

## Implementing the national broadband network in Australia -- regulatory issues

### Introduction

The national broadband network company (NBNC), which will roll out Australia's national broadband network, will have substantial market power. So it will be important to regulate it to prevent abuse of that power. At the same time those investing in the NBNC will want to know what these rules are in advance of any investment. They will also want certainty that, for a period of time at least, the Government will not change these rules.

In this short paper we set out some of the main regulatory issues, associated with the rollout of the national broadband network, which the Government will need to resolve. The aim of the paper is to contribute to the debate about such regulation rather than to provide a specification of what the regulations should be.

### The Government's objectives

In setting rules to constrain the NBNC the Government will need to balance:

- A requirement to make the investments as attractive as possible - both to attract the private investment and to maximise the long-term value of the NBNC when it is eventually privatised
- A requirement to ensure that there is vigorous competition at the retail level between access seekers using the national broadband network
- A requirement to ensure that those who continue to want only narrowband voice services can receive them at an affordable price
- A requirement to ensure that the NBNC is constrained in the monopoly profits it can generate.

### Assumptions underlying our discussion of issues

In discussing the various options for regulating the national broadband network, we make the following (simplifying) assumptions:

- The national broadband network provides fibre to the home to the bulk (assumed to be about 90%) of Australian homes and businesses within eight years
- The remainder of the population is served by wireless broadband eg based on LTE and/or LTE
- The national broadband network is initially majority government owned, with up to 49% investment by private organisations
- The NBNC is privatised 5 years after it becomes fully operational
- The NBNC provides wholesale access network services only
- The core IP transport network is provided on a competitive basis

- The NBNC is an autonomous entity rather than a consortium. Existing operators might offer assets in return for an equity stake in the NBNC. But they would purchase services from it as an access seeker on the same terms as equivalent non equity owning customers
- The NBNC sells services and/or facilities to access seekers on a non-discriminatory basis

## Issues

We list below 10 issues which the Government will need to resolve in establishing the regulatory framework for the NBNC. These issues interact in various ways as indicated in the accompanying commentary. We divide them into general and transitional issues.

### General issues

**Issue 1:** *Will the NBNC be allowed to choose its own FTTH technology on commercial grounds?*

There is a basic choice here between point to point and PON fibre. The former is (slightly) more expensive when installed in new ducts but has more flexibility and greater upgrade potential. PON fibre can be a lot cheaper if it is blown through ducts in situations where the spare capacity in existing ducts is limited.

**Issue 2:** *how far should the NBNC be obliged to unbundle its access network to access seekers?*

There are again two main options – access to unbundled fibre and access to bitstream products. Requiring the former significantly weakens the investment case, since it is the access seekers rather than the access provider which then extracts the additional willingness to pay from those in the market who need next-generation broadband. There is also an interaction here with Issue 1. Fibre unbundling is very difficult using PON technologies.

**Issue 3:** *how should the prices which the NBNC charges to access seekers be regulated?* There are two main options here - cost based prices and value based prices in which the NBNC charges access seekers different prices for different products according to its judgement on the value of each product to end users. The former option is suitable for passive unbundled fibre while the latter is more appropriate for active bitstream products. There are also issues of the extent to which the NBNC is allowed to geographically de-average its prices and to discriminate between access seeker customers of different sizes. On the latter point, it is assumed that cost-justified discounts would be permitted.

**Issue 4:** *if the NBNC is allowed to sell bitstream products at unregulated prices then there are two further questions to answer:*

- How is the NBNC constrained from extracting monopoly rents? Will there be sufficient cross-platform competition, at least in the short term, to constrain prices or will some kind of regulation be required?
- What incentives will the NBNC have to innovate in the products it offers to access seekers eg in terms of bandwidth upgrades and differentiation of products to reflect end-user requirements?

**Issue 5:** *what net neutrality principles should the NBNC adopt?* There is a growing concern that there is a need to prevent an access network operator from discriminating between access seekers, except perhaps on grounds of size, or between groups of end users while, at the same time, allowing it to manage traffic so as to maximise the efficient use of the network.

**Issue 6:** *will the Government impose obligations on the NBNC so as to ensure affordable narrowband voice services, and perhaps affordable basic broadband services, for all?* In a situation where the NBNC serves 90% of Australians with FTTH it makes more sense to impose obligations on the NBNC to offer basic products at wholesale prices which translate into affordable retail prices than it does to impose obligations on retail service providers. But such obligations could significantly reduce the profitability of the NBNC, at least until there is demand for high price next-generation broadband access from a high proportion of the population. One way to deal with this problem is to redefine the universal service obligation in a technology neutral way so as to include mobile services. This would mean there is no obligation on the NBNC to provide fixed voice services customers in areas with good mobile coverage.

### Transitional issues

**Issue 7:** *how will the Government managed the transition from today's position, in which Telstra is the universal service provider and carrier of last resort to one in which the NBNC is the access network provider of last resort?* There are a number of interrelated issues here:

- Will the NBNC take on carrier of last resort obligations in all areas or only those with inadequate mobile coverage?
- What will trigger the transition in each area?
- Under what conditions will Telstra be allowed to close its copper or HFC networks?

**Issue 8:** *what rollout targets will the NBNC need to meet?* This issue raises a number of questions:

- How are rollout targets to be defined - in terms of homes passed or homes connected?
- How much flexibility should the Government allow the NBNC in meeting its targets? The Government's objective is to roll out FTTH to 90% of the Australian population. But profitability will be maximised if the NBNC can roll out only in those areas with a high average willingness to pay.
- Should the Government impose intermediate rollout targets and should it review the 90% target as roll-out progresses to see if it remains a sensible long-term goal?

**Issue 9:** *will any restrictions being imposed to prevent other companies from building wireline broadband networks to compete with that of the NBNC?* Upgrade of Telstra's HFC network is an obvious example here. Rival access networks will help constrain the NBNC from monopoly pricing. But they will also dilute the NBNC's profitability as rivals cream off the customers with the highest willingness to pay.

**Issue 10:** *what rights, if any, will the NBNC have to access existing telecommunications assets- such as the poles, cabinets, ducts and concentrator sites of Telstra?* Such access could significantly lower the cost of national broadband network rollout. But access might best be achieved through negotiation than through regulatory diktat, especially given the position of the Australian constitution on expropriation of property. This does not prevent the Government from using regulatory options (and especially in relation to Issue 7) as a bargaining tool in its negotiations with Telstra.