

Senate Standing Committee on Environment, Communications and the Arts
Answers to Senate Estimates Questions on Notice
Budget Estimates Hearings May 2010
Broadband, Communications and the Digital Economy Portfolio
Department of Broadband, Communications and the Digital Economy

Question No: 139

Program No. 1.1

Hansard Ref: ECA77

Topic: NBN Rollout - Tasmania

Senator Fisher asked:

At the time of a hearing that we had in Tasmania some of the witnesses suggested that there was, in prospect, a potential exception for what would have been the normal rules for the building of infrastructure of the sort to be built by the National Broadband Network in Tasmania; that there would be the need for some sort of exception to be created.

Has there been a need to institute a different process in respect of the NBN rollout in Tasmania from what would otherwise be the local government planning process for the NBN, whether it be through getting approval or otherwise? Has there been any need to change any rules in order to facilitate the NBN build in Tasmania?

Answer:

The National Broadband Network roll-out in Tasmania is being progressed under existing legislative arrangements.

No amendments have been made to Commonwealth telecommunications legislation in order to facilitate the roll-out of the National Broadband Network.

The rollout is being undertaken in accordance with the development application approval process of the relevant Stage 1 local councils, and the requirements of the Tasmanian Department of Infrastructure, Energy and Resources.

NBN Tasmania and Aurora Energy are consulting local councils and communities on the rollout of the National Broadband Network in Tasmania.

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Question No: 140

Program No. 1.1

Hansard Ref: ECA 79

Topic: Optical Network Terminal (ONT)

Senator Fisher asked:

1. Who will bear the cost of the ONT?
2. If it needs replacing say, for example, in four years will NBN Co. bear the cost of replacing it?
3. What does the ONT box do? What is its shelf life?
4. Does it essentially enable the splitting of NBN related services from others, for example, TV.

Answer:

1. NBN Co.

If the ONT needs replacing due to normal wear and tear then NBN Co will be responsible for replacing it.

2. The ONT converts the optical signal from the fibre exchange into an electrical signal that can be used by consumer devices (i.e. telephone, computer or set-top-box).

The shelf life on the ONT will vary from manufacturer to manufacturer and depend on the actual specifications. In general, and as outlined in the Implementation Study, it is expected that the ONT should have a shelf life of 5-7 years, however, the actual shelf life will depend on the factors outlined previously.

3. Yes, the ONT will enable multiple retail service providers to provide a range of different services to the end user.

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Question No: 141

Program No. 1.1

Hansard Ref: ECA 82

Topic: Implementation Study and Tasmania

Senator MacDonald asked:

Which recommendations of the implementation study are yet to be implemented in Tasmania?

Answer:

On 8 April 2009, the Australian and Tasmanian Governments announced Tasmania as the launch state for the National Broadband Network (NBN).

The three Tasmanian communities of Smithton, Midway Point and Scottsdale were selected as the first communities to receive superfast broadband over the NBN. NBN broadband services began operating these communities in July 2010, with the official launch on 12 August 2010.

The Government released the Implementation Study on 6 May 2010, and is currently considering the report's 84 recommendations.

When decisions on the recommendations are taken and implemented, they will apply equally to NBN Co and NBN Tasmania.

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Question No: 142

Program No. 1.1
Hansard Ref: ECA 86

Topic: Connection Fees

Senator Macdonald asked:

What is the cost of NBN Co. supplying that service? They are getting back \$300 per connection.

Answer:

The capital cost to the end of August for NBN Tasmania project totals \$24.2 million. This cost estimate includes the supply and construction of the fibre-to-the-premises (FTTP) network, equipment shelters, backhaul links as well as direct project costs such as network design and the supply of active and passive equipment. Importantly, the capital cost includes establishment costs and shared infrastructure that will benefit future stages of the NBN rollout. Accordingly, it is not possible to determine the cost of NBN Co supplying the service to stage one premises at this stage as much of the costs incurred to date will be apportioned over the ultimate installed base rather than the small number of Stage 1 premises.

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Question No: 143

Program No. 1.1

Hansard Ref: ECA 87

Topic: Budget papers for Implementation Study (Budget Paper 2 p117)

Senator Cormann asked:

How much of the \$23.4 million is going to go on staff in your department, how much of it is going to go on external expertise and how much of it is going to go on other things?

Answer:

The measure shown at page 117 of Budget Paper 2 includes three elements:

- \$16 million for an advertising campaign, of which \$7.6 million was met from existing funding to the Department in 2009-10, leaving a balance relevant to the \$23.4 million of \$8.4 million in 2010-11;
- \$12.9 million to the Department to support the implementation and regulation of the NBN of which:
 - some \$10 million is allocated for employee expenses; and
 - \$2.9 million for supplier expenses, including items such as consultants, legal services and travel; and
- \$2.1 million to the Department of Finance and Deregulation to assist in managing the Government's shareholding in NBN Co.

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Question No: 144

Program No. 1.1

Hansard Ref: ECA 104

Topic: Fixed Wireless Broadband versus Fixed Fibre - Pricing

Senator Fisher asked:

1. Could the entry level [pricing] for the bush, essentially, for fixed wireless broadband be less than the fibre footprint? Could there be forfeitures?
2. If your ambition is achieved, how will you be taking into account the reality that that means that equivalent prices will be being paid for a lesser speed service?
3. If your ambition of equivalent prices is achieved in respect of the fibre footprint and satellite services outside the fibre footprint, then essentially you will have Australians paying the same price for differing degrees of service, won't you, in terms of your speed guarantee?

Answer:

1. NBN Co has not settled its prices at this stage. The Implementation Study recommends that the entry-level services offered over each technology platform in NBN Co's customer access network be available to end users at a comparable but not necessarily identical price.
2. NBN Co has not settled its prices at this stage. The Government's policy is to ensure that all Australians have access to affordable broadband regardless of where they live or work. The Implementation Study confirms that population density and distance may influence the cost of providing such access, and that it is not cost effective to provide fibre to the premises technology to 100 percent of Australian premises. As a result, the NBN will use multiple access technologies to deliver broadband service across Australia.
3. The Government's NBN policy is to provide next generation wireless and satellite technologies offering minimum peak speeds of 12 Mbps to those premises located outside the fibre-to-the-premises footprint offering speeds of 100 Mbps. The policy will deliver access to superfast broadband to all Australian premises at speeds which are a significant improvement over those currently available to most consumers today.

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Question No: 145

Program No. 1.1

Hansard Ref: ECA 109

Topic: Transition to satellite services

Senator Fisher asked:

How will households transition to your satellite services? What will they need at their fingertips?

Answer:

NBN Co has not finalised how it will deliver satellite services to customers. Accordingly, it is too early to provide information to customers about how to transition to the services offered by NBN Co. However, customers will be provided with detailed information with sufficient time to allow them to make informed decisions.

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Question No: 146

Program No. 1.1

Hansard Ref: In Writing

Topic: Public Capital Expenditure - NBN

Senator Macdonald asked:

You would be aware that the Department of Finance and Deregulation, in relation to public capital expenditure, applies a series of usual principles, which you would be familiar with. Have you taken the step to obtain the net present value of the NBN using the data and assumptions contained in the implementation study and based on that usual calculation of the weighted average cost of capital in accordance with those principles that I am talking about?

Using the data and assumptions of the implementation study—all of the assumptions that it has made—what would be the present value based on the weighted average cost of capital?

Answer:

The Implementation Study did not calculate a Weighted Average Cost of Capital or a Net Present Value of the NBN project. The Implementation Study recommends that NBN Co be funded by the Government until such time as the company can support commercial debt without a Government guarantee.

The Implementation Study concludes that, under most reasonable estimates, the NBN will deliver a return of between 6% and 7% by year 15 of the project on the basis that privatisation is completed. Decisions on NBN Co's financial targets and capital structure will be determined following consultations between the Government and the company.

The Government has advised NBN Co to delay its submission of its Business Case and Corporate Plan until:

- The Government has considered its response to the Implementation Study and technical and business planning inputs from NBN Co; and
- The Government and NBN Co have fully considered the implications of the Financial Heads of Agreement and the Definitive Agreements between NBN Co and Telstra

When NBN Co has finalised its Business and Corporate Plan, these documents will then be submitted, as required, to the shareholder Ministers. The Government will then determine what specific information should be made publically available.

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Question No: 147

Program No. 1.1

Hansard Ref: In Writing

Topic: Professor Paul Kerin's criticism of the implementation study

Senator Minchin asked:

In relation to Professor Paul Kerin's criticism of the implementation study and its methodology for determining the commercial viability of the enterprise, in which he criticises the use of a discount rate based on the long-term bond rate. He says that under proper government guidelines that should be the weighted average cost of capital, not the long-term bond rate. Have you given or are you intending to give a response to Professor Kerin's criticism?

Answer:

A separate response to Professor Kerin's criticism is not proposed as the context for his comments was that of a cost benefit analysis. Such an analysis was not the underlying objective in undertaking the Implementation Study. The Government is, however, currently considering the recommendations in the Implementation Study, and will formally respond in the coming months.

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Question No: 148

Program No. 1.1

Hansard Ref: In Writing

Topic: NBN Funding Capital Costs - Debt

Senator Fisher asked:

1. What proportion of NBN Co's capital will be financed by debt over the next three years?
 - a. Over the next five years?
 - b. Over the next ten years?
2. What are the costs of debt for NBN Co's current financial position?
3. What are the costs of debt when NBN Co's projected investments over the next three years are taken into account?
 - a. Over the next five years?
 - b. Over the next ten years?
4. What methodology has been used to calculate NBN Co's cost of debt?
5. What market risk premium has been used to calculate NBN Co's cost of debt?
6. If a weighted average cost of capital methodology has been used, what beta value has been calculated for NBN?
 - a. What comparator firms have been used to estimate NBN Co's beta?
 - b. Why do these firms represent appropriate comparators to NBN Co?
 - c. Is the Department satisfied that the level of beta calculated represents an appropriate measure of NBN Co's risk profile at this point in time and over the entire economic life of the NBN?
 - d. If a weighted average cost of capital methodology has not been used, then how can the Department be satisfied that an assessment of NBN Co's cost of debt has been adequately conducted?
7. What risk free rate has been used for the estimate of NBN Co's cost of debt and/or in the calculation of NBN Co's weighted average cost of capital?
 - a. If treasury bonds were used, what was the time period used for these bonds (e.g. 5 year, 10 year)?

Answer:

(1)– (7)

See response to question on notice 131.

The Government has advised NBN Co to delay finalisation and submission of its Business Case and Corporate Plan until:

- The Government has considered its response to the Implementation Study and technical and business planning inputs from NBN Co; and
- The Government and NBN Co have fully considered the implications of the Financial Heads of Agreement and the Definitive Agreements between NBN Co and Telstra

When NBN Co has finalised its Business and Corporate Plan, these documents will then be submitted, as required, to the shareholder Ministers. The Government will then determine what specific information should be made publically available.

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Question No: 149

Program No. 1.1

Hansard Ref: In Writing

Topic: NBN Funding Capital Costs - Equity

Senator Fisher asked:

1. What methodology has been used to calculate NBN Co's cost of equity?
2. What market risk premium has been used to calculate NBN Co's cost of equity?
3. If a weighted average cost methodology has been used, what equity beta value has been calculated for NBN Co?
 - a. What comparator firms have been used to estimate NBN Co's beta?
 - b. Why do these firms represent appropriate comparators to NBN Co?
 - c. Is the Department satisfied that the equity beta calculated represents an appropriate measure of NBN Co's risk profile at this point in time and over the entire economic life of NBN?
 - d. If a weighted average cost of capital methodology has not been used, then how can the Department be satisfied that an assessment of NBN Co's cost of equity has been adequately conducted?
4. If a weighted average cost of capital methodology has been used, then how has the Department calculated gamma?
 - a. What assumptions has the Department made about NBN Co's future returns to shareholders to substantiate its calculation of gamma?
 - b. What assumptions has the Department made about capital markets to derive its calculation of gamma? In particular, is the Department satisfied that the assumptions of the capital asset pricing model hold in the case of NBN Co given the extent of sunk-cost capital investment (either equity or debt) being made by the government to finance the NBN?
 - c. If the Department is not satisfied that the assumptions of the capital asset pricing model hold in the case of the NBN, then how has the Department been able to satisfactorily calculate the equity and debt costs of the NBN?

Answer:

(1) – (4)

See response to question on notice 132.

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Question No: 150

Program No. 1.1

Hansard Ref: In Writing

Topic: NBN Funding Weighted Average Capital Costs

Senator Fisher asked:

1. What weighted average capital cost has been calculated for NBN Co?
 - a. Is this a pre- or post- tax rate of return?
2. If the Department has not calculated NBN Co's weighted average capital cost, then how has it calculated the necessary rates of return to demonstrate that NBN is commercially viable, taking into account its debt and equity levels, risk profile, and market risk premium?
3. What is the estimated economic life of NBN Co's assets?
 - a. How has the estimated economic life of assets been accounted for in estimates of NBN Co's risk profile, equity costs, and debt costs?
 - b. If the economic life of NBN Co's assets has not been taken into account in the estimates of NBN Co's risk profile, equity costs, and debt costs, then how can the Department be satisfied that an appropriate commercial rate of return has been calculated for NBN?

Answer:

Decisions on NBN Co's capital structure will be determined following consultations between the Government and the company. NBN Co will submit its Corporate Plan to Shareholder Ministers following the Government's consideration of the Implementation Study, released to the public on 6 May 2010, and after NBN Co factors in the implications of the \$11 billion Telstra Heads of Agreement to its Plan. The Government expects to respond to the Implementation Study later this year.

While definitive responses to the questions below are unable to be answered by the department until after NBN Co submits its Corporate Plan to Shareholder Ministers, where relevant, excerpts from the Implementation Study have been provided as responses (noting that the Implementation Study advice and modelling is still being considered by the Government).

1. A Weighted Average Cost of Capital (WACC) has not been calculated for NBN Co by the Implementation Study.
2. The Department and the Department of Finance and Deregulation will review NBN Co's Corporate Plan when it is submitted to Shareholder Ministers following the Government's consideration of the Implementation Study. The Implementation Study confirmed that high-speed broadband for all Australians is achievable, and can be built on a financially viable basis with affordable prices for consumers.

3. The economic life of NBN Co's assets will vary across asset types. The Implementation Study advised that some passive network assets (eg. fibre, buildings) may have asset lives of 30 - 60 years, while other assets may have asset lives of 5-7 years. The Department will review and provide advice to the shareholder Ministers on NBN Co's Corporate Plan when it is submitted to the shareholder Ministers.

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Question No: 151

Program No. 1.1

Hansard Ref: In Writing

Topic: NBN Funding; Regulated Rate of Return

Senator Fisher asked:

1. I understand that NBN Co. will submit an access undertaking to the ACCC outlining its price and non-price terms and conditions of access to its network. Can the Department:

- a. Confirm when an access undertaking will be submitted to the ACCC?
- b. What services will be covered by the undertaking?
- c. What depreciation rate will be applied to NBN's assets?
- d. What methodology the Department will use to determine NBN's asset base?
- e. What regulatory term will be appropriate for NBN's asset roll forward and maximum allowable revenue calculations?

Answer:

1. NBN Co is preparing its Special Access Undertaking (SAU) and is keeping the Department and ACCC informed.

- a. NBN Co has advised that it has not determined a firm date for the submission of its SAU, however progress on a draft approach consistent with meeting timelines for retail service roll-out nationally has been made.
- b. The SAU will cover wholesale open access layer 2 broadband services.
- c. NBN Co is considering applicable depreciation rates for its asset base.
- d. Under Part XIC of the *Trade Practices Act 1974* the methodology used to determine NBN Co's asset base is a matter for NBN Co to propose in its SAU and has yet to be determined by the board.
- e. Under Part XIC of the *Trade Practices Act 1974* the regulatory term appropriate for NBN Co's asset roll forward and maximum allowable revenue calculations is a matter for NBN Co to propose in its SAU, and has yet to be determined by the board.

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Question No: 152

Program No. 1.1

Hansard Ref: In Writing

Topic: Ka-band satellites

Senator Birmingham asked:

- (a) Does the Department have a view about the Government procuring in its own right next-generation Ka-band satellites? Does the Department prefer working through an existing satellite operator?
- (b) Has the Department commenced any sort of scoping study/inquires to determine if Ka-band satellites could be commissioned and launched by Government over the next three years? Are there any estimates of the costs of launching Government-owned satellites?
- (c) Is the Department aware or has the Department investigated the expected availability of commercially operated Ka-band satellite capacity?
- (d) Does the department favour an integrated satellite solution or DIY build-it from the ground-up solution?
- (e) Has the Department considered at this stage any existing available 'interim' solutions? If so, what are they?

Answer:

Consistent with the 7 September agreement with the Regional Independents, NBN Co is planning for satellite and wireless services to be brought forward so that regional Australia can access better broadband as soon as possible.

- (a) The Implementation Study notes that the options for securing satellite capacity depend upon the likelihood of Ka-band capacity being available in the commercial market at the time of service launch. If capacity is expected to be available, consideration could be given to a leasing model using third-party infrastructure. The Implementation Study also notes that it is unclear whether the market by itself will supply sufficient capacity. For this reason the Implementation Study advises that NBN Co should contract with satellite operators to provision a new satellite platform comprising two next-generation Ka-band satellites and the required gateways. NBN Co is currently considering this issue.

On 19 January 2010, NBN Co extended an invitation for Capability Statements from experienced Satellite Network operators and equipment providers capable of supporting the delivery of NBN Co's satellite service requirements. These responses are being considered in conjunction with the finalisation of the company's business plan. Following

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relevant decisions being made, NBN Co will invite a short list of suppliers to participate in a formal Request for Proposal process.

- (b) To inform the Government's decisions regarding the National Broadband Network, the Government commissioned the Implementation Study. The study notes that:
- The amount of time required to design, build and launch a satellite is typically 3-4 years. The Implementation Study estimates the cost of a combined fibre, wireless and satellite solution to cover rural, remote and relatively inaccessible premises at \$5.3billion. However, a further breakdown can not be provided as this may prejudice the achievement of a value-for-money outcome in any subsequent commercial tender processes relating to this element of the network.
 - The cost of launching two satellites represents approximately 11% of the total cost of a satellite solution. NBN Co is currently considering this issue.
- (c) The Implementation Study also notes that it is unclear whether the market by itself will supply sufficient capacity. For this reason, the advice of the Implementation Study is that NBN Co should contract with satellites operators to provision a new satellite platform comprising two next-generation Ka-band satellites and the required gateways.
- (d) NBN Co is considering the value-for-money and risks associated, with a range of options , including turnkey solutions, in-orbit delivery, or on-ground delivery of satellites. The Department will provide advice to Government on NBN Co's position following NBN Co's approach to market.
- (e) The Department is currently implementing enhanced arrangements to the existing Australian Broadband Guarantee program. In 2010-11, the program will require registered providers (including those offering satellite-based services) to offer a higher threshold level of service in terms of data transfer speed and monthly allowance.

The Implementation Study notes that a number of methods may be employed to improve the provision of satellite broadband services prior to the deployment of new Ka-band satellites, including:

- Increasing the amount of satellite bandwidth purchased from existing suppliers.
- Improving the efficiency of Customer Premises Equipment.

In response to the Implementation Study, the Department has received some submissions that propose interim satellite solutions. These proposals will be part of the Government's consideration of its response to the Implementation Study. NBN Co has indicated that it intends to approach the market for an interim satellite solution.

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Question No: 153

Program No. 1.1

Hansard Ref: In Writing

Topic: Questions on Notice to the NBN Select Committee

Senator Fisher asked:

In response to Questions on Notice to the NBN Select Committee, the Department stated;
The study found the NBN is likely to deliver a project return of between 6% and 7%.

- a. Is the Department satisfied that this return will exceed the weighted average cost of capital for the project?
 - i. How?
 - ii. On what basis?

The Department also states;

The Government considers the additional benefits to the economy and society accruing from the NBN is sufficient to justify taxpayers not receiving a premium for project risk.

- a. On what basis has the Government determined this?
- b. Has the Government assessed the 'additional benefits to the economy and society' in any way?
 - i. If so, how?
 - ii. Please provide these assessments.

In regard to the use of the Internal Rate of Return calculation;

The study has explicitly not assumed a discount rate, which would be required in order to calculate NPV. Hence there is no NPV calculated in the report. Instead, the study has used an IRR which is a pure metric for calculating the return of the project over its total life.

- b. Does the Department agree with expert assertions that by definition the IRR is not a substitute for WACC?
- c. Is the Department satisfied that NPV for the project will be positive?

Re project risk premiums, the department states;

The government considers the additional benefits to the economy and society accruing from the NBN is a legitimate consideration in not receiving a premium for project risk.

- a. On what basis has the Government considered this?
- b. What benefits to the economy and society have been identified?
 - i. What process has been undertaken to identify these?

- ii. Please outline any identified benefits, and the measure of those benefits to the economy and society.
- c. Are these benefits beyond those that could be captured by industry?

Answer:

Re Project Return

- a. The Implementation Study concludes that, under most reasonable estimates, the NBN will deliver a return of between 6% and 7% by year 15 of the project on the basis that privatisation is completed.

Decisions on NBN Co's financial targets and capital structure will be determined following consultations between the Government and the company. NBN Co will submit its Corporate Plan to Shareholder Ministers following the Government's consideration of the Implementation Study which was released to the public on 6 May 2010.

- i. Refer a. above
- ii. Refer a. above

Re previous statement by the department

- a. & b. While the broader economy-wide benefits of investment in NBN have not been explicitly modelled in the Implementation Study, they are endorsed by the OECD, Access Economics, a range of other studies and emerging practice in developed countries. The case for investment in high speed broadband is well accepted around the world.

- i. Refer a. & b. above
- ii. Refer a. & b. above

Re internal rate of return calculations

- a. Yes.
- b. Decisions on NBN Co's financial targets and capital structure will be determined following consultations between the Government and the company. NBN Co will submit its Corporate Plan to Shareholder Ministers following the Government's consideration of the Implementation Study, released to the public on 6 May 2010. *Re project risk premiums*
- a. While the broader economy-wide benefits of investment in NBN have not been explicitly modelled in the Implementation Study, they are endorsed by the OECD, Access Economics and a range of other studies. The case for investment in high speed broadband is well accepted around the world.
- b. The NBN is expected to benefit the Australian economy and drive future growth, productivity and employment opportunities by enabling increased efficiencies to the delivery of services such as health and aged care.
 - i. Refer a. above.
 - ii. Refer a. above.
- c. Yes.