



Review of NBN Co Limited's Corporate Plan

February 2011

Executive Summary

In April 2009, the Commonwealth announced a National Broadband Network initiative ("NBN") to fulfil its objective of connecting all Australians to broadband, including superfast broadband for the vast majority. The Commonwealth established NBN Co Limited ("NBN Co") to build, own and operate the NBN. The NBN will represent the largest single infrastructure investment in Australia to date.

NBN Co has prepared a long-term corporate plan and business model for the development and operation of the NBN (the "Corporate Plan"). In November 2010, NBN Co submitted its initial Corporate Plan to the Government. The initial version of the Corporate Plan included assumptions on a number of policy matters that had not been finally considered by the Government. Following submission of the initial Corporate Plan, the Government reached final positions on many of these matters, and these positions have been reflected in the revised version of the Corporate Plan dated 15 December 2010.

The Corporate Plan provides a detailed overview of the expected technological, operational and financial framework for the development of the NBN. NBN Co is in the process of developing five first release sites to test its proof of concept. Assuming a number of regulatory and other approvals are received, NBN Co expects to commence large-scale construction of the fibre network in mid 2011.

Greenhill Caliburn Role

The Commonwealth retained Greenhill Caliburn Pty Limited ("Greenhill Caliburn") to prepare a review of certain commercial aspects of the Corporate Plan (the "Report"). Our Report provides:

- an overview of NBN Co;
- a preliminary commercial assessment of the Corporate Plan, including an identification and analysis of key assumptions and potential risks; and
- a summary of a range of potential ongoing performance management strategies to assist the Commonwealth with its investment in NBN Co.

Our Report does not purport to evaluate the Government's NBN policy objectives, nor does it undertake a returns or cost-benefit analysis of the implementation of the NBN. The Report is not intended to be and does not 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. The Report is confidential, and may not be disclosed to any third party without the prior written consent of Greenhill Caliburn.

Summary

Greenhill Caliburn has reviewed the Corporate Plan and relevant supporting documentation provided to us. Based upon our review, we believe that the Corporate Plan has been completed to high professional standards, providing the level of detail and analytical framework that would be expected from a large listed public entity evaluating an investment opportunity of scale.

Based on our preliminary review, as more fully described in our Report, and subject to the assumptions contained in the Corporate Plan itself, Greenhill Caliburn believes that, 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.

The Corporate Plan is based on a number of underlying assumptions, including the network design, regulatory considerations and completion of agreements with third parties. The business strategies and expected return profile of NBN Co as set out in the Corporate Plan could vary – potentially materially – if those assumptions are modified.

As outlined in the Corporate Plan, successful implementation of the NBN and the achievement of NBN Co's financial forecast are subject to a number of risks, contingencies and external factors. In particular, long-term revenue forecasts for NBN Co contain inherent uncertainties and are subject to shifting technologies and consumer preferences. Changes to underlying revenue assumptions have the potential to materially affect the return profile for NBN Co. Although 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.

Greenhill Caliburn has not conducted an in-depth analysis of NBN Co's future funding requirements. Our preliminary review suggests that, assuming performance in-line with or in excess of levels set forth in the Corporate Plan, the prevalence of normalised financial market conditions and some level of implicit government support (as signalled, for instance, by equity injections consistent with the Corporate Plan), NBN Co is likely to be able to obtain debt funding over time in a manner consistent with the Corporate Plan.

The Corporate Plan includes a number of processes NBN Co will use to manage risks in its control, and to ensure it can respond to external factors such as changes in technologies or shifts in consumer behaviour and preferences over time. In addition to such internal processes, Greenhill Caliburn recommends that the Commonwealth work with NBN Co to agree upon a series of performance indicators so they can jointly track the actual performance of NBN Co and adjust strategies or operations as circumstances require.

Overview of the Corporate Plan

The Corporate Plan provides a detailed overview of the expected development and operation of the NBN, including a 30-year business forecast. The Corporate Plan reflects the Government's principal objectives with respect to the NBN, including:

- providing fibre network coverage for 93% of Australian premises by the end of 2020, with the remaining 7% served by fixed wireless and satellite coverage;
- delivering a wholesale-only, open access platform offering Uniform National Wholesale Pricing over the network, from points of interconnect ("POIs") to premises, on a non-discriminatory basis; and
- providing an entry-level mass market product peak information rate of 12 Megabits per second ("Mbps") / 1Mbps, with the potential to deliver up to 1 Gigabit per second ("Gbps") in the future.

The latest Corporate Plan incorporates the impact of a number of recent Government decisions on policy matters affecting the NBN, including the implementation of a semi-distributed POI model (which results in around 120 POIs compared to 14 POIs in the more centralised model underlying the initial Corporate Plan) and requirements with respect to greenfield developments. The Corporate Plan continues to make assumptions on a range of regulatory and corporate matters, including but not limited to:

- passage by the Government of effective regulatory protection to prevent market participants from "cherry picking" the most commercially attractive areas ahead of the NBN build;
- passage of enabling legislation by the Government (e.g., grants of powers and immunities to facilitate the rollout of overhead cabling and other NBN equipment);
- passage of greenfield-related legislation to mandate that corporate developers install fibre-ready equipment and provide requisite access to NBN Co; and

- execution and performance of the agreements with Telstra Corporation Limited ("Telstra") pursuant to the terms outlined in the Heads of Agreement announced in June 2010.

Based on these assumptions, the Corporate Plan estimates the NBN's total build cost to be \$35.9 billion and its total funding requirements to be \$37.1 billion (excluding debt servicing costs). Given the high fixed-cost nature of the construction of the NBN, the financial returns for NBN Co will be determined largely by its ability to generate revenues over time to support the initial investment and ongoing capital and operating expenses, as well as its ability to manage that build cost.

As a result, key variables in the Corporate Plan include:

- the number of users that can be attracted to and retained on the NBN ("up take"), and the pace with which they join the network;
- the average revenue per user ("ARPU") that NBN Co can earn by providing not only entry-level products to the mass-market, but also by providing higher value products and services for residential and business customers consistent with expected growth in traffic volumes; and
- NBN Co's ability to manage the cost of building the NBN according to the Corporate Plan and its future operating expenses.

Assessment of Key Assumptions and Potential Risks

In reviewing the Corporate Plan, Greenhill Calburn has analysed the key revenue drivers, cost elements and other risk factors of NBN Co's business model. We note that our Report is necessarily limited by the lack of directly comparable precedents globally for the NBN, and that the telecommunications services it provides will necessarily change as the industry continues its rapid development and new products and services that drive volumes by leveraging communications infrastructures come online.

Revenue Drivers

NBN targets wide scale usage. A fundamental component for its success is the number of premises connected to it through fibre, fixed wireless or satellite. The Government's objective is to connect every home, school and workplace in Australia to the broadband network within 10 years. This is currently around 10.9 million potential connections, growing to a forecast potential number of 13 million by the end of 2020. This premises count can currently be made with considerable accuracy, and forecasts of future growth in premise numbers are also relatively uncontentious.

The principal drivers of NBN's revenue are up take and ARPU. Rapid up take is important to enable the high up-front fixed costs inherent in NBN Co's business model to be quickly spread over a wider subscriber base, while ARPU drives future top-line growth.

NBN Co is forecasting up take of 56.0% of homes passed by 2015 and 63.4% by the end of 2020, and ARPU increasing over time driven by increasing usage per customer.

Up Take

Wide-spread availability of superfast broadband products is a new phenomenon globally. Broadband networks have been created in a number of countries in recent periods, but comparisons of consumer responses in different overseas markets are made inexact by the unique demographic, cultural, pricing, timing and competitive aspects of each market.

Up take of services on the NBN will be largely driven by consumer assessment of the value proposition (price and performance) of products offered on the NBN, 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 retail service

providers ("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. NBN Co's current pricing is designed to achieve comparable or better prices for users of services offered over the NBN than the prices currently offered for equivalent products on other delivery platforms.

The customer conversion potential of NBN Co's proposed agreement with Telstra, and the relative lack of cable competition in Australia compared to many other international markets, provide strong support for NBN Co's ability to achieve its targeted up take. Overseas experience also generally supports NBN Co's assumptions in this regard.

Key risks to NBN Co's up take assumptions 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. Trends towards "mobile centric" broadband networks could also have significant long-term implications for NBN Co's fibre offerings, to the extent that some consumers may be willing to sacrifice higher speed fibre transmissions for the convenience of mobile platforms. Although NBN Co has received guidance from independent experts on expected levels of wireless-only households and reflected the same in the Corporate Plan, the prevalence of such homes should be carefully monitored in connection with ongoing performance management efforts.

ARPU

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.

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. These services will differ for individuals, businesses and government entities. They could include on-line health services (including telemonitoring and time-critical expert consultation), on-line educational services, "over-the-top" communications and video services, Internet Protocol television ("IPTV"), gaming and other vertical applications / services.

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 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.

Key Cost Drivers

The NBN will be similar to many infrastructure investments in that the vast majority of costs will be fixed and front-ended. Operating costs, on the other hand, are expected to be relatively

low and spread out in relation to both the initial build cost as well as the ongoing technology refresh and maintenance capital expenditures required.

Capital Expenditures

The Corporate Plan's cost base is based on a bottom-up modelling approach using an extended range of assumptions relating to network design, construction, operations and maintenance and product constructs. Unlike the drivers of NBN Co revenue, where data availability to support estimates are limited given that broadband represents a relatively new market, the majority of the cost assumptions, including those relating to the impact of Australia specific elements (e.g., geology, population density), can be more accurately measured or estimated based on global precedents or other studies.

The primary network-related costs for NBN Co will be the installation of the fibre network, as well as additional expenses associated with the creation of fixed wireless systems and satellite coverage. These build costs are estimated to be \$35.9 billion, based on the Corporate Plan's specific assumptions.

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.

Operating Expenses

Operating expenses form a relatively smaller portion of overall costs. As a comparison, forecast aggregate operating expenses for the 10 year period to 2020 of c.\$8.1 billion (excluding decommissioning and infrastructure payments of c.\$13.7 billion, which will largely be fixed upon agreement with Telstra) are significantly lower than the total estimated capital expenditure commitments for the same period of \$35.9 billion.

The main components of operating expenses are a result of the expected Telstra Agreement for the decommissioning payments up to 2020 and leasing of assets which are subject to commercial agreement. Other major components of operating expenses comprise wireless / satellite leasing and Operations and Maintenance ("O&M") and Sales, General and Administration ("SG&A") costs. The former is expected to become a smaller portion of total operating expenses going forward (given the front-loaded nature of wireless / satellite roll-out) and the latter is expected to scale with up take, with moderate productivity improvements after 2020.

Key potential risks to the operating expenses budget contained in the Corporate Plan include increased labour costs and unanticipated legal or regulatory issues.

Other Risk Factors

A 10 year, \$35.9 billion infrastructure project has many inherent risks. The Corporate Plan sets out NBN Co's approach to risk management, and highlights the company's focus on safety (including occupational health and safety), revenues and execution. We also note that 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.

NBN Co has also retained the flexibility to amend the Corporate Plan over time in response to changing circumstances. Given the rapidly changing nature of the Internet, new emerging technologies and disruptive “over-the-top” services / applications, the Commonwealth's regulatory regime may also need to evolve over time to ensure the success of NBN Co and its ability to meet policy objectives.

Recommended Performance Management Approach

Meeting Current Plan Assumptions

The Corporate Plan makes several important assumptions, including, but not limited to, regulatory protections against “cherry picking”, passage of enabling legislation by the Government (e.g., grants of power and immunities) and execution and performance of the proposed agreements with Telstra. If any of these important assumptions are not realised, the Corporate Plan will need to be revised, and the resultant changes to total costs and the project's Internal Rate of Return (“IRR”) may be material. We recommend that the Commonwealth monitor these issues closely.

In order to maximise flexibility during the large-scale NBN rollout, Greenhill Caliburn recommends a close monitoring of the Telstra customer migration and initial release phases relative to plan. The targeted rollout schedule provides the Minister for Broadband, Communications and the Digital Economy and the Minister for Finance and Deregulation (together “the Shareholder Ministers”) and NBN Co with 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.

Managing Ongoing Performance

In order to manage its ongoing risks as an investor in NBN Co, we recommend that the Commonwealth establish appropriate ongoing monitoring arrangements with NBN Co, particularly during the early stages of the project when key decisions are made. An ongoing review policy would be in-line with the approach of many professional investors, who closely monitor and analyse companies in which they have material investments rather than relying solely on standard periodic reporting. The objective is to ensure the Commonwealth receives regular updates so that it is at all times aware of NBN Co's performance relative to the original and latest agreed Corporate Plan, as well as NBN Co's views on the immediacy and relative impact of the risks that NBN Co is managing as it develops and manages the NBN. By focusing on key risk areas and tracking actual financial and operational performance relative to agreed standards on a periodic basis, the Commonwealth will be able to identify adverse trends and agree modifications to the Corporate Plan accordingly. These matters are regarded as highly important given the role of NBN Co in delivering Commonwealth policy, achieving stated financial objectives and minimising the ongoing risk of reputational issues for the Commonwealth from underperformance relating to the NBN.

To the extent that the requirements generally imposed on government business enterprises fail to do so, Greenhill Caliburn recommends that the Commonwealth agree with NBN Co that it will make a number of detailed, periodic disclosures to the Shareholder Ministers to allow them to assess the implications of any variations on a more timely basis and evaluate and introduce mitigants as required. Opportunities for review include:

- Annual Reporting – Provide an update of the detailed Corporate Plan to the Shareholder Ministers confidentially for approval on an annual basis. The Corporate Plan would include historical and projected financial information, as well as an in-depth discussion of the business environment, results and trends;
- Quarterly Reporting – Provide key performance indicators for revenue and cost drivers relative to the assumptions underlying the Corporate Plan and any updates. Examples of such indicators include up take rates and usage levels relative to plan from a number and revenue perspective, cost per premise passed and per premise activated, underlying trends in procurement practices, actual and prospective performance by RSPs and trends in complementary and competing technologies; and

- Event-Based Disclosure – Continuous, event-based reporting obligation to the Shareholder Ministers in accordance with agreed thresholds for materiality and as key milestones are reached.

Greenhill Caliburn would further recommend that review and oversight be lead by a nominated "investment committee" within the Commonwealth, staffed consistently with representatives with appropriate expertise levels in order to best preserve an ongoing relationship with, and institutional knowledge base of, NBN Co.

Disclaimer

This Executive Summary does not purport to be a complete description of the analyses or data presented by Greenhill Caliburn in the Report, but simply describes, in summary form, the material analyses that Greenhill Caliburn considered in connection with its review. The Executive Summary is qualified in its entirety by reference to the full Report. The review was a complex analytical process involving various determinations as to the most appropriate and relevant methods of analysis and the application of those methods to the particular circumstances, and, therefore, the review is not readily susceptible to partial analysis or summary description. The preparation of the Report did not involve a mathematical evaluation or weighing of the results of the individual analyses performed, but required that Greenhill Caliburn exercise its professional judgment, based on its experience and expertise, in considering a wide variety of analyses taken as a whole. Each of the analyses conducted by Greenhill Caliburn was carried out in order to provide a different perspective on the Corporate Plan and add to the total mix of information available. Greenhill Caliburn did not form a conclusion as to whether any individual analysis, considered in isolation, supported or failed to support its views regarding the Corporate Plan. Rather, in reaching its conclusion, Greenhill Caliburn considered the results of the analyses in light of each other and without placing particular reliance or weight on any particular analysis, and concluded that its analyses, taken as a whole, supported its determination. Accordingly, notwithstanding the separate factors summarized herein, Greenhill Caliburn believes that its analyses must be considered as a whole and that selecting portions of its analyses and the factors considered by it, without considering all analyses and factors, may create an incomplete view of the evaluation process underlying its Report. In performing its analyses, Greenhill Caliburn made numerous assumptions with respect to industry performance, business and economic conditions and other matters. The analyses performed by Greenhill Caliburn are not necessarily indicative of future actual values or results, which may be significantly more or less favorable than suggested by such analyses. It should be understood that subsequent developments may affect the Report, and we do not have any obligation to update, revise, or reaffirm the Report.

We have assumed and relied upon, without independent verification, the accuracy and completeness of the information publicly available, supplied or otherwise made available to us by the Commonwealth and NBN Co and its advisers, and have further relied upon the assurances of the representatives of the Commonwealth and NBN Co and its advisers that they are not aware of any facts or circumstances that would make such information inaccurate or misleading. With respect to the business model, financial forecasts and projections of NBN Co and other data with respect to NBN Co that have been furnished or otherwise provided to us, we have assumed that such projections and data were prepared on a basis reflecting the best currently available estimates and good faith judgments of NBN Co as to those matters. We have not made any independent valuation or appraisal of the assets or liabilities of NBN Co, nor have we been furnished with any such appraisals.

We are not expressing an opinion as to any aspect of the NBN or NBN Co, other than the views with respect to aspects of the Corporate Plan expressed herein. This Report is not intended to be and does not constitute a recommendation to the Commonwealth with respect to the NBN or NBN Co in any form, including with respect to its approval or adoption of the Corporate Plan. This Report is not intended to, and does not constitute, a recommendation to any person to acquire or dispose of any securities of NBN Co or any other person.