ALLEN & OVERY

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Submission to the Joint Committee on the National Broadband Network

Overview

Our detailed submission to the Joint Committee on the National Broadband Network (**JCNBN**) is set out in our paper published in March 2013 *NBN Options for a Coalition Government* (**2013 Paper**). We have also made available to the JCNBN our February 2011 paper *The Australian Broadband Network – A Forensic Analysis* (**2011 Paper**).

The purpose of this short submission is to provide further context for these two detailed papers. They are public documents and we would be pleased for this paper to also be a matter of public record.

We have both been advisers to various clients in the telecommunications sector in Australia and other markets for over 20 years. While our respective fields are strategic consulting and law, we have worked on a range of telecommunications network projects over that period with telecommunications engineers, financial advisers, economists and executives from other disciplines.

Over that period we have seen the full evolution of telecommunications markets, competition and regulation since 1990. We have also observed projects in which the key assumptions for an initial business case underlying a network project have proven to be materially wrong, often because of flawed demand estimates or unexpected technology change or competitive entry.

Broader perspectives

We are in favour of a coherent national broadband network policy, both as advisers and as consumers. We believe that Australia needs an NBN policy and that the Federal Government must set the relevant policies and encourage the correct commercial framework to achieve policy outcomes. We do not believe in discarding policy settings that are important to long term competition and efficiency when formulating an NBN policy.

We are advocates for an NBN policy based on a sound cost/benefit analysis including retail demand projections, comparisons of the cost and performance of different technologies in different geographies and an understanding of future upgrade paths that allows alternatives to be assessed in the long term on a net present value basis.

In our view the debate concerning whether the NBN earns a rate of return on investment is far less material than *the comparative cost of alternative networks and ultimately retail services relative to performance for which there is mass market demand.*

If a Federal Government owned NBN makes a loss then all taxpayers will be funding this loss. If that NBN makes a profit by setting retail prices higher to recoup expenses that were incurred inefficiently then it is telecommunications users that are ultimately paying for that inefficiency. This is a differently constituted group than taxpayers, but largely the entire community.

Such higher telecommunications charges may be viewed as an implicit tax required to fund inefficiency and hidden cross subsidies. In summary, the burden of any inefficiency is always borne by the general public, just in different ways.

Accordingly, the more relevant question is *whether the NBN is incurring any inefficient costs*. In this context costs would be inefficient if they incurred in deploying a technologically superior mass market network for which there is no mass market demand for its incrementally better performance.

Of course a government sponsored project need not be profit making on a standalone basis in the same sense as a private sector project. The role of government is to consider wider consumer welfare and also take into

account costs and benefits not regarded as relevant by the private sector. Most government expenditure on major projects is based on a quantitative analysis of consumer welfare.

For example, it is valid to assess an NBN on the basis of tangible improvements in wider productivity that it may deliver to the economy. An NBN that is primarily used for productivity enhancing activities will have a multiplier effect of some level. Alternatively, an NBN that is used to consume greater amounts of passive audio visual entertainment services will not have that effect. However, consumer welfare must be carefully measured.

We also believe the private sector should be involved in delivering and funding NBN solutions to the fullest extent that this is practicable and efficient. In the short to medium term there are outcomes that may only be achievable under government ownership. Entrenched industry positions, regulatory risk and funding during a period of limited debt availability are relevant in this context. However, in the medium to long term it is not the role of government to own profitable businesses or to crowd out investment by the private sector. Any NBN policy should take into account a planned transition back to the private sector.

The 2011 Paper

We are not recent commentators on this topic. Two years ago we published our 2011 Paper that included the following broad themes:

- The new Australian NBN policy had reversed 20 years of policy directed at facilities based competition and private sector investment, a policy initially implemented under the Hawke/Keating Labor Governments and continued under the Howard Coalition Government.

- The FTTH component of that NBN was a significant government sponsored program not replicated elsewhere in the world. Importantly the retail applications that would drive capacity demand for FTTH were not apparent.

- The economic model of the NBN did not look sustainable.

- Given those circumstances, and the fact that telecommunications networks are typically delivered more slowly and at higher cost than initially planned, the predicted return on investment for the NBN seemed doubtful.

- The NBN had the potential to fundamentally impact all other network technologies that reached Australian homes, to alter the operating model and strategies of carriers, service and content providers and to change the fabric of competition in these sectors.

We published our 2011 Paper in response to what we considered to be a lack of industry debate regarding the NBN. Unusually for the typically vocal Australian telecommunications sector most industry participants were initially unwilling to openly question NBN policy, either as a result of their own corporate strategies or the ongoing potential for an alternative policy that did not deliver structural separation.

However, in private they were more sanguine about the potential for the NBN to be delivered in the manner anticipated (including technology, time and cost), particularly given the 2013 and 2016 electoral cycle. In our discussions with them this was often referred to as “Scenario B” and it has been a strategic industry consideration for some time.

In our 2011 Paper we made short, mid and long-term forecasts regarding potential policy and commercial outcomes for an NBN. Two years on we remain comfortable with those predictions. Many of the short-term predictions have been upheld such as the debates about “mission creep” and service provider focus on NBN

Co's wholesale pricing. The mid term predictions around the economic pressures that would be faced by NBN Co are now very central to a wider public debate.

The 2013 Paper

In early 2013 there again appeared to be a similar lack of debate regarding potential alternative approaches to the NBN. It seemed to us that, regardless of the outcome of the 2013 Federal Election, the form of the NBN would ultimately be driven to change as a result of inevitable economic pressures. However, if there were a change of government the changes to the form of the NBN could be quite fundamental. In summary, the "Scenario B" that we had discussed with the industry two years before was now a short term strategic issue.

There was certainly no shortage of media driven debate regarding the NBN. However, this was largely in a political context. We believed that there was a need for a more detailed debate to be progressed before the 2013 Federal Election concerning potential solutions that could be implemented after that election. Our 2013 Paper is intended to be a contribution to that debate.

Existing Labor policy is well known. Therefore we chose to examine the scenario in which the most significant change would occur, a change of government. While this was a hypothetical scenario, it required consideration as an industry that plans for the long term had a major strategic issue to consider. Moreover, the relevant questions will inevitably be answered by the market in the long term. If they are considered early enough there is still the potential to make positive contributions to policy.

Australia's largest infrastructure project cannot be delivered in an uncertain policy environment. Moreover in an uncertain policy environment private sector involvement and financing are far less likely. Accordingly, we believe that Australia needs to work towards developing greater bipartisanship in relation to the NBN.

Issues for the Federal Government

We believe there are five key aspects of the NBN that the Federal Government needs to address:

- **The market for broadband services** – The starting point must be an understanding of the scope of the market need that policy is trying to address.
- **Major regulatory settings** – The key policy goals that must be retained to ensure the correct competitive and market structure is established for the long term.
- **Scale and technology** – The scale at which the NBN is deployed and the optimal mix of technologies and the areas in which to deploy them (based on a cost benefit analysis).
- **Ownership and funding** - The best structure and ownership model for the NBN, whether it should remain as a GBE or have private sector involvement and what form that private sector involvement should take.
- **Industry stakeholders** – The benefits and trade-offs associated with renegotiating the existing transactions with Telstra and Optus.

The market for broadband services

Regardless of which party wins the next Federal Election, we believe that broadband policy will need to be reset because we remain sceptical of the projections contained in the current NBN business plan for the following reasons:

1. **There is no fibre premium** - The NBN Co plan implies that, over time, as customers use more and more data they will pay more and hence the amount that retail service providers will pay NBN Co will also increase. Global benchmarking suggests that this is unlikely.

2. **The relationship between price, demand and externalities** - If a high cost FTTP network feeds those costs through to retail prices, and this constrains demand for the same very high bandwidth retail services that an FTTP network is designed to deliver, then ironically the economics of an NBN intended to be egalitarian could in fact become elitist in practice. Affordability and ubiquity combined with mass market usability are better drivers of broad public benefit than ever higher levels of bandwidth demanded by few.
3. **A mass market fibre network assumes mass market demand** - The current NBN is a mass-market fibre network of great scale. The NBN's economics must be driven by the retail mass-market, not by users that are outliers. No-one has yet been able to articulate the high bandwidth applications that will drive demand for mass market FTTP capacity, particularly applications that promote productivity and social utility. Super high definition television should not be rationale for an investment of this scale.
4. **The ROI is not sustainable** - The plan implies that NBN Co's profit margins and return on investment will rise over time. These 'outer-year' margins and return on investment look unsustainable from a regulatory or political perspective.

The third issue is critical. FTTH proponents will state that 10 years ago we were getting by on dial-up and we could not imagine the use to which we would put high bandwidth. However, 10 years ago we certainly did conceive of being able to deliver on-demand standard and high speed audio visual services to the home. That is now achievable using existing network technologies and FTTH, FTTN and HFC technologies can all support these services.

If you asked experts 10 years ago what the mass market could achieve with 25 Mbps to the home they would have had no difficulty in articulating the applications that could and have now been developed. If you ask experts today to articulate the applications that will be demanded by the *mass market* that require 100Mbps or 1Gbps rather than 25 Mbps or 50 Mbps they generally struggle and rely on the premise that we cannot imagine what we may need the capacity for.

Mass market demand for bandwidth is driven by retail applications for which there is a mass market demand. Even then retail applications that require new content and consumer equipment require other investments to be made first. Consider the process to upgrade to digital televisions and the delays that will be incurred in upgrading content and display devices for 4K television, assuming it is demanded.

We also should not be provisioning the NBN for the highest common denominator home user. There are certainly members of the public that are in audio visual creative industries, architects using CAD programs and IT consultants that work from outside fibre coverage. But this is a small fraction of the population and one for which it makes greater sense to develop a specific solution, just as you would ensure fibre connectivity for schools, universities, hospitals and other locations where fibre is truly demanded.

FTTH is a superior technology in terms of additional bandwidth. However, the real question are:

- *when will there be mass market demand for the incremental bandwidth to consumers delivered by FTTP;* and

- *will consumers be willing to pay the additional cost of delivering that bandwidth.*

Critically, if we are to build without clear visibility of future demand, then this needs to be acknowledged and reflected upon. The measure of incremental FTTH capacity is also a moving target as improvements in technology are increasing the carrying capacity of both FTTN and FTTH. While FTTH will remain faster, FTTN may be keeping pace with demand for some time. The existence of these risks is a valid reason for deferring an FTTH investment until market and technical conditions are clearer.

Major regulatory settings

A national wholesale only network that implements structural separation and supports a level of national uniformity of prices for certain services are common themes for both political parties.

The major distinctions between the parties on regulatory settings are that the Coalition sees greater utility in using existing assets by applying the copper sub-loop to an FTTN solution and employing one or both HFC networks to be upgraded and serve the 2.6 million premises passed by HFC cable. The degree of infrastructure competition also appears to be the major distinction between the two parties in terms of regulatory policy.

As we stated in our 2013 Paper, we are concerned that the current NBN must be a monopoly in order to recoup its costs and it is not a monopoly because that is the most economically efficient outcome. In our view a different model could preserve more facilities based competition and private sector investment.

However, in the short to medium term infrastructure competition will need to be balanced against the need to achieve the co-ordination and investment environment necessary to deliver the timely national solution demanded by the public. However, an NBN with a lower total cost is better able to operate in an environment of infrastructure competition.

Scale and technology

In our 2013 Paper we discussed ways that NBNCo could achieve scale. NBN Co plans to pass 12.2 million fibre premises and 1 million fixed wireless and satellite customers by 2021. We proposed the following alternative scenario:

- By the time of the September 2013 election 17% of the target premises will either passed by the FTTP network or it may be efficient to complete the passing (assuming a further 5% is required by existing contractual commitments).
- 2.6 million households or approximately 20% are already covered by HFC networks, which could be upgraded (and are also a quicker deployment option).
- An additional 10% of premises could be addressed through the fixed wireless and satellite networks so that the fixed line footprint only reaches out to a reduced percentile of the more remote premises (another quick deployment option)
- Following the election NBN Co could then focus on deploying FTTN to the remaining 53% of premises using a network platform that is faster to deploy. The constrained labour force would also be directed at a more focused rollout.

We neither costed nor confirmed a timetable for this scenario. However, it is a reasonable scenario to be tested.

The technology mix recently proposed by the Coalition in its NBN policy announcement is different to our hypothetical as it does not change fixed wireless and satellite coverage and has a greater emphasis on FTTN.

There are many variants on technology mix and there is no single ‘correct’ answer. However, a specific cost/benefit analysis will take us much closer to an informed decision making process.

Ownership and funding

When government progresses a plan like the NBN it is necessary to understand how the private sector may be involved over time. Private sector involvement will lower the capital cost to the public and increase efficiency.

In our 2013 Paper we proposed three broad potential phases to restructure the NBN. They are not the only possibilities, but in our view they are a sensible set of scenarios to debate:

- **Renewed NBN Co**: NBN Co is initially redirected to deploy a ‘technology efficient’ outcome. While more controversial aspects of the current deployment are being considered (e.g. FTTP in regional areas), others will continue (e.g. fixed wireless and satellite). Once policy has been reset and a cost/benefit

analysis is complete, after an independent review, deployment may accelerate on a different path. During this period the NBN would remain wholly government owned, but private sector debt could be introduced.

- **Metro and Regional NBN Cos**: Once final policy has been determined, NBN Co could be split into a number of entities. We suggest a Metro Co and a Regional Co as one alternative, recognising that the metropolitan and regional NBN solutions will operate under fundamentally different economics and technologies. This model could be designed to optimise private sector participation that could be put to tender at a later stage.
- **Listed New Net Co (including a potential Telstra demerger)**: A new national wholesale access entity could be listed on the ASX. This could be implemented on a standalone basis or through the demerger of the Telstra customer access network assets and combining them with NBNCo's assets. However, this is unlikely to be an option until shortly before or after a 2016 Federal Election. A Telstra demerger would of course depend on the approval of its shareholders.

In our view NBN Co has considerable value in terms of its existing investment and human and intellectual capital and remains a vehicle to drive a transition. However, that transition may ultimately involve the NBN being split into further cohesive entities. Those entities should be much better structured to attract private sector equity.

We believe there is potential for the metropolitan networks to be attractive to financial sponsors in the future, particularly infrastructure investors, if they are structured as stable yielding brownfield investments. However, it will take some time for the necessary stability and predictability to be achieved.

There is yet an unexplored option to review the integration of the NBN fixed wireless network and the private sector regional mobile networks that often use common towers and backhaul. The mobile carriers may be interested in investing in this component and also in aligned operating arrangements.

The satellite network is expensive but now fully contracted for acquisition and launch. However, there remains scope to engage with domestic or international satellite operators in relation to both equity and operating positions.

In the longer term after project maturity is achieved an IPO would be an attractive option.

Industry stakeholders

Engaging industry stakeholders successfully will be important to achieving these outcomes. There would be a need to vary the existing Telstra and Optus agreements in the following manner:

- Both Telstra and Optus will want to achieve comparable shareholder value, but should be prepared to renegotiate within this envelope.
- Access to Telstra's ducts and other facilities above the node would continue to be necessary. The ability to deploy FTTP would also still be attractive, but at a vastly reduced scale.
- The current deal in which Telstra is required to shut down its entire copper local loop and offer up its entire local loop duct system could become a transaction in which duct access is offered to the node and access to the copper sub loop is provided below the node. This is a different deal, not one with a significantly different impact on Telstra.
- Rather than Telstra restricting its HFC network to pay television and Optus shutting down its HFC network, NBN Co could acquire the Optus HFC network and upgrade it to provide broadband in its coverage areas and leave the Telstra HFC arrangements in place. Alternatively NBN Co could acquire exclusive access to those networks for broadband capacity. Again, this is a different deal, but not one with a very different impact.
- To the extent that the satellite and wireless networks are expanded there will be less need to access Telstra facilities.

This would leave the Commonwealth with the significant cost of these transactions, but still an overall project with substantial savings.

The use of analogies in the current debate

This is a complex topic that all participants have tried to simplify. Many are fond of using the road transport analogy. At one end of the debate this becomes a question of "do we need a six lane highway to the home on which to drive our family car". Recently one commentator likened wireless broadband to driving a Ferrari on a crowded road.

We think that the correct debate is whether the Federal Government should be subsidising Ferraris if consumers only need less expensive vehicles, thereby releasing funds to spend on alternative projects that have greater value to the community.

We have also seen all points of view on the costs of the NBN from NBN Co executives being questioned over the purchase of its coffee machines to it being suggested that $42 billion is an expense that should not be regarded as significant (we support neither line of reasoning).

An important positive contribution of current NBN policy is that it has shifted public expectation in favour of the need for an NBN. A negative contribution is that FTTP is sometimes now seen as a public entitlement, without any consideration of financial cost or opportunity cost.

Like the United States budget deficit, when dealing with major projects the numbers are often so large that very large savings can sometimes seem immaterial. To put this in context a figure of $17 billion (the difference between each political party's costing of its own policy) is greater than the market capitalisation of all but the top 13 companies listed on the ASX by market capitalisation.

Conclusions

We believe that policy decisions should be a function of analysis and analysis should not be a function of prior policy decisions. We do not suggest that any of the scenarios that we have raised are inevitable and they require further assessment. However, we do believe that these scenarios, together with the other questions raised in our 2013 Paper provide a useful framework for the policy debate that is currently underway and can also inform the cost/benefit analysis that is required to inform sensible policy decisions.

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