

Submission to the National Broadband Network

To Whom It May Concern,

I wish to make a submission regarding the National Broadband Network as I find it a very vital infrastructure.

The Coalition Party government is making a grave mistake by allowing deployment of a Fibre to the Node Network. Past governments including the Coalition Government under John Howard have already tried deal with the situation, and have failed miserably, Telstra won that day.

And now Telstra is trying to win again, because the Coalition Party government is going down that path once again. I might need to remind you that, in a policy development, the government need to make the policy value for money for the tax payers, not value for money for the companies involved in the project, which is including Telstra.

As per the outline in the Annual Report of the Department of Finance, which specifically says that the value for money in policy creation.

Going to a Fibre to the Node rollout will not give the tax payers value for money.

We have a Treasurer Joe Hockey who cannot guarantee 'equality', The Fibre to the Node network delivers 'Inequality'.

So Joe Hockey, who is our Treasurer, is failing to keep Value for Money in regards to policies.

Recently, we have the ACCC said they will keep an eye on service providers who cannot deliver the speeds, we all should know that it is not up to the Service Providers (Backhaul providers, condition of the copper, do control the speeds).

1. http://www.afr.com/p/technology/accc_to_watch_nbn_reseller_speed_rFBqWhoUWwkOB0UDJWASoO
2. <http://delimiter.com.au/2014/06/04/nbn-co-misleading-fttnfttb-users-says-accc/>
3. <http://www.accc.gov.au/regulated-infrastructure/communications/compliance-anti-competitive-conduct/broadband-speed-claims-information-papers>

(3) *The ACCC released a series of information papers to inform ISPs and companies advertising broadband and wireless internet services of their obligations under the Trade Practices Act 1974, now the Competition and Consumer Act 2010 (the Act).*

The FCC in USA just released its fourth report on this matter:

<http://www.fcc.gov/reports/measuring-broadband-america-2014>

*Throughout this Report, we use the term "advertised speed" to refer to the speed ISPs use in marketing their broadband service. We also use the term "sustained speed," which is speed averaged over a period of several seconds.¹⁰ On a short time scale, broadband speeds may vary widely, at times approaching or even exceeding advertised speeds and at other times—due to network congestion—slowing to rates that may be well below advertised speeds. **The "sustained speed" metric is designed to describe long-term average broadband performance.***

*While the average increase in network speed tier was about 36 percent, the results are not uniform over ISP and technology types. Most notably, **those ISPs using DSL technology show little or no improvement in maximum speeds**, with the sole exception of Qwest/Centurylink, which this past year doubled its highest download speed within specific market areas. **The reason for this may be that DSL, unlike cable and fiber technologies, is strongly dependent upon the length of the copper wire (or "loop") from the residence to the service provider's terminating electronic equipment, such that obtaining higher data speeds would require companies to make significant capital investments across a market area to shorten the copper loops. On the other hand, both fiber and cable technologies intrinsically support higher bandwidths, and can support even higher speeds with more incremental investments.***

See the above bolded sections for the most important sections.

Also the FCC declares that DSL technology shows little or no improvement in the maximum speeds.

So why are we going ahead with such an out-dated technology? Well my only guess is that there are vested interests at play, those who will gain from going to a Fibre-to-the-Node rollout, personal gain, over tax payer gain.

CONTENT MATTERS, DISPUTE COALITION PARTY ATTACKING “ENTERTAINMENT SYSTEM”.

Now I will move onto content, and the reasons why we need to move to Fibre-to-the-home technology.

Coalition Party members and Tony Abbott himself has declared FTTP an ‘entertainment system’. This is nothing more than a slogan designed to attack the FTTP rollouts.

Online sales have helped the growth of this country, while in a downturn, but it can massively be improved by allowing massive deployment of FTTP network (as per Labor’s vision).

www.afr.com/p/technology/online_sales_hit_as_growth_slows_dxoojOBWsatgxSGhfxqkrl

Australian businesses took in \$246 billion worth of sales over the internet during the 2013 financial year after sales growth slowed significantly, according to figures from the Australian Bureau of Statistics.

<http://www.gds.com/2014/01/10/triple-play-revenues-to-reach-us144-billion/>

Need a reason to be optimistic heading into the new year? According to new research from Digital TV Research, telecom and cable operators can expect to see triple-play subscription revenues reach \$144 billion over the next five years, and to increase by \$80 billion this year alone. As more and more customers opt to meet their telephone, cable, and Internet needs with a single provider, broadband providers will find a wider, more lucrative market for their package deals, and will continue to invest in network infrastructure in order to upgrade subscribers to bundles.

Triple-play continues to thrive worldwide, and Digital TV predicts that subscription numbers in the 97 countries covered by their research will reach 333 million by 2018, a 239 million rise over 2012 subscriber numbers. China will account for more than 34 percent of the global total of triple-play subscribers. Worldwide, about 21 percent of the television households will subscribe to triple-play services by 2018.

Why is this so? It will allow cheaper internet, FTTP is known to be cheaper (New Zealand Deployment of 1Gbps, Google 1Gbps, Other USA companies rolling out FTTP, and as well as European countries deploying cheaper FTTP, as well as Asian countries still rolling out FTTP – Indonesia is the latest country to do so).

Universal FTTP allows more businesses to be able to increase productivity, less time searching for products on the web, able to stream high speed video for conferences to lessen the need of road transport in long distance.

Also, going to Fibre-to-the-node threatens Net Neutrality by giving the biggest providers the ability to fund advertising campaigns to block and lockout competition (such as smaller rollouts of City/suburb sponsored rollouts).

T-Mobile in the USA is the latest company (after the long list of providers such as AT&T, Verizon to threaten Net Neutrality).

<http://www.motherjones.com/politics/2014/06/verizon-comcast-net-neutrality-blind-deaf-disabled> (Verizon lobbyists are canvassing Capitol Hill with a curious new argument against net neutrality—it hurts disabled people.).

<http://www.washingtonpost.com/blogs/the-switch/wp/2014/06/18/att-claims-strong-net-neutrality-would-actually-ruin-the-internet-thats-a-big-leap/>? (Advocates of an open Internet have for weeks been urging the Federal Communications Commission to re-label broadband as a utility — a move toward "strong" net neutrality that would give the FCC much greater authority to ban controversial fast lanes on the Internet. Reclassification, as the proposal is called, would allow the FCC to apply the same set of strict rules to ISPs that it currently uses to govern telephone companies. (Congressional Democrats, meanwhile, have just introduced legislation to ban fast lanes outright.).

<http://www.dsreports.com/shownews/TMobiles-Latest-Uncarrier-Move-Could-Threaten-Net-Neutrality-129422>

Unlike AT&T's Sponsored Data effort, it doesn't appear that companies have to pay T-Mobile in order to have their content bypass the cap. However, T-Mobile's implementation remains problematic in that it still gives the biggest music streaming services a leg up against their smaller competitors, something that is sure to raise net neutrality hackles. While T-Mobile's trying to be disruptive here, it could set a very dangerous precedent.

Spotify, Google (Youtube), Twitch.tv, Vimeo, and other large companies that stream legal services to users have a lot of restrictions on slow broadband.

1. Users cannot do something else, while they are waiting for a video or audio service to buffer; the bandwidth takes a toll on slow broadband.
2. Content restrictions are in place in many countries, restricting profit for their business owners of the content, users are forced to bypass geoblocking, to use sometimes slower proxy based solutions.

3. Say a user has 4Mbps ADSL (such as my-self), I try and load a 720p resolution video, opponent of high speed broadband claim you need 3mbps for that resolution, but forgets that I have a family that uses services such as Youtube on a dailybases, as well as other services such as consoles, computers, so slow broadband is very useless for 3 people living under the same house that uses content on a daily bases. <http://www.theguardian.com/money/2013/jul/27/bt-broadband-two-months-without-service> (The Judges' problems go back to September 2012 when he complained that the broadband speed he was receiving was closer to 1-4Mb rather than the 37Mb service he had been promised)

Cheaper but also faster broadband also allows users to donate money to charity on annual bases, Twitch.TV streamers regularly do donation runs to charity runs, gamers especially do donation runs such as 24 hour events, and this requires a stable internet.

Regular complaints regarding those who do streaming on twitter are:

"I think I had about 5 seconds delay tonight on my stream.... From Australia"

"ETA! long... haha Australian uploads"

These are all Australian streamers, they are pretty big streamers; they earn their own semi income from Twitch.TV subscriptions while they working in real life jobs, so they do their part for the Australian economy, so Coalition Party has no right to claim that this is just an "video entertainment system", people that do their own content, spends time streaming, or uploading while editing videos, takes a lot of time, patience, something that Politian's don't understand, especially those Politian's who spend their time in the 1700's to 1900 period time frames.

Uploading videos do not always work; sometimes they fail because they take a long time to upload.

POWER CONSUMPTION BETWEEN TECHNOLOGY FTTN VS CABLE VS FTTP

Power consumption and usage matters.

As you know, power consumption of such large networks, different technologies have different power requirements.

The following documentation and URLs are all safe, and use for supporting the argument that FTTP wins out in terms of lowering the costs for users, when we rolling out a large network such as the one we are doing, not just in terms of power usage and savings in terms of tax payers, but also in terms of data-servers required, cost to run those are not cheap in terms of power usage, so we should do everything in our power to decrease power consumption in other area's, like the technology chosen for a nation wide network.

It is very important that we choose our path very carefully.

<http://people.eng.unimelb.edu.au/rtucker/publications/files/tja10043.pdf> (Page 9).

http://wr.lib.tsinghua.edu.cn/sites/default/files/Th.1.G.1_0.pdf (Page 8 has the graph comparing wattage usage of different technologies).

<http://www.bbc.com/news/uk-scotland-south-scotland-27682415> (BT is a major consumer of electricity, using around 170 Gigawatt hours (GWh) per annum in Scotland.)

<http://www.carboncommentary.com/2007/10/15/31> (BT's electricity use is about half a percent of the UK's total, and its server farms represent over 10% of its energy consumption. BT says that data centre use is rising at 40% a year, and the company's emphasis on growing video businesses, such as BT Vision, is likely to increase data storage and transmission demands into the foreseeable future.)

The FTTN trials have already shown issues with power companies not being able to provide power to FTTN cabinets, something that those on Whirlpool community have argued that this will happen.

BT and power companies in the UK have often have disputes, about construction, costs, and other related issues regarding the FTTN rollout.

<http://forums.thinkbroadband.com/fibre/4212858-bt-and-edf-dispute-causing-me-to-have-no-internet.html> (BT and EDF dispute causing me to have no internet)

<http://www.ispreview.co.uk/index.php/2012/11/bt-openreach-criticise-uk-power-networks-for-costly-fttc-cabinet-installs.html> (Garfield, whom yesterday denied that BT itself was a monopoly in the superfast broadband market where Virgin Media's coverage is still technically bigger (at least for a little while longer), warned that the estimated cost of upgrading a cabinets power supply could sometimes jump from around £2,000 to a whopping £25,000 and make the cabinet "non-commercially viable". Indeed this is one of the issues that affected the Haywards Heath cabinet, which we covered yesterday (here).)

<http://www.ispreview.co.uk/index.php/2012/11/uk-power-networks-refutes-bts-claim-that-its-a-monopoly-in-the-fibre-space.html> (According to UKPN, each connection is "priced on its own merits" and the wide variation in prices are apparently "due to factors beyond our control", such as the distance of the kiosk from the nearest electricity main, the need to extend the electricity network and costs that they incur and "have to pass on", such as traffic management (no not the internet kind), road closures, parking bay suspension and lane rental etc.).

Now for Cable, well, apparently, Cable can be more power usage:

<http://www.fiercecable.com/story/report-cable-boxes-are-second-biggest-energy-suckers-homes/2014-06-18>

There are 224 million cable set-tops deployed in the U.S., according to Bloomberg, and together, they consume as much electricity as four giant nuclear reactors running 24/7. Indeed, a set-top with a digital recorder can consume as much as 35 watts of power, costing about \$8 a month for a typical Southern California consumer, according to The Los Angeles Times.

*The cable industry recently agreed to reduce the power consumption of its new set-tops, which could save consumers \$1 billion annually **but some experts say that is a drop in the bucket and could take years.** The Department of Energy has plans to regulate the devices, according to Bloomberg News.*

Part of the problem is that even when people think they've turned the boxes off, they often are just in a dormant mode and continue to burn energy as if they are in use. Indeed, two-thirds of the total energy they burn is consumed when they are not in use, the NRDC found.

A typical household setup--one high-definition TV set-top box plus one high-definition DVR--uses 7 percent more electricity than a new, 21-cubic-foot Energy Star refrigerator. That costs consumers about \$4 a month on average.

7-8 Watts for Fibre to the Premises per user, 15 watts per user for Fibre to the Node, Wireless is 20-26 watts per user; Cable is 35 watts per user with a digital recorder.

CONCLUSION

In the research that I have done, the calculations that I have done, I believe that the Government is going in reverse in terms of technology and regulatory means.

It is also my view that the Coalition Party government is going against tax payers, value for money, goes against what Government is for, in additional views that Former Telstra and News Ltd employees are in control of NBN Co Board, benefiting Telstra and News Ltd.

FTTP rollout, Labor's NBN Policy, should be returned to the previous change, there are four changes I would recommend.

1. Restore the previous management if possible, if that is not possible, move to more independent/expert oriented NBN Co Board with industry expertise.
2. NBN Co board needs to change the rollout, getting rid of Primary Contractors and go in-house for all the rollouts.
3. NBN Co board, as well as senate committee, should be controlled by the Senate, which means the government has no input, there have been too many failures under this government, including key promises of more transparency over the rollout of the National Broadband Network.

The Coalition damned the Labor Party in the rollout delays, and as I noted earlier in regarding

4. Finally, restore the previous funding model, cancel the FTTN rollout.

Coalition Party have patronized, politicalized the National Broadband rollout from day 1, they should have no longer control or have any more input over infrastructure projects in Australia.

I am also concerned with the appointment of Bill Morrow, with the court case in the USA regarding his previous position, and now that the issues with Vodaphone after he left his position, it's quiet obvious that his previous positions as a bean counter is the reason why we have such issues with his previous positions with both USA (PG&E) and Vodaphone (<http://www.smh.com.au/digital-life/mobiles/vodafone-optus-outages-frustrate-users-20140619-zsenb.html>) now.

Telstra Outage (ADSL): http://www.computerworld.com.au/article/547990/outage_strikes_telstra_adsl_customers_victoria/

Finally I will leave with the following links below for some additional reading that is required:

<http://www.bbc.com/news/technology-27484554> (Under the new rules, BT must complete around 80% of fault repairs within one to two working days of being notified and provide an appointment for around 80% of new line installations within 12 working days.)

(BT must also publish figures on how its engineers are performing and Ofcom could impose fines if it does not deliver on the new timescales given for repairs and installations.)

https://www.btwholesale.com/shared/document/Products/Broadband/fibre_to_the_Connect/Handbook_and_Technical/WBC_FTTC_Handbook_Issue_10.pdf

We cannot rely on Mobile or out of date technology in the modern day, we also cannot allow Telstra to continue to hold the gun on the Government of the day in terms of extracting more tax payers money out of us, we must provide value-for-money policy, and FTTP is the only way to get there, for both in today's issues and money, and in future expansion.

Fibre to the Premises is the only solution on a mass scale to provide for an ever-expanding network that the internet is.

Additional links/information that does not have a category:

http://www.uswitch.com/broadband/news/2014/04/fibre_takeup_stimulates_global_broadband_base/

<http://www.zdnet.com/au/alcatel-tapped-for-indonesias-conrovian-ftp-rollout-7000027179/>

<http://www.itu.int/ITU-D/ict/newslog/About+1750+Km+Of+Fiber+Optic+Communication+Lines+Built+In+2013+In+Kazakhstan.aspx> (As a result of the completion of III phase of the strategic project "Construction of FTTH networks" included into the Industrialization Map of Kazakhstan, about 15 500 houses and more than 7300 cottages were covered by fiber-optic networks. In the past year, the works on the development of IP TV services were carried out in Astana, Almaty and in all regional centers. The network capacity was more than 246,000 points of connection by year-end.).

<http://www.fiercetelecom.com/story/georgias-habersham-electric-cooperative-gets-1-gbps-ftth-game/2014-03-21> (Taking a page from Google Fiber (Nasdaq: GOOG), the 1 Gbps service is priced at \$99 a month. For customers that don't want that much speed, there's a 50 Mbps offering that starts at \$49.95 a month.).

(All of its current 1,800 FTTH network customers have the option to upgrade to the 1 Gbps service by making a call to the service provider. It plans to extend the fiber-based service to all 25,000 homes in its territory based on what it says is "solely on customer demand.")

<http://www.timesofmalta.com/articles/view/20140227/technology/Go-gearing-up-for-4G-and-national-fibre-rollout.508528> (Go has welcomed recent developments at a regulatory level which should facilitate the rollout of ultra-fast broadband internet access to Maltese homes, known as fibre-to-the-home (FTTH). Furthermore it is willing to allow third parties to use its upgraded fibre network to provide their data services within a "fair" framework.).

<http://www.telecompaper.com/news/tot-earmarks-thb-25-bln-for-fibre-network-rollout--954866> (Thai state-owned telecommunications provider TOT has allocated THB 25 billion to roll out two fibre networks as part of its strategy to become a network service provider. Some THB 20 billion will be used to install 3 million ports for a nationwide FTTH network and the remaining THB 5 billion will be used to expand submarine cable facilities in Satun and Songkhla provinces, the Bangkok Post writes citing chief executive Yongyuth Wattanasin").

<http://www.telegeography.com/products/commsupdate/articles/2013/07/24/ukrtelecoms-new-kid-sister-reports-ftth-expansion-progress/> (TeleGeography's GlobalComms Database notes that at the beginning of its FTTH rollout in October 2012, Vega already operated a fibre-to-the-building (FTTB) network with a presence in selected areas of 33 cities, offering internet access for consumers and businesses at up to 100Mbps.).

(Vega's soon-to-be-big-sister telco Ukrtelecom (pending antimonopoly authority permission) is also developing direct fibre access technology, but its rollout remains in the early stages, TeleGeography adds.).

<http://www.zdnet.com/spains-1bn-ftth-rollout-progresses-as-work-starts-in-12-cities-7000020220/> (The rollout of a €1bn fibre to the home (FTTH) network has been locked in for 12 Spanish cities, laying the groundwork for planned activation later this year.).

(The two operators announced in March they intended to reach 800,000 premises during the first year of their fibre pact with an expected budget of €200m. The pair plan to take FTTH to six million properties in 50 cities within the next four years, covering roughly 40 percent of premises in the country.).

http://www.circleid.com/posts/20140513_market_led_demand_for_ftth_is_picking_up/ (With more than 100 countries now involved in the rollout of FttH there is increased evidence that commercial demand exists for this infrastructure. In developed economies FttH demand will, over the next 5 years, grow to between 30%-50% of the population. Competition aimed at the top end of this market will trigger a broader rollout.).

<http://www.techradar.com/news/internet/web/cityfibre-to-pour-30-million-into-creation-of-20-gigabit-cities--1253068> (Infrastructure provider CityFibre has announced plans to roll out super-speedy fibre-optic networks across the UK, a move that will see the creation of 20 new 'Gigabit Cities').

<http://www.fiercetelecom.com/story/att-adds-raleigh-nc-its-1-gbps-ftp-deployment-target-list/2014-06-18> (Complementing its efforts in North Carolina and Texas, AT&T announced in April it would consider expanding its fiber network to up to 100 of what it calls candidate cities and municipalities nationwide, including 21 new major metropolitan areas.).

(Further FTTP expansion will be driven by its ability to get permitting approval from local communities and getting access to necessary rights of way to lay fiber and install related network electronics.).

http://www.itnews.com.au/News/372839_gigabit-google-fibre-expands-to-34-more-us-cities.aspx (Web giant Google today announced that it has invited 34 cities across the United States to take part in its fibre to the premises network project that offers one gigabit per second symmetric connection speeds to customers.).

<http://www.dsreports.com/shownews/Champaign-Urbana-Plans-Open-Access-1-Gbps-Network-129230> (The cities of Urbana and Champaign, Illinois have formed a non-profit venture that will expand the regional network and eventually offer 1 Gbps to locals. After a public bidding process, non-profit UC2B (Urbana-Champaign Big Broadband) has formed a partnership with private ISP iTV-3 to build and operate the broadband network, with TV services potentially down the line.).

<http://www.telegeography.com/products/commsupdate/articles/2014/04/16/talktalk-bskyb-and-cityfibre-partner-for-ftp-network-rollout-in-york/> (Alternative British broadband providers BSkyB and TalkTalk have announced a partnership under which they will join

forces with CityFibre to create a new company that will deliver ultra-fast broadband services in the City of York. Detailing their plans, the companies confirmed that the new joint venture company will roll out a state of the art, city-wide, pure fibre-to-the-premises (FTTP) network to deliver speeds of 1Gbps to tens of thousands of premises in the city, with vendor Fujitsu also helping out with the deployment. This new infrastructure will reportedly leverage CityFibre's existing metro fibre infrastructure in York and, once it is in place, both BSkyB and TalkTalk will retail competing broadband services over it, with the first customers expected to be connected next year.).

<http://www.dslreports.com/shownews/CenturyLink-Hints-at-1-Gbps-in-Minnesota-129403> (Though Omaha and Las Vegas are the only formally announced 1 Gbps CenturyLink markets, the ISP keeps vaguely hinting at additional deployments. With Google Fiber maybe coming to Portland, CenturyLink has been promising 1 Gbps to some customers there if they sign long-term contracts now.).

<https://twitter.com/iiNet/status/478779084747464704>

iiNet @iiNet · Jun 17

Get up to speed with the NBN, Australia. Did you know that Slovakia has faster average internet speeds than we do? <http://bit.ly/1n6A1bL>

<https://twitter.com/iiNet/status/479473660881690624>

iiNet @iiNet · 13h

Get up to speed with the NBN, Australia. Did you know that Romania has faster average internet speeds than we do? <http://bit.ly/1n6BEwO>

<https://twitter.com/iiNet/status/479503863888613376>

iiNet @iiNet · 11h

2 facts about the Netherlands: better at soccer than us and have faster broadband speeds. Bring on the #NBN!

<http://www.ispreview.co.uk/index.php/2014/06/global-internet-traffic-tops-29k-petabytes-a-month-and-set-for-83k-by-2018.html> (**The vast majority of last year's consumer IP traffic came from fixed line Internet connections**, while only 1,189 PB of the total came via mobile networks (e.g. 3G and 4G). But consumer mobile data traffic is now rising at a Compound Annual Growth Rate (CAGR) of 62% versus just 20% for the more mature fixed line broadband market. **In both cases Internet video content is the largest single segment, gobbling 17,455PB of traffic per month in 2013 and rising to 62,972PB by 2018.**)

(Cisco claims that global IP traffic for fixed and mobile connections, of all types (business and consumer), is expected to reach an annual run rate of **1.6 ZettaBytes per year** (over one and a half trillion GigaBytes) by 2018. In other words the projected annual IP traffic for 2018 will be greater than all IP traffic that has been generated globally from 1984 – 2013 (1.3 ZettaBytes).).

<http://www.gizmodo.com.au/2014/01/most-aussies-have-crappy-internet-speeds/> (7.1 million Australians are getting less than 24Mbps from the copper network, while 3.7 million others are located in areas where estimated peak speeds are less than 9Mbps. 920,000 customers have less than 4.8Mbps available.).

Which could have been told by ABS figures.

This is my evidence that FTTP is the not only the technology go for RIGHT NOW, but also the RIGHT TIME TO UPGRADE.

Thank You,