

**FINAL CONSULTATION PAPER
NBN NON COMMERCIAL SERVICES FUNDING OPTIONS
BUREAU OF COMMUNICATIONS RESEARCH.**

SUBMISSION BY

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Dear Sir,

I make the following submission in relation to the final consultation paper.

We currently rely on the NBN Interim satellite and have concerns in relation to ensuring that those who have no choice but to use the NBN Long Term Satellite Service are provided with the best possible speeds and download capacity available at comparable prices to other internet services within Australia.

The removal of those premises who have alternative fixed line or fixed wireless services under NBN, from the satellite is critical to cost reductions and maintenance of speeds and available data capacity.

Any cost reductions that can be achieved are integral to the provision of this service and I would like the following suggestions to be considered as part of the policy for the implementation of NBN satellite and fixed wireless to reduce those costs.

Page 7

"NBN Co is working to optimise the services which can be provided over fixed wireless and satellite. This is particularly important to ensure that satellite capacity is used in areas of greatest need. Optimisation may include the possibility of investing in more satellite capacity or shifting the coverage of some premises from the satellite to the fixed wireless network to preserve satellite capacity. Capacity management requirements may increase non-commercial service losses beyond current projections."

As the fixed wireless will provide greater speeds, increased access to data and a better quality of service compared to the satellite service, why would customers be on satellite rather than fixed if fixed is available or can be made available?

There should be no customers who are able to receive fixed wireless on the satellite.

The report itself indicates on page 8 under quantifying losses, that in FY2015 real terms, there is a saving of \$20 per month for each fixed wireless service. Over the 25

years the figures are calculated on, this represents a saving of \$6,000 per customer in 2015 figures.

The unnecessary placement of premises on satellite rather than fixed wireless will increase the pressure on the satellite service, which the report already indicates, will be impacted by current and future demand. The report already indicates a likelihood of short term and long-term capacity constraints (Page 22).

"To ensure that satellite capacity is used in areas of greatest need"

The report indicates that this will not be the case as the same paragraph refers to capacity management of placing satellite customers on fixed wireless.

The report also refers to supply of satellite services to "large population centres"

The implementation of satellite services must be to those who need the service, not those where political pressure is placed to provide it to large population centres which already have high quality internet.

Page 8

Quantifying losses.

The report indicates that the npv loss for fixed wireless and satellite services to 2040 is approximately \$9 billion.

1,500 customers nationally on the satellite that could otherwise be on fixed wireless will result in a \$9 million dollar saving in current values. This represents 0.1 percent saving.

15,000 customers nationally on the satellite that could otherwise be on fixed wireless will result in a \$90 million dollar saving in current values, or 1 per cent.

Why is this not highlighted?

Why is there any consideration being given to the placement of fixed wireless accessible customers on the inferior service of satellite, if there is the potential to save significant amounts in subsidies which are also in the range of percentages of customers, not just a handful?

Page 18 Table 3.

The useful life of fixed wireless assets, shows a useful life of five years for customer premises equipment?

What does this refer to?

Is this equipment that the customer will have to pay to replace?

How will the equipment be replaced?

Will it be when it fails and rely on customer reports, or will the equipment automatically be replaced at the end of its useful life?

Cost saving can be achieved if there is a formulated approach to the replacement of customer premises equipment, particularly as the fixed wireless will be in lower population density areas. If the replacement is done on the basis of when the customer equipment was installed, this will result in unnecessary travel in rural and remote areas. If the replacement is done in blocks, either by roads, streets or areas, then lost time due to travel will be minimised, which will reduce the costs through lost time and increased travel costs.

In terms of this report, which estimates costs over the next 25 years, based on current technology and useful life estimates, there could be five replacements (2015 initial install, 2020, 2025, 2030, 2035 and 2040).

On page 16 of the report, it refers to 535,000 fixed wireless installations by 2018.

A saving of one minute in travel time for each replacement would equate to a saving of 8,916 hours on each rotation. Based on five replacements this would save 44,583 hours.

A one minute saving would result in 1,173 weeks reduced labour costs (based on 38 hour week).

Based on 46 weeks (52-4weeks leave less public holidays), the one-minute per customer would save 25.5 years of labour cost.

In reality, the saving in time by having a formulated approach to replacement of equipment would save significantly higher amounts of time, possibly up to 10 minutes per customer. A 10 minute saving would save 255 years of labour costs.

As the replacement is likely to involve the roof-mounted antenna, for OH&S purposes, this would involve two technicians to be in attendance.

For fixed wireless, based on 10 minutes travel time saving per premises with two technicians, the saving would be 510 years of labour costs.

At \$50,000 per annum wages for the technicians, based on current wages, this would be a saving of over \$25 million.

Based on inflation this figure could approach \$100 million by 2040.

Difference in satellite figures on pages 19 and 20.

On page 19 the report refers to "a coverage footprint of approximately 412,000 premises that are outside the NBN fixed wireless or fixed line footprint".

On page 20 the report refers to there being 37,000 active satellite customers on NBN Co and that this will grow to 135,000 connections by FY2018.

Why is it expected that only 32% of all customers outside of the NBN fixed wireless and fixed line network footprint, will be connected by FY 2018?

Is this because of limitation on installations due to availability of satellite dishes, modems, other equipment or available technicians?

Obviously some premises will not wish to connect to the internet (including those who do not have computers, holiday homes, premises used for short periods), however a 68% non-take up is significant.

Is NBN Co and the Federal government only expecting a 32% take up of NBN?

Page 21 Table 5, satellite asset useful life.

The useful life of satellite assets, shows a useful life of seven years for customer premises equipment?

The same questions arise as for the fixed wireless asset life.

What does this refer to?

Is this equipment that the customer will have to pay to replace?

How will the equipment be replaced?

Will it be when it fails and rely on customer reports, or will the equipment automatically be replaced at the end of its useful life?

Cost saving can be achieved if there is a formulated approach to the replacement of customer premises equipment, particularly as the satellite installations will be in rural and remote areas with very low population density areas. If the replacement is done on the basis of when the customer equipment was installed, this will result in unnecessary travel in rural and remote areas. If the replacement is done in blocks, either by roads, streets or areas, then lost time due to travel will be minimised, which will reduce the costs through lost time and increased travel costs.

In terms of this report, which estimates costs over the next 25 years, based on current technology and useful life estimates, there could be three replacements (2016 initial install, 2023, 2030, 2037).

On page 19 of the report, it refers to 412,000 satellite installations could be expected based on the NBN fixed wireless and fixed line footprint.

As with the comments in regard to the customer premises equipment replacement, a formulated approach to this replacement program can have significant cost savings to NBN Co and the stakeholders.

We are on satellite, having changed from the Australian Broadband Guarantee to NBN Interim satellite.

Using our installation as an example, the two technicians had a one-hour return trip to do the installation.

There are at least six NBN interim or ABG customers within 2 kilometres of us. Since both the NBN interim and ABG services will be discontinued, they would expect to migrate to the NBN long-term satellite service. In a recent letter to Gavin Williams (Executive General Manager New Developments, Wireless and Satellite NBN Co) I identified there were at least 23 premises within a few kilometres of us who would need to have NBN satellite, as they would not have fixed line or fixed wireless services.

In regard to the replacement of the customer premises equipment and installation, with three visits, each of those 23 customers would incur between 1 hour and 1 hour and 10 minutes return travel time. The travel time per replacement schedule alone would be over 24 hours, but this could be reduced to less than 3 hours. Two technicians are likely to be needed due to roof mounted satellite dishes.

Over the three replacements, a saving of 126 hours could be made (21 hours x 3 replacements x 2 technicians) depending on the time needed to perform the replacements.

A simple, well thought out procedure would have significant savings, in this case.

A saving of 30 minutes travel for two technicians for 412,000 potential premises for each of the three replacements would be 1,236,000 personnel hours or 32,526 weeks or 707 years of labour cost over 25 years.

At a labour cost of \$50,000 per year that would be a saving of over \$35 million in current dollar values or nearly 0.4% of the total loss over the period. With inflation on wages the actual saving is likely to pass \$100 million.

In addition to labour cost reductions, simple savings on fuel can be achieved. For the 23 customers in our area, instead of over 1,600 kilometres the total distance could be reduced to under 100km or 93%.

Page 22 Capacity constraints.

"...capacity constraints are unlikely in the short term..."

"Capacity constraints are more likely a longer term consideration and given that the LTSS is offered on a spot-beam basis, capacity shortfalls will likely be limited to beams serving large population centres"

After the NBN interim satellite episode, whereby overselling of capacity has resulted in significantly reduced speeds and in some cases download restrictions, one would hope that there will not be capacity constraints in the short term, since as on page 7 reference is made to ensure that satellite capacity is used in areas of greatest need.

Why is the satellite being used to serve large population centres?

What large population centres does this refer to?

Why aren't these large population centres being serviced by fixed line or fixed wireless?

Low earth orbit broadband satellites. Page 26.

The cost effectiveness of low earth orbit broadband satellites should be considered as a priority, particularly for high data usage situations.

There should be a point at which the higher cost of installation over a 25 year period would be outweighed by the impact on other users by a number of very high data usage customers who would otherwise impact on the download speeds and data capacity of the long term satellites.

November 3 2015.