



SUBMISSION

Tangled telecommunications

A hypothetical story of one business struggling to navigate telecommunications tax and subsidy schemes



Prepared for
Vodafone Hutchison Australia
20 December 2019

THE CENTRE FOR INTERNATIONAL ECONOMICS
www.TheCIE.com.au

The Centre for International Economics is a private economic research agency that provides professional, independent and timely analysis of international and domestic events and policies.

The CIE's professional staff arrange, undertake and publish commissioned economic research and analysis for industry, corporations, governments, international agencies and individuals.

© Centre for International Economics 2019

This work is copyright. Individuals, agencies and corporations wishing to reproduce this material should contact the Centre for International Economics at one of the following addresses.

CANBERRA

Centre for International Economics
Ground Floor, 11 Lancaster Place
Majura Park

Canberra ACT 2609
GPO Box 2203
Canberra ACT Australia 2601

Telephone +61 2 6245 7800
Facsimile +61 2 6245 7888
Email cie@TheCIE.com.au
Website www.TheCIE.com.au

SYDNEY

Centre for International Economics
Level 7, 8 Spring Street
Sydney NSW 2000

Telephone +61 2 9250 0800
Email ciesyd@TheCIE.com.au
Website www.TheCIE.com.au


DISCLAIMER

While the CIE endeavours to provide reliable analysis and believes the material it presents is accurate, it will not be liable for any party acting on such information.


Key Messages




Don't introduce the Regional Broadband Scheme



This tax will stymie competition and investment. It is based on the false assumption that NBN has commercial services that subsidise non-commercial services. In reality, NBN has non-commercial services and highly non-commercial services!



Reform the USO to recognise the role of the NBN and the role of other technologies, as per the Productivity Commission Inquiry



These funds can be used to help fund NBN's regional services as well as establish a technology-neutral and contestable fund to provide a reasonable quality, cost effective voice service for regional and remote Australians.

This story

Telecommunications policy in Australia is tangled. There is a vast array of duplicate policies and programs providing up to \$1 billion¹ of industry and taxpayer funding each year for the provision of universal telecommunications services. This is in addition to the \$51 billion taxpayer funded National Broadband Network.

The complexity and duplication of current arrangements is illustrated by Chart 1.1 which captures such some of the multiplicity of transfers, subsidies and taxes already present in the industry. The confusion and inefficiency of current arrangements is illustrated by the following overlapping subsidies:

- industry and taxpayers are required to subsidise Telstra for maintaining unspecified parts of its copper network,
- industry and taxpayers including Telstra subsidise the NBN to rollout fibre, FTTN, fixed wireless and satellite services to the same areas,
- NBN also transfer large sums of money back to Telstra for duct and infrastructure rentals,
- government also subsidises Telstra to build mobile towers in the same areas where the Telstra copper network is supposedly being subsidised to provide voice services.

Even if the individual elements of this complex and circuitous roundabout were efficient (which they do not appear to be given the concerns raised by numerous government agencies), the deadweight losses and administrative burdens imposed by multiplicative separate schemes should not be underestimated as they create barriers to investment and provision of services to Australian consumers.

Despite this, the Government is seeking to introduce yet another tax on the industry in the form of the Regional Broadband Scheme (RBS). The RBS is premised on two key assumptions, neither of which appear to survive scrutiny:

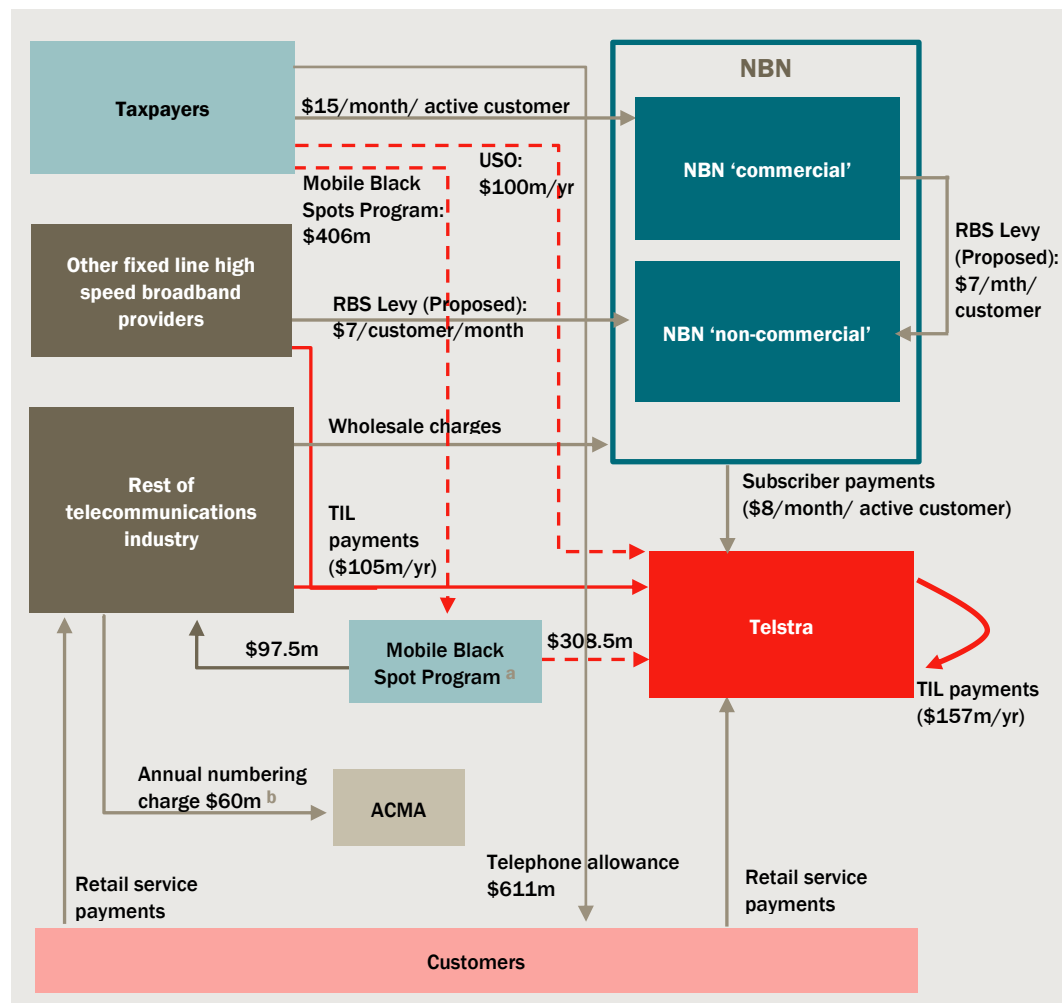
- that NBN's 'commercial' operations are cross-subsidising its 'non-commercial' operations, and
- that a levy on other competitors to NBN therefore "levels the playing field" between the commercial arm of NBN and other network providers.

In reality, NBN's own corporate plan does not show any cross-subsidy – only a subsidy from the taxpayer to both arms of the NBN since both are in fact loss making and therefore non-commercial. This makes the RBS levy distortionary and anti-competitive, especially since NBN is actively competing with the independent network providers that are forced to cover its losses.

¹ Productivity Commission 2017, *Telecommunications universal services obligation*, Inquiry report, p.7

Our recommendation is to not exacerbate the tangled web of legacy subsidies and tax schemes. The best focus for government would be to reform the current USO policy, as outlined in numerous Government reports, and introduce focused, targeted, efficient and fair mechanisms which deliver what Australia really needs.

1.1 Where the money flows



^a based on available information on funding from Department of Communications, Telstra, Optus and VHA websites and CIE analysis. Telstra has received funding for 797 of the 1,047 total base stations funded to date (or 76 percent). ^b based on ACMA fee revenue target for 2019 <https://www.acma.gov.au/annual-fee-phone-numbers>

Note: \$/customer/month figures are based on the present value of the cost or revenue items divided by the present value of active customers. For example, subscriber payments are actually front-loaded, so will be very high initially and then decline to zero.

Data sources: Regional Broadband Scheme factsheet, available at: <https://www.communications.gov.au/documents/regional-broadband-scheme>; TIL amounts for 2018/19 see <https://www.acma.gov.au/sites/default/files/2019-11/Telecommunications%20Industry%20Levy%20Assessment%202018-19.pdf>; See Appendix A for NBN subsidies. Telephone allowance amounts based on Productivity Commission 2017, *Telecommunications universal services obligation*, Inquiry report, p.7 Table 1

1 Introduction

The Federal Government is proposing to introduce yet another tax on the telecommunications sector (the Regional Broadband Scheme). This is despite the fact the Government has yet to follow through on its commitment to reform the large, inefficient and anti-competitive subsidy regime already in place (the Universal Service Obligation), which is funded by industry and government to the tune of \$297 million each year².

Given the Universal Service Obligation was established as a funding mechanism to provide subsidies for uneconomic communications infrastructure, it should be updated for the 21st century and directed towards funding NBN services in regional Australia. This is particularly relevant given NBN Co.'s proposed role as the default Statutory Infrastructure Provider for all of Australia. The alternative is direct budget funding for these services, which is viewed as the best approach for uneconomic services by the ACCC³, not another levy on an already heavily burdened telecommunications sector.

As the Productivity Commission has noted, "Australia has a plethora of policies and programs broadly designed to provide better access to telecommunications services".⁴ Governments seeking to address regional telecommunications issues has led to policy becoming more and more confused, particularly with the introduction of the NBN and the provision of legacy voice services over Telstra's copper network.

This report aims to provide a view of operating in the telecommunications sector from an outsider's perspective. To do this, we have created a hypothetical telecommunications company, RegionalNet, and followed its efforts to enter the market as a broadband provider and understand and explain the various overlapping telecommunications sector policies, taxes and subsidy schemes.⁵

² The Universal Service Obligation is an agreement between the Australian Government and Telstra which commenced in 2012 and reflects the regulated obligation of Telstra to supply standard telephone services and payphones. Telstra receives payment (\$253 million and \$44 million including GST per year) from the Government and Industry for fulfilling this obligation until 2032. Productivity Commission 2016, *Telecommunications universal services obligation*, Inquiry report, p.8, <https://www.pc.gov.au/inquiries/completed/telecommunications/report/telecommunications.pdf>.

³ ACCC Chairman Rod Sims, quoted in Australian Financial Review, 31 October 2017, <https://www.afr.com/politics/federal/budget-funding-for-unprofitable-regional-nbn-services-makes-sense-accs-chairman-rod-sims-says-20171031-gzbqze>.

⁴ Productivity Commission 2017, *Telecommunications universal services obligation*, Inquiry report, p.6, <https://www.pc.gov.au/inquiries/completed/telecommunications/report/telecommunications.pdf>.

⁵ We credit the Property Council of Australia for the idea and style, based on *Planning Gone Mad: A story about the NSW planning system and how it drives applicants crazy*, May 2012, <http://www.prmarchitects.com.au/Resources/Planning%20Gone%20Mad.pdf>.

2 *The start of our story*

A company decides it wants to provide telecommunications services in a large regional town in New South Wales. Let's call this company RegionalNet'.

RegionalNet is thinking of laying a fibre cable to serve a new business area that also has some residential customers. The company potentially wants to provide voice and data services over fibre and a wireless local network using both fixed and mobile numbers, as several business customers require these for business and personal purposes.⁶ Several of the businesses locating in the new business area are existing customers of RegionalNet, and it is keen to remain the provider of choice for these businesses at all their locations around Australia.

The regional town is excited about new communications investment and a new name in town.⁷

InteliNet is also confused because it will also be providing regional broadband services, but without any subsidy.⁸ It asks its local MP if it would be able to access this funding source also however is advised that it can only be accessed by NBN.⁹

⁶ For example, the Parkes and Wagga Wagga Special Activation precincts.

⁷ CIE (2016) found that Telstra had market share in mobile and fixed line services of over 60 per cent. (CIE 2016, *Telstra's price premium: The premium paid by consumers for fixed and mobile services*, prepared for VHA, November.)

⁸ Note that it turns it doesn't matter where a service is being provided, for the Regional Broadband Scheme, only that the area is getting a fixed wireless and satellite service.

⁹ The Bureau of Communications Research notes its policy principles as: Transparency, contestability, competitive neutrality, sustainability, economic efficiency and equity (BCR 2016, NBN non-commercial services funding options, Final Report, March, <https://www.communications.gov.au/publications/nbn-non-commercial-services-funding-options-final-report-march-2016>).

3 *RegionalNet's first encounter with policy*

RegionalNet starts by working out the costs, the number of customers and how much it needs to charge its customers to provide a financially viable service.

It discovers that there is a new proposed levy that it would need to pay as a provider of broadband services, to help fund regional, rural and remote broadband services. This levy is called the Regional Broadband Scheme.¹⁰ The money paid would be directed to NBN and confusingly, the majority of the RBS levy will be paid by NBN to itself.

The company asks the Department of Communications why there is a need for this new levy and why RegionalNet can't receive subsidies as it is providing regional communications services. The Department responds to the effect that it would be unfair for NBN to pay for regional broadband by itself.¹¹

The company is a little confused, because it had thought NBN was a government business, already paid for by taxpayers.¹² In that case, it is taxpayers who are paying for regional broadband. That seems like a good way to fund a regional subsidy.¹³

¹⁰ The Regional Broadband Scheme levies carriers \$7.10 per month for each premises on their network with an active high-speed broadband service. This levy is intended to fund part of NBN's costs for the rollout of broadband in rural and regional areas. (Regional Broadband Scheme factsheet, available at: <https://www.communications.gov.au/documents/regional-broadband-scheme>). Whether or not RegionalNet would be subject to the Regional Broadband Scheme would depend on how many existing customers it has.

¹¹ The NBN fixed wireless and satellite networks are expected to incur a net loss of around \$9.8 billion over 30 years. The Department of Communications states that these losses are currently funded by an internal cross-subsidy from NBN Co's fixed-line networks and that the RBS would ensure these are spread over all NBN-comparable networks. (Regional Broadband Scheme factsheet, available at: <https://www.communications.gov.au/documents/regional-broadband-scheme>)

¹² To date, NBN has been funded by a public equity funding commitment of \$29.5 billion, followed by a Commonwealth Government loan facility of up to \$19.5 billion. See Appendix A for overall subsidy rates of NBN, indicating that NBN is not commercial, even for its 'commercial' part. (NBN Corporate plan 2020-23, p54)

¹³ ACCC Chairman Rod Sims, quoted in Australian Financial Review, 31 October 2017, <https://www.afr.com/politics/federal/budget-funding-for-unprofitable-regional-nbn-services-makes-sense-accs-chairman-rod-sims-says-20171031-gzbqze>.

The Productivity Commission also notes budget funding as preferable for universal service obligations – Productivity Commission 2016, *Telecommunications universal services obligation*, Inquiry report, p.16, <https://www.pc.gov.au/inquiries/completed/telecommunications/report/telecommunications.pdf>.

RegionalNet is also confused because it will also be providing regional broadband services, not only without any subsidy, but with an additional cost which will make it harder for it to invest to deliver the services.¹⁴ It asks its local MP if it would be able to access this funding source also however is advised that it can only be accessed by NBN.¹⁵

¹⁴ Note that it turns it doesn't matter where a service is being provided, for the Regional Broadband Scheme, only that the area is getting a fixed wireless and satellite service.

¹⁵ The Bureau of Communications Research notes its policy principles as: Transparency, contestability, competitive neutrality, sustainability, economic efficiency and equity (BCR 2016, NBN non-commercial services funding options, Final Report, March, <https://www.communications.gov.au/publications/nbn-non-commercial-services-funding-options-final-report-march-2016>).

4 *RegionalNet's first interactions with NBN*

While RegionalNet is doing its due diligence on whether or not to proceed, NBN releases its corporate plan.¹⁶ The company is surprised to find that NBN's 'commercial' part is losing just as much money as NBN's 'non-commercial' part.¹⁷ It wonders in what way NBN is already paying for its regional broadband services on its own as the Government had previously advised.

The company investigates further the commerciality of NBN's 'commercial' operations and discovers that NBN has had to pay Telstra so much each year to rent its infrastructure and to migrate its customers to the NBN, that it can't make any money even on its 'commercial' network.¹⁸

RegionalNet then discovers that Telstra has indicated that NBN can't make any money because it is so inefficient, and NBN needs to drop its prices so that communications companies retailing NBN services can make money.¹⁹

RegionalNet is comforted that everyone agrees that NBN can't make any money.

It then reads the Government's public statements. The Government does appear to believe that NBN will make money.²⁰ After talking to people in the industry, RegionalNet understands that this is so that government can keep the expenditure 'off-budget'.²¹

¹⁶ NBN Corporate plan 2020-2023, August 2019

¹⁷ See Appendix A.

¹⁸ In the financial year ending 2019, subscriber payments amounted to \$1.9 billion. To put this into perspective, operating expenses over the same period were \$2.2 billion, capital expenses were \$5.9 billion, and revenue was \$2.8 billion. (NBN Annual report 2019, p42)

¹⁹ Telstra has stated in its submission to the ACCC Telecommunications Market study in 2017 that retail service providers face significant margin pressure in providing services over the NBN. It attributes this to the current pricing structure, in which there has been only a modest update of average connectivity virtual circuit (CVC) per user over time (December 2017, p10-11)

²⁰ Communications Minister Paul Fletcher has rejected calls to intervene in the NBN, stating that NBN has reached "peak funding" and will leave pricing decisions to NBN. Sydney Morning Herald "Government cools talk of intervention to cut NBN prices", available at <https://www.smh.com.au/politics/federal/government-cools-talk-of-intervention-to-cut-nbn-prices-20190611-p51wnq.html>, accessed 13/12/2019

²¹ Former NBN CEO Mike Quigley stated in February that "The financial performance of NBN Co has been hit in two directions" he explained that "The peak funding costs have increased to \$51 billion and the ability to generate revenue has been severely constrained". He believes that a write-down of NBN assets is "inevitable". Sydney Morning Herald "NBN write-down inevitable after 'disastrous' rollout, says ex-boss", available at <https://www.smh.com.au/politics/federal/nbn-write-down-inevitable-after-disastrous-rollout-says-ex-boss-20190204-p50v17.html>, accessed 13/12/2019

It asks if this changes how much the taxpayer has to pay. It is told 'No', but some buckets of money are easier to forget about than others.

5 *RegionalNet's second encounter with policy*

RegionalNet continues trying to complete its business plan which is becoming more complex as multiple taxes and subsidies paid to others are included. It finds out that it will also need to pay a Telecommunications Industry Levy equal to a percentage of its revenue every year.²²

It asks what this levy is for and is told that this is to cover uneconomic communications services provided to regional areas. RegionalNet is again confused, as it had thought that is what the Regional Broadband Scheme levy was for, which was already duplicating what taxpayers were under the impression that they had paid for. After reading over 500 pages of government and independent reports, the company is even more confused, as these reports, commissioned by the same government say the USO arrangements should be radically changed, and the USO is past its used by date.²³

RegionalNet asks how it can receive some of the USO money, as it is providing a communications service to a regional town, and it can't find what services the USO is actually providing.²⁴ It is told that only Telstra can be given this money.²⁵ Queries about

²² This refers to the Telecommunications Industry Levy (TIL) which funds telephone and payphone services as part of the Universal Service Obligation, as well as telephone services to assist impaired individuals <https://www.acma.gov.au/apply-telecommunications-carrier-licence>

²³ The Productivity Commission has stated that for the vast majority of premises (more than 99 per cent), the combination of the NBN and mobile networks is likely to meet or exceed minimum standards for universal service delivery. With this, the commission believes that the Telecommunications Universal Service Obligation (TUSO) is no longer needed. It suggests that the TUSO can be terminated once the NBN is fully rolled out and be replaced with more targeted policy responses (Telecommunications Universal Service Obligation – Productivity Commission Inquiry Report, 28 April 2017, p2)

²⁴ The ANAO has noted that “reporting provides no information on the quantity of standard telephone services that Telstra supplies solely on the basis of its universal service obligations, it is not possible to determine the extent to which the TUSOPA contributes to Australians having reasonable access to such services on an equitable basis” (ANAO 2017, *Management of the contract for telephone universal service requirements*, Report No. 12, 2017/18, p. 8, <https://www.anao.gov.au/work/performance-audit/management-contract-telephone-universal-service-obligations>).

²⁵ The Productivity Commission has argued in its Telecommunications Universal Service Obligation inquiry that the USO “takes a one-size-fits all approach with no contestability in universal service provision, making it out of sync with technological and market developments”. This is amplified due to the fact that service providers are also increasingly providing telecommunications for all forms of media (including voice), making payphones redundant. <https://www.pc.gov.au/news-media/pc-news/pc-news-august-2017/telecommunications>, Accessed 11/12/2019

what services are being provided with this \$297 million each year go unanswered.²⁶

After more reading the company finally understands that the Government considers that voice and broadband services cannot be provided using the same infrastructure in regional areas and that there is a need for both copper network services and the NBN. Industry and taxpayers are required to subsidise Telstra for maintaining the copper network, while at the same time taxpayers and industry subsidise the NBN.

The company finds it hard to comprehend that after a \$51 billion taxpayer investment in the NBN, Telstra is still being paid to deliver voice services via copper wire and payphones in regional areas. This is despite the fact that the NBN fixed wireless service is capable of providing a voice service as well as satellite²⁷. Telstra's mobile network maps also show 3G and 4G coverage indicating that mobile voice services are available in many of these areas as well.

RegionalNet also finds on the Telstra website a press release celebrating the deployment of mobile coverage in the local area for which Telstra was subsidised under the Mobile Black Spot Program.²⁸

²⁶ The Australian National Audit Office found in its review that key aspects of the TUSO do not reflect value for money principles. It found that the contract's term of 20 years with a fixed annual fee based on 2009-10 costs does not reflect the demonstrated decline in demand for standard telephone and payphone services over the relevant period. Further, existing performance reporting provides limited transparency as to whether contract services are achieving the stated policy objective, with no information on the quantity of standard telephone services that Telstra supplies solely on the basis of its USO.
<https://www.anao.gov.au/work/performance-audit/management-contract-telephone-universal-service-obligations> Accessed 11/12/2019

Infrastructure Australia states that TUSO lacks transparency, competition and specificity, and are often technology prescriptive. It believes that without action, both taxpayer and user outcomes will be compromised, and CSOs will not service the locations and communities where need exists (Australian Infrastructure Audit 2019 p583)

²⁷ Voice services are available on the NBN network for a range of different access technologies, including FTTB, FTTC, FTTN, HFC, FTTP, Fixed Wireless and Satellite. Voice services are delivered using the Voice over Internet Protocol (VOIP). See <https://www.nbnco.com.au/sell-nbn-services/products-services-pricing/voice>

²⁸ The Federal Government has committed \$380 million to the Mobile Black Spot Program, which invests in telecommunications infrastructure (such as base stations) to improve mobile coverage across Australia. To date, \$406 million in State and Federal Government funding has been provided.

6 *A change of plan for RegionalNet*

The company talks to its potential customers and decides to investigate whether it can provide broadband services more efficiently with a 5G wireless service than with fibre connected to the premise.

RegionalNet starts looking for a good location for a fixed-wireless base station to service the business park and again notes the existing Telstra mobile tower which looks to be a suitable-existing structure on which to locate its fixed wireless site. Even better, this particular site was part-funded by the Mobile Black Spot Program. Since the tower was government funded, RegionalNet assumes that there would be mechanisms in place to maximise the benefit for the local community from the tower.

After investigation, the company cannot obtain access to the mobile tower because Telstra has reserved space for itself for potential future deployments even though it has no finalised plans to use the reserved space.

RegionalNet notices another tower nearby which appears to have telecommunications equipment on it. After making inquiries, RegionalNet is informed that it is an NBN fixed wireless tower. RegionalNet inquires as to whether it can place its equipment on the NBN tower. NBN informs RegionalNet that it too has reserved space on its tower for future needs, and if RegionalNet wishes to co-locate its equipment on the tower, it will need to separately rent additional space nearby and build its own communications cabinet as it is not possible to co-locate equipment in NBN's cabinets. Frustrated, its management decides to build its own tower on the property next door.²⁹

The company makes enquiries into the Mobile Black Spot Program. It discovers that only Mobile Network Operators have received this money and Telstra has secured funding for 75 percent of sites under the program to date.³⁰

²⁹ For example, of the 765 towers being built over rounds 1 and 2, co-location between mobile network operators occurred on just 87 taxpayer funded towers, or just 11 percent of the towers being built. Further, 36 of these towers which are being shared are being built by VHA, available at <http://parlinfo.aph.gov.au/parlInfo/search/display/display.w3p;db=CHAMBER;id=chamber%2Fhansardr%2F55ca705c-f4c5-4a16-a7f5-47295e740c6e%2F0261;query=Id%3A%22chamber%2Fhansardr%2F55ca705c-f4c5-4a16-a7f5-47295e740c6e%2F0011%22>, accessed 16/12/2019)

³⁰ To date, around 76 per cent of funded base stations constructed under the program have been provided by Telstra. (CIE calculation based on funded base station data from Department of Communication and Arts website, available at <https://www.communications.gov.au/what-we-do/phone/mobile-services-and-coverage/mobile-black-spot-program>, accessed 12/12/2019)

The company also becomes aware of the Annual Numbering Charge which is levied on carriers who hold mobile numbers³¹. Strangely while a significant tax of 63 cents per number per year is levied on mobile numbers³², no such tax is levied on fixed numbers. This tax not only isn't applied to fixed-line numbers, or mobile numbers allocated for clearly commercial purposes. RegionalNet doesn't understand the logic for this as it is providing both fixed and mobile numbers to its business customers, and many of them route calls from their fixed number to their mobile phone and vice versa or have both fixed and mobile numbers which terminate on a VoIP service or a fixed line or a mobile. Luckily, RegionalNet can simply allocate fixed numbers rather than mobile numbers to the service which means that this charge doesn't apply to them.

The company then discovers a range of state-based schemes such as the NSW Regional Digital Connectivity program³³, which focuses on eliminating mobile blackspots and investing in backbone digital infrastructure such as data centres in regional communities. The company starts to wonder why there are duplicate programs and funding sources aimed at achieving the same policy outcomes.

Having sorted out access to power the company needs to access fibre to connect to its new tower. The company seeks to connect to the NBN fibre network nearby, however NBN shows little interest in engaging with RegionalNet. In the meantime, the company learns that NBN Co has been making direct approaches to large businesses who are planning to locate to the new business area as part of its plans to bring in new revenue³⁴.

While confused to learn that NBN is able to compete for business customers, the company presses on with its plans and decides to build its own fibre. Finally, after a lengthy process securing a lease with the landowner and obtaining planning approval the company starts construction and is finally ready to provide a service to its customers.

After the first year of operation, things are going well and a number of local businesses and some residential customers are enjoying their broadband service. It sends in a payment for the Regional Broadband Scheme Levy. This is returned, with a note saying

³¹ As per the ACMA, phone numbers are treated as a public resource and so carriers are charged annual fees for their use (<https://www.acma.gov.au/annual-fee-phone-numbers#the-rules>, accessed 12/12/2019). The rules governing these fees are set out in the Telecommunication (annual charge) determination 2014. The fee scales with the length of the number (see Telecommunications Numbering charges Act 1997)

³² Fee amounts for 10-digit numbers change each year and are available on the ACMA website: <https://www.acma.gov.au/annual-fee-phone-numbers>

³³ The NSW Government has committed \$400 million to bring a faster and more reliable digital network to regional NSW, see NSW Government announcement at <https://www.nsw.gov.au/improving-nsw/regional-nsw/snowy-hydro-legacy-fund/regional-digital-connectivity-program/>, accessed 13/12/2019

³⁴ NBN Co has been making direct approaches to the Enterprise and Government market, having recently signed on Westpac, Woolworths, Coles and Australia Post to its wholesale offerings. This occurred, despite a formal warning from the ACCC in October 2019 about its conduct. IT News: How NBN Co struck its bothersome business deals, available at <https://www.itnews.com.au/news/how-nbn-co-struck-its-bothersome-business-deals-535217>, accessed 13/12/2019

that this levy does not apply to the service because of the technology used.³⁵ This is a welcome surprise for the company.

The levy for the USO, called the TIL, is not returned. The following year the TIL increases. The company is surprised, as it had expected this to fall.³⁶

After a year in operation, the company hears news that as a small network, it may no longer be required to structurally separate its business between retail and wholesale components. While RegionalNet is primarily providing services to businesses, it also supplies some services to households incidentally, given that some customers are multi-purpose (e.g. operate small businesses out of their home)³⁷. Previously, this was not allowed, meaning RegionalNet would need to have separate business units supplying services to business and residential customers. This is good news, but the company is frustrated after unnecessarily going through the cost and pain of structural separation.

³⁵ The levy is only applied to fixed line services, rather than being technology neutral.

³⁶ The Productivity Commission 2016 and ANAO 2017 both note that the services covered by the Telecommunications Universal Service Obligation (TUSO) and the Telecommunications Industry Levy should decline over time.

The Productivity Commission notes “the demand for TUSO services is clearly falling”. Telecommunications Universal Service Obligation – Productivity Commission Inquiry Report, 28 April 2017, p7.

ANAO notes a “demonstrated decline in demand for standard telephone and payphone services over the relevant period.” ANAO 2017, *Management of the contract for telephone universal service requirements, Report No. 12, 2017/18*, p. 30, <https://www.anao.gov.au/work/performance-audit/management-contract-telephone-universal-service-obligations>).

³⁷ The proposed Telecommunications Legislation Amendment (Competition and Consumer) intends to offer more flexibility to business networks, since they may supply a small number of residential customers. This is the case if residential usage compared to total usage is ‘minor’. Telecommunications Legislation Amendment (Competition and Consumer) Bill 2019, Explanatory Memorandum, page 6.

7 *Explaining the policy system*

After some surprises in financial outcomes as a result of government levies being applied and not applied, the RegionalNet board is losing confidence in the understanding management has of the policy framework.

The management is asked to provide its board with an understanding of how the levies and industry and government payments work. It creates a flow chart summarising how money flows around. The board discussion goes something like this:

CEO: “The taxpayer first subsidises NBN services by ~\$15 per service per month, which goes to both its commercial and non-commercial services. It also directly gives Telstra \$100 million per year. NBN’s commercial services then pay on \$7 of its \$15 per month subsidy on to the non-commercial services, as well as paying about \$8 per month equivalent on to Telstra in subscriber payments.”

Chairman: “So what is the distinction between NBN’s commercial and non-commercial services if both get a subsidy?”

CEO: “I think it is how far each is from being non-commercial. The commercial services are a long way from being commercial, while the non-commercial services are a very very long way from being commercial.”

Chairman: “Ok”

CEO: “Other parts of the industry also provide extra money for NBN’s non-commercial services and to Telstra.”

Chairman: “But where does the money from other parts of the industry come from?”

CEO: “This comes from customers”

Chairman: “So NBN uses taxpayer money to pay its part of regional subsidies, and the rest of the industry uses customer money to pay its part of regional subsidies?”

CEO: “Now you are getting it!”

Chairman: “Oh!”

Chairman: “And what services does Telstra provide to get its part of competitors and taxpayer money?”

CEO: “We are pretty sure it is to be able to make a phone call. But no one seems to know how many services this money actually is for.”

Chairman: “But doesn’t NBN provide regional services including the ability to make a phone call?”

CEO: “Yes, but that is subsidised separately, to keep everything clear.”

Chairman: “And both subsidies can apply to services delivered to the same place?”

CEO: "I guess so, but it would be hard to know if you don't know what the subsidies are for."

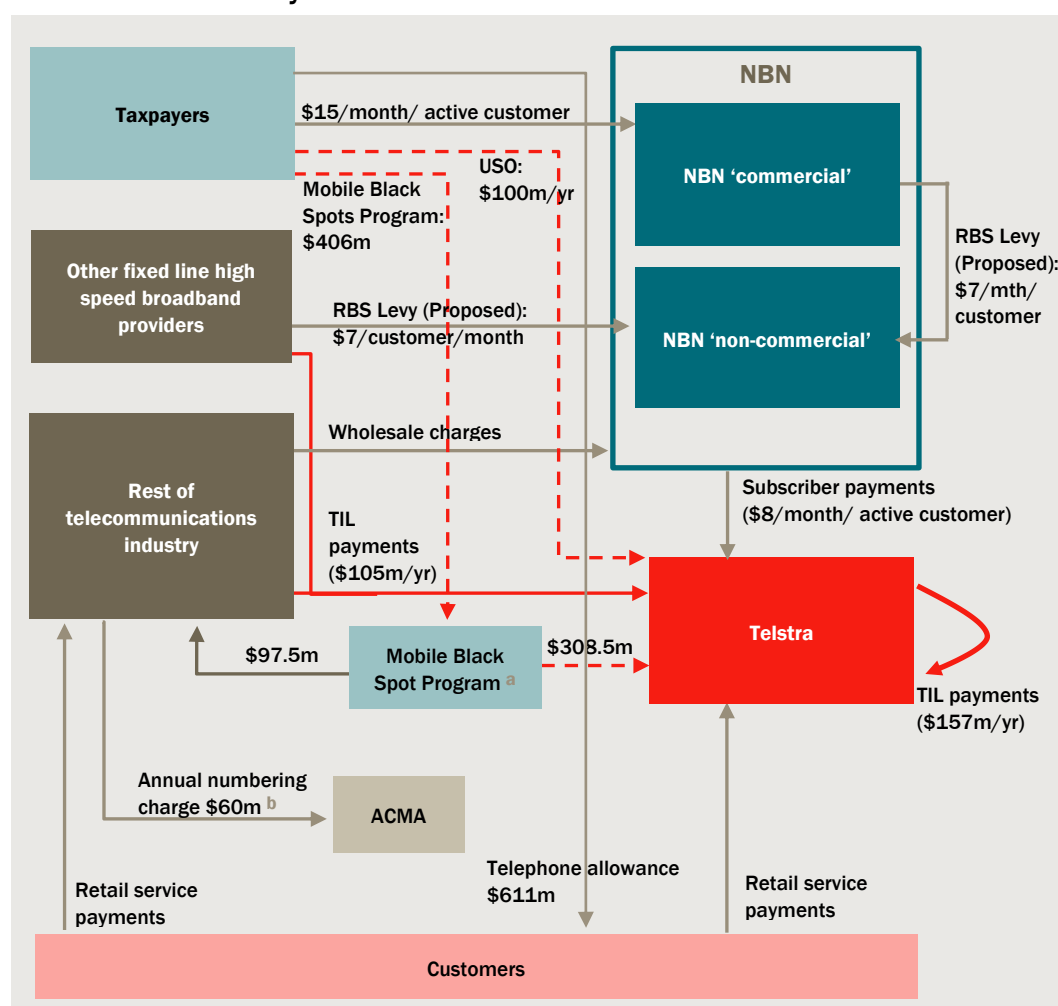
Chairman: "Wouldn't it be better to take the money paid to Telstra and give it to NBN and also get NBN to provide a voice service?"

CEO: "Seems like a lot of reviews think that. There does seem to be a reason not to do it in satellite areas as voice quality is lower, but no-one seems to have tried to match up the taxpayer funded NBN network with the taxpayer and industry funded Telstra copper network."

Chairman: "Can't other companies compete for these subsidies and do it cheaper than NBN and Telstra."

CEO: "Seems like a lot of reviews think that too!"

7.1 Where the money flows



^a based on available information on funding from Department of Communications, Telstra, Optus and VHA websites and CIE analysis. Telstra has received funding for 797 of the 1,047 total base stations funded to date (or 76 percent). ^b based on ACMA fee revenue target for 2019 <https://www.acma.gov.au/annual-fee-phone-numbers>

Note: \$/customer/month figures are based on the present value of the cost or revenue items divided by the present value of active customers. For example, subscriber payments are actually front-loaded, so will be very high initially and then decline to zero.

Data sources: Regional Broadband Scheme factsheet, available at: <https://www.communications.gov.au/documents/regional-broadband-scheme>; TIL amounts for 2018/19 see <https://www.acma.gov.au/sites/default/files/2019-11/Telecommunications%20Industry%20Levy%20Assessment%202018-19.pdf>; See Appendix A for NBN subsidies. Telephone allowance amounts based on Productivity Commission 2017, *Telecommunications universal services obligation*, Inquiry report, p.7 Table 1

A Commerciality of NBN services

The Regional Broadband Scheme is premised on NBN's 'commercial' operations cross-subsidising its 'non-commercial' operations. The rationale of the scheme is that other networks which seek to offer services in competition with NBN should pay the levy for poaching a presumptively profitable commercial customer from NBN, requiring therefore a "top up" of NBN's subsidy flows in order than NBN can continue to subsidise its non-commercial operations. A levy on other competitors to NBN therefore "levels the playing field" according to this rationale.

However, NBN's numbers do not show any cross-subsidy between the commercial and non-commercial services – only a subsidy from the taxpayer to both. This is under a very low test of commerciality, of meeting a nominal rate of return of 6.46 percent, based on the rate used by the Bureau of Communications Research in assessing NBN's non-commercial services. Actual commercial rates of return for a venture such as NBN would be substantially higher than this.³⁸ The rate of return in NBN's Special Access Undertaking would be lower than this currently, as it is based off the government bond rate plus 3.5 percent and the government bond rate is at historic lows.

To arrive at this view, we have used historical NBN data, projections NBN has made as part of its latest corporate plan (2020-2023) and forecasts thereafter that give returns equivalent to those stated by NBN, of a 3.2 percent internal rate of return.³⁹ Using this data and NBN's assumptions:

- NBN has a present value of revenue of \$69.4 billion and a present value of costs of \$87.8 billion. This means there is a total loss of \$18.4 billion.
- The Bureau of Communications Research estimates the loss for non-commercial services of \$9.8 billion⁴⁰
- This means that 'commercial services' are achieving a loss of \$8.6 billion.

³⁸ See Table 3.2 of Independent cost benefit analysis of broadband and review of regulation 2014, Volume 2, https://www.communications.gov.au/sites/default/files/Cost-Benefit_Analysis_-_FINAL_-_For_Publication.pdf?acsf_files_redirect. This indicates nominal post-tax rates of return of over 8 per cent.

³⁹ Outside of the period over which NBN provides data (2024 to 2040) we have assumed operating costs grow by 3 per cent pa (nominal), revenue grows by 3.5 per cent pa (nominal), capital costs remain at a stable level of \$1.4 billion pa (nominal) and customers active grow at 1 per cent pa. The residual value is calculated as six times EBITDA, as assumed by NBN. This gives an estimated internal rate of return of 3.2 per cent, as stated by NBN. Note that NBN does not state its assumed longer term assumptions to arrive at a 3.2 per cent IRR.

⁴⁰ BCR 2016, NBN non-commercial services funding options, Final Report, March, p. 7, <https://www.communications.gov.au/publications/nbn-non-commercial-services-funding-options-final-report-march-2016>.

On a per premise basis, calculated by dividing the present value of revenues and costs by the present value of premises activated, NBN is losing \$14 per premise activated per month in 2015 dollars or, adding inflation from 2015 to 2019, \$15 per premise per month. NBN's commercial services are losing \$7 per premise per month – this is the subsidy being provided by the taxpayer to achieve a 6.46 per cent nominal return for NBN's commercial customers.

A.1 Costs and revenues of NBN

	\$B	\$/premise/month 2015\$	\$/premise/month 2019\$
NBN revenue	69.4	47	50
NBN costs	-87.8	-61	-65
NBN loss	-18.4	-14	-15
NBN non-commercial services loss	-9.8	-150	-160
NBN commercial services loss	-8.6	-7	-7

Note: Discounted at 6.46 per cent nominal, with a base year of 2015 to match the Bureau of Communications Research Assessment for non-commercial services. The time period is 2012 to 2020.

Source: The CIE, based on NBN Annual reports and Corporate Plan 2020-23.

B Existing policies that enable universal telecommunications services

The Productivity Commission estimated that at least \$1 billion is spent on programs and policies that address telecommunications universal service objectives (table B.1). This also does not include the Government's investment in the NBN infrastructure or the expected ongoing costs of supplying non-commercial services over NBN infrastructure⁴¹

B.1 Programs that address telecommunications universal service objectives

Program	Indicative annual funding
	\$m (incl GST)
Telephone Allowance	611
Standard telephone service USO	253
Mobile Black Spot Program	48
Payphones USO	44
Programs to support digital inclusion	29
Emergency Call Service	22
National Relay Service	22
Voice only Customer Migration	17
Remote Indigenous telecommunications programs	5
Total	1 051

Note: The Productivity Commission considers these figures as conservative estimates

Source: Productivity Commission 2017, *Telecommunications universal services obligation*, Inquiry report, p.7, <https://www.pc.gov.au/inquiries/completed/telecommunications/report/telecommunications.pdf>.

⁴¹ Source: Productivity Commission 2017, *Telecommunications universal services obligation*, Inquiry report, p.6, <https://www.pc.gov.au/inquiries/completed/telecommunications/report/telecommunications.pdf>.



THE CENTRE FOR INTERNATIONAL ECONOMICS
www.TheCIE.com.au