A SIGNIFICANT GAP IN THE NBN CORPORATE PLAN

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The financial advisory firm Greenhill Caliburn identified three key areas of risk with NBN Co’s corporate plan including rollout cost, take up rates and average revenue. Our interpolation between recent trends and indications in these three areas and projections in NBN Co’s corporate plan suggests a significant gap between NBN Co’s likely targets and projections in its corporate plan. Any short fall between actual results and planning targets should be apparent by the 2013 financial year. With an election due soon after that, this would provide an opportunity to revise the corporate plan, most likely by retaining copper based access for longer. Policy issues need to be considered in the context that copper will remain a component of high-speed broadband networks for much longer than envisaged in the current NBN corporate plan.

A SIGNIFICANT GAP IN THE NBN CORPORATE PLAN

The review of the NBN corporate plan by the financial advisory firm Greenhill Caliburn revealed three areas of risk of a substantial shortfall between the business’s financial projections and its likely actual performance: the cost of the rollout; take up rates, including take up rates of higher level services; and average revenue. Our interpolation between recent trends in average access revenue, take-up rates and initial indications on rollout cost and projections in NBN Co’s corporate plan suggests a significant gap between NBN Co’s likely revenue and cost and the projections in its corporate plans. Only the executive summary of the Greenhill Caliburn report has been released, but this suggests it has highlighted similar issues to the government.

The TJA’s May 2011 edition was focused on the policy gaps in the NBN. These covered a range of technical and social issues but did not touch on the commercial and economic gaps, although these have been covered in previous articles published in the TJA and elsewhere. The analyses of the commercial gaps in this article suggest that the NBN will not develop in accordance with its corporate plan.

Possibly the NBN will develop along more commercial lines – that is its corporate plan will evolve to adjust in response to actual costs, take up and average revenue. This may well mean that it will retain copper-based broadband access in some form for a longer period. Alternatively, the NBN may be recast in a wider economic case where those benefits which are not well captured commercially are used specifically to supplement its poor commercial prospects. However, assuming a wider economic case is made for NBN, a non-commercial NBN would become a Federal budget item and so open to ongoing scrutiny of its performance against policy objectives. Again, almost certainly this would delay the long term deployment of ubiquitous fibre to the home in favour of retaining copper based access to high speed broadband for a longer period.
In either case the policy gaps identified in the May edition of TJA need to be considered in the context that copper will remain a component of high-speed broadband networks for much longer than envisaged in the NBN corporate plan.

GREENHILL CALIBURN REVIEW OF NBN’S CORPORATE PLAN: AN AID, NOT AN ENDORSEMENT

Greenhill Caliburn’s review of NBN Co’s corporate plan included: an overview of NBN Co, a preliminary commercial assessment of the corporate plan and a summary of potential ongoing performance management strategies to assist the Commonwealth with its investment in NBN Co. An eight page executive summary of the report was released on 14 February 2011, but the full report is confidential.

The executive summary of the report makes it clear that it does not evaluate the Government’s NBN policy objectives, nor provide a cost benefit analysis nor does it “constitute a recommendation to the Commonwealth with respect to the NBN or NBN Co in any form, including with respect to approval or adoption of the corporate plan.” (Greenhill Caliburn 2011, 1).

Nevertheless, the overview, preliminary commercial assessment and summary of performance management strategies are valuable for the government as investor in the NBN and to aid its management of that investment. Given the substance of the government’s NBN investment, the review is sufficiently worthwhile on that basis without necessarily being an evaluation or analysis.

GREENHILL CALIBURN SAYS NBN’S CORPORATE PLAN, TAKEN AS A WHOLE, IS REASONABLE

Greenhill Caliburn said:

“based on its preliminary review … and subject to the assumptions contained in the corporate plan … taken as a whole, the corporate plan for the development of the NBN is reasonable. In general, key assumptions underlying revenue and cost projections appear to be in line with a range of available domestic and international benchmarks, and are consistent with the stated policy objectives of the Government with respect to the NBN. Accordingly, we believe that the Corporate Plan provides the Government with a reasonable basis upon which to make commercial decisions with respect to NBN Co.” (Greenhill Caliburn, 1).

The Government was sufficiently encouraged by this to state that “(t)he Greenhill Caliburn report confirms NBN Co’s key assumptions underlying revenue and cost projections which provide the Government with a reasonable basis on which to make commercial decisions about the NBN” but didn’t mention the preliminary nature of the review or the other qualifications noted including the underlying assumptions (Conroy 2011). In fact the Greenhill Caliburn report goes on to say the corporate plan is based on a number of assumptions and that the NBN’s expected return profile “could vary – potentially materially – if those assumptions are modified” (Greenhill Caliburn, 2).

Overall, the Greenhill Caliburn executive summary makes clear in eight pages three specific areas of significant risk and uncertainty. Two of these are average revenue expectations and take up projections which together are the key drivers of revenue forecasts. It says “(i)n particular long-term revenue forecasts for NBN Co contain inherent uncertainties … (c)hanges to underlying revenue assumptions have the potential to materially affect the return profile for NBN Co.” It’s a point that needs to be made clear because these two drivers of revenue forecasts as laid out in the NBN Co’s corporate plan are at odds with market trends over the past several years.

Greenhill Caliburn appears somewhat less concerned about the third factor, resource costs. It notes that “(a)lthough changes in capital or operating expense forecasts could also have a
material impact, those forecasts mostly relate to nearer-term events and have a lower risk profile given NBN Co’s ability to manage the NBN roll-out.” Nevertheless, given recent experience, there is good reason to be concerned about this factor as well.

**AVERAGE WHOLESALE REVENUE ASSUMPTIONS AT ODDS WITH CURRENT BROADBAND ACCESS REVENUE TRENDS**

Wholesale revenue forecasts in NBN Co’s Corporate Plan 2011 – 2013 are based on two options, Option A (1) and Option A (2), respectively forming upper and lower boundaries of the corporate plan’s scenario range (NBN Co 2010; 109). The two revenue scenario options are not greatly different over the three year corporate planning period, with the first option modelling a blended average revenue per activated line (ARPU) of $34 per month by the end of the three year corporate plan (FY2013) and the lower bound ARPU of $33 per month. These would help generate revenue of $154m to $160m from 566,000 connections in FY13 (or $224-231m annualised).

These ‘prices’ are more than three times higher than the current blended price paid by broadband access seekers for access to copper. Although there are some important differences in the access product offered on copper compared with the proposed fibre access product of NBN Co it highlights the question of ability to pay: that is, does the broadband user community have the capacity to pay such prices given it has grown to a 65% subscriber penetration rate largely due to cheap access? At current average wholesale prices paid for copper access of just over $10 per line per month, 566,000 access lines would only generate around $70m in annual access revenue.

Part of the difference is in the backhaul dimension of the larger footprint of NBN Co’s fibre access network (FAN) compared with the footprint of Telstra’s local exchange service areas (ESAs). In effect this allows access seekers to avoid around half of their backhaul payments and also expands the addressable market given households in some current ESAs can’t be offered effective capacity to support broadband service. Benchmarking backhaul payments by access seekers against their access payments suggests that a 50% saving in backhaul applied to NBN access might add ten percent to the willingness to pay for NBN access. Similarly, a ten percent expansion in service area footprint, other things being equal, might add a similar amount to willingness to pay for fibre access relative to copper access. These two adjustments imply that 566,000 access lines generating $70m, in the relative NBN fibre footprint, might deliver $86m in broadband access revenue.

Two other differences are perhaps more important in assessing the average revenue prospects for NBN Co fibre access service. Access revenue derived from voice service is the most critical of these in the early years of NBN Co’s plan. The broadband market has developed over the past decade on the back of cheap access to a network built for and paid for by voice. In aggregate, broadband lines contribute less than 25% of the annual cost of the copper access network, including Telstra’s own broadband lines at the same average price paid by broadband access seekers, about A$780m per annum in broadband access revenue.

**INITIAL FIBRE ARPU IS SIMILAR TO CURRENT VALUE INCLUDING A COMPONENT FOR VOICE ACCESS**

The bulk of the copper access network is paid for by voice; however, voice revenue is declining rapidly. PSTN revenue has declined by 30% from a peak of A$8.3bn in FY04 to $5.8bn in FY10, or about 5.8% per annum. The retail access share of this (including local call revenue and some inherent retail margin) has declined by 26% from A$4.7bn in FY04 to $3.5bn in FY10, or about 5.0% per annum. The trend indicates a decline in the willingness to pay for fixed voice as valuable voice traffic migrates to mobile and voice access becomes commoditised in a fixed broadband environment.

Initially, the bulk of NBN Co’s revenue is contributed by its access charge for the access virtual circuit (AVC), which is a speed based charge commencing at A$24 per month for a 12
Mbps downstream and 1 Mbps upstream access service (i.e. 12/1 Mbps), rising in small increments to $34 for a 50/20 Mbps access service, $38 for a 100/40 Mbps access service and then rising in larger increments for higher speed access services. At $24 the entry level 12/1 Mbps access service is priced similarly to the current copper access service for voice and shared broadband. In its latest access prices, the ACCC set wholesale line rental (WLR) and line sharing service (LSS) rates of $22.84 and $1.80 respectively, a combined rate of $24.64 for voice and data access service.

Initially also, NBN Co’s product set is similar to that of copper access, with its first product release being high speed broadband and telephony and its second product release being emerging entertainment capability. Although it will offer these at speeds well above that of copper on average, copper can offer these at a sufficiently good speed in many areas. In terms of the AVC component of NBN Co revenue, a substantial value differential arises to the extent people will pay for higher speed access (than is available on copper) to deliver high quality broadband access and entertainment services as well offering access services in areas not well serviced currently by copper.

As well as this potential value differential, NBN Co proposes three further product releases drawing on the high-speed capability of fibre network. These are aimed at business and enterprise, but much of this value will be contested by other networks including privately owned fibre. (NBN Co has a fibre access monopoly only to households and business premises with fewer than 15 people.)

The relationship between demand for voice and broadband access may not work both ways: demand for voice may be relatively inelastic at $22.84 (although this demand elasticity seems to be increasing over time) and given this service is taken up there may then be good demand for broadband access at $1.80. That is to say much of the current demand for broadband access derives from a low access cost given a certain demand for voice. Against that, the demand for broadband as the primary access service with low cost voice provided as a component service looks much more elastic given low subscription prices are a primary driver of retail demand for broadband.

In broadband packages, voice is typically offered as a supplementary service for around $10.00 per month, that is for retail service. If we include voice at $10 per month as an access service, then this would deliver NBN Co additional revenue of about $45m in FY13, or about $130m in total (annualized at $150m and $170m) depending on the previous assumptions. This is an ARPU of about $22.50, close to the current WLR/LSS combined access price but only about two-thirds of NBN Co’s FY13 ARPU target, and essentially with no retail margin on voice service compared with current pricing.

THE KEY TO NBN CO’S LONG TERM ARPU TREND IS ITS ABILITY TO EXTRACT A PREMIUM FOR HIGH SPEED SERVICE QUALITY

The differential may be made up depending on the extent to which people may value and pay for higher speed access service (in more areas than served by copper access) and NBN Co’s ability to extract a premium for service quality at high speed. In our view, this expected uplift in willingness to pay for additional value is a critical factor in NBN Co’s FY13 corporate plan targets.

Extending this beyond FY13, the difference between copper and fibre access on which the NBN Corporate Plan most depends over the long term is its ability to offer high service quality, in part because its fibre infrastructure allows it great capacity to specify and deliver specific product speed (peak information rate or PIR) and in part because of its provision of backhaul allows it to offer a Connectivity Virtual Circuit (CVC). The CVC is the capacity required for each service area to aggregate access circuits to NBN’s point of interconnection. It is, as NBN Co’s corporate plan says, a “product construct … an aggregation point where the access seekers can choose to contend their traffic to create differentiation. CVCs can be used as proxies for usage charging.” (NBN Co 2010, 103).
The CVC is the ARPU component that is the substantial difference in the value of the fibre access product relative to copper, and ultimately may help justify the economic case for the NBN. It is the potential value in this price component that underlies the case for ubiquitous fibre access, a point made plain in NBN Co’s corporate plan. It says that the CVC products are expected to contribute approximately 30% of revenue by FY2025 and 36% in FY2040. “This reflects a policy to balance NBN Co revenues between speed (AVC) and usage (CVC). The construct of charging for CVC capacity is the principal mechanism by which NBN Co can benefit from the expected future growth in broadband data usage”. (NBN Co 2010, 110).

There are other products that contribute to NBN Co revenue including network interface (NNI) and multicast. These help make up the value differential, but the differential in value between fibre and copper mostly hinges on Retail Service Providers (RSPs) paying more for higher speed access than the basic entry-level service and on the CVC component. The take up of these two components of value needs to drive an increase in access ARPU from (effectively) $24.64 on copper currently to $33.00 on fibre by FY13, a 34% increase over 2 years, or 16% per annum over two years.

The importance of rising ARPU was noted by Greenhill Caliburn, although not quantified in its executive summary.

“Average revenue per user consists of baseline connection fees as well as usage-based rates charged to customers. ARPU is important in driving return increases over time as volume growth (up take) plateaus, shifting revenue growth from new users to increasing returns from each connected customer. The Corporate Plan assumes ARPU will rise over time as usage per customer increases.” (Greenhill Caliburn 2011, 4).

NBN CO’S ASSUMED RISING ARPU TREND COMPARES WITH DECLINE SINCE 2005

The significant value-driven increases in access prices assumed in the corporate plan don’t seem to be realistic against the historic trend in declining access prices. Although the bundled WLR/LSS rate is $24.64 on copper now, it was previously around $28.50. As well, the unconditioned or unbundled local loop (ULL) rate for broadband access on copper is now $16.21 across 90% of copper access lines; that is, roughly comparable with the NBN Co’s proposed fibre footprint. When the ACCC first introduced geographic de-averaging for ULL, the metropolitan rate was $22 per month and the rural price was $40 and across the three bands (city, metro and rural) the rate averaged around $26 per month. The fall to a common rate of A$16.00 is a 38% reduction from that average while the key metropolitan rate has fallen by 27%.

Line sharing rates have fallen even more significantly, from $9.00 to $2.50, and now $1.80. These initial reductions in access prices drove a step down in average monthly retail prices from over $60 in FY05 to around $50 in the following years. Retail ARPU has increased in some years since then to around $55 by FY10 as the broadband market matured, with growth in demand for higher service packages and improvement in ISP margins. However, they fell again in FY11 by about 1.5% as Telstra dropped its broadband prices to rebuild market share. Overall, we contend, there was a sharp drop in regulated broadband access prices mid decade, and further reductions since then. These flowed into lower retail prices and this helped initially drive good growth in broadband subscription for several years before the industry looked to consolidate these gains in better margins and returns in FY09 and FY10. In this context, and with only a gradual and interrupted increase in retail ARPU with maturing subscriber demand, how is it that the NBN expects to turn these trends around to achieve a 34% increase in average access revenue across its fibre product over two years?

Further the step up in access prices over this period is only the start of a long-term trend. On the revenue and connection growth in the NBN Co corporate plan, ARPU is indicated at around $65 per line per month by 2025. This is a 5.7% annual increase sustained for a further
12 years, about twice the rate of inflation, and at odds with access price trends over the past half decade or more.

It’s an optimistic projection with several clear risks indicated by Greenhill Caliburn: “Consumers of telecommunications services generally have an expectation that prices for services will decline or that consumers will receive higher value services for same price over time. The Corporate Plan assumes that on a per unit basis, the real price of service will decrease over time. This loss is assumed to be more than offset by the increase in consumer spending on broadband services as they purchase higher quality services, measured in usage and potentially targeted or committed speed levels.

“NBN Co’s pricing philosophy maintains low price increments between the different access speed tiers in order to encourage an upward movement through pricing levels. The actual retail prices and services / products offered to consumers are largely outside NBN Co’s control, but in our view NBN Co’s proposed pricebook and approach to pricing are conducive to allowing retail service providers (RSPs) to develop and market applications and services that will meet and encourage the expanding speed and usage requirements of a potentially growing number of internet users.

“Key risks of ARPU assumptions include potential consumer pushback on the usage-based pricing model, the potential need for lower prices to overcome initial low up take, a faster than expected erosion of RSP margins on base-level products (which may affect consumer willingness to buy materially higher priced products) and potentially lower-than-expected growth in attractive internet-based content and “over-the-top” services requiring higher speeds and usage rates.” (Greenhill Caliburn 2011, 4).

OVERALL TAKE UP TARGET OF 70% IS DRIVEN BY THE TELSTRA DEAL

Indeed, the issue is not so much NBN Co’s ability to offer this high service quality but rather to convince enough people to pay for it. The second key factor assessed by Greenhill Caliburn is the extent of take up, especially for the higher level services. NBN Co expects to have 1,268,000 premises passed by fibre by June 2013 (including 249,000 in greenfields sites by third parties) and a further 447,000 to have wireless or satellite available. FY13 is the first full year of substantial growth in rollout. More importantly for its revenue projections it expects to have 511,000 premises connected to the fibre network, a connection rate of 40%.

Perhaps more importantly for long-term value, it expects to have 12,931,000 premises passed by fibre and a further 1 million by satellite and wireless by 2025 when NBN Co expects to be in its established operations phase. Of these it expects to have 9,052,000 premises connected to fibre, a connection rate of 70%. The key assumption behind the 70% connection rate and take-up of basic services is the customer migration agreement recently reached with Telstra.

In the corporate plan’s revenue model, connection and take up of services are taken as the same thing, with connected premises that take no telecommunications services considered with vacant premises and estimated at 12.4% at 2025. The corporate plan considers “the majority of empty/no service premises are structural in nature” (NBN Co p. 116) and doesn’t separately weigh the possibility that people may take a connection when it is offered but not activate a service. A premises is activated, it considers, when a valid service order is received.

Two other key assumptions behind the 70% connection rate target of 2025 are wireless-only premises of 13% (equivalent to 16.3% of households) and third party fibre premises of 4.6%. Clearly, the wireless-only premises assumption is a matter of concern for NBN Co, sufficient for it to require Telstra and Optus to agree not to “promote wireless services as a substitute for fibre based services for 20 years”. (Telstra 2011, 9).
NBN Co’s forecasts of wireless-only households are based on extrapolation of current estimates of 13% growing to 15% by 2015. It argues that this estimate includes 4% of households that subscribe to fixed broadband but not fixed voice, although this group won’t necessarily value the fixed voice broadband bundle intrinsic to NBN Co’s fibre access. In any case it seems an error to limit extrapolation of the current wireless-only household trend which reflects (among other things) the current relative pricing between wireless and fixed broadband, when these relative prices are likely to change significantly through the forecast period. That is, fixed broadband prices are likely to become more expensive relative to wireless, given access pricing in NBN Co’s plan and growth in wireless network capacity. The more likely scenario is further migration of more valuable services from fixed to wireless networks.

Greenhill Caliburn also warned about the “(t)rends towards ‘mobile centric’ broadband networks … to the extent that some consumers may be willing to sacrifice higher speed fibre transmissions for the convenience of mobile platforms.” Despite the guidance of industry experts it said “the prevalence of such homes should be carefully monitored in connection with ongoing performance management efforts”. (Greenhill Caliburn 2011, 3-4).

A related issue for NBN Co’s take up target, but not separately included in its corporate plan, is the growth of wireless femtocells used within buildings or households. NBN Co’s plan envisages these being connected to its fibre network but in many cases they may readily connect to nearby wireless base stations and allow traffic to bypass NBN Co’s access network. The risk was sufficiently important for NBN Co to specifically exclude the option in its subscriber agreement with Telstra.

We would question how workable such restrictions are across the whole industry. Apart from Telstra and Optus there are several other wireless operators capable of developing a workable wireless access strategy in target markets and, given the access price trends outlined, a strong incentive for RSPs to find ways to bypass NBN Co with such technology. If or where this opportunity becomes significant, it is likely to require a commercial response from Telstra and Optus.

**EXPECTATIONS FOR MIGRATION TO FIBRE OF VOICE ONLY HOUSEHOLDS**

A further key issue in NBN Co’s take up projections relates to the 3.5 million households that subscribe to voice-only service on copper, many with monthly telephone bills below $40, or even $30. These make up about a third of all households currently. NBN Co expects 52% of residential end-users initially to be on the basic 12/1Mbps service, including (we assume) these existing voice-only customers, in part a result of the subscriber migration agreement with Telstra. As part of that agreement, these people will by default have their voice service included as part of a broadband service package when they are migrated to NBN Co fibre, although so far they have seen little or no value in broadband services. There is potential for significant ‘leakage’ (as the corporate plans describes it) to wireless among these customers, especially given the impact of changing relative prices between wireless and fixed services. Even to the extent they do migrate to NBN Co’s basic access services there must be significant doubt about their willingness to migrate to higher value plans, which underlies NBN Co’s assumption of rapid increase in ARPU.

**UPSELLING POTENTIAL CONSTRAINED BY STRUCTURAL SEPARATION MODEL**

Compounding these take up and service evolution issues, a key issue only hinted at in the Greenhill Caliburn assessment (at least, only hinted at in the executive summary) is that unlike most other investors in networks, NBN Co is constrained in its ability to up-sell services by its structural separation. It holds the investment risk but the key means of managing this risk – getting enough end users to see the value in higher value access service – is in the hands of third party RSPs. The RSPs have upside revenue incentive to do this, but
this incentive is constrained as margins are squeezed by the CVC price component as they up-
sell. And they don’t have the significant downside incentive; that is, they don’t bear the cost of failure to develop the high value demand that comes with holding infrastructure investment. Instead, many have established expertise and differentiation in bargaining down access prices.

Greenhill Caliburn said the up take of NBN services:

“will be largely driven by consumer assessment of the value proposition … which will necessarily be measured relative to the value of similar products offered through other technologies such as copper, wireless broadband or HFC networks. NBN will be a national wholesaler, so its pricing must allow affordable products to be offered by its customers, the RSPs. Attractive RSP pricing, robust RSP competition and the potential for development of innovative prices, services and applications will be key factors for driving up take.” (Greenhill Caliburn 2011, 3-4).

This is a key risk arising from structural separation, the break in the alignment of incentives between the body holding the infrastructure investment risk, NBN Co and the groups best able to manage it by growing high value content, the RSPs. Potentially, structural separation exacerbates a substantial issue in the industry currently: the volume of traffic levels is growing at a rate much greater than the value of traffic measured in revenue terms; growth in traffic volume requires more network capacity but if the revenue is not growing sufficiently carriers lack the incentive to expand network capacity. Who should pay for increases in network capacity? In microeconomics, one solution is to varies prices inversely with demand elasticity, so that usage that is more resilient to price changes pays more. Ideally, where service quality is a key differentiator such an ‘exchange of values’ is also aided by a good relationship between buyer and seller to ensure valued service is best delivered. Structural separation complicates this process; the access network provider can’t readily see the demand preferences of end users, and so uses a broad proxy such as the CVC charge; and the access network provider doesn’t have the ‘value’ relationship with the end user and so may not value the business of the end user sufficiently to provide the appropriate level of service. Such complications in matching network capacity and service quality with end user needs was not weighed up in the policy process that led to structural separation and the NBN.

Key risks to NBN Co’s up take assumptions according to Greenhill Caliburn, “relate to competition from alternative technologies, and the potential for adverse consumer reactions in one or more markets to service offerings from RSPs to be delivered over the NBN or RSP pricing options.” Overall, however, Greenhill Caliburn was relatively optimistic about NBN Co’s pricing being “designed to achieve comparable or better prices”, although this is probably a reference to higher speed services available on cable currently. The agreement with Telstra and the relative lack of cable competition, it said, “provide strong support for NBN Co’s ability to achieve its targeted up take.” (Greenhill Caliburn 2011, 4).

**FTTH ROLLOUT COSTS, MORE STRAIGHTFORWARD THAN DEMAND, BUT STILL HAS RISKS**

Of the three key issues raised by Greenhill Caliburn, the cost issues are the most straightforward. Cost information is relatively well established and resources required for rollout can be assessed in advance, benchmarked and project managed. As Greenhill Caliburn puts it, “unlike the drivers of NBN Co revenue, where data availability to support estimates are limited … the majority of the cost assumptions, including those relating to the impact of Australia specific elements can be more accurately measured or estimated based on global precedents or other studies.” (Greenhill Caliburn 2011, 5).

Cost risks are more likely to arise in the capital expenditure associated with rollout given the substance of this relative to low operating costs. “Given the complexity and large number of variables, a number of environmental, regulatory and other operational factors could potentially result in unanticipated costs or delays. For example, the expected real gains in
labour productivity are dependent on delivering consistent productivity improvements throughout the project’s lifetime. However, the impact of such isolated factors is likely to be relatively insignificant on the overall plan.

“Key risks of capital expenditure overruns include changes in government policies and / or local approvals, which could require more expensive underground installation costs, or lack of productivity improvements in materials or labour sourcing over time.” (Greenhill Caliburn 2011, 5).

The risk became more evident in April when NBN Co suspended its network construction tender after 14 construction companies were unable to meet NBN Co’s requirements within budget constraints. NBN Co said at the time that it had benchmarked its project “against similar engineering and civil works projects in Australia and overseas” and did not consider it would receive value for money from those proposals (NBN Co 2011a). However, the view of construction companies was that NBN Co’s RFP required construction companies to carry extensive risks around deployment and mobilisation, including risks that the companies themselves could not necessarily control.

NBN Co thought it could secure better value through an alliance approach. In May it appointed Fujitsu Australia Limited as its prime alliance partner to deliver fibre infrastructure to new developments or ‘greenfields’ sites. In June it appointed Silcar Pty Ltd for the first large-scale deployments of fibre in Queensland, NSW and the ACT. NBN Co says these arrangements are in line with its corporate plan. However, risk sharing is different from the original RFP issued by NBN Co. “In our one-on-one negotiations we agreed NBN Co would assume the risk of other infrastructure providers and Silcar would assume the risk of construction.” (NBN Co 2011b)

NBN Co’s corporate plan targets of 58,000 premises passed by fibre and 35,000 connections by June 2011 were intended to be predominantly met by greenfields build, although under a build, operate and transfer (BOT) model rather than direct construction by NBN contractors. However, delays in finalising arrangements for BOT in greenfields areas mean NBN has likely missed this target. It’s a minor lapse in the early stage of a ten-year construction project, perhaps inevitable given the complexity of the project, but another early indication that unplanned events may undermine a detailed plan.

A further development since Silcar was appointed is the finalisation of definitive agreements with Telstra. The infrastructure services agreement makes Telstra responsible for remediation of that infrastructure as well as ongoing maintenance and repair. However, Telstra has no remediation or service level obligations for lead-in conduits which become the property of NBN Co. These mixed arrangements risk complicating the roll out process, potentially increasing mobilisation of NBN construction crews beyond optimal levels, a key driver of costs.

THREE KEY RISKS POINT TO A SIGNIFICANT GAP IN THE CORPORATE PLAN

“A 10 year, $35.9 billion infrastructure project has many inherent risks”, say Greenhill Caliburn (p. 5). The risks are asymmetric and point the wrong way for NBN Co: ARPU may well be lower, but there is little prospect it will be higher than planned, take up may be lower but is unlikely to be higher or sooner, and at best costs may come out in line with forecasts but there is a good chance they will be higher.

The extent to which NBN Co is achieving or falling short of its corporate plan will be apparent by 2013 when NBN Co should have 1,269,000 premises passed by fibre and a further 448,000 covered by wireless or satellite. Of these it expects 511,000 to be connected to fibre services, in a total of 570,000 active service premises. By then it should be clear whether construction costs are in line or not. The key variable to deliver the corporate plan’s financial target should also be apparent by then: is there enough take up of key services to drive a lift in average revenue to $33 per line per month? This will require nearly half of active service subscriptions to be for a higher than basic level of service.
What will happen in the event that one or more of these three key parameters is missed, causing a gap in achieving the corporate plan? “NBN Co is planning on managing a number of the cost and execution risks of the project by conducting a staged deployment process (using first release sites and second release sites) to refine costings, procurement methodologies, planning, construction processes, operating systems and other related matters. Best practices can be developed from this sequenced rollout.” (Greenhill Caliburn 2011, 5).

However the more substantial risk to achieving the financial targets in NBN Co’s corporate plan is on the revenue side: average revenue and take up targets. If these targets are not met, Greenhill Caliburn suggests “NBN Co has also retained the flexibility to amend the Corporate Plan over time in response to changing circumstances. “The targeted rollout schedule provides … an opportunity to monitor costs and procurement processes, adjust product offerings or pricing levels, identify and adopt best practices and modify other variables prior to the NBN’s introduction nationwide.” (Greenhill Caliburn 2011, 6).

**LIKELY SIGNIFICANT CHANGE IN CORPORATE PLAN IF FY13 TARGETS NOT MET**

This leaves open but unsaid the possibility of a significant change in the plan if NBN Co is running well behind on key variables by FY13. The next federal election is due soon after NBN Co reports FY13 results. Given the Coalition’s broadband policies, a change in Government would certainly lead to a change in broadband plan; in fact a change in focus of rollout to include other technologies and support infrastructure competition in many areas while focusing government support in underserved areas. This may be done most readily by changing the NBN corporate plan to focus on those areas, including expanding copper-based access, although other adjustments would be needed.

However, even if the Labor Government is returned after the next election it too would need to revise NBN Co’s plan if it was not meeting targets. If the outcome of lower revenue and/or higher costs meant that NBN Co’s likely rate of return on invested capital fell below its cost of capital then it would not be counted as a commercial venture and so spending (including capital spending) would become an item on the Federal Budget. The Government has resisted including it as such because such expenditure may delay the planned return to budget surplus. If this remains the policy priority of a Labor Government after the 2013 election and NBN Co is falling well short of its financial targets, that would also likely lead to a significant change in plan. A more budget conscious Labor Government could reduce the rate of rollout; but possibly, if demand for high speed services hasn’t evolved as expected, it may consider retaining copper access in some form for longer, and managing increases in capacity by extending fibre to the node to better match the rate of change in demand.

In support of this possibility, it is notable that the compensation arrangements in favour of Telstra in its services agreement with NBN Co only apply when NBN Co’s fibre deployment reaches 20% of its current coverage target of 93% of premises. By June 2013, if its rollout is on track, NBN will only be at about 12.5% of that target, providing plenty of scope to revise the subscriber agreement without incurring a $500m penalty and still retaining the more important infrastructure agreement.

**CONCLUSION: POLICY GAPS IN THE NBN MAY REQUIRE MORE TIME FOR ADJUSTMENT**

Key policy gaps identified in the TJA’s May edition (TIA 2011) range from interconnection issues (Rocke and Wignall, Hackett), regulatory responsibilities (Eason), points of interconnection (Sinclair), end-to-end service delivery (Rocke and Wignall, Darling), Universal Service Obligations (Darling, Sinclair), the Standard Telephone Service (Darling, Stanton), wholesale competition (Sinclair), end user issues (Sinclair, Darling, Hawkins, Lee), and the need to develop services to use the NBN (Sinclair, Stanton, Budde, Salomon, Pesce).
Our analysis suggests that the resolution of policy and social gaps will not occur in the development context envisaged in the TJA’s May edition articles. However, even assuming a wider economic case for NBN, a non-commercial NBN would become a budget item and so open to ongoing scrutiny of its performance against policy objectives, again, almost certainly delaying the long term deployment of ubiquitous fibre to the home in favour of retaining a copper based or supplemented high speed broadband access network for a longer period. In either case the policy gaps identified in the May edition need to be considered in the context that copper will remain a component of high-speed broadband networks for much longer than envisaged in the current NBN corporate plan.

END NOTES

1. That is for those living sufficiently close to ADSL-equipped exchanges.

REFERENCES


