreement, Optus will actively migrate customers of its HFC network onto the NBN as it is built out in Optus' HFC footprint. NBN Co will pay Optus a fee for each HFC subscriber migrated to the NBN.

4.1 There are public benefits from the migration payments

68 The primary form of public benefit from the HFC Agreement is in the form of cost savings, or improvements in productive efficiency.¹⁹ These efficiencies should be substantially passed through to consumers in the form of lower prices.

69 NBN Co receives two kinds of benefits from the HFC Agreement:

- lower costs associated with a more orderly migration of customers; and
- higher and more certain revenues from connecting more customers to the NBN.

70 It is very difficult to quantify the size of such benefits. Nonetheless, there is some evidence to suggest that the size of each could be substantial.

71 The efficiency associated with an orderly migration of customers relates to efficiencies of 'mass migration' on an area-by-area basis rather than piecemeal approaches. To the extent that Optus is able to migrate more of its customers in a given area to the NBN at the one time, it is possible this will create opportunities for Optus and NBN Co to co-ordinate their activities in this area to facilitate this migration *en masse* in ways that can produce cost savings for both NBN Co and Optus (e.g. from having less truck and technician visits to a given geographic area over time as individual visits are able to be used to migrate a series of customers together, rather than requiring a succession of different truck/technician visits each time a subscriber in a given area takes up services provided over the NBN).

¹⁹ Note that the migration payments themselves are merely transfers between Optus and NBN Co, and have no direct effect on community welfare. It is the effect that they have on production or consumption that is important for resource allocation and efficiency.

72 The benefits of higher and more certain revenue for NBN Co will also have an effect on the operation of its business. In particular, the certainty of the revenues and the faster move into profitability it allows (on a cash basis) should reduce the cost to NBN Co of raising debt. That is, revenue certainty will be a factor in how lenders assess the risks of lending to NBN Co. As McKinsey noted in the Implementation Study:

Discussions with debt market participants confirm that debt financiers want to limit their exposure to roll-out risk. Potential debt financiers will likely wait until NBN Co has proven cash flows before lending significant levels of debt. Therefore, it is preferable and practical that NBN Co wait until EBITDA is positive to raise corporate debt.²⁰

73 Given that Optus has around 500,000 subscribers on its HFC network, even assuming fairly basic take-up of services by Optus customers (say \$30-40 per customer per month²¹) the cash flow benefit to NBN Co might be around \$180-\$240 million per year once all customers have migrated (and a significant proportion of this will represent positive cash-flow, in the sense that revenues will lie above marginal costs²²). It is difficult to identify how this might translate directly into a saving for NBN Co, but in the context of cash profits (EBITDA) forecast at the end of the rollout period (the financial year 2021) of around \$2 billion, the customer acquisition appears material to the business case.²³

74 While both of the identified benefits will directly accrue to NBN Co, they will also flow to consumers as NBN Co will be heavily regulated in terms of the prices it can charge. In this respect, there is an extensive regulatory framework in place which provides, *inter alia*, that:

- NBN Co cannot supply services to service providers unless that service is a ‘declared service’;
- NBN Co can only supply ‘declared services’ in one or more of a number of ways specified in legislation; and

²⁰ Implementation Study, p. 378.

²¹ Optus suggests in its submission (paragraph 6.28) that the average revenue per user for its customers should be higher than average because its network has been rolled out in relatively affluent areas, and because approximately 87% of Optus’ HFC subscribers take more than one service, as compared to approximately 40% of Telstra’s customers. The assumption used of \$30-40 per month is therefore likely to be conservative.

²² It should be noted that a price in excess of marginal cost will not necessarily represent economic profits given the high fixed costs of deploying the NBN. In this respect, prices in excess of marginal cost are needed to ensure NBN Co is able to generate sufficient revenues to both cover its marginal costs of producing an extra unit of output and make a contribution towards the recovery of fixed and common costs.

²³ See NBN Co’s *Corporate Plan 2011-2013*, December 2010, p. 134.

Migration payments

- once a service is a ‘declared service’, NBN Co is subject to specific supply obligations and non-discrimination obligations in respect of that ‘declared service’.²⁴

75 This means that there will not be any wholesale services that NBN Co offers “commercially” outside the boundaries of the regulatory regime.²⁵ In these circumstances, it is highly unlikely that the ACCC would allow services to be offered on terms that allow for NBN Co to earn monopoly returns (returns above the opportunity cost of the capital employed). Lower costs are therefore highly likely to deliver lower prices for consumers.

76 We also note that Optus will also save resource costs associated with running systems on two networks. Optus values those benefits to be in the order of **[RESTRICTION OF PUBLICATION OF PART CLAIMED]**:

This will mean that Optus will be required to maintain duplicate sets of systems, processes, customer care functions and operational support capabilities to service its fixed line customer base....In relation to efficiency benefits, the HFC Agreement will enable Optus to achieve savings in ongoing capital and maintenance costs in the order of **[RESTRICTION OF PUBLICATION OF PART CLAIMED]** post-migration of its services to the NBN. These savings will be generated because Optus will be able to progressively de-commission the HFC Network and support platforms.

77 These benefits are an improvement in economic efficiency (productive efficiency). **[RESTRICTION OF PUBLICATION OF PART CLAIMED]** Migrating all customers to the NBN allows for such costs to be only incurred once (by NBN Co) rather than twice (by NBN Co and Optus).

4.2 Any public detriments are likely to be negligible

78 It is possible that some might argue that migration payments could potentially reduce competition for either of two reasons:

- They might reduce competition between Optus and NBN Co to supply (or self-supply) wholesale broadband services.
- They might reduce competition between Optus and other access seekers when services are acquired from NBN Co (i.e. to use the NBN).

79 We find that a significant public detriment is not likely to occur in either case, however, and that any effect on competition would be negligible.

²⁴ NBN Co, *Discussion Paper: Introducing NBN Co's Special Access Undertaking*, July 2011, p. 3.

²⁵ *Ibid.*

4.2.1 Competition between Optus and NBN Co will be geographically limited and short lived

80 To the extent that the migration payments are critical to Optus shifting its customers to the NBN, then it might be expected that in the counterfactual situation Optus will compete with NBN Co to some degree. If this competition has the effect of delivering lower prices for broadband services for consumers, then the loss of that competition might be a public detriment related to the migration payments.

81 The first point to note, however, is that any such competition is likely to be substantially limited by the extent of the HFC footprint. Optus points out in its submission that while its network passes 2.4 million homes, only 1.4 million of those are considered serviceable addresses due to technical or practical difficulties.²⁶ By comparison, NBN Co's fibre network has a minimum fibre coverage obligation of 90 per cent of Australian premises (homes, schools and businesses). By 2021, the end of the fibre roll-out period, NBN Co is forecasting that more than 12 million premises will be passed and more than 8.5 million premises will be connected.²⁷

82 The vast majority of Australians could therefore acquire no competitive benefit from Optus continuing to operate its HFC network.

83 Even then, for any such detriments to be material to those affected consumers would require two further conditions to hold.

84 The first condition is that Optus would have to undercut NBN Co on price to offset the technological inferiority of its service. The HFC network is a shared network, congestion levels affect capacity and particular speeds cannot be guaranteed (even after recent capacity upgrades). The NBN will offer significantly better service offerings in each of these dimensions (see Optus submission, paragraphs 2.19-2.20); in simple terms, there is far less sharing in the design of NBN Co's network than is inherent in the current HFC network design. Further, there are limitations on using the HFC network to provide business services, because it does not offer symmetric capacity, diversity or business grade quality.

85 The second condition is that competition between Optus and NBN Co must persist over time. This seems unlikely, for three main reasons:

- a. Optus would have to continue investing to meet NBN Co's rapid progress in upgrading its network to provide new and improved services. These costs

²⁶ Optus submission, paragraph 2.5.

²⁷ NBN Co, *Corporate Plan*, p. 77.

would be both fixed and sunk. Optus refers to these realities in its submission:

Whilst HFC Networks also have an upgrade path to higher speeds allowing peak speeds of over 300Mbps, HFC technology will lag the capability of fibre to the premise technology. More pertinently, as mentioned earlier, it is unlikely that such future technology would ever be deployed because it effectively requires significant re-engineering of the network through node splitting or extending fibre deeper into the network (this pushes the HFC Network to more closely resemble a fibre to the premise network with fibre being provided closer to the home and the coaxial portion shared with fewer users). This is costly and would require significant capital expenditure.²⁸

This view is also consistent with the findings in the McKinsey Implementation Study.²⁹

- b. The Government has also imposed legislative controls³⁰ on new investments in fixed line networks outside of existing coverage areas, or on upgrades to networks within existing coverage areas. In particular, network extensions or upgrades (to a speed greater than 25Mbps/s) could only occur if the HFC network owner supplied layer 2 wholesale services on an open access wholesale-only basis. Our understanding is that this condition could not readily be met by the Optus HFC network (“There is no investment case to support such a scenario.”³¹)
- c. As Optus drops customers due to a growing service gap quality and more intense retail competition from the RSPs using the NBN, over time its fixed costs per user will rise (even if we exclude sunk costs associated with the original network rollout.) These fixed costs include costs like marketing and platform support expenses. Even if Optus’ marginal costs of supplying HFC customers with services on the HFC network are lower than NBN Co’s prices now, this cost advantage will be likely to diminish over time and Optus will no longer be able to justify further investments. At this point, the network will be de-commissioned and competition will cease. Although making reference to copper networks, the Implementation Study McKinsey makes the following point with reference to United States evidence:

Evidence suggests, however, that a meaningful proportion of the costs of operating the network are fixed and that, as a result, the average unit costs of operating a line will increase as the number of subscribers decrease. AT&T in

²⁸ Optus submission, 2.22.

²⁹ Implementation Study, pages 106, 108.

³⁰ Contained in the *Telecommunications Legislation Amendment (National Broadband Network Measures—Access Arrangements) Act 2011*.

³¹ Optus submission, paragraph 6.26.

a submission to the FCC states that customers who leave their network raise the average unit costs for their other customers.³²

4.2.2 Payments that do not affect marginal costs or marginal revenues have no effect on competition

86 A second argument could be that payments from NBN Co to Telstra and Optus allow each to build a ‘war chest’ which will be used to advantage these firms in competing for customers on the NBN. Because not all firms that have existing customers will receive these payments, competition between these firms and Telstra and Optus will be distorted. This argument is raised, for example, by Herbert Geer (on behalf of iiNet, Adam Internet and Internode) in the context of the payment of migration incentives to Telstra for moving its customers to the NBN:

“The provision of this ‘war chest’ to an already dominant player in retail markets gives Telstra a significant competitive advantage over access seekers.”

87 In the first instance, and as indicated in section 2.2 above, it is not in NBN Co’s interests to enter into agreements with Optus (or any other party, for that matter) that will lessen competition in downstream retail markets. Doing so will likely lead to some level of “double marginalisation”, with consequent reductions in the demand for NBN Co’s services and its overall level of profitability.

88 Further, and perhaps because of this incentive, it is highly likely that the nature of the migration payments made by NBN Co will have no effect on competition between RSPs using the NBN. This is because, based on the material provided to us, we understand that NBN Co will make a one-off, fixed payment to Optus for each subscriber that migrates to the NBN over a specified time period. The payment of migration fees will therefore have no effect on the marginal costs or revenues Optus faces when providing services to consumers over the NBN.

89 A migration payment could only affect competition between Optus and other RSPs using the NBN if it altered the marginal costs and revenues Optus faced when providing services over the NBN (and all RSPs did not receive an identical deal). This result holds regardless of the type or form of competition. It is standard economics that firms will set their marginal revenues equal to their marginal costs; this is the point that maximises their profits whether they are a monopoly, an atomistic firm in perfect competition, or engaged in some kind of oligopoly behaviour.³³

³² McKinsey Implementation Study, p. 248.

³³ See, for example, Pindyck and Rubinfeld, *Microeconomics*, 2nd edition, p. 247 (“The rule that profit is maximised when marginal revenue is equal to marginal cost holds for all firms, whether competitive or not.”).

- 90 The structure of the payment offered is therefore critical to its competitive effect. As an example, if the payment to Optus was in the form of a discount on NBN Co's access prices, then Optus may well have a competitive advantage over other seekers. But, as we have identified, this is not how the payment is structured. As the payment is fixed per subscriber, it will not influence Optus' on-going marginal cost or revenue of providing a service to the existing Optus subscriber over the NBN. Further, NBN Co is under strict non-discrimination requirements which ensure that payments of the kind described cannot be linked to ongoing marginal costs or revenues (because such measures would be discriminatory).
- 91 Note this analysis holds even if Optus elected to compete by subsidising upfront customer acquisition costs (such as consumer premises equipment) in the early periods of NBN operation. Put simply, if a customer is worth having, then it will be worth having them regardless of how the customer acquisition is financed.³⁴ Even if Optus is gifted the funds, it still needs to consider the opportunity costs of earning a return on those funds in alternative investments.

³⁴ The only possible exception to this analysis would be if Optus was currently capital constrained, and the payments from NBN Co alleviated that capital constraint. This might occur, for example, if the acquisition of customers required large upfront costs to be incurred which were to be recovered over a contract life and this would require large borrowings or equity financing. However, there is no evidence to suggest that customer acquisition subsidies will be required, or that the payments would alleviate any capital constraint on Optus. If it is worthwhile to serve a customer based on expected costs and revenues, then we would expect that a long-established RSP such as Optus, with the financial backing of the multinational communications firm SingTel, would have little difficulty in raising the necessary funds to do so.

5 Deactivating and decommissioning the HFC network

92 We understand that the HFC Agreement contains terms requiring Optus to progressively deactivate and decommission the HFC network within 18 months of the NBN being completed in each HFC serving area. This has two implications for an analysis of the HFC Agreement under section 90 of the CCA:

- First, Optus will agree to no longer serve its customers over its HFC network within 18 months of the NBN being completed in a given service area; and
- Second, no other network operator will be able to acquire the assets of Optus' HFC network in order to provide services to consumers with it.

93 In sections 5.1 and 5.2 below, we set out our views on what we believe will occur with respect to the use by Optus and potentially other network operators of the HFC network if the proposed HFC Agreement does not proceed. In sections 5.3 and 5.4, we then consider the implications of these likely outcomes in the absence of the HFC Agreement in wholesale and retail markets for high-speed fixed broadband services. We then consider in section 5.5 whether the HFC Agreement is likely to have any public benefits relative to the situation that will occur in the absence of the agreement.

5.1 Optus will likely continue to use its HFC network in the counter factual

94 As indicated in section 3, we believe it is likely that the NBN will continue to be built in the absence of the HFC Agreement. We also believe that Optus will continue, at least for some time, to provide high-speed fixed broadband services to its consumers using a combination of access to the NBN and use of its HFC network.

95 Over time, however, we expect that it will progressively migrate all of its customers to the NBN. In that sense, therefore, the HFC Agreement simply increases the speed with which Optus will migrate its customers to the NBN, and therefore cease to provide services to consumers over its HFC network. In the short-to-medium term, therefore, Optus is likely to continue to provide services to some consumers over the HFC for a period of time longer than it would if the HFC Agreement proceeds.

5.2 It is unlikely any other party will wish to use the HFC network to provide services in competition with those provided over the NBN

96 While it is likely that Optus will continue to provide high-speed fixed broadband services to its consumers using its HFC network in the absence of the HFC Agreement for a limited period of time, we do not believe an alternative service provider would be prepared to acquire Optus' HFC network to provide services in competition with those provided over the NBN if the agreement does not proceed. There are two main reasons why this is not likely to occur:

- First, Optus' HFC network has a limited geographic footprint and is presently only able to provide services to consumers in Melbourne, Sydney and Brisbane. In this regard, Optus indicates that its HFC network passes only 2.4 million homes, of which it estimates only 1.4 million are feasible to connect if a service is requested.³⁵ This contrasts with the 12 million or so customers that the NBN will be capable of supplying.
- Second, and as indicated in section 3 of this report, the NBN Access Act requires that any investments that expand the coverage of (or upgrade) the HFC network must be used to provide wholesale services to RSPs on an open access basis.

These factors suggest that if an acquirer of the HFC network wanted to provide retail services to consumers using the existing network, it would be limited in its ability to compete with services provided over the NBN. In order to match the capabilities of the NBN, an acquirer of the Optus HFC network would likely need to invest significant amounts of sunk capital in order to improve the quality of services able to be consumed over the network. In this regard, however, we are instructed that Part 8 of the Telecommunications Act 1997 (Cth) provides that a controller of a telecommunications network (other than the national broadband network) must not use a local access line to supply an eligible service to a person other than a carrier or a service provider, if:

- (a) the local access line is part of the infrastructure of the network;
- (b) the network is used, or is proposed to be used, to supply a superfast carriage service wholly or principally to residential or small business customers, or prospective residential or small business customers, in Australia; and
- (c) the network came into existence, or was altered or upgraded, on or after 1 January 2011.

³⁵ See Optus submission, para 2.5.

Section 156(2) of the Telecommunications Act 1997 (Cth) further provides that, for the purposes of Part 8, if a telecommunications network is extended on or after 1 January 2011 and the extended part of the network is capable of being used to supply a superfast carriage service to residential or small business customers, or prospective residential or small business customers, in Australia, then the extended part is taken to be a network in its own right and that network is taken to have come into existence on or after 1 January 2011.

97 The practical effect of this is likely to be that any upgrade to the existing network would mean that this upgraded part of the network could not be used to provide retail services to consumers. In effect, therefore, any party wishing to acquire the Optus HFC network with the intention of providing retail services to consumers would be limited only to providing retail services using existing technologies.

98 Further, it is questionable whether Optus would sell its existing HFC network in totality given it intends to retain all fibre components of its HFC network in the future in order to support its mobile infrastructure and business customers. Where an acquirer of Optus' HFC network was required to invest in additional fibre to replace that retained by Optus to service its mobile and business customers, then it is possible the NBN Access Act would mean that no part of the acquired network could be used to provide retail services if all parts of the network are jointly reliant on these fibre parts of the network. Instead, an acquirer could only use it to provide wholesale services to consumers – and even then only after incurring additional sunk costs in order to invest in infrastructure necessary to configure its network to provide layer 2 wholesale services on an open access basis.

99 Alternatively, a potential acquirer of the Optus HFC network could use it simply to provide wholesale services in competition with the NBN. However, to be able to compete with the NBN, a potential acquirer of these assets would need to invest considerable sums of capital in sunk assets in order to increase the coverage and capability of the Optus HFC network so that it would be able to provide wholesale services that would attract consumers to it instead of the NBN. Given the natural monopoly characteristics of investments in the infrastructure necessary to provide high-speed fixed broadband services, we do not believe such investment would be likely to be economic (and therefore attractive to a potential investor).

5.3 Deactivating and decommissioning the HFC network is unlikely to substantially lessen competition in wholesale markets

100 At present, Optus does not use its HFC network to provide wholesale services to other RSPs. Further, we are advised that its HFC network is not presently

configured to enable it to provide wholesale services to RSPs. Combined with its limited geographic scope, the HFC network therefore does not presently provide a significant competitive constraint on fixed wholesale broadband offerings provided by Telstra over its copper network.

- 101 In the future, the NBN will offer both a nationwide wholesale service to RSPs and a significantly better level of functionality than Telstra's existing copper network. To the extent that the Optus HFC network is limited in its ability to compete with Telstra's existing copper network today, it will be even less likely that it can act as a competitive constraint on the NBN with its greater functionality in the future.
- 102 That said, the provision of retail services over Optus' HFC network could conceptually have the potential to exhibit some level of competitive constraint on providers of wholesale fixed broadband services. This is because a provider of wholesale broadband services may feel that its RSPs would be unable to compete with the offerings provided by Optus over its HFC network if it set its access prices too high. In reality, however, we expect this constraint would be unlikely to be significant in this instance for two main reasons. First, NBN Co's access prices will be subject to strict regulatory arrangements such that it will not be able to freely set the prices of its services. In other words, the prices it will be able to set for services provided over its network will already be constrained to a large extent so that any additional constraint offered by retail services provided over the Optus HFC network is likely to be immaterial. Second, the geographic limitations of Optus' HFC network mean that any possible competitive constraint would be limited in its scope.
- 103 We are also advised that Optus has no intention of using its HFC network to provide wholesale services for resale in competition with the NBN when it is deployed. Together, these factors suggest that in its current form, the Optus HFC network is unlikely to provide a significant competitive constraint on the NBN in the future in the absence of the HFC Agreement.

104 For the reasons outlined in section 5.2 above, we also think it is highly unlikely that an alternative investor would be prepared to acquire the Optus HFC network and use it to provide wholesale services in competition with the NBN. In its present form, wholesale services provided over the HFC network would not be likely to be attractive to RSPs compared to the functionality and nationwide coverage available to them with the NBN. This is especially the case given the terms and conditions of access to the NBN are subject to regulatory oversight and NBN Co's public statements recognising the importance to it of pricing in a way that "meets the market". In this regard, NBN Co has noted that:

NBN Co needs to price to 'meet the market' to stimulate uptake, meet the Government's policy objectives and to avoid 'price shock' in the wholesale (and consequently, retail) market during the transition of services to the NBN.³⁶

105 NBN Co has also indicated its intention to set the prices of its entry level products having regard to existing price levels:

NBN Co has set prices for the entry-level access product ... in the first five (5) years based on current market prices to reduce price shocks for end users moving to the NBN.³⁷

106 We also believe it is highly unlikely in these circumstances that an alternative investor would be prepared to expand the network coverage and capability of the Optus HFC network to make it competitive with the NBN. The natural monopoly characteristics of investment in the infrastructure necessary to provide broadband services means it is highly unlikely a second provider of wholesale broadband services would be viable – especially in circumstances where the Government has considered it necessary to support the building of the first broadband network via a range of supporting funding and legislative arrangements.

107 Given the Optus HFC network is unlikely to ever be used to provide wholesale services in competition with the NBN and that services provided over the NBN will be subject to access price regulation, it therefore follows that the deactivation and decommissioning clauses in the HFC Agreement are unlikely to substantially lessen competition in wholesale markets for high-speed fixed broadband services. In the absence of the agreement, the Optus HFC network is unlikely to provide any meaningful competition in wholesale markets for high-speed fixed broadband services. Relative to this counter-factual, therefore, the deactivation and decommissioning clauses of the HFC Agreement cannot be said to substantially lessen competition in these wholesale markets.

³⁶ NBN Co, *Introducing NBN Co's Special Access Undertaking*, at p. 52

³⁷ *ibid.*, at p. 51.

5.4 Deactivating and decommissioning the HFC network is unlikely to substantially lessen competition in retail markets

- 108 At present, Optus is only able to provide limited competitive constraint on the provision of retail fixed line pricing through the use of its HFC network. In this regard, the vast majority of fixed line consumers are served by services provided over Telstra's copper network, with only 4.8% of total fixed line telephony subscribers in Australia served by Optus' HFC network at June 2010.³⁸ Further, information provided by Optus indicates that the customer take-up on its HFC network is relatively low. The network's 504,000 individual subscribers as of 31 March 2011 represent only 21% of homes passed or 36% of 'serviceable' premises.³⁹
- 109 In the absence of the HFC Agreement, this is unlikely to greatly change in the future. Where Optus is only able to capture approximately 5% of the fixed line subscribers at present using its HFC network to compete against Telstra's copper network, it is unlikely it will be able to capture any more market share if it uses its HFC network to compete against services provided over the NBN. This is due to the increased functionality and performance of the NBN relative to Telstra's existing copper network, and the commitment of NBN Co to price its entry level products at levels comparable with those for existing broadband services (as noted in paragraphs 104 and 105 above).
- 110 While it may be the case that Optus finds it economic to continue to provide services to some of its consumers using its HFC network in the future in the absence of the HFC Agreement, we do not believe this is likely to be significant over time. As indicated in section 4.2.1 above, any enduring competition from services provided over the Optus HFC network in the absence of the HFC Agreement is likely to be limited in duration.

5.5 The deactivation and decommissioning clauses will create some public benefits

- 111 While the deactivation and decommissioning clauses contained within the HFC Agreement are unlikely to substantially lessen competition in any relevant market, it is likely that they will provide at least three types of public benefit. First, and as indicated in section 4.1 above, decommissioning and deactivation of Optus' HFC network will mean that the resource costs of running its network alongside the

³⁸ Optus submission, para 5.10.

³⁹ SingTel Optus submission, paras 2.5 and 2.11.

NBN will be saved. This means that high-speed broadband services can be provided using just one network (the NBN) rather than two (the NBN and the Optus HFC network). As indicated in paragraph 62 above, Optus estimates this will generate savings in the order of [RESTRICTION OF PUBLICATION OF PART CLAIMED].

112 Second, to the extent that the HFC network has already been constructed and the NBN will definitely be constructed, capital will be sunk that will enable high-speed broadband services to be provided over two networks. In these circumstances, services should be provided over that network that will enable the services to be provided at the lowest marginal cost. This will ensure services can be provided at the lowest cost to society. In this instance, it is our expectation that the marginal costs of providing high speed data services over an HFC network will be substantially higher due to the nature of the technology and the age of the network. By way of evidence, the NBN Implementation Study notes the O&M cost advantages of FTTP relative to other types of networks (admittedly not HFC, but at the very least we would expect HFC O&M costs to at best fall in between those of copper and an all fibre network):

Network operations and maintenance costs are significantly lower for an FTTP network than a copper or FTTN network...Verizon has estimated the network operations and maintenance costs of its FTTP network are almost 70 percent lower than its copper network.⁴⁰

113 We note that industry documentation in relation to the operations and maintenance costs of FTTH and HFC networks in the United States points to much lower costs for FTTH than for HFC.^{41,42} Alloptic's documentation points to cost savings from converting HFC to its FTTH MicroNode technology in respect to:

- reduced routine CLI and sweep maintenance tests;
- reduced need for emergency powering equipment and dispatch;
- lower power consumption; and
- reduced plant maintenance costs.

114 In relation to plant maintenance it is claimed:

⁴⁰ McKinsey, NBN Implementation Study, p. 357.

⁴¹ Brouse, J. A. Fibre Access Network – A Cable Operator's Perspective, 2004, www.itu.int/ITU-T/worksem/asna/.../asna_0604_whitepaper_brouse.doc

⁴² Alloptic, MicroNode Economics, 2007, http://www.cctanet.com/index.php?option=com_docman&task=doc_view&gid=43

Fiber maintenance is generally accepted to be on the order of 10% that of copper/coax. Other studies note plant maintenance rates dropping by over 80% with PON.⁴³

115 As indicated in paragraph 62, however, it is likely Optus will continue for a limited period of time to service some of its retail consumers using its HFC network rather than the NBN if the HFC Agreement does not proceed. This is because NBN Co will likely need to price its services above its marginal cost of production in order to ensure it recovers its fixed and common costs of providing the NBN. It follows, therefore, that Optus may continue to inefficiently use its network to provide services to consumers when these services could more cheaply – from a societal perspective – be provided over the NBN rather than over Optus’ HFC network.

116 Third, we note NBN Co’s submission that:

The decommissioning of the Optus HFC network will considerably reduce the quantity of aerial cabling in Optus HFC areas which are aerially deployed, with NBN Co likely to deploy the majority of the NBN underground and utilise only a small percentage of the aerial location currently used by Optus.⁴⁴

117 To the extent that decommissioning of the Optus HFC network will lead to the removal of overhead cabling and wires, this is likely to provide public benefits in the form of improved visual amenity and improved safety for those who work in close proximity to these cables and wires.

⁴³ Alloptic, *Op. cit.*, p. 7.

⁴⁴ NBN Co submission at para 148.

6 The 15 year commitment to the NBN

118 Based on the material provided to us, we understand that the HFC Agreement contains terms requiring Optus to make a 15-year commitment (from the date the NBN is first available in an HFC serving area) to only use the NBN for fixed line services for mass market customer operations within the HFC footprint. There is also a provision for Optus to provide NBN Co with a first right of refusal to build any point-to-point fibre Optus may require within that area.

119 While it could be argued such terms may limit future competition over the provision of fixed and broadband services by limiting the ability of alternative network operators to build and deploy a fixed-line network in competition with the NBN, we do not believe this term is likely to represent a substantial lessening of competition in the circumstances. Our reasons for this view are detailed below.

Long term contacts are common business practices

120 It is not uncommon for firms to enter into long term agreements with providers of services that need to make large-scale capital intensive investments – especially in relation to natural monopoly utility infrastructure services. For example, owners of private toll roads will normally require a long-term concession to operate the road in order to ensure the recovery of the road investment. This might also require clauses limiting construction of alternative roads or other infrastructure such as train lines.

121 While such arrangements may be necessary to ensure that these investments go ahead, the investments may not necessarily be efficiency enhancing. There are, however, some well established instances of when such arrangements may have a basis in economic efficiency. Some of these specific to NBN Co and Optus are discussed at the end of this section.

The agreement is in Optus' commercial interest

122 It is unlikely that Optus would agree to enter an agreement on such terms if it did not believe such an agreement represented the most commercially favourable way for it to provide services to its consumers in the future. In other words, if it expected an alternative infrastructure provider might emerge over the 15-year term of this agreement that would provide it with a better way to service its consumers (and therefore compete in downstream retail markets), then it is unlikely it would be willing to enter into an agreement that contained such a term. Moreover, NBN Co is a regulated entity, so it should not be in a position to earn monopoly profits, and pay a share of this to Optus in order to help underpin Optus' adherence to the agreement.

- 123 Indeed Optus has available to it the alternative option of continuing to use its HFC, which it has clearly decided is a less commercially viable option than transferring its customers to the NBN. We expect that while Optus will pay higher marginal costs (by way of access fees) to use the NBN compared to the marginal costs of operating its HFC, it will avoid sunk investment costs required to upgrade and extend its NBN, potentially including those to offer wholesale access. Moreover, by using the NBN, it will be no worse off than its major competitors. As a result of these expected cost savings, the use of the NBN rather than upgrading the HFC network should be viewed as a manifestation or outcome of the competitive process at work.
- 124 Another important point is that Optus' customers are not being tied for 15 years as a result of the agreement. If customers are unhappy with the price or service offerings of Optus, they are free to move to another RSP. We also note, very importantly for competition, that no other service providers are being denied the use of the NBN as a result of the agreements.

Alternative fixed networks are unlikely to emerge

- 125 The characteristics of the proposed NBN mean that it is unlikely an alternative network will be developed in the next 15 years that could serve to provide competition to the NBN.
- 126 As discussed in the section 2 of the report, in its recent declaration and pricing decisions, the ACCC has accepted that the copper CAN is a natural monopoly. The NBN, which is to replace the copper CAN, is likely to also be one given the much greater capacity to expand the number and speed of services over fibre access lines, which means the scale economies are greater.
- 127 Further, and as discussed in earlier parts of this report, the Government has introduced into legislation restrictions on the ability of alternative fixed networks to compete with the NBN. The key requirement in this regard is the obligation to offer wholesale only access if a network operator builds a new network; and to only provide wholesale services on any upgraded or extended part of an existing network.

Economic efficiency benefits

- 128 There are expected to be a number of efficiency and commercial benefits that NBN Co will enjoy as a result of a commitment from Optus to provide fixed-line services over the NBN over the next 15 years. The efficiency gains suggest that there is a public benefit from NBN Co and Optus entering into the long-term agreement as specified. Such economic efficiency benefits are widely accepted in the economic literature as one of the key rationales for exclusive dealing arrangements, and why they can frequently be viewed as pro-competitive rather

than as anti-competitive.⁴⁵ We note that these benefits are one-sided in NBN Co's favour because, with the Government committing to roll-out the NBN (and that NBN Co will be subject to standard access obligations requiring that it must provide access to Optus), Optus does not need the 15 year commitment to give it the benefits of additional certainty. Further, to the extent that the Government commitment is not credible (because the current Government might lose office and the opposition could terminate it), the 15 year commitment is not expected to alter this.

129 Accordingly, the efficiency gains expected to be realised compared to the case where there is no long-term commitment between the two parties include the following:

- Reduced uncertainty in cash flows for NBN Co by securing Optus' custom can be expected to reduce NBN Co's cost of capital. This will arise from having Optus as an anchor customer and because of the positive demonstration effect this will have in attracting other customers to the NBN.
- The more customers that NBN Co has, the more it can take early advantage of economies of scale to spread its fixed costs over more customers so that it can charge lower access prices. These economies will be further realised if the agreement helps NBN Co attract other wholesale customers.
- Reduced transaction costs from an alternative arrangement involving more frequent and piecemeal contracting. If Optus and NBN Co were to renegotiate the agreement more frequently, say annually or upon the transfer of a given number of customers, this would impose additional direct costs on both parties. These could also potentially produce bargaining 'hold-ups' that could undermine economic efficiency benefits.⁴⁶

Further, were Optus not prepared to enter into the 15 year agreement, but to instead enter short term and more localised agreements, it is highly unlikely that NBN Co would be prepared to offer the migration payments presently contained in the HFC Agreement. That is, the two terms can likely not be considered in isolation as NBN Co is likely prepared to offer migration payments of the amount presently set out in the HFC Agreement partly because of the 15-year loyalty arrangements contained in the agreement. On this basis, if the 15-year commitment to the NBN was not included in the HFC Agreement, it is possible that some of the benefits of the migration payments identified earlier would also fall away.

⁴⁵ M. Motta, *Competition Policy: Theory and Practice*, Cambridge University Press, 2004, pp. 363-364.

⁴⁶ An explanation of several of these concepts in the context of vertical integration and long-term contracts is provided in D. Besanko, D. Dranove and M. Shanley, *Economics of Strategy* (Second Edition), John Wiley and Sons, 2000, Ch.4-5.

7 The ability of NBN Co to profitably offer uniform national wholesale prices

130 In section 5 of this report, we indicated we believe it is highly unlikely that Optus (or any other network operator) will use the HFC network to provide wholesale services in competition with NBN Co if the HFC Agreement does not proceed. Further, while it is likely Optus will use its HFC network to compete to provide retail services to some of its consumers in the event the HFC Agreement does not proceed, we do not believe this will materially impact on competition over the medium-to-long term. However, there may be some short-term impact whereby Optus uses its HFC network to compete to provide retail services to consumers in competition with those services provided by customers of the NBN.

131 That said, Optus could theoretically use its HFC network to compete to provide retail services to consumers in a way that significantly impacts on the number of consumers taking up the NBN in HFC serving areas. If it did so, this could threaten the ability of the NBN to earn a normal profit. This is because of the obligations NBN Co faces to provide its services at uniform national prices. This obligation is made clear in the Government's Statement of Expectations, dated 17 December 2010. The Statement of Expectations notes that:

... NBN Co will be required to charge access seekers uniformly for services across its network for all technologies and for the basic service offering.⁴⁷

132 In this section of our report we first set out how, conceptually, the combination of a uniform national pricing requirement and different cost technologies and geographic areas can create the possibility for 'cherry picking' in low-cost areas in a way that will lead to higher uniform charges being set by NBN Co or to a reduction in its ability to profitably provide services to RSPs. We then consider whether the facts in this matter suggest this is likely to be the case.

7.1 Uniform pricing and cherry picking

133 Where a firm faces a uniform pricing constraint, it will be unable to recover its costs (inclusive of a normal return on its investment) unless it is able to set a price that just covers its average cost of providing services to all its consumers. To illustrate, suppose a firm provides services to two groups of consumers – high cost (H) and low cost (L). Assume then that the incremental cost of supplying service to H is \$600 and the incremental cost of supplying services to L is lower at \$100. Assume also that it faces fixed and common costs of providing

⁴⁷ Letter from Senator the Hon Penny Wong and Senator the Hon Senator Stephen Conroy to Mr Harrison Young, *Statement of Expectations*, 17 December 2010, at p. 7.

services to both sets of consumers of \$300. In these circumstances, its total costs of providing services to both H and L are \$1,000. Assuming it has 100 consumers in each of H and L, it would need to set a price of \$5 per consumer if it was subject to an obligation that required it to set the same price for all consumers.

134 In these circumstances, however, its ability to recover its total level of costs would be compromised if there were an alternative network operator that was equally efficient at providing services in L. In this respect, its stand-alone costs of supplying services in L would be only \$400 (the variable cost of \$100 to provide services to L plus the fixed costs of \$300). In these circumstances, it would be able to set a lower per unit price to the 100 consumers in L of only \$4 per service.

135 In these circumstances, therefore, the second firm operating only in L will be able to win customers away from the firm that faces the uniform pricing constraint. That is, it will be able to profitably set a price for consumers in L that lies below the average cost faced by the firm with the uniform national pricing constraint. In particular, it will find it profitable to set any price above \$4 per service, while the average cost facing the firm with the uniform pricing obligation is \$5 per service. Where the second firm is able to acquire consumers in this way, it is sometimes said to be able to 'cherry pick' the more profitable low-cost-to-serve consumers.

136 In these circumstances, the firm facing a uniform pricing constraint can respond in one of two ways:

- One, it could respond to any lower prices offered by the second firm operating only in L. In this circumstance, competition might lead to an equilibrium being found at a price somewhere between \$4 and \$5 per service. If it does this, however, it would need to reduce the price of the services it provides in the high cost area (H) due to its uniform pricing obligation. In turn, this would mean that the lower price it sets for providing services to all consumers will lie below its average cost of supplying services to these consumers. Accordingly, responding to lower prices offered by the second firm will mean the firm with the uniform price obligation will be unable to recover its costs of providing services to all consumers.
- Two, it could decide not to lower prices in L, and allow the second firm to capture the market for these consumers. Doing so, however, would only leave it supplying services to consumers in high cost parts of the country. Here, it would face a cost of supplying these customers of \$900 (the variable cost of \$600 to supply these consumers plus the \$300 fixed costs). In order to recover these costs across the 100 consumers in H would mean it would need to increase its price to \$9 per service. This would have two unwanted effects for policy makers:

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- It would undermine any policy objective aimed at ensuring equal prices for consumers in different geographic areas (or using different network technologies). In this instance, consumers in L would pay a price somewhere between \$4 and \$5 per service; while consumers in H would pay a higher price of at least \$9 per service).
- It would lead to inefficiencies in the supply of these services to consumers. This is because providing services to consumers in different regions by two different suppliers would involve two sets of fixed costs being incurred. In this instance, the total costs of supplying all consumers with the two networks would be \$1,300 given the need to incur two sets of fixed costs to provide the service.

137 That uniform pricing obligations can be undermined by cherry picking activity is well recognised in the economic literature.⁴⁸

7.2 The HFC network could conceptually cherry pick the NBN

138 In the event that the HFC Agreement does not proceed, there is a risk that Optus may seek to use its HFC network to cherry pick the low-cost-to-serve areas of the NBN in the way discussed in section 7.1. In this respect, if the HFC Agreement does not proceed:

- Optus will likely continue to serve some of its consumers using its HFC network.
- To the extent that the consumers Optus supplies using its HFC network tend to be consumers that involve a lower incremental cost for NBN Co to serve than average (i.e. are low-cost-to-serve), this will have the effect of increasing the average cost faced by NBN Co when supplying the remainder of its customers using services acquired from RSPs using access to the NBN.
- In turn, NBN Co will have two options available to it:
 - In the first instance, it could seek to retain these lower cost consumers by lowering its prices for services provided over the NBN. Doing so may encourage Optus to more quickly move to migrate its customers to the NBN rather than serve these customers using its HFC network. However, its uniform pricing obligations are likely to force it to reduce prices for all RSPs in all geographic areas (and using all network technologies) to levels below its average cost of supplying all its customers. In other words, it would be required to price in a way that

⁴⁸ See, for instance, Armstrong, M., *Access Pricing, Bypass, and Universal Service*, AEA Papers and Proceedings, May 2001 at pps. 297-301.

threatened its ability to cover the costs (inclusive of a normal profit) of building and operating the NBN.

- Alternatively, it could seek not to respond to Optus' use of its HFC network to supply its retail consumers by not lowering the prices of its services. However, this will mean it has fewer lower-than-average cost consumers using its network than would be the case if the HFC Agreement proceeded. In turn, this would increase its average costs of supplying customers. To cover its costs of building and operating its network, it would therefore have to raise its prices for those consumers that it does serve. Doing so, however, is likely to further slow the migration of consumers from Optus' HFC network to the NBN leading to even further increases in prices for all consumers.

139 Conceptually, therefore, the decommissioning and deactivation clauses in the HFC Agreement have the potential to prevent cherry picking (thereby facilitating the achievement of the Government policy relating to Uniform National Wholesale Pricing); provide a greater chance that NBN Co will be able to recover its cost of building and operating the NBN; and ensures that final retail prices for NBN services are kept lower.

7.3 The evidence suggests cherry picking is possible

140 While section 7.2 sets out how, conceptually, cherry picking could occur using the HFC network if the HFC Agreement does not proceed, the likelihood of this actually occurring depends on the facts in this matter. In particular, cherry picking of the form described in section 7.2 is likely to be more pronounced (and have greater impacts on NBN Co's pricing and/or profitability) where the following conditions exist:

- NBN Co is obliged to price more than just a basic level of services at uniform prices; and
- The unit cost of providing services in different parts of the country and using different technologies varies greatly.

141 This does not take account of Optus' position and what it is likely to do in circumstances in which Optus is supplying services over its HFC network and the NBN.

142 With regard to the scope of the uniform pricing obligation, the Government's Statement of Expectations sets out an expectation that NBN Co will charge access seekers uniformly for services across its network for all technologies and for the basic service offering. On its face, therefore, it appears that NBN Co may have scope to charge different prices for consumers in different geographic regions for higher value services other than the basic service offering. In this respect, the extent of the obligation on NBN Co to provide uniform pricing may

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not be complete, and the ability to potentially charge different prices to different consumers for higher value services may provide scope for NBN Co to find ways to set different prices in different geographic regions. For instance, in the absence of further pricing restrictions, it might be thought to be possible for NBN Co to set prices for the basic service offering that are cost-reflective in high cost parts of the country and offer the same price across all parts of the country. It could then set lower prices for higher value services in lower cost parts of the country without having to offer the same prices in high cost areas because the service involved would not be the basic service offering.

143 We believe, however, that there are other mechanisms in place that will serve to prevent NBN Co from avoiding uniform pricing in these ways. For instance, and as indicated in paragraph 94 above, NBN Co has indicated it intends to ‘meet the market’ with respect to the pricing of its entry level products. It is also our understanding that NBN Co intends to commit to price cap measures with respect to its entry-level basic service offering as part of its Special Access Undertaking (SAU) that will be submitted for approval by the ACCC. Having an entry-level product initially priced at competitive levels and then subject to a price cap arrangement will therefore serve as an anchor on the pricing NBN Co will be able to charge for higher value tiers – in all parts of the country.

144 In addition to this, we are advised that NBN Co’s Wholesale Broadband Agreement, which serves as a form of Standard Form of Access Agreement for the purposes of Part XIC of the CCA, contains a commitment to price a series of specified fibre speed tiers on a nationally uniform basis.

145 It appears likely, therefore, that the combination of the Government’s expectations and the operation of various regulatory instruments and commitments will serve to ensure NBN Co faces a broad range of uniform pricing obligations.

146 With respect to variations in the cost of providing broadband services under the NBN in different parts of the country and using different technologies, we note that the capital cost per premises for activating a fibre to the premises service on the NBN for the 93rd percentile is likely to be at least 3 times that of connecting a service to premises in the bottom 10th percentile.⁴⁹ Further, the NBN Implementation Study notes that:

The obvious impediment to the delivery of high-speed broadband services to the final 10 per cent is cost. Capital expenditure per premises can be an order of magnitude higher than in metropolitan areas due to low population densities, and the revenue pools are correspondingly lower.⁵⁰

⁴⁹ See, for instance, NBN Implementation Study at Exhibit 1-3 at p.14.

⁵⁰ *Ibid.*, at p. 273.

- 147 The combination of a broad range of requirements for NBN Co to price uniformly in different geographic regions (and using different technologies) as well as significant cost variations between different regions suggests there is some scope for cherry picking to occur using the Optus HFC network if the HFC Agreement does not proceed.
- 148 Whether or not this will be significant is still hard to tell. To the extent that the deactivation and decommissioning clauses in the HFC Agreement are unlikely to substantially lessen competition in retail markets for broadband telecommunications services, it seems unlikely that cherry picking via the HFC network will pose a significant threat to NBN Co's ability to earn sufficient revenues to cover its costs and/or meet its uniform pricing obligations. In contrast, however, if the decommissioning and deactivation clauses were expected to significantly lessen competition in retail markets, it is to be expected the risks to NBN Co's ability to recover its costs and/or maintain uniform pricing will be greatest. In that sense, the two concerns go hand in hand – if the ACCC fears that the deactivation and decommissioning clauses in the HFC Agreement are likely to substantially lessen competition in the markets for broadband services, it must also accept that any such competition it might seek to protect would carry a substantial risk of undermining Government policies to set uniform access charges for services provided by NBN Co and for NBN Co to be a commercial entity capable of earning sufficient revenues to cover its costs of building and operating the NBN.

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