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SENATE

SELECT COMMITTEE ON THE NATIONAL BROADBAND
NETWORK

Reference: Implications of the proposed National Broadband Network

THURSDAY, 15 APRIL 2010

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**SENATE SELECT COMMITTEE ON
THE NATIONAL BROADBAND NETWORK**

Thursday, 15 April 2010

Members: Senator Macdonald (*Chair*), Senator Nash (*Deputy Chair*), Senators Birmingham, Fisher, Ludlam, Lundy and Sterle

Senators in attendance: Senators Fisher, Lundy and Macdonald

Participating members: Senators Abetz, Adams, Back, Barnett, Bernardi, Bilyk, Mark Bishop, Boswell, Boyce, Brandis, Carol Brown, Bushby, Cameron, Cash, Colbeck, Jacinta Collins, Coonan, Cormann, Crossin, Eggleston, Farrell, Feeney, Ferguson, Fielding, Fierravanti-Wells, Fifield, Forshaw, Furner, Heffernan, Humphries, Hurley, Hutchins, Johnston, Joyce, Kroger, McEwen, McGauran, McLucas, Marshall, Mason, Minchin, Moore, O'Brien, Parry, Payne, Polley, Pratt, Ronaldson, Ryan, Scullion, Stephens, Troeth, Trood, Williams, Wortley and Xenophon

Terms of reference for the inquiry:

1. To inquire into and report on:
 - a. the Government's decision to establish a company to build and operate a National Broadband Network (NBN) to:
 - i. connect 90 per cent of all Australian homes, schools and workplaces with optical fibre to the premise (FTTP) to enable broadband services with speeds of 100 megabits per second;
 - ii. connect all other premises in Australia with next generation wireless and satellite technologies to deliver broadband speeds of 12 megabits per second or more;
 - iii. directly support up to 25,000 local jobs every year, on average, over the eight year life of the project.
 - b. the implications of the NBN for consumers and taxpayers in terms of:
 - i. service availability, choice and costs,
 - ii. competition in telecommunications and broadband services, and
 - iii. likely consequences for national productivity, investment, economic growth, cost of living and social capital.
2. The committee's investigation should include, but not be limited to:
 - a. any economic and cost/benefit analysis underpinning the NBN;
 - b. the ownership, governance and operating arrangements of the NBN company and any NBN related entities;
 - c. any use of bonds to fund the NBN;
 - d. any regulations or legislation pertaining to the NBN;
 - e. the availability, price, level of innovation and service characteristics of broadband products presently available, the extent to which those services are delivered by established and emerging providers, and the prospects for future improvements in broadband infrastructure and services (including through private investment);
 - f. the effects of the NBN on the availability, price, choice, level of innovation and service characteristics of broadband products in metropolitan, outer-metropolitan, semi-rural and rural and regional areas and towns;
 - g. the extent of demand for currently available broadband services, the factors influencing consumer choice for broadband products and the effect on demand if the Government's FTTP proposal proceeds;
 - h. any technical, economic, commercial, regulatory, social or other barriers that may impede attaining the Government's stated goal for broadband availability and performance in the specified timeframe;
 - i. the appropriate public policy goals for communications in Australia and the nature of any necessary regulatory settings to continue to develop competitive market conditions, improved services, lower prices and innovation;
 - j. the role of government and its relationship with the private sector and existing private investment in the telecommunications sector;
 - k. the effect of the NBN on the delivery of Universal Service Obligations services;

- l. whether, and if so to what extent, the former Government's OPEL initiative would have assisted making higher speeds and more affordable broadband services available.
3. In carrying out this inquiry, the committee will:
 - a. expressly seek the input of the telecommunications industry, industry analysts, consumer advocates, broadband users and service providers;
 - b. request formal submissions that directly respond to the terms of reference from the Australian Competition and Consumer Commission, the Productivity Commission, Infrastructure Australia, the Department of the Treasury, the Department of Finance and Deregulation, and the Department of Infrastructure, Transport, Regional Development and Local Government;
 - c. invite contributions from organisations and individuals with expertise in:
 - i. public policy formulation and evaluation,
 - ii. technical considerations including network architecture, interconnection and emerging technology,
 - iii. regulatory framework, open access, competition and pricing practice,
 - iv. private sector telecommunications retail and wholesale business including business case analysis and price and demand sensitivities,
 - v. contemporary broadband investment, law and finance,
 - vi. network operation, technical options and functionality of the 'last mile' link to premises, and
 - vii. relevant and comparative international experiences and insights applicable to the Australian context;
 - d. advertise for submissions from members of the public and to the fullest extent possible, conduct hearings and receive evidence in a manner that is open and transparent to the public; and
 - e. recognise the Government's NBN proposal represents a significant public sector intervention into an increasingly important area of private sector activity and that the market is seeking openness, certainty and transparency in the public policy deliberations.

WITNESSES

CORBIN, Ms Teresa, Deputy Chief Executive Officer, Australian Communications Consumer Action Network	33
COX, Mr Dermot, Marketing Director, C-COR Broadband	26
de RIDDER, Mr John, Private capacity	18
HILL, Mr Tony, President, Internet Society of Australia	1
MASON, Mr Philip, Assistant Secretary, NBN and Fibre Rollout Regulation, Department of Broadband, Communications and the Digital Economy	63
QUIGLEY, Mr Michael Patrick, Chief Executive Officer, NBN Co. Ltd	43
QUINLIVAN, Mr Daryl, Deputy Secretary, Infrastructure, Department of Broadband, Communications and the Digital Economy	63
SINCLAIR, Ms Rosemary Anne, Managing Director, Australian Telecommunications Users Group	10

Committee met at 9.49 am**HILL, Mr Tony, President, Internet Society of Australia**

CHAIR (Senator Ian Macdonald)—Welcome. I declare open this hearing of the Senate Select Committee on the National Broadband Network. Mr Hill, you are probably familiar with Senate committees, but I will very quickly run through some of the rules under which we operate. The program has been set. These are public proceedings. We can take evidence in camera if there is a specific request, although we prefer to have questions and proceedings in public. As a parliamentary committee, evidence is protected by parliamentary privilege. It is unlawful for anyone to threaten or disadvantage a witness on account of evidence given to a committee. Any such action may be treated by the Senate as a contempt. It is always a contempt to give false and misleading evidence to the committee. If for any reason witnesses do not want to answer questions they are able to do that but they should give the grounds upon which a refusal is requested. Mr Hill, thank you for your presentation and your past assistance. I invite you to make an opening statement.

Mr Hill—Thank you very much. We are very happy to come along to this Senate inquiry to give evidence on the subject of the National Broadband Network because we regard that as one of the most farsighted and positive initiatives in this area for Australia that we have seen, and we are very hopeful that that can deliver substantial benefits to Australia. I want to make it absolutely clear that you can mark us down as a total supporter of the concept of a national broadband network. Our desire is to see the benefits of that maximised for Australia. We think there will also be spin-off benefits around the world.

I will give you a bit of background about our role in the scheme of things, because it is a perhaps a tad unusual. We are the Australian chapter of the worldwide Internet Society. The way in which the internet has developed and the way in which internet technology has developed has been very much a grassroots process. In a sense, the engineering came first, with the birth of internet technology going back to the 1960s. So that process has been around for a long time. It got a formal life in a group called the Internet Engineering Task Force, which was formed in the 1980s. That has become one of the largest physical meetings held around the world, with huge attendances at various times.

It was not until the 1990s that people went, ‘This is a process, not an organisation, and we need an organisation to support that process,’ and the organisation of the Internet Society was born in the early 1990s. The Internet Society is a worldwide organisation and it has core responsibility for the process of internet standards and the architecture of the internet world wide. A lot of people are confused on that point, so that is why I want to state quite emphatically that other organisations do not have that responsibility, and you might often hear in public debate mention of ICANN and various other things.

It is the internet society that sits at the core of the internet standards process and its architecture, and we are designated as the only Australian chapter of that society. There are chapters elsewhere around the world. The last time I counted they were in 60 or 70 countries, but I think there are many more now. So those chapters exist. The debate has been: if this is a global technology, why do you need local organisations as well as the international one? I think we have found that jurisdictions such as yours take a very strong interest in these developments and so it is very handy to have a local group you can talk to about that. Where we are coming from is a very soundly based technical position because of our membership, because they are the people who helped build the internet in Australia and worldwide. Australia’s position in the international debate about the internet has been very strong. In fact, I can let you know today that one of my fellow directors of the Internet Society of Australia has just been elected by our fellow chapters as a representative on the ISOC board of trustees, and that is Narelle Clark. We are very pleased with that result and it certainly shows the respect that the Australian chapter is held in on a number of topics, including that one. That is a very good development from our point of view.

As you may have guessed from those statements, our interest is very strongly in the internet dimension of this discussion. A lot of people have talked about the term ‘broadband’ in Australia for some time and they do not necessarily talk about specifically the internet, but it is our contention that it is demand for internet services that is very strongly driving the demand for bandwidth. If you want to put it the other way around, it is further access to bandwidth by users that really makes the internet fly for users. It is an essential marriage in our regard. It is very hard to talk about bandwidth without talking about the internet. Having said that and having made it quite clear that we are very strong supporters of the concept of a national broadband network, I want to move on to some concerns that we have that may limit the capacity of the National Broadband Network to deliver maximum benefit to Australia.

The first point that I want to make is related to bandwidth. We know that the policy discussion around the National Broadband Network has been very positive, so shifting Australia's mentality to the idea that 90 per cent of dwellings in Australia can get access to 100 megabits per second or more is a very positive development. But with the way things move in this industry, it is almost dead in the water as soon as you say it. The industry will move on. Other countries are already moving on. As Australia sets this target—and it is very important not to fall below it—it is also becoming a bit of a historical fact as well, so we need to keep the opportunity open to keep moving in this area. Flexibility is very important.

We are concerned about the downside of this. We are concerned that, in the implementation of the National Broadband Network, we may see backsliding. One of the problems underlying this is that, depending on the technology that is used for the fibre-to-the-premise architecture, you may find that users, when the service becomes popular, have to share bandwidth, and therefore the 100 megabits is not delivered to their premises. In some of our commentary on the National Broadband Network we have suggested the idea that users should have access to some sort of meter that shows what sort of bandwidth is being delivered in their premises, to show that it is working out for them. There is a whole technical debate about architecture. I realise the public debate has moved on substantially from when the idea was first launched. Nevertheless, we think that is an issue that needs very close watching: whether the National Broadband Network architecture, as conceived, actually delivers maximum speed to users as designed. That is our first point.

Our second point is that we have gone to some lengths in our submission to do analysis of the various bills and legislation that surround policy for the National Broadband Network. We have a bit of a problem with some of these areas. We think they might not properly reflect the needs of users, especially in relation to competition policy. With hindsight—and I am not saying we could have foreseen these problems—looking back at the landscape of telecommunications policy over the last 15 or 20 years, we are not sure it actually delivered the competitive regime that was of best use to users over that period.

So where are we placed now and where will we go forward? What we are concerned about is that the way in which the legislation is now written, and the way in which pieces of legislation interact with each other, produces a somewhat complex environment for competition policy. In fact, trying to find a single point of reference in among the legislation is quite difficult because some of the legislation refers to the long-term benefit to end users but then you have to look at different legislation to find the definition of what that means.

When we delve through some of those processes, what we find is a discussion about the importance of end-to-end communication and, probably even more importantly, any-to-any communication. Some of that legislation was drafted at a time when 'any to any' meant any telephone to any telephone. We all know the theory about the exponential growth of benefit compared to the number of users and so forth, but times have moved on. We now have to deal with a world that is not just 'any telephone to any telephone'. We have to deal with a world which very soon is going to be 'any device to any device'. I have noticed a lot of positive comment about new products that are currently being launched in the market and the way they are going to talk to the network. I think I heard a statistic the other day that there are now more than 300 million mobile phone subscribers in India. That is a huge number compared to the numbers we are dealing with in Australia and that is the sort of future we are looking for. Those mobile phone users will regard their mobile phone handset as a window on the internet, and very quickly that will become the same situation in Australia because of economies of scale in production. So any-to-any communication ranging across not just voice but also video and data is a key building block in getting the NBN policy right, and if NBN policy bumps up against some other legislative requirements then we are going to have some problems.

I have not spoken specifically about competition there, but effective competition policy obviously underlies that. An issue we may have some time to discuss today is the balance between retail and wholesale activity in this market. Cutting to the chase on that question, our view is that the NBN should be operating in the wholesale space. There are very few exceptions to that and, if there are exceptions, our submission describes the way in which those exceptions should be dealt with.

I would now like to turn to a slightly more technical aspect of the discussion. As the policy was enunciated by the government, the NBN was conceived as a fibre-to-the-premises network. We thought that was a very good thing. In fact, at one stage we seemed like the only organisation in Australia that was arguing that any new network such as this should be fibre to the premises. For a while there, there was a lot of discussion about what sort of fibre that should be and what it should be connected to. So acronyms such as FTTX, 'fibre to the X', were coined. So, for a while there, I think there was a popular notion around 'fibre to the node'.

We are extremely pleased that this is a fibre-to-the-premises network but we think there has been a complication in the way the industry has interpreted the policy. I am not necessarily suggesting that this has been a very sophisticated analysis, but once they read the acronym 'FTTP', they answered that acronym in terms of their technical knowledge related to what is called the OSI model of layers of a network. I think you have had some introduction to this discussion, but just let me make sure we are on the same wavelength here. The OSI model overall—and I have provided a link to the model to your secretary—allows for seven layers. Anyone who is an ordinary user of these networks gets to deal with only one of those layers—layer 7. The technical community has managed to identify another six layers that lie underneath and support that technical layer—and some people argue that there are a couple more layers above that, but I will not go into that.

What I want to talk about is the territory around the first three layers of this model. Layers 1 and 2 have to do with the physical connection that you are using for the network. In fact, layer 1 is defined as the physical layer. A copper network, a fibre network or a wireless network would all be included in that. In fact, I think there is even a registered internet standard for carrying internet traffic by carrier pigeon. So you get the breadth of the discussion here—physical layers can vary enormously. The next layer up is called the data link layer, and this and the physical layer tend to go together. For ordinary users their experience of this would be to see an ethernet port on some device to which they can connect their computer. From a technical point of view, that ethernet port would represent a layer 2 connection.

As I have just been discussing, the variety of these layer 1 and layer 2 connections is enormous. They tend to be, to some extent, proprietary domain technologies, so it is not very easy to get interoperability between one sort of layer 1 and layer 2 connection and another sort of layer 1 and layer 2 connection. How do you join, for instance, a fibre network to a carrier pigeon network—that is quite difficult—or even a wireless network, a fibre network or a copper network?

The place where the interoperability has been demonstrated hugely around the world is not at layer 1 or layer 2, but at layer 3. Layer 3 is where the internet protocol lives. Technical people describe this model as an hourglass: it has a very broad base because there are multiple technologies at layer 1 and layer 2; it is very broad at the top because there are multiple applications; and where it becomes narrow and interoperable is at layer 3 and 4. To be technical about this—and I am almost reaching the end of my technical knowledge here—layer 3 is the internet protocol and layer 4 is the transmission protocol, or TCP, and there are others as well. What has been proven by the world wide popularity of the internet is that people demand this level of interoperability. My punchline is that, while Australia contemplates a new national network architecture and defines it as layer 1 and layer 2, it will miss out on some of the advantages to be gained from the interoperability at layer 3.

CHAIR—Like what?

Mr Hill—If you do not believe me about what the advantages are, have a look at the analysis the OECD has done on the importance of internet addresses.

CHAIR—Can you give us some examples of that?

Senator FISHER—It is not that we do not believe you. It is just that we are trying to understand you and make sure your punchline is not a knockout blow.

CHAIR—And I do not share your expertise.

Mr Hill—The basic principle is that the interoperability delivers the benefit. That is because it is an open platform that anyone can come to with minimal barriers and innovate on top of that platform.

Senator FISHER—That sounds entirely sensible in theory but I think we are trying to get some nuts and bolts examples.

Mr Hill—I am going to go to that now. From my experience, ordinary users are now—and perhaps always have been—enormously confused about what constitutes 'the internet'. They go to their favourite operating system and click on the start button and get a menu of options. One of the options is 'internet' and another one is 'email'. If you ask a person, 'What is "the internet" in this?' they say, 'It is that bit up there.' What 'that bit up there' turns out to be is their browser, which is accessing the world wide web. From this hypothetical person's limited perspective on the world, the email gets there by magic. In fact, email is delivered by the same internet technology as the browser is. So it is the interoperability that allows people to create applications such as email, the world wide web, social networking and web 2.0. This plethora of innovation is possible because this is an open accessibility standard and is widely available. I think that boils it down. I am not sure if I have satisfied your curiosity.

CHAIR—Doesn't the NBN do that?

Mr Hill—No, because the NBN, as currently conceived, operates at a maximum of layer 2. The layer 2 stuff, and below, is not the interoperability layer that we have seen worldwide.

CHAIR—Is it for the Optuses of the world to add to that by providing those services?

Mr Hill—You are now moving on to what would be the appropriate policy prescription in this environment to make sure Australia gets maximum benefit. In our reply to the NBN Co. consultation paper we said NBN Co. should take an interest in layer 3. In other words, NBN Co. should install the equipment that delivers to people internet protocol as well as the supporting services that are available.

CHAIR—Thank you, Mr Hill. I would now like to move to questions. We will start with Senator Lundy.

Senator LUNDY—I think I speak on behalf of the committee in offering our congratulations to Narelle Clark on her appointment to the ISOC board of trustees. Mr Hill, I am grateful for your description of and discussion around layer 2 and layer 3. This came in for some discussion at yesterday's hearing. I am keen to ask you to cross-reference your knowledge about layer 2 and layer 3 services and how that impacts on what would be the definition of 'wholesale' in the provision of layer 2 and layer 3 services. It is an area that some witnesses yesterday believed needed further definition. I would like to throw that at you, given that you understand more than most the technical issues and policy implications of what constitutes a wholesale network.

Mr Hill—I am not sure you have had access to some of the other submissions that were cross-referenced in our submission to you, but one submission that I think is very valuable on that subject is our submission to the NBN consultation paper, because it does describe some aspects of the layer 2 and layer 3 questions that are in there. I would like to draw out one aspect of this, and it has to do with the capacity of this network to reach the maximum population in Australia. We all know that in some areas of Australia population densities are quite low. Where population densities are low, telecommunications providers and service providers are reluctant to invest in new equipment in those areas. So when layer 2 gets to reach a rural and regional area of Australia, how do those people gain access to the internet protocol services that they need in order to match up to the rest of Australia? Will they have access to more than one provider in that situation, or will it only be one person?

Our experience of competition policy is that low-density population centres have been served by only one provider under the USO provisions of telephone services. In this situation we are suggesting that, if only layer 2 is reaching those areas because of the NBN's activities, those people will not have the freedom of choice of layer 3. Let us posit a situation where NBN becomes a provider of layer 2 and layer 3 in some way or another—and I not trying to prescribe how that will happen. The layer 3 services would then be freely available across the whole breadth of the NBN service and not depend on investment by particular service providers to install layer 3 equipment at the far reaches of the NBN network. That is one scenario.

Senator LUNDY—Thank you for that. Can you tell me about the implications for IPv6 and progress to date in relation to the National Broadband Network policy.

Mr Hill—I have some more news for the committee here. A turning point was reached in the development of the internet in January this year. At that point, only 10 per cent of the available IPv4 addresses were available for allocation. Since that point, another four blocks have been allocated, so we are now below eight per cent in just the first three months of 2010. What this means is that during 2011 there will be no more IPv4 addresses to allocate from essential blocks around the world. Australia shares its region for allocation of these addresses with some of the major users, including China, which is very demanding on addresses. What does that mean? It is very similar to the telephone network. If there are two telephone numbers in the world that are the same, the network will not work. So everybody who uses a telephone must have a unique telephone number. In the same way, if there are two unique addresses on the internet the internet will not work. Therefore, the allocation of these unique addresses is a key question. The internet started running out of addresses in the 1990s. As a result of that, the technologists worked on creating a new version of the internet protocol, called internet protocol version 6, which needs to be used to replace entirely the current range of addresses.

The technical discussion around the implementation of IPv6 concluded as of 2008—there is a reason why I say that—and the world is now embarked on the process of implementing internet protocol version 6. A key point about these two protocols is that if you make services available on one protocol it cannot be seen by the other protocol. So if I am a user on IPv4 and I want to visit a website that is available on IPv6, I will not know

it exists and I will not be able to get access to it unless I get access to IPv6 as well. In other words, if China is very interested in implementing IPv6, to communicate with China we will need to implement IPv6 as well.

Senator LUNDY—Is it ‘backwards compatible’? If you have got IPv6 can you see IPv4 addresses?

Mr Hill—It is not compatible in either direction. If Australia is in the process of implementing a new National Broadband Network, our proposal is that this network should take account of this new internet technology and make sure Australia can communicate with the rest of the world as it implements the new technology as well. I can catalogue developments around the world that might help you to think about why that is important, if you want to go there. Obviously there are implications for the layer 2 and layer 3 discussion that we have just had. If I cannot get IPv6 on the National Broadband Network, I will struggle to be an international player in the very near future.

Senator LUNDY—So what are you asking from ISOC-AU in policy terms to ensure that the NBN is rolled out in an IPv6 environment?

Mr Hill—We think that IPv6 should become part of the planning horizon of the National Broadband Network. At the moment, we are not trying to be prescriptive on how that should happen. I think if you had heard some public statements from the Internet Society of Australia over the last 12 months or so, we might have been saying at one point that the architecture of the NBN should embrace IPv6. But I guess we are happy to be flexible about this. If we find a suitable way in which the NBN could deliver this network protocol to users for their own free and flexible use, we would be quite happy.

Senator LUNDY—You mentioned that IPv6 needs to be built into NBN architecture. Is that at layer 2?

Mr Hill—That would only happen at layer 3.

Senator LUNDY—So, in essence, because the policy decision or the exposure draft talks about layer-2 services, conceivably it is not a decision of NBN Co. to make that call one way or the other or indeed the government to direct NBN Co. to go to IPv6; it is potentially the players at the retail level for whom such a policy decision or such a commercial decision is really targeted?

Mr Hill—I think there was a breakdown in communication in the way that the industry interpreted the government’s policy. Perhaps they did that for their own commercial interests or perhaps not.

Senator LUNDY—But I mean dissimulation to IPv6.

Mr Hill—That is what I mean.

Senator LUNDY—Right.

Mr Hill—So when they heard the acronym FTTP come from the government, they went ‘layer 2’.

Senator LUNDY—And you think it should be layer 3?

Mr Hill—I think layer 3 should be strongly considered.

Senator FISHER—Does the industry agree on layers 1 to 7? You have given the committee the link to the Wikipedia description of the OSI model. What does OSI stand for? Oh, there it is: Open System Interconnection.

Mr Hill—Yes. It is also an agreed international standard. That is a common reference point for discussions in the industry. There is no dispute that I know of about whether these are the layers.

Senator FISHER—So when the government in its policy refers to a layer by number, you are comfortable that the government is effectively referring to a layer as defined in the OSI reference model?

Mr Hill—I am not aware that the government in its policy has referred to layers.

Senator FISHER—Okay; that helps. Back to you, Senator Lundy—although I am going to ask a really silly question. Where does the discussion about layers interrelate with the government’s policy? What brings them together?

Mr Hill—If I could perhaps help there—

CHAIR—Before you do, Mr Hill, I am not sure if Senator Lundy has finished. Senator Lundy clearly understands what you are talking about and I suspect Senator Fisher does as well. You might have been talking in Uzbekistani for 10 minutes and I am afraid that I, and I suspect 90 per cent of Australians, would not have a clue what you are talking about—much as I want to.

Mr Hill—I apologise for that.

CHAIR—No, it is not you; it is me. Before we move to Senator Fisher, I am just wondering whether there is some simple one-line way that you can explain to me the ‘so what?’ What effect that has on me as a consumer, me as a legislator and the government?

Mr Hill—The so what of it is that the internet has become fundamental to almost every aspect of life and particularly business.

CHAIR—Yes. But it will under the NBN.

Mr Hill—That is our contention: that it will not unless NBN policy is adjusted to make sure that NBN delivers the internet properly to Australians, and ‘properly’ means that it must address the layer 3 question and it must address the IPv6 question.

CHAIR—These are very silly questions for someone like you who knows exactly what you are talking about—and I have no idea. If they do not address it, won’t the providers—the Telstras, Optuses and iiNets—do that?

Mr Hill—Our contention is that competition policy has not worked this way in Australia very successfully, with hindsight, and that we may face the same problems in the future.

CHAIR—Are you saying that one or other of the providers might provide a better service than others cannot do and that NBN should do it all, so everyone is equal at the third layer?

Mr Hill—To be hypothetical about this, a single provider pursuing its own commercial interest in this situation may not be interested in providing full and free access to the internet in the way that people are used to it.

CHAIR—Senator Lundy, have we cut you off in the middle of your questions?

Senator LUNDY—Pretty much, but I have only a couple of more points I think I need to make.

CHAIR—Go on.

Senator LUNDY—The first is to confirm Mr Hill’s statement that it is not government policy. I may have been incorrect in implying that earlier regarding layer 2. You are quite right: it was a decision by NBN Co., as I understand it, to identify layer 2 as the appropriate infrastructure, in their view, going forward. I just wanted to clarify that.

Senator FISHER—Thank you for that.

Senator LUNDY—It is an important point relating to the discussion; hence Mr Hill’s view and views we heard from other competitors yesterday about the merits of a layer 2 approach. I want to ask a final question. Given NBN Co. have determined that they want to provide layer 2 and you are contending that they ought to consider layer 3, from a government policy perspective, is it still conceivable that the government policy could be to determine a migration from IPv4 to IPv6 in conjunction with the progressive rollout of a layer 2 based architecture by NBN Co.? In effect is your lobby at this point to get that government direction in anticipation of the bill to try to get everything lined up—all the ducks line up?

Mr Hill—Yes, and the ends of the string that need to be joined up here. The Australia government is already in its own planning committed to full implementation of IPv6 for all Australian government services by a deadline of the end of 2012. That comes from the Australian Government Information Management Office.

Senator LUNDY—That policy is in place.

Mr Hill—That policy for Australian government services is in place. In fact, it turns out that they are one of the first governments in the world—possibly the first—to do a plan for a full implementation of IPv6 throughout government. They lead the world in that regard. But IPv6 is then not carried across to the NBN policy environment. You mentioned a minute ago, ‘Should it be NBN that implements IPv6 or should it be some other way?’

Senator LUNDY—Well, it is not if they are at layer 2. I think that is your point, is it not?

Mr Hill—Our point is that NBN Co. have determined that their responsibilities stop at layer 3. Our contention is that that now presents a national problem: how do we get IPv6, which is needed, out of this environment? NBN Co. could decide to move themselves up to layer 3. That might be one solution, or there may be another solution.

Senator LUNDY—Could all the other companies planning to operate at layer 3 level in the retail market make a collective decision to move to IPv6? What are the sorts of commercial considerations and market considerations that could conceivably prevent that from happening?

Mr Hill—It is very hard for me to project the full range of possibilities that might come out there, because they are huge.

Senator LUNDY—But that is really the challenge, is it not?

Mr Hill—Let us pick on one area that I think is very interesting here. I was listening last night to the fact that you can now walk into the shop and buy a 3D TV. If you buy a 3D TV at the moment and you tried to tune in to a normal free-to-air channel in Australia, you probably would not find many 3D programs—in fact, I do not think there would be any. The only way you can get 3D TV, according to the radio program I was listening to, is to go out and buy a suitable blue-ray disc and play it yourself. But the internet is different. The internet can provide that. In fact, these TVs are quite capable of connecting to the internet.

So there is one example. How will the internet and how will the NBN support delivery of that sort of service through TVs in Australia? Will it be through some monopoly provider situation—still by the internet protocol but without any control of the end user in there? Or will it be the internet as we know it now where I can choose what applications I load on to my TV and what source I get my programming from? It is that open environment that we think is terribly, terribly important to this. If you want background on that, have a look at the FCC in the US and their policies going back a long way around internet policy.

CHAIR—Mr Hill, as I understand it, most of our witnesses yesterday and previously have told us that level 1 and level 2 are how it should be and that it should not go beyond that. Would anyone else agree with your view on this?

Mr Hill—I suspect there are very few people from the industry who are professing the same view as I am.

CHAIR—Why would that be?

Mr Hill—We have the luxury of taking an independent and very well informed technical view on the matter, because our membership involves the people who have actually built this technology worldwide.

CHAIR—Would it affect the profits of others or something, or do they just not know? I would not for a moment suggest that; they are obviously people who would understand what you are talking about, unlike me.

Mr Hill—Yes. I want to make sure that I do not put this too strongly, but I think it is a truism to say that the internet has affected business models. If you saw the excitement around the first wave of the internet boom and the way in which corporations were treating that situation as a fundamental threat to their existing business model, you would have seen the sort of potential that there was for a free and open internet technology to affect the established position of companies.

CHAIR—Have you made your views known to the department or to the minister?

Mr Hill—We talk to the government regularly.

CHAIR—So they are aware of your views but they have not—

Mr Hill—And these are not new views.

CHAIR—But it has not resulted in any change in the way we are heading?

Mr Hill—I think this forum has been a very useful opportunity to confront the two issues of bandwidth and layer 2, layer 3 and IPv6.

CHAIR—In the problems you are identifying, is there anything in the legislation or in the exposure draft that should, could, must or might be changed?

Mr Hill—Absolutely, and I think we have done our best to catalogue those things. What I am not sure of is whether you actually have access to our response to the NBN consultation paper that goes through some of the layer 2 and layer 3 issues and documents those. If you do not have that, we would be happy to provide it.

CHAIR—Okay. Would you do that. Senator Fisher, did you have a couple of quick questions? I was going to ask you some mundane questions, Mr Hill. I am almost reluctant to do that.

Senator FISHER—They will be of interest, Chair.

CHAIR—I was looking at page 4 of—

Mr Hill—I am very to talk about all of this.

CHAIR—We do not have time, unfortunately, but I was looking at item 3.2 of your submission, where you talked about things that I can understand:

... NBN Co may provide fibre only up to the network boundary of a multi-dwelling unit, which leaves open questions of whether and/or how residents in individual units will have access to the 100 Mb/s speeds, and at what cost to each resident.

You have said what you have said, but is there a solution? Is there a problem? How is it addressed?

Mr Hill—We have heard in more recent briefings—and I have had this information from some members overnight—that there has been some discussion on multidwelling units in NBN briefings. I am not sure that the final solution is out there, and I almost do not like to do this, but I am going to bring you back to IPv6. IPv6 is an integrated suite of technical facilities. There are a number of facilities that have been built into the IPv6 environment, and one of them is IPv6 mobility. If you are trying to provide NBN services to people who live in caravans or caravan parks, those people may move around. Is the standard model of digging a trench and fixing a unit to the wall going to work for a caravan? We do not know. Are those people going to be required to miss out on this service? One solution might be to deliver their services by wireless. In that environment, having IPv6 mobility built into the network would be an enormous advantage, from our point of view.

CHAIR—That was going to be my question. If we had IPv6, that would address the problem of the multiunit dwelling or, as you say, the caravaners who move around.

Mr Hill—I am not trying to claim exclusivity. There may well be other technical solutions, but I think it would be very helpful.

CHAIR—We will put some questions on notice to you if you would not mind helping us.

Mr Hill—I am very happy to respond.

CHAIR—Our support staff will be following you and understanding, but there are a few things we might do.

Mr Hill—I do not want to scare you, but I am not the technical end of the operation!

CHAIR—I do not believe that; I am sorry! On page 5 of your submission you talked about lack of electrical power and lifeline telephony services. I was surprised yesterday to find that, as I understand it, the NBN becomes a live electricity source; that is my wording. Tell me what you mean, anyhow, by that last dot point in your submission.

Mr Hill—I am sorry; I do not want to interrupt your secretary.

CHAIR—The box that receives it rather than the bandwidth. The secretary assisted me with that.

Mr Hill—I am certainly not the fibre technology guy.

CHAIR—No, but what did you mean in your—

Mr Hill—Let me explain it this way. The photons will travel down the fibre optic to a certain point and at that point they cannot deliver their value without being converted into some sort of electrical circuit, and that electrical circuit needs power. So, if you want to provide stable power to that, the grid is probably the most practical option in most circumstances. If the grid is not available, the electrical side of the thing will not work and you do not get any communication. That has been the concern discussed in the policy environment around this for quite a long time. Our contention is that the concern may be overrated in some circumstances, because people talk about emergency services phone calls: ‘What do I do if the grid is down, there is a bushfire or whatever and I can’t ring up about this emergency situation?’ We have seen some nasty cases of that in Australia. This draws on some very difficult real-world examples, such as the 9-11 attack. Our understanding is that, in fact, the internet survived that catastrophe better than some of the other networks, even those that claim to have very high levels of reliability.

What we are saying is that we are moving into a world where people typically have access to multiple forms of communication. A well-established engineering principle, in my experience with the industry at least, is that redundancy is a very important factor in this. So it may be that you are better served, rather than saying, ‘We need to absolutely keep these devices running, come hell or high water,’ by saying, ‘No, we need to make sure that people can adequately address this in a multiple way of having access to multiple services.’ VOIP may be part of the mix, wireless may be part of the mix and NBN may be another part of the mix, and, depending on

which part of the network has been affected, at least you would have recourse to some of the other parts. That is where we were going.

CHAIR—We have run out of time but, finally, one of the other submitters to our inquiry has, as I read their submission—and perhaps I have it wrong—suggested that cable networks would be better than the NBN. Do you have a view on that? I am not naming them, because I might have it wrong, but I think it is the second-last submission we received. I do not know that that is what they mean, but that is my take on it.

Mr Hill—This speaks to the first issue that I raised about whether the NBN would be capable of delivering the stated bandwidth with its designated technology. Again, you are taking me a little bit far from my normal technical understanding, but my understanding is that—and I discussed this last night with members who know a bit more about it than me—the current technology, GPON, is a shared bandwidth environment. In other words, if you are the first user on it you get a wonderful experience; if you are the 100,000th user on it, your experience may not be so good. Again, I am quoting someone else here, so I would prefer not to be held strictly to it, but my understanding is that the GPON technology is quite long-lived and, from my other readings about this topic, there are a range of other options which may or may not have to be considered which could provide guaranteed bandwidth to users.

CHAIR—Thank you very much.

Mr Hill—I hope that has not been too painful!

CHAIR—It was certainly not painful. It is a bit mind shattering for people with my expertise, but we are very well served by our secretariat staff who will help us get through what you have told us. Thank you very much for coming along. We might submit a few questions to you, if you would not mind assisting us with answers.

Mr Hill—We are very happy to provide assistance in any way we can.

CHAIR—Thank you very much.

[10.40 am]

SINCLAIR, Ms Rosemary Anne, Managing Director, Australian Telecommunications Users Group

CHAIR—Thank you, Ms Sinclair, for joining us yet again. We are almost like family here, with the number of times we have called upon your expertise. Thank you again very much for your assistance and for your submission. I will not go through all the rules and regulations under which we operate. I think you are perhaps as familiar with those as we are. Would you like to make an opening statement and then we will have some questions.

Ms Sinclair—Thank you. What I will do is to go briefly through the beginning of our submission. In listening to the discussion earlier, I think there are some key points that will help the committee to make the kind of input that we end users need to provide the context in which others who have buckets more technical expertise than I have got can do the work that they need to do. We have been working on NBN type discussions for a number of years. Over the last three years in particular, we have been distilling and distilling our discussions to the point where we have arrived at a set of policy principles that we think are needed to guide the technical and engineering architecture, et cetera, decisions that need to be made by people with that expertise. So I will quickly walk through those.

The first one for us is that we are very keen that the core policy mantra, if you like, in the communication sector stays right in the middle of things. That is the policy that whatever we do in this sector is about the long-term interests of end users. Funnily enough, it is not about building the best networks and it is not about recovering costs for investors—and all of that stuff, although we have got to keep a mind to it. It is actually about what is in the best interests of end users in the long term. For example, you never hear from us that we have to have the lowest prices in the OECD, because we know that for end users in Australia in the long term that does not work. If we take that principle, and it is enshrined in the Telecommunications Act and the Trade Practices Act and wherever else it needs to be, we need to hold onto it. Happily it is in the NBN legislation at the moment, and our position is that it really needs to stay there. It needs to be taken more notice of, I would say, in decisions that are made particularly by industry in self-regulatory processes. I think quite a bit of the discussion that we have just heard, and that we have been watching by industry over the last 12 months, is really about industry in its own interests—without this context being applied that ‘We are happy for you, industry, to do your work, but there is an overriding mantra which says that whatever you decide must be able to stand up against this benchmark that those decisions result in actions, policies or whatever that are in the long-term interests of end users.’ In that sense—unhappily, Senator, later on I am going to get back to layer 2 and layer 3.

CHAIR—I think we are right with layer 2 and 3 but not IVP 6 or whatever.

Ms Sinclair—We are quite happy that ‘long-term interests of end users’ is well defined and that we all know what we are talking about. We are talking about promoting competition, we are talking about any-to-any connectivity—which is this interoperability discussion—and we are also talking about encouraging efficient investment, efficient use of an investment in infrastructure. That is actually very important for us, because if we have inefficient investment then all that happens is that end users wind up paying higher prices than need be the case. So that is No. 1 for us: the long-term interests of end users.

No. 2 is the fact that ubiquitous access is very important, and not only building the network but encouraging take-up, because there is all the discussion about how we are going to transform the health system or the education system or the business system or whatever, and none of that is going to happen until around 90 per cent of people are connected to this new platform. We have seen it through the history of telecommunications technology. It was only when 90 per cent of people had the telephone that suddenly we started to see call centres, customer service habits started to change and there were innovations in telemarketing, for heaven’s sake. Things started to change when you could be pretty sure as a business or a government agency that you could get to most of the customer base. It is the same with mobiles. When 90 per cent of Australians had mobiles, then there was a raft of innovative services based on the fact that people were connected. It is going to be the same with the NBN and broadband services. So there has got to be quite a lot of policy attention and focus, in our view, on making sure that 90 per cent of people can be connected in the shortest possible time. That takes us to decisions or discussions about affordability, accessibility and a whole range of other issues.

There has been a great deal of focus, with regard to NBN, on consumer needs. Our third point is that business needs from the NBN have got to be factored into planning and decision making. We have been

pleased in the last month or so to in fact see NBN Co. address these business needs separate from and in addition to consumer grade needs. So I think it is a matter of putting the issues forward and making sure that NBN continues to take account of these needs that business—and when I say ‘business’ I mean government enterprises as well, so the health department, the education department, Centrelink and so on—have for speeds, service levels, service security and rapid restoration.

The reason that we think this is a policy issue is that NBN is an organisation tasked with a very important task and given very significant money to undertake that task, but it is not really up to NBN to set the policies around these sorts of issues. If you look at NBN’s objectives, they are: coverage, tick; competition, tick; cost-effectiveness, question mark—not so much the costs but the effectiveness. If we have consumer grade services, then it is going to be a whole lot cheaper for NBN but it will not be effective for business and government users. If NBN decided—and I am not suggesting that they have made this decision; it is just an example—to offer a service quality level lower than business and government users might need, then they might be able to tick the cost-effectiveness box from their point of view but from our point of view we would have the wrong outcome. Their last objective is customer care, but they are talking about their wholesale customers and not retail customers. So that is another set of policy issues that we think need to be reflected in the rules of engagement for NBN Co.

Then we get very practical; we talk about migrating to the NBN, and that has got to be very carefully thought through by NBN Co. and industry so that there is as little disruption as possible. Given our shared history on the migration from one telecommunications platform to another, particularly in the mobile space, this is a key issue for us. However fabulous the NBN is, if moving to it creates hassles for business and government enterprises we have got a problem.

The next point is this point about layer 2 and layer 3 and wholesale and retail. We want NBN to be a wholesale-only operator because we think the NBN Co.’s structure deals with an important issue about competitiveness and market structure, so we do not want to actually get NBN Co. mixed up in retail services. However, we think that the discussion by the current industry about NBN Co. staying at layer 2—and I should first of all say that NBN Co. has a significant objective as to why it wants to stay at layer 2, and that is because the cost of being a layer 2 wholesale operator is less than it would be for them to be a layer 3 wholesale operator. So their position is driven by a careful and rigorous assessment of having to get to 90 per cent of premises within eight years with this amount of money, and they are saying, ‘We give ourselves the best chance of doing that and achieving government objectives for high-speed broadband if we are layer 2 wholesale.’ And I understand that. My question is: will the people who buy layer 2 wholesale themselves offer layer 3 wholesale services when they have a foot in the retail camp?

CHAIR—Some would, wouldn’t they? And then competition would do the rest.

Ms Sinclair—That is right. People say to me, ‘Stop worrying about this, Rosemary.’ I have had Mr Quigley say that to me, I have had various CEOs of telcos say to me, ‘Don’t worry about this; this market will emerge,’ and I have said, ‘Well, I am worried about this because your perspective, the kaleidoscope through which you look at this issue, is that of the experience of the existing telcos.’ My vision of all of this is that, if we have a ubiquitous high-speed network, there may be other people that want to come into this market and deliver their services using the communications platform that is enabled by the NBN. I am not sure what value-adding there is in requiring those people to invest in bits of telecommunications infrastructure, so I want to make sure that those people can get a higher level wholesale service which does not require them to invest in being a telco at any level of the stack but allows them to deliver their services.

Perhaps a simple example is in health care. If we have the healthcare providers saying: ‘All right, we’ve got this NBN everywhere and we’re not going to build any more hospitals. This service is going to enable us to send people home more quickly after procedures of one sort or another, but when there are at home we want to connect them to this health monitoring network—which we want, by the way, to be available 24 hours a day and not subject to fluctuations on the grid but a different issue. So we want to send them home.’ It might be my mother, for example, who is 85. She is not the slightest bit interested in internet services of any sort but she is very interested in health services. So they would say to her: ‘We’re going to send you home, Mrs Bowers, and we’re going to connect this box. We’re going to put this little system on your table and every morning we want you to open that up and we want you to talk to the nurse at the healthcare centre. We’re going to leave that there for six weeks,’ or three months. ‘We’re going to connect it to a universal power service so there is no chance of anything happening and, when we’re all satisfied that you’re better, we’re going to take that away.’

So it is that kind of innovation and significant modification of service delivery models that we are imagining and envisaging in our discussions about the role of the NBN.

CHAIR—I understand that. I do not want to push you, but we do want some time to question you. What is your last dot point?

Ms Sinclair—The other thing that is emerging for us is that the National Broadband Network is going to be a series of networks. We have NBN Co. building where other people have not built. Then we have bits of network owned by other people. So we want to make sure that across that entire network, made up of elements owned by different people, the service experience is consistent. That is about industry standards, protocols and so on, which must be developed in the long-term interests of end users and not in the interests of saving money or whatever. They are the core policy issues.

CHAIR—That is very good. We have a few questions. I might start. One of the things that concerned me, which is germane to a couple of your dot points, is: if Telstra, to use a real-life example, is currently adequately serving 70 to 80 per cent of Australians with as much as they want, how does that relate to your dot point 2, the big benefits when 90 per cent take-up of the NBN wholesale occurs? If—this is all hypothetical, of course, because we do not know what Telstra and Senator Conroy are doing as we speak—they elect to continue their existing network and run in competition with NBN, how are we going to ensure that 90 per cent take-up? It will provide a lot more, as I understand what you are saying, but for most Australians, including your mother, what they have now may be all they ever want.

Ms Sinclair—She is quite an interesting example, and she is very pertinent to this. A few years ago I was in the middle of this discussion that ‘people don’t want these speeds’. Someone made a very good point. They said, ‘No, people don’t want them; applications need speeds.’ I think that is the crux of it. The things that we are going to want to do, even if we do not realise it today, are going to need the sorts of speeds that the NBN delivers. The example that I use in trying to frame this for people is the Sydney Harbour Bridge, which I know is a very local, Sydney girl example. Bradfield started thinking about that in the early 1920s. Think about what he did: he put an eight-lane bridge across the harbour when I think there were 10,000 cars in New South Wales. There was the engineering expertise to understand what a difference to the economy and community that sort of infrastructure would make. Then it was built in such a way that it really lasted for about 80 years. That is my vision of the NBN.

I think about the speeds. I go back, as you were suggesting, a number of years in this debate. When we first started talking about broadband, we all thought 56 kilobits was a life-changing breakthrough. Now the ABS is telling us that a considerable number of people are moving up the speed chain to 1½ megs or eight megs. If you go back and divide 1½ megs by 56 kilobits, and then you catapult yourself forward using the same multiplication factor, you see we are going to need near on 100 megs. I do not think there is any doubt about it.

The other reason I say that is that we run a broadband award competition every year. I have been really amazed by the things that people are doing with current-generation broadband—what they can get their hands on. The sort of thing they tell us in the education space, in the health space, in community services and in business applications is: ‘If we could get more speed, we could do such and such. The next phase of this is going to be whatever it is when we get more speed and everybody gets connected.’ So I am really sensing a groundswell of innovation as people are starting to understand the benefits of the speed.

I think the need is there albeit latent. My mother is a perfect example. We got her connected at 256 kilobits, she trucked along quite happily for about 18 months and then she said to me, ‘There’s something wrong with my broadband’. I said, ‘I don’t think there is anything wrong with your broadband, it sort of doesn’t go wrong. It’s not that sort of thing.’ She said ‘You come and have a look.’ I said, ‘What are you trying to do?’ She said, ‘I’m trying to look at these photographs that the kids are sending me when they are travelling around the world on their gap years and it is clunk, clunk, clunk. There’s something wrong with it.’ I said ‘We probably need a bit more speed and we need to get a bigger bucket of data.’ She said to me, ‘How much is that going to cost?’ I said, ‘\$10 a month.’ She said, ‘Oh, that’s all right.’ So I think people get on their own journey with this.

CHAIR—That is right and your analogy with the Sydney Harbour Bridge is a very good one, but it is a question of what you get for what you pay.

Ms Sinclair—Absolutely.

CHAIR—I have an ongoing concern that unless the government effectively confiscate Telstra, you are going to have a competitor there who is going to provide a fairly good service but at a much cheaper cost, we think until we see the implementation study, than NBN is going to do. This is why I come back to your dot

point 2 and dot point 4 or 5, I think it was. How do you address this problem so that we get the speed that your mother and I really want to download? Are we prepared to pay?

Ms Sinclair—At the price you are prepared to pay, absolutely. We have been watching this issue because the 90 per cent take-up will not happen just because the NBN is running past anybody's door. It will happen because someone decides they want to do something and the price is right. There is no doubt about it. We have been arguing over the last couple of years that there needs to be what we call entry-level packages such that nobody is forced to buy 100 megabits until they realise that is what they actually need. There should be packages which offer people speeds and performance at prices that they are comfortable with.

The second thing is that in the last month or so NBN have said in some discussions that they will price to the market. I took some comfort from that that they understand it does not actually matter how terrific this platinum plated matchbox is, what matters is the consumer price point that will encourage people into the market. I am more confident now that we are going to get to the right price point for performance to bring people in. One area that I am worried about and I think it really needs some work is that there is about 25 per cent of households that, after all the noise and hullabaloo about the current sort of broadband, have for a range of reasons not come on board. I think there is going to have to be some policy work in that area because it is particularly that area where, once you look at the demographics, income levels and locations, they are the folks that are going to need government services for example that can be delivered by broadband.

CHAIR—I agree with what you say. One of the concerns I have from Senator Conroy's announcements is that NBN is going to be commercial, give a return on money, it is going to have at least 49 per cent private ownership and eventually 100 per cent private ownership which means you get a return on capital but, as I understand what you are saying and other submitters have said, this is a public service like the train lines and water delivery where they are in effect heavily subsidised by government. It seems to be what you are talking that will not happen unless the government or someone is subsidising NBN because if they have to get a commercial return on their operations without subsidy it is just not going to work. Do you have a view on that?

Ms Sinclair—Yes, and I think perhaps the next witness will make some very interesting contributions about pricing models. I think there are different ways of thinking about pricing models which would allow an entry-level access, and people who want to watch *Star Wars* in 3-D pay for that usage. For those people who just want to talk to the hospital nurse every day to say that 'blood pressure is whatever', then those services are priced accordingly. I think that we can look at new business models and new pricing models as well as new technologies to help us ensure that everybody is connected, at prices they can afford.

In terms of the commerciality of the whole thing, I think it depends on the time frame that you take. In the public discussions with NBN Co., they have been talking about a network with a life of 50 years with a return period of 30 years, like a utility—a gas pipeline or electricity network. It is quite different from the sort of industry structure at the moment where people are looking for returns of 20 per cent. I think that unpacking the network from the retail operations allows us to say, 'Okay, that is the network. Its return is six to seven per cent over 30 years. These are new applications. If you want them they are \$100,' and we would need to get a return on that in 18 months, because then the next thing will be on board.

CHAIR—Are the 49 per cent private investors going to wait 20 years for a return?

Ms Sinclair—If they are looking at network assets, then that is toll roads, airports, bridges, gas pipelines et cetera. It seems to me that there are people in the investment community who understand those long-term investments and are quite happy with those vehicles. Other people have much shorter time frames and much higher risk profiles.

CHAIR—I guess the proof will be in the pudding, and perhaps it is all told in the implementation study—

Ms Sinclair—Yes. I have watched this quite carefully, because I have been concerned about what sort of rate of return the government would want.

CHAIR—It is not so much the government as the private investors.

Ms Sinclair—Even the government on their 51 per cent. It is an issue that we watch, because all of that goes to affordability, to take-up, to whether we are going to get the benefit of this program in the first place.

CHAIR—I will pass on to Senator Lundy and then Senator Fisher.

Senator LUNDY—Thank you, Chair. I have a couple of general questions. How important do you think it was for the particular bill relating to NBN Co. to have been released in an exposure draft?

Ms Sinclair—Extremely important. It has been a difficult period, and I understand that, but we got to a point of saying, and I was bold enough to say, ‘I am not actually interested in what NBN Co. thinks about anything much. I am much more interested in what the policy framework is within which that government owned enterprise, that tool of government policy that responds to market failure is going to operate.’ For us, this exposure draft is something that we have really been waiting for. We like the process—the fact that it has come out, that we have had a chance to talk about long-term interests of end users and to say that we want to reserve power for the minister if that layer 3 market does not develop, and to really take on board the positions of other people and to understand what those positions are. The openness and transparency of the discussion, although it has probably been a bit more uncomfortable for Senator Conroy than he might have been expecting when he went down this path, we actually think it is a very good process. Reflecting on some other telecommunications policy processes which have been rather truncated about very important matters, we prefer this kind of process.

Senator LUNDY—What do you think about the aspects of the exposure draft that have attracted some criticism, including retaining some discretion when it comes to the prospect of NBN Co. accessing, for example, government agencies directly in the market?

Ms Sinclair—I honestly think that the commentary is misunderstanding. I do not know whether it is the lawyer in me, but I read the whole thing, so when I got to clause 9, or whatever it is, after having read the definitions—clause 1, 2, 3, up to 8—and read it in the context of all the previous statements that say NBN is going to be a wholesale only company, I say, ‘Okay, that means that there’s the potential for NBN to offer wholesale type services to other than telcos.’ I think that is a good prospect because I think that one of the problems that we have is that, if we do not have that kind of reserve power, we are actually limiting the prospects for innovation to the existing communications sector. From where I sit, the prospects for innovation are going to come from outside that sector.

When I look at my broadband awards and I see people in Far North Queensland, the back blocks of New South Wales and health departments doing amazing things, it is not relying on any innovation from the telco sector; it is relying on innovation by experts in communications and IT areas in health departments. I want to make sure that those folks are given the broadest possible opportunity to make the best use of NBN. I do not want their opportunities limited by the vision of innovation that might come from existing communication sector players. But I am happy if NBN Co. is offering wholesale services to those customers, not retail services. We could come at it by saying that not only carriers can buy from NBN Co. but also certain service providers—government service providers delivering services in the public interest. It is a balance between the services we are talking about and/or who can buy from NBN Co. It is time for people to get the blinkers off. It ought not be the case that at the end of the NBN Co. rollout every other sector in the economy is changed except the communications sector.

Senator LUNDY—Thank you for that. One of the issues that has been characterising the whole parliamentary debate is the difficulty the government has in getting the bills debated. How important is this and other NBN legislation in terms of timing and getting it through the parliament?

Ms Sinclair—I think that is very important. It is not just this bit of legislation but the others—telco reform and fibre as well. They are all related, as far as we are concerned. If I can go to telco reform for just a moment, our preferred option is that the part of that bill that relates to Telstra is worked out through negotiation between the government and Telstra. We think that would be the best approach to a sustainable outcome in regard to those matters in that bill that relate to Telstra. I have to say, I would not want to be sitting here in another 12 months saying, ‘It’s our preferred outcome, but we do not seem to be getting anywhere.’

CHAIR—Things will move rapidly in the next few weeks.

Ms Sinclair—Something has to give in that regard, I think. We have to live with the competition aspects of that bill, from our point of view. This goes back to my point about patchwork of networks—not just NBN, but for the next eight years there are other bits of network in this whole scenario and they are subject to existing Trade Practices Act legislation. They are not covered in this NBN bill, because that only relates to NBN Co. So, unless we get the progress that we need with regard to existing legacy networks, whether owned by Telstra or other people, then we are really stymied. The competition aspects of that bill are very important and the consumer protection aspects of that bill are very important.

The NBN bill is very important to us, because we see a government business enterprise with a significant amount of money but without a carefully specified policy framework in which to operate. Whilst I have the highest regard for the people I have seen in NBN Co., the idea of NBN Co. making policy decisions about

communications for Australia is not my idea of good process—nor is it, to be honest, if there is discussion between the CEO and chair of NBN Co. and the two shareholders, the two government ministers. I am not very happy about that either. I want the rules to be out there, for us all to know what they are, so that we can judge decisions as they are made against an agreed policy framework that has been through the parliamentary processes.

Senator Lundy, could I just go back to that point on the clause in the legislation. What I have been asking for is a power for the minister, on the basis of robust investigation by the ACCC, to determine that wholesale services that ought to be offered are not being offered—by the people who said, ‘Don’t worry about that, Rosemary; we will offer these services.’ If we get to the end of the day and they say, ‘We’re actually going to take our little bat and ball and go home’, and, ‘We want to add lots and lots of value, and create lots and lots of margin for ourselves, so we don’t want to offer these layer 3 wholesale services’, then I want the minister to be able to say to the ACCC: ‘We want you to have a look at this’—and, on the basis of ACCC investigation relating to market structures, for them to come back to the minister and say, ‘We think you should require NBN Co. to offer these wholesale services’.

CHAIR—But wouldn’t that be better to have in legislation rather than leaving it as an unfettered discretion? Sure, the minister is required to—

Senator LUNDY—I think, technically, it is on the advice or in consultation with the ACCC.

Ms Sinclair—Yes, it is.

CHAIR—The legislation says he ‘will consult’. Whether he takes one iota of notice of the ACCC is a different matter. All I am saying is: wouldn’t it be better to be more prescriptive in the legislation as to what the minister can and cannot do, and what the ACCC should do, rather than leaving what is a very wide discretion?

Ms Sinclair—I would be happy with an amendment that required notice to be taken of the ACCC’s findings and that required those findings to be open. As I understand it, this would be a disallowable instrument, so that information ought to be made available to other people and then there can be a proper discussion.

Senator LUNDY—So it is not unfettered; it is in consultation with the ACCC and it is a disallowable instrument.

Ms Sinclair—Yes.

Senator LUNDY—I just wanted to make that point.

CHAIR—Is it a disallowable instrument?

Ms Sinclair—I think it is.

Senator LUNDY—I think that is what Ms Sinclair is saying.

CHAIR—I know it is what Ms Sinclair is saying, but that is not my understanding.

Senator LUNDY—Well, we should do that.

Ms Sinclair—But that sort of structure.

CHAIR—I am interrupting Senator Lundy, and I should not, but that is the purpose of this inquiry into the exposure draft. Hopefully, the government will take on board what you are saying and allay the fears of a lot of people. But I am sorry, Senator Lundy, you have a little bit of time left.

Ms Sinclair—Can I say that I have been very fond of whichever colour of minister we have had, as you all know, over the last 10 or 12 years that we have been at this—but I am not very fond of unfettered ministerial power. I think there is enough experience in this place for people to develop suitable amendments so that we can all get to a shared position on that.

Senator LUNDY—Those are all the questions I have. Thank you very much.

Senator FISHER—Thanks, Ms Sinclair. In your submission you talk about the wholesale service equivalence. You refer to ATUG’s view of the need for a new proactive, pro-competition, independent, industry based oversight body to implement open access and equivalence. I think those are your words. Do you mean something different from the ACCC or do you mean that the ACCC become that?

Ms Sinclair—I mean something different.

Senator FISHER—What and why?

Ms Sinclair—The ACCC, in my view, deals with market structure and access policies and prices. Let us concentrate on the current environment. That is all very well and good, but our experience is that if you cannot get access to an exchange the only lever that you have is to register a dispute with the ACCC. That seemed to me to be a very long and legalistic process. So we put this suggestion forward to say that we need a body that not only is developing the industry codes and standards but does not require a legal trade practices type process and could have a common sense operational discussion about implementing access decisions that have been made by the ACCC. It was a way of dealing with the fact that the ACCC has more access disputes in the telecommunications industry than any other industry. We felt that it should be an industry body modelled very much on a body that they have in the United Kingdom called the Office of the Telecoms Adjudicator. It is not a body that end users are at, but it is a body that industry participants are at. It could have an independent chairman and the ACCC observing. When they get around the table together, rather than having the bilateral process, we suddenly find that nobody can ever get access to an exchange. So it is a way of dealing with systemic problems that are not effectively dealt with, even in a time sense, through bilateral, legally based processes through the Trade Practices Act access dispute arrangements.

Senator FISHER—The ACCC currently has an enforcement and prosecutorial role. Are you suggesting that somewhere there should reside the role of arbiter, a mediation and/or conciliation role?

Ms Sinclair—More of a mediation role.

Senator FISHER—Why could the ACCC not provide that?

Ms Sinclair—Because I felt that it was more down the Comms Alliance industry path.

Senator FISHER—It does not provide it at the moment, but why could it not?

Ms Sinclair—Possibly there is no legislative reason why it could not; it was just not the sort of body that I had in mind.

Senator FISHER—That is because you are thinking in current terms.

Ms Sinclair—That could be right. It is just that ACCC processes are legalistic. They are long term. We have seen decisions appealed all the way up to the High Court. It looked to me like an arcane and tortuous process. But the industry discussions stop too quickly. They do not actually get down to the implementation of what we have all agreed.

Senator FISHER—So I guess, irrespective of where it resides, you are identifying the prospective benefits of a mediation facility.

Ms Sinclair—Yes.

Senator FISHER—That might assist things that would otherwise have to be dealt with by the ACCC.

Ms Sinclair—Yes.

Senator FISHER—Given that the ACCC is not a court—

Ms Sinclair—No.

Senator FISHER—the question is: if the government were to accept that need then where does that facility reside? Given that the ACCC is not a court, there might not be any reason, as you have said, legislatively or constitutionally, why it could not reside in the ACCC. Would it not make more sense if it could be so, from an industry perspective, rather than setting up a whole different bureaucracy which will then have issues about interfacing with the ACCC? Let me ask it another way: would it give the ACCC any conflict? Think about what the ACCC does at the moment. Would it give the ACCC any conflict within its own walls if it did essentially what it currently does but updated, as well as playing a mediation role?

Ms Sinclair—I do not see why it would. The point of it is to get practical, early decisions about making things happen, rather than encouraging disputes which need to be dealt with in very legalistic ways under the relevant sections of the Trade Practices Act.

Senator FISHER—Yes, but the legalistic dealings go somewhere else. The ACCC is a player in it, but they are dealt with by the Federal Court in the main. Some sort of model along the lines of the traditional workplace relations tribunals is what I am wondering about.

Ms Sinclair—Okay.

Senator FISHER—Thanks.

CHAIR—Ms Sinclair, you put forward a new thought about giving the minister the power to allow wholesale services to, say, the hospital network or the health department if the other carriers do not do it.

Ms Sinclair—Yes.

CHAIR—Could you not achieve the same outcome if you said: ‘Telstra and Optus are not doing this because there is no money in it, but it is a public service. Therefore, we will subsidise Telstra, Optus, iiNet or whoever an amount of money to ensure that public service’? That way you do not get into the issues of where you draw the line and, once you start leaving another retailer in the health area, how you then curtail them from allowing all their employees, for example, to use it with them in effect being a retailer as well.

Ms Sinclair—You would simply not allow them to retail services so they are not getting any money from anything. When they send my mother home with this box, they are not getting a monthly bill from her. They do not have a billing system. They have not got the support that goes with a retail operation. My problem with the suggestion of a subsidy is that I think we would find ourselves with a very long list of things that are not commercial without an additional subsidy. The attraction for me with an incentive like leaving this power with the minister is that it is a signal to the players that if this set of services does not emerge properly from the market then action will be taken. If we do not have any signal then I do not know what we would do.

CHAIR—The shareholders will not allow them to do it unless there is a quid in it.

Ms Sinclair—Yes, I understand that. That is why I am saying that I think there would be quite a long list of things that could not be provided on a commercial basis without additional government subsidy. That is the other side of the coin.

CHAIR—We did have a program called Broadband Connect, which was a subsidy to the retailers for services out in the remote areas where it could not possibly be commercial and you could not expect a profit-making company to provide them. The government recognises that it has an obligation to provide services and therefore it subsidises the private companies to do that. You don’t think it would operate like that?

Ms Sinclair—It would not be quite as simple as that because, if we take the healthcare network, there would be as many people in metropolitan areas where you would say, ‘That is a commercial market.’ But it is the ones who are in your electorate that are the ones I am trying to make sure could be serviced adequately. Hopefully, it would be like the minister’s reserve pricing power. It would never need to be used but having it there, as we have said about that power, is a very good safety net for all of us. The best position is if it is not used and the market says, ‘Okay, there is a need for these services for these sorts of customers and we are going to offer them those services and not require them to buy these retail type services.’

CHAIR—Okay. Thanks very much for all your help. Unless something dramatic happens, I suspect we will not have you back before this committee, but I am sure that, when the final legislation is brought to the parliament, we may be seeing you again.

Ms Sinclair—I look forward to it and I hope the committee does.

Proceedings suspended from 11.29 am to 11.40 am

de RIDDER, Mr John, Private capacity

CHAIR—We will resume this hearing of the Senate Select Committee on National Broadband Network. I welcome Mr de Ridder from De Ridder Consulting. We have received your submission; thank you. I will just mention to you, because I think this is the first time you have appeared before this committee, that this is a parliamentary committee and you are protected by parliamentary privilege. If there is anything you particularly want to say in camera you should indicate to the committee and we will consider that. I invite you to make an opening statement. You have given us a very detailed submission which, again, I thank you for. Do be conscious that we want to question you about various things that your submission raises.

Mr de Ridder—I understand that. Thank you for the opportunity to share my ideas on what is a very important subject for us all. By way of opening remarks I thought I would pose this rhetorical question: what is the NBN about? Some people say it is about nation building and some people say it is more about enhancing competition. Of course, it is a little bit of both. But let us start with nation building, because that is where I get most excited. I have rehearsed this with my wife, and she said, ‘What do you mean ‘nation building’? It is just about a better service, isn’t it?’ I said, ‘No, it’s about technology that can transform economic and social relationships.’ Of course, they are not yet cutting through. When people first thought about the phone network the first application they thought of was using the phone network to broadcast concerts. It might amuse you to know that the first commercial application for the phone network was in Victoria where somebody on Flagstaff Hill would see the boats come into the bay and would phone madam to say, ‘The girls better get ready.’ So you never know how technology will be used.

But let us just reflect a little on what we have done to date. The biggest transformation to date is probably moving from dial-up to ‘always on’. The big thing about broadband is that it is always on. That has meant that things like Facebook that you would never even think about with dial-up have become standard. So ‘always on’ has been wonderful. But there are problems with it because it is copper based, which is why we are looking at a new network. All this has been shoehorned into a copper network which was designed for voice. We are very fortunate that we can get any sort of broadband out of it at all—much more than we thought was possible even a few years ago. It is limited by distance and you cannot advertise speeds because you do not know what you will actually get and so forth.

Looking forward to NBN there are two ways we can go. What I am scared of is that people have very modest ambitions. I think NBN is looking at guaranteed speeds. If you know that you can guarantee 12 megabits per second then you can sell applications like Telework and know that you will get the speed you want. That is important. That is where the mindset currently is. I just heard Rosemary Sinclair express that view again. I heard Senator Conroy say it and I have seen NBN Co. say it. I think that would be a pity, because there is another way that we can go. We are, after all, building a network that can handle 100 megabits per second. Rosemary Sinclair said that people would move up the chain when they realise they need better speeds. It is not happening. People are not prepared to pay for speed. It will not happen, so you could wind up spending \$40 billion on a network, with a capability that is never used. My themes are: this is not about enabling 100 megabits per second; it should be about adopting these kinds of speeds and using them. If you do not do that you do not get the transformative effects that you expect out of the NBN.

So I am saying that, rather than focusing on guaranteeing speeds, I want to see full speed ahead—full speed ahead is transforming; it is a game changer—then you will start to see the sorts of things that will automatically encourage adoption and use. People have been thinking about this as a big engineering project—another Snowy. It is only half the story. To effect the changes I am talking about you have to look at the economic dimensions of this project. Not much attention has been given to that. When I first started thinking about this it looked pretty hard. I wrote a paper, published in May 2008, which referred to the Goldilocks problem. This is the Goldilocks problem: ‘Here, you are going to spend \$40 billion on a network and yet you want it to be affordable. How are you going to make that happen?’ I imagined seven or eight different access pricing models, which are written up in this Goldilocks paper of 2008. I came up with a new one. I did not get hired by the government, but I did get a job with TransACT and Pricewaterhouse to help them deliver their NBN mark 1 bid. So in the second half of 2008 we came up with a completely different pricing methodology, which will be a world first. Australia has the opportunity to not only be the world’s best network but also provide the world’s best pricing model to support it. It is doable. That is the nation-building aspect. It is, if you like, a utility vision. The concept has been used a few times. I think it is a utility. I am very comfortable with

NBN Co. focusing on layers 1 and 2. I imagine that we will come back to that in your questions. To make it work it also needs utility vision with utility pricing.

I have a few remarks with respect to competition. I am also keen that this is a wholesale-only network, as currently envisaged. In fact, it is not only desirable but it is imperative. Another theme of my submission is that with the de-layering of the communications industry, which comes with all IP networks, the old days when you could expect to cross-subsidise the high cost of access from the business you carried over the network are gone. That happened some time ago in the fixed network ago when we had call competition. The first business model for competition was around getting high-margin international calls. To some extent you still have this in the mobiles network. You can have high handset subsidies because you know you have the call revenue to make that possible. Those days are going. You can now get Skype on mobile phones. All the interesting applications can be delivered to consumers, such as Skype, without having any business relationship with the carrier. What I am saying is that the carrier is at risk.

In the United States they had a net neutrality debate. What it is really about is business. At the end of the day, it all comes back to money. Net neutrality is about the carriers getting upset that their networks are getting congested because of the likes of Google, Yahoo, YouTube and so forth. But they are not getting any of that revenue. They are getting squeezed. They are expected to enhance and augment their networks at extra cost but receive no extra revenue. That is crazy. NBN Co. says the Americans are now looking at what we do. That is true. There is fierce fight-back against the overage charges, the caps and so forth. This is not world's best practice. It is about what Australia can do to set world's best practice. World's best practice is a utility pricing model where you charge for volume. Currently, that is a bit prohibitive in terms of video but, with the way that data is currently exploding, even without NBN, it is growing at 60 per cent per annum. Within a few years you will get the prices per gigabyte. That means you can carry all applications over one port. This is the future, this is where Australia can lead the world not just on the engineering side but on the economics and business side of the model. That is where our attention has been focused. It comes at a cost of course. The cost is that you have to change and people do not like change. What we currently have is actually a competitive business model that is based on reselling access. There are people who will object to that, because they are investing in DSLAMs. But they are still using Telstra copper. It is basically a resale of access with a little bit of value add and a little bit of investment in DSLAMs. DSLAM investments repay themselves within 18 months.

Internode are now investing in DSLAMs in Tasmania, even though we know we have an NBN rollout there, because they know they will get a payback before they have to cut over. They have a very nice business model with very high margins, but the future, with this utility vision, is that access will become a utility. There is no real point in having a business based on access, because it will not have high margins like it does today—not in communications. It is going to look more like electricity distribution does today, because the margins may be a third of what the ISPs get today.

The ISPs will tell you that NBN is a wonderful thing, and while there are trials of them in Tasmania there are first-offer good deals just to get customers on. But, when the rubber hits the road and they are asked to pay real prices, watch them squirm. I am querying their interest in NBN. When TransACT was putting together its business model, in June 2008, I put together a regulatory submission with them in which we laid out most of the ideas that you can see in that paper. Of the other 60 submissions, pretty much all of them assumed that Telstra would get the gig to build the FTTN, as it was in those days, and it was all about how you corral Telstra. It was only in April last year that you saw them suddenly wake up to the fact that it was not going to be Telstra. It was going to be a new beast, backed by the government, that they could not hem in with the ACCC, which is enlisted to help support the NBN.

By the way, they are not doing too good a job of that. I mentioned to you that they have made their first stumbling efforts towards it. In the paper I talk about moving up ULL prices up, averaging ULL prices. They made a first attempt to do that and backed off very quickly because of the howls of anguish from the ISP industry. This is not an auspicious start to the business side of the NBN, so I am worried—and you should be too. I wonder about the ISPs' commitment to the NBN. Remember that the future of competition is not around calls or access. In the future it is going to be around applications and content, which is where the benefits of the NBN lie. That is where you get the benefits, not through resellers' NBN access. That is old history, or will be.

In summary there are three things to say. We need to lift the policy focus from coverage, or enablement, to adoption and use because that is the only way that you get the productivity benefits and all the rest of it from NBN. Otherwise, it is not transforming. Secondly, we have to widen the focus from being just an engineering

project to recognising this is all about the economics of the NBN as well, to make it all hang together. Thirdly, I think you can deliver all that, the NBN potential, with a utility vision and utility pricing.

CHAIR—Thank you. Your submission does this, but is it possible to explain your pricing model in relatively simple language for me?

Mr de Ridder—In a few words? Yes. First, let me start from the point where NBN Co. started, and so did we when we were working at TransACT, which was that we want an access pricing system which will be compatible with the way that broadband is sold today. When you line up all the plans, the ISPs cannot advertise speeds, because they cannot guarantee them, so they differentiate around caps. It is quite extraordinary. There are quite miniscule differences. If you put it all on a spreadsheet you get a lot rows describing the caps. If you just take the ADSL2+ plans, which are the highest that you can get from the market, and do a scatter plot, basically the higher the cap the more you pay per month. You can describe what they look like on average if you put a best fit line through those points, which I have done in the paper.

I did that in September 2008 and I did it again in September 2009. In September 2009, on average across all those ADSL2+ retail plans, you are looking at something like \$54 per month and 50c a gigabyte. Just as a check for that, the ABS told us that the average download is about 4½ gigabytes per month. If you multiply out \$54 plus 50c per 4½ gigabytes per month, that gets you to a retail bill of around \$56, which just happens to be around the same as the average iiNet and Telstra broadband user is paying. So it must be about right.

That is what the retail plans look like. What you want is an access pricing regime which is consistent with that—right? As I said, most people are thinking around speeds. I am thinking that utility pricing is around volume. What you have is a line below and parallel to where the market is today and that, for example, is \$20 per month plus 50c a gigabyte. That means you can offer entry level plans at \$20 which is less than you can pay now in the market—the retail price would be about \$30. Users like Rosemary's mother who are just making phone calls are not going to be using a lot of gigabytes per month, so they will be getting broadband at 100 megabits per second for \$20 plus the retail margin, whatever that might be, but those margins are not going to be what ISPs enjoy today and that is the rub.

CHAIR—You are saying that there should be a base fee for the speed and then you pay for what you use in volume?

Mr de Ridder—No, there is only one speed and it is full speed. What ISPs do is that they go to NBN Co. and NBN Co. will tailor the service they require. You have five different ports on there, you can have a port for standard telephony, you can have a port for broadband, you could probably have a port for IPTV and so forth. I am saying for the broadband port, the one where they surf the internet and go to Facebook and so forth NBN Co. would say to the ISP, 'It is going to cost you \$20 for me to provide you connection to that port and you will also pay 50c a gigabyte for data transfer to that customer.'

CHAIR—As Senator Conroy indicated—and I think you have quoted this on a number of occasions—it is to be a commercial operation with private investors who want a return on their money. Using your pricing method would there be a return on the money?

Mr de Ridder—We built this model for TransACT. this is the heart of TransACT's business model for NBN mark 1. I have to say that FTTN was not a big deal for TransACT, it already has its own network with a footprint covering half of the ACT. It is a very urban environment and easy to serve, but it has private shareholders and the board was convinced that this model worked and it did. For TransACT for FTTN it was a very viable proposition. I have not done the sums for the new FTTP. I have to wait and see like everybody else what the implementation study says to have a look at how the model will work.

CHAIR—Do not hold your breath.

Mr de Ridder—It is going to be harder, but what I am saying is that over time it will get easier. As I said data is growing at 60 per cent per annum, 50c per gigabyte in September 2009 was a dollar a gigabyte—the slope of the line was twice—a year ago in September 2008. In September 2008 it was still about 50 bucks a month and people were paying about a dollar a gigabyte. A year later it is 50c a gigabyte. Today I am not sure, I would have to have a look. It is getting easier and it will be 2c a gigabyte within a few years.

CHAIR—While I have marked it I cannot immediately find it, but in your pricing I think you say the day is almost nigh—

Mr de Ridder—The moment of truth?

CHAIR—Yes, the moment of truth and yet we were told yesterday that although it starts in June or July this year, iiNet still have no idea, according to them, of what NBN is going to charge them for the wholesale fee. It seems incredible that that could be the case when in a couple of months it is going to be operating. Do you have any knowledge or comment about that at all?

Mr de Ridder—Like everybody else I can only read what is in the paper and in newsletters. I have tried to talk to the people responsible for pricing in NBN Co. but they are running a very tight ship and they are not talking to anybody. It is not just me. I have learned from others that they cannot get in and talk to them.

CHAIR—They are not talking to us either although we will see later on today, perhaps, because we would be fascinated. In view of the imminent start up in Tasmania one would think that they must be getting close to having some sort of policy. Is it your understanding that Senator Conroy is still of the view expressed in what we call the Tamworth declaration:

My ambition is that there will be the same wholesale price for every household for the same speed across satellite, wireless and fibre-to-the-node ... this will be a cross-subsidy, one wholesale price ... across the country.

Are you aware that that is still his view?

Mr de Ridder—I would imagine it is not just his view, and I think he meant to say that retail pricing, rather than access pricing, will be uniform across the nation. I think there is bipartisan political support for uniform retail pricing—that is what people want to see.

CHAIR—I was very interested in your submission. On page 13, at 2h, you say:

The risks from competition from the copper network (if customers are not migrated to the NBN) and from mobile broadband are probably well understood. The ‘elephant in the room’ is the ISPs’ commitment to the NBN. They will only give their support if the (access) price is right (low).

... ..

This is because the current ISP business models based on ULLS and/or Line-Sharing will be replaced by more expensive NBN access and a more competitive market due to lower barriers to entry. This means lower margins and fewer ISPs.

Have you conducted any study to justify those comments?

Mr de Ridder—I presented at an OVUM conference in December 2009—it is given in one of the footnotes—showing graphs of these business models for iiNet and Optus. The reference is here but I can direct the secretariat to which one might illustrate this for you, if that would help.

CHAIR—Do you seriously think there will be fewer ISPs?

Mr de Ridder—Yes—it is happening already anyway. Remember the larger context is that with NBN we have a utility just like electricity distribution. It is going to cost more, because you cannot spend \$40 billion on a network and not charge at least as much and probably a bit more than you do today. If you want to maintain uniform retail prices at about where they are now, something has to give, and I think that will be the margins.

CHAIR—You are a very experienced economist in the telecommunications area, but that is the bit I can never quite understand. If it were a utility being ‘subsidised’ by the government, that is one thing; but the thing that I cannot get my head around until I see the implementation study or there is a cost-benefit analysis, none of which, I suspect, we are likely to see, is how you can have private investors for 49 per cent of the NBN and the government assuring us that the NBN will be commercial and will pay its own way eventually over a period of time, when the number of users in Australia just does not seem to me, on the back of an envelope, to possibly enable you to be commercial and give a return to private investors without subsidy—and the government seems to be saying it is not going to be subsidised; it is a commercial operation. As an economist, can you elaborate on or explain that?

Mr de Ridder—I have reservations too. As I mentioned, with TransACT we could build a business case that worked for FTTN given that it already had a head start with its own network. We are now talking about a network that is going to cost three or four times as much as the FTTN, and I think that was a mistake. I think it is still possible, as I said in my paper, that the FTTN model itself could be used in some areas right now. I think VDSL, which is FTTN, can be turned on for 70 per cent of customers much quicker than rolling out fibre. Why not? It would make it cheaper. What we want is—

CHAIR—That is for 70 per cent, but then, of course, the government and I are particularly concerned about the other 30 per cent, of which I am one, who are out in the sticks, where it is not commercial, and I guess that is what is driving them.

Mr de Ridder—They have already said that for at least 10 per cent they cannot serve fibre, but even those who are within the footprint are going to be very expensive to serve, and that is where we get into cross-subsidy. You can have a cross-subsidy which does not require a public subsidy; a cross-subsidy is funded internally and that is traditional in industry. But the people have confused, I think, cross-subsidy and USO arrangements. They are not the same thing at all. In fact I should provide you with a copy of a 1995 paper that I did. It gave a simple example showing why they are not the same thing at all.

It also referred to why you have to have a subsidy arrangement which is not avoidable, and that is something else that the industry is not going to like. That is to say, if you say that the access lines providing the NBN Co. will be averaged at some level that means that metro customers will be paying more so that country customers can enjoy the same retail price—

CHAIR—Or their alternative might be that they will not use NBN as their trunk line and will simply stick with Telstra—and Telstra becomes bolshie and decides to go it alone and compete for the high-activity markets and forget about—

Mr de Ridder—That is right. Or they will invest in cable if that means they can get an access that is less than what they had to pay NBN, which is loaded for cross-subsidy. That is why I said ‘unavoidable’. And it is not just me; I have referred to Laffont and Tirole, very famous competition economists in telecoms. I first referred to this in the 1995 paper, which I will get to you. What I mean by ‘unavoidable’ is that every fixed line—whether it is NBN Co.’s or Telstra’s or a cable network—all have to pay the same to be technologically neutral in competition terms. If it is all about a national approach to have national uniform prices, then you have to have the same levy on every fixed broadband line to make sure that there is no distortion in choices of technology.

CHAIR—Is it not correct that as things now stand, the legislative system as it is today, that Telstra could simply say, ‘I do not want the NBN; I will continue my own network. I will serve only 60 per cent of the population, which are those in the capital cities, and it is up to government to provide for the Ian Macdonalds in this world who are out in the sticks.’

Mr de Ridder—They can, but through a type of regime you can say to Telstra and Optus and anyone else who wants to run their networks—and by the way, I agree with Rosemary: NBN Co. is not going to be the only network—that there are other ways. There is no reason why you should not allow the existing cable networks to operate. There are already existing fibre networks and NBN Co. is not going to take them over. As long as they have interoperability—customers can talk to each other—it really does not matter. But what does matter is that if NBN Co. has to charge \$10 a month more in metro areas to make sure that it can get an affordable service in country areas, then every other network owner has to put \$10 on its access line, and you can do that as government. It is a new USO arrangement expressed in terms of dollars per line: you have so many customers on a cable network and it is \$10 a line for them, and it is \$10 a line for every NBN Co. customer, and it all gets put into a pot to cross-subsidise country customers.

CHAIR—So why as a matter of policy would it not be better to let the 60 per cent of customers operate on a purely market-driven basis and for the rest of us, who demand equity, have the government simply come in—as they do with so many other things—and say that they will subsidise us to get the same service, but we will not expect the retailers to do the subsidising? Why isn’t that good policy? I am not advocating this, I might say; I am raising the issue.

Mr de Ridder—It might be good policy. We have not looked at the options, have we? Optus and Telstra said that they are very happy to serve 60 per cent of the market. That was the offer, their FTTN networks. That is pretty good; that is VDSL.

I think I said a moment ago, that I would like to see those options exercised. But it makes it very hard, then, for NBN Co., which is left with the rump. They need help. If you want a system which says that the metro customers can enjoy all the broadband they are getting but that the country customers are not going to get any help then you have to have some sort of cross-subsidy arrangement. But everybody has to pitch in. It cannot be done just within NBN Co., because that will distort its pricing, making these other options uneconomically attractive.

CHAIR—Except that there does not have to be a cross-subsidy; there could be a direct subsidy from government to people who live in remoter areas.

Mr de Ridder—You could start that by having capital grants to help NBN Co. I think that should happen. Beyond that, from my long experience in telecoms, I would not rely on public subsidies. They get turned off easily and quickly.

CHAIR—Those of us who live in the country suffer from not getting the same services. Governments will, close to elections, subsidise us—but that is another issue. There are lots of other things I would like to take up with you but our time is limited so I might pass to Senator Lundy and then to Senator Fisher.

Senator LUNDY—I am curious about your source of data with respect to pricing and packages. Where do you get that information from?

Mr de Ridder—Do you mean for the scattergram?

Senator LUNDY—Yes.

Mr de Ridder—The websites of the various companies. I have taken the six major ones and looked at the websites in September last year and September the year before. On the graph you see the peak downloads only.

Senator LUNDY—We had some evidence yesterday about the difference in the service of an ADSL style service and a service that can be delivered over a fibre-to-the-premises style network. I am interested in hearing from you about your understanding of the differences in the quality of service, particularly relating to the way in which an ADSL service can be described, given most of those packages that you are talking about are up to certain speeds. The speeds actually realised by customers depend on quite a significant range of variables, regardless of whether the customers are on a 256 or a two-meg package. Can you just go through some of the technical attributes of an ADSL style service and your understanding of how that would differ to a fibre-to-the-home style service.

Mr de Ridder—First of all, remember that I am a not-so-humble economist, not an engineer.

Senator LUNDY—I just raise it because I think an understanding of that difference is important when doing some price analyses of the different products that are going to be (a) in the market now, as compared to (b) in the market under the NBN.

Mr de Ridder—I chose ADSL2+ because it is the best that is on offer today and it is what the NBN Co. will have to compete with today. Tomorrow it is going to be VDSL if Telstra, for example, implements fibre to the node. It can still do that. That will become a different benchmark, but today the benchmark is ADSL2+. As I said in my opening remarks, for me there are two possible differences: one possible difference is that NBN Co. will say, ‘With fibre I can guarantee you speeds,’ and you cannot with current plans—it depends on how far you are from an exchange and all that jazz. The other differentiator could be, ‘I will give 100 meg bits per second immediately to all customers.’ That is what becomes really interesting in terms of transforming economic and social relationships.

Senator LUNDY—I certainly agree with that.

Mr de Ridder—And it is doable.

Senator LUNDY—With regard to the price comparison between ADSL2+—I think you said the average was about \$54 for a package—and the entry-level package for NBN Co. being around the same money, we are dealing with completely different products and a different quality of service, aren't we?

Mr de Ridder—Yes, a far superior product.

Senator LUNDY—Fibre to the home—

Mr de Ridder—But customers are not prepared to pay for speed. The benchmark is what NBN Co. has to meet. That is why NBN Co. itself is starting with, ‘How can we make something compatible with what is out there now?’ They will have to compete with it, anyway.

CHAIR—But they will not be able to make a profit at that, will they, with a \$43 billion capital investment?

Mr de Ridder—As I said, it was a near thing with FTTN. I have no idea what it is like with FTTP, but there have to be some compromises in terms of looking at other technologies including FTTN.

CHAIR—Sorry, just let me understand. You are saying that with FTTN it just about drew even or was a bit on the positive side?

Mr de Ridder—With TransACT we could make a case, but TransACT has a number of advantages going for it, like an all-urban environment and the fact that it had its own network footprint et cetera.

CHAIR—So you are not saying it but you are agreeing that at that price, at \$54 for that package, there is no way in the world that NBN can possibly give a return on its \$43 billion investment?

Mr de Ridder—No, I am not saying that.

Senator LUNDY—I do not think I heard Mr de Ridder say that at all.

CHAIR—Could you just clarify that?

Mr de Ridder—No, I am not saying that. I said that I have not seen the numbers to rework that model and I would like to see some. The costs depend on what they do. I keep saying, if they choose to roll out fibre to 90 per cent of households in competition with everybody else, forget it; that is a basket case. They are too smart. I do not think they will compete head to head with cable networks or existing fibre networks. Their mission is to provide broadband where it is not available. But, even with that limited ambition, there is copper out there and they are now side by side with copper in most residential environments. They have got a problem, which is why we are all waiting with bated breath to see how you get Telstra to get onto the new network. If that is yes—if they also, for example, get Telstra to say, ‘Can we have FTTN within eight years while we are waiting for fibre, to test out the market et cetera?’ and do it slowly rather than in one big bang—then it gets really interesting. Then you can start to look at something which makes sense. But they are what-ifs.

Senator LUNDY—I think that is the point. A lot of the things you are saying are speculation regarding the what-ifs, so I do not have any more questions.

CHAIR—It certainly depends on what happens between now and the budget, because, as I think you or someone pointed out, if this is not resolved by the budget the government are going to have a budgetary problem in putting \$43 billion on the budget bottom line, which I reckon they would be reluctant to do in an election year, so it is full of all sorts of fascinations.

Mr de Ridder—That was not me.

CHAIR—It was not you that said that? Okay, fine.

Senator FISHER—Mr de Ridder, in response to Senator Macdonald you were talking about Minister Conroy’s Tamworth platform where he said ‘one wholesale price across the country’. I thought I heard you saying that you thought that the minister might have intended to say ‘retail price’. Your submission does not say that, so can you explain a bit more what you meant by that observation, if we heard it correctly?

Mr de Ridder—Yes. As I said, there is bipartisan political support for uniform retail pricing. The pricing that I have suggested that will get you there involves charging metropolitan—let us say that the average cost is 20 bucks per line per month across the country for NBN Co. That is obviously too low, but let us just take it. In fact, I think I have got the example in the paper. Let us say it is \$10 cheaper in the metro areas and \$30 or \$40 more expensive in the country areas. Then that is saying that instead of charging an excess price of \$10 to all ISPs wherever you are, which I do not think would work, what you would have to do is charge them \$20 in metro areas so that you can charge them only \$10 in the country areas. That is where you get the subsidy from. So the access price is not the same. It is geographically de-averaged. It is a new USO system. It is a new one.

Senator FISHER—To deliver the same retail price?

Mr de Ridder—And then, yes, they are facing the same costs.

Senator FISHER—It is kind of begging the question as to whether the subsidy, or the differential, needs to be funded by some mechanism by NBN Co. itself or by the providers.

Mr de Ridder—The providers. It is a government impost, a USO impost, on all lines, whether they are NBN Co. lines, cable lines or even mobile broadband lines, perhaps.

Senator FISHER—Thank you.

CHAIR—We have been talking about this, but I again quote from page 5 of your submission:

Pricing of telephony and IPTV ports is relatively straightforward. Pricing the port that underpins IP/ISP broadband services is harder. Too high a price discourages adoption—

I take it that by ‘adoption’, and you have mentioned the word ‘adoption’ a number of times, you mean the number of people actually accessing it, do you?

Mr de Ridder—Buying the service, yes.

CHAIR—So too high a price discourages people getting involved in the NBN, but, you say:

... too low ruins the business case – and as the ISP port grows in capability it will displace other ports.

That is a conundrum. How is that addressed, do you think? If you were Mr Quigley, how would you address the issue that too high a price discourages involvement and too low ruins the business case? And you would be under an obligation by the government pronouncements to make a profit.

Mr de Ridder—I would hire John de Ridder to explain to me how to make the utility pricing model work for me.

Senator FISHER—Touche!

CHAIR—That is what we were talking about before. But you think that with that utility pricing you can get a profit? You would have to have some compulsion to make sure that people then deal with you, wouldn't you?

Mr de Ridder—No. By the way, there is no reason that Telstra could not do this today, except that the ACCC, I think, is very conservative. It needs a bit of help to understand this stuff. But, in principle, this access-pricing regime that I am putting to you today is a lot better than the speed based pricing system that FANOC, the Optus G9 Consortium, took to the ACCC two or three years ago. I looked at all the arguments the ACCC had with that, the uncertainty about the pricing and so forth, and all those arguments fall over when you look at this new model. This is much stronger. It is a world's first. When you ask, 'Is it commercial?' I do not know because I do not know the costs and I do not know about their technology choices and all those what-ifs again. But, in terms of the principle, the paradigm, it is better than the other options they are looking at.

CHAIR—I think you say that your pricing model is adopted elsewhere in the world.

Mr de Ridder—No. In utilities, of course—and you can look at ordinary utilities like electricity, gas and water. It is very normal for them to charge a fixed price per month and charge for volume; it just has not been done in telecoms.

CHAIR—What have the minister, the department and Mr Quigley said when you put this proposition to them?

Mr de Ridder—I have not spoken to Mr Quigley or Minister Conroy about this. I have spoken to one or two senior members in NBN Co., and they have tried to encourage me to speak to the executives to do this. I have tried a number of times but, as I said, NBN Co. thinks that it does not need any help. That is why I made this submission, Mr Chairman. It is my last chance to get on the radar of NBN Co.

CHAIR—I assume that is because you want the system to work, not because you are looking for a job! Obviously you are busy in your own right.

Mr de Ridder—All the IP is sitting in front of you. They do not need me after this.

CHAIR—I would assume that NBN Co. and the department at some stage are reading what we say here.

Mr de Ridder—I hope so.

Senator FISHER—I hope they are watching avidly right now.

CHAIR—It would be useful to get their take on what you are saying, at least. Thanks very much for your time, and we will all watch with bated breath what evolves over the next few weeks, I would think. Thanks very much for your attendance.

[12.24 pm]

COX, Mr Dermot, Marketing Director, C-COR Broadband

CHAIR—Thanks very much for joining us, Mr Cox. I think you have been before Senate committees before.

Mr Cox—I have.

CHAIR—I will not go through the long rigmarole then, except to remind you that it is a parliamentary committee and parliamentary privilege applies. Thank you very much for your submission. I did not mention you by name but I perhaps wrongly interpreted your submission in one line, which is always dangerous, when I said—

Mr Cox—I know what my wife said about it!

CHAIR—Perhaps we won't go there at this stage! I think Senator Lundy corrected me on this, and I do not want to verbal you, but is your submission about using cable instead of the NBN?

Mr Cox—No.

CHAIR—Is that too simplistic?

Mr Cox—It is too simplistic.

CHAIR—Having got that out of my mind, I invite you to give us an opening statement.

Mr Cox—Thank you. I started off preparing notes and then I distilled the presentation down; I kept cutting words out of it. That is when you start to see clarity—well, in my case, I saw some clarity. What I noticed in my submission was the reference to the word 'choice', which came through in what I distilled it down to.

CHAIR—It did.

Mr Cox—The essence of what I am advocating is that, to date, fixed broadband users do not have a choice of infrastructure. They have a choice of ISPs who provide competing, differentiated DSL services in the fixed domain, and of course we have people providing differentiated services in the wireless domain which are based on discrete infrastructures—the wireless guys have, in the main, built their own wireless infrastructures. But when it comes to the fixed domain I think Australian businesses and consumers suffer from a lack of physical connectivity choice, which is not the case in other markets in other geographies and jurisdictions around the world. So, reflecting on the submission you have in front of you, what I noticed was the reference to lack of connectivity choice, competition and things like that. That does not detract from the fact that, as a dreamer, I believe in the NBN because of the promise of what it will do for our country. You have got to have those sorts of grand plans.

My point of difference is that I think NBN 2, as I call it, suffers from the fact that it is predicated on delivering a technology choice to the marketplace. I cheekily suggest NBN mark 3, its successor, will actually deliver a promise of outcomes for consumers of broadband. As we heard from Rosemary Sinclair this morning, consumers do not give a rat's about whether it is delivered on DSL, wireless or whatever—those who do are the nutters or nerds in the community. What people want is the ability to take advantage of the applications and to enjoy the content when and where they want it: that is the choice they want. The underlying infrastructure is important in terms of supporting the experiences they want, and different infrastructures are better at supporting different types of applications and experiences than others.

I am an advocate for the cable broadband industry in Australia, and there is a membership of one—myself. The cable industry was invented in North America to support entertainment services. As a technology, it was designed to deliver video. Lo and behold, I think you will find that, if you talk to the people who are looking at building networks today, they realise that the new networks of today are about optimising the experience for videocentric content. That means that, for example, when you and I want to talk to each other and I ring you in your office in Far North Queensland, in the past we have done that over an analogue telephone but going forward we probably will be able to do that over a video link, which would be cost optimised but would give a very good experience so that you and I can have a private interactive conversation and talk about things as mates do.

I think the essence of my proposition is that NBN mark 2 is a grand plan but it suffers from the fact that people got wedded to a technology and forgot that there are other infrastructures that could be leveraged to deliver the same sorts of outcomes for customers, whether they be business customers or residential

customers. Being the founding member and the only member of the cable broadband industry in Australia, I just wanted to raise the flag for cable as an infrastructure. Seven million Australians are within easy reach of that. It is a cost-effective platform. If you look at overseas markets, cable is used by challengers. They use it as a way of winning market share. Typically, the incumbents do not have cable infrastructure; it is used by challengers to win market share from the PTTs or the incumbents. So we have got a bit of a quirky landscape here in one sense, but we have also got a regulatory environment that encourages people to leverage off the PSTN network as distinct from building their own infrastructure. So we have got a distorted playing field here.

At the end of the day, the NBN should be about a capability rather than a technology. The idea of fibre to the premises is fine, but by creating NBN Co. I suggest we are effectively creating Telecom Australia or the PMG, when perhaps what we need to do is go back to the regulatory landscape and see what we can do about creating choice for customers and giving businesses some protection to build new networks as distinct from everyone dipping into the same trough and leveraging off the copper network, which was built 100-odd years ago and reinvented every seven or eight years by the PMG, by Telecom Australia and by Telstra. They have been reinvesting in those networks over many years and people in Far North Queensland and the remote parts of Australia have not necessarily had the latest technology. They tend to have the recycled stuff that comes out of the major markets. As it is paid off in the premium market, it is put out into the bush where it does not owe us anything.

My submission is that NBN is a great concept. I think NBN 2, as I label it, is flawed insofar as it is predicated on a technology. I think NBN mark 3 should be about delivering capabilities or outcomes for customers. So we should perhaps be talking about layer 2 ethernet services, but they will not necessarily be delivered by NBN Co. We can talk about it being delivered by the core infrastructure providers.

CHAIR—As an example, are you saying that, as well as having an NBN fibre-to-the-premises network, a choice and an alternative might be to use existing cable networks?

Mr Cox—Yes, as an option, so that as a business customer I have a choice. At the moment I do not have a choice. I can go to Telstra and use their copper network and get an ADSL service off them or I can go to another service provider who uses the unbundled local loop to deliver a comparable service.

CHAIR—Why can't you use cable today?

Mr Cox—My suggestion is that the regulatory landscape is distorted in favour of leveraging the copper assets of the country for fixed services. If you talk to the guys, the cable assets do not really address the issue of opening up the ethernet services on the cable network. They are outside the regulatory landscape. The ACCC, I think, acknowledges that probably one of its biggest failings over the last 10 years is the fact that it is a piece of infrastructure that has not been leveraged and it has overlooked its existence.

CHAIR—But are you saying to me that as a customer I could connect my laptop up to my cable TV without having any concept of how it works?

Mr Cox—Yes.

CHAIR—But it is not possible for me to do that at the moment.

Mr Cox—There are a number of people who do enjoy the service for pay TV, free TV, broadband and telephony. They do enjoy those services. But you will find that if you were to rock up—say you had an apartment in Balmain in Sydney and you said, 'I want a broadband service off that infrastructure'—then they would choose not to connect you, because you are not connected. The economics of the industry are skewed towards taking advantage of the copper network, because it is subsidised and regulated down. People will not spend \$200 to connect your house in Balmain, for example, to the cable network, because there is a \$200 cost disadvantage from day one, whereas every premise is connected with the copper network, so the cost of entry there is next to zero. Does that make sense?

CHAIR—Yes, it does, except for this: if I could pay \$200 and get a better, faster—

Mr Cox—Experience.

CHAIR—experience than I am getting on the copper, why wouldn't I invest the \$200 capital?

Mr Cox—They are not doing that. Subject to being hit by a bolt of lightning, I do not see that innovation happening with the service providers in this marketplace. They do not choose to innovate around that space.

Senator FISHER—Mr Cox, you suggest near the end of your submission that 15 to 20 per cent of the target market will not ever take up the fixed broadband offer even if it is subsidised by the government. Are you saying that is 15 to 20 per cent of the target 90 per cent?

Mr Cox—If you look at people's buying behaviours across any population, people make choices.

Senator FISHER—Sorry. What do you mean by 'target market'?

Mr Cox—Excuse the language, but market people talk about target markets, addressable markets—whatever. But in any population there are people who choose not to buy things.

Senator FISHER—Sure. How do you get your 15 to 20 per cent of the target market?

Mr Cox—If you look at various industries, you will find that there are people who choose not to buy: people who choose not to have TV services, the telephone or cars. People make choices about their lifestyle. I think you will find that, if you inquire with the department, they will confirm that even in their own studies they have seen similar sorts of numbers where people choose not to adopt the broadband service because of a lifestyle choice.

Senator FISHER—Earlier on in your submission you talk about the price and about how, if the price reflects the real costs of the network, there is really going to be underwhelming customer adoption. But you are saying more than that here, aren't you? I hear you saying that, almost irrespective of what the government does and/or of the price of the ultimate consumable, you are going to have 15 to 20 per cent of the target market, however you define it, who will not take it up—irrespective of what the government does to help them.

Mr Cox—Correct. I think you will find that that is a reasonable proposition. People will make a conscious decision not to have broadband because they do not want it or they do not believe in it, irrespective of price. There are people who will choose not to buy it because they cannot afford it, which is a different category.

Senator FISHER—Okay, but then you go on to say the NBN Co. will not be able to fight this reality because its business case will fail unless it is given monopoly powers and is state sponsored and heavily subsidised—blah, blah, blah. So are you leaving an out or are you saying there is nothing the government or NBN Co. can do—you will still get 15 to 20 per cent of the target market not taking this up?

Mr Cox—I would suggest that, in a population of 100, 15 to 20 per cent will choose not to have broadband, another 15 to 20 per cent might say, 'We can't afford it,' and, among the balance, five per cent might say, 'I want super-fast speed.' But that is fairly normal consumer adoption in any market.

Senator FISHER—And obviously that would impact on the ultimate price.

Mr Cox—Correct.

Senator FISHER—You also observed that NBN Co.'s real role might turn out to be one of stimulating competitive intra-metro backhaul and inter-provincial-city backhaul. If that were to be the case, what would happen to rural and regional Australia? You are saying it would stimulate competition within cities and between provincial centres. What about the rest of Australia? What would happen to rural and regional Australia if that scenario were to unfold?

Mr Cox—All the commentary that I have seen—and I think you have heard it from experts before me—is that there will perhaps be a lack of choice for backhaul between the regional towns. That impacts on the prices that the service providers—wireless operators, for example—if there is only one person in town who provides conductivity to Alice Springs, for example, so maybe they do not have a choice for providing services into that market.

Senator FISHER—Are you saying it should be the ultimate role of NBN Co. to stimulate competition within cities and between provincial centres?

Mr Cox—I think there is probably a better business case for them in that—as distinct from the access market, which is high cost and high risk because of consumer behaviour and consumer adoption, which was referred to by the previous witness.

Senator FISHER—So you are basically advocating that NBN Co. go where it is already good to go in a competitive sense and a profit sense. In that scenario, what should happen to give rural and regional Australia some sort of equivalent access to equivalent services at something like equivalent prices? Or is it undoable?

Mr Cox—If I understand your question, I sense there are more opportunities for NBN Co. to build competitive infrastructure to which other operators could deliver services in those parts of Australia that are

underserved by choice for backhaul. For example the Australian Broadband Connect program suffers from the fact that the business cases of people who are building wireless networks in South Australia et cetera are undermined by the lack of cost-effective transport back into the major centres, where they have their data centres and the like. The Australian Broadband Guarantee has been about building retail access networks as an alternative. But, in my observation, their business case has come unstuck in their lack of a cost-effective choice, or bartering, to get their content from the cities.

Senator FISHER—Are you saying the government's \$250 million regional backhaul program is not going to cut the mustard either?

Mr Cox—No, I did not say that. I think that is a necessary part of building the new fabric.

Senator FISHER—Sorry, I am not suggesting that you said it. I am asking whether it is a necessary corollary of what you have just said. Are you saying no?

Mr Cox—Yeah. Intuitively, I think that Australia will get a better return out of that type of investment than from building a parallel network to what Telstra already has in its copper network.

Senator FISHER—Would you have NBN focus its activities on where the private sector already wants to be anyway because there is competition and because there is profit available?

Mr Cox—No. The major markets are well served with choices, particularly the corporate markets in the cities. That is where the new entrants came in. In the nineties they cherry picked all that market. You did not see that sort of behaviour happening in regional and remote Australia.

Senator FISHER—No, exactly. So who is going to look after them in your brave new world?

Senator FISHER—Well, that is about nation-building. One of the great strengths of Australia is our nation-building programs. We try to help people who live and worked in regional parts of Australia.

Senator FISHER—But you are saying that should not be the role of NBN Co.?

Mr Cox—I am suggesting the role of NBN Co. as a state sponsored network might be to do that. In the major parts of the market, people do not have the physical choice. You could change the regulatory landscape. You could introduce a simple subsidy to give a return to the broadband providers for each new broadband connection that they make. That would probably have a very quick return on investment for the nation and at the same time give people a choice.

CHAIR—I want to refer to your submission again. At page 6 you say:

Australia's fixation on Local Loop Unbundling (LLU) has distorted broadband business case modelling: it is cheaper to rent copper services than connect customers using the retail service providers' capital budget. This same anomaly also applies to the existing cable broadband assets ...

We can fix this issue very quickly and it's pragmatic. A Government sponsored \$200 bounty for each new broadband service—defined as an average user experience of 50Mbps downstream—connected, will stir the market.

Are you advocating that as a policy option government should look at?

Mr Cox—Politically it is a very quick fix.

CHAIR—By what would you multiply the \$200 to get a bottom-line price for that?

Mr Cox—Further down I said that the \$250 million would give us 1.25 million new broadband connections.

CHAIR—That seems pretty simple.

Mr Cox—It is simple arithmetic.

CHAIR—And the solutions seem simple. Obviously no-one is thinking of doing that, but why not? What would the government say if I put that to them?

Mr Cox—That is a good question. I do not know. I do not talk to the government.

CHAIR—Why, do you think, have they not at least given a fraction of thought to it? Would it not provide the same service as the NBN will?

Mr Cox—Yeah.

CHAIR—'Yeah' meaning that it would provide the same service?

Mr Cox—I think it is a very simple quick fix. Politically it is very quick to execute. Administratively it could probably be done tomorrow. As a parallel, I just returned from India and the federal government over

there has an aspiration to grow from about three or four million broadband connection customers to something like 40 million by 2014. How are they going to do that? They are going to give a \$100 million bounty to the service providers for connecting the customers.

CHAIR—I am sorry if I seem a bit dense about this, but I do not know enough about this to know exactly what you are saying. Are you saying that we should say to Telstra, Optus, iiNet and anyone else that we will give them a subsidy of \$250,000 for any new broadband customer they provide and then 90 per cent of Australia would be covered in next to no time?

Mr Cox—I would not say 90 per cent; I think there are about 9½-odd million premises in Australia, so I am talking about 1.2 million new broadband connections, to be exact. That would grow it quite a lot. The other thing I am doing here is resetting the goalposts. The broadband experience today is notionally referred to as about 1.5 megabits download speed, which is good for many experiences but, for the applications that people are moving into, including videocentric type stuff, you are going to need 10-megabit service plus and more over time.

CHAIR—You are talking about 50 megabit service for the \$200.

Mr Cox—It is very achievable. If you were to leverage the cable broadband assets that are in the ground today in Australia, you could grow them to 50 megabits within a very short period of time. I have been cheekily suggesting that those transformations of the existing cable assets could have happened by Christmas last year and Christmas the year before that. I have been bantering on about the management of existing infrastructure in the last 18 months. A relatively manageable transformation could occur to modernise the cable assets as they sit in Australia today.

CHAIR—I am only a politician, so I do not understand these things fully, but be a devil's advocate for your own suggestion. A \$200 bounty would more or less give everyone what they wanted in Australia. I am not overly broadening what you are saying?

Mr Cox—No.

CHAIR—Be a devil's advocate against that. Why wouldn't you do that?

Mr Cox—I run the risk of being too provocative by suggesting we are suffering from groupthink. Our thinking is built around how we migrate the copper assets and how we now commercialise the NBN Co. We are thinking along those lines as distinct from looking back and saying, 'We have existing assets; how do we leverage those assets to get the outcomes that we want?'

CHAIR—I am sure I am missing something here. The idea is to get a world-class broadband system in Australia, and you are saying that can be done at a cost of \$200 times one million. Is that right?

Mr Cox—Yes.

CHAIR—Which comes to \$200 million.

Mr Cox—No, 250 million divided by 200 is about 1.25 million new broadband connections.

CHAIR—And 1.25 million is all you need to get Australia up to speed over and above what is there now. Is that what you are saying?

Mr Cox—No, I am just saying that, if we were to allocate \$250 million we could offer a bounty to Telstra, Optus, iiNet and so on whereby every time they connected a customer to a service with these attributes, including speed, performance and quality of experience, we would give them \$200-odd, for example.

CHAIR—And you would say that that is sufficient incentive for those companies to go out and sell me a package—

Mr Cox—Yes. The direct equivalent in India is US\$100.

CHAIR—And that is working in India?

Mr Cox—They are about to adopt that. They give the wireless operators there are about \$100 for each mobile customer that they connect. You can see that the growth figures there are still trending at around nine million wireless connections per month. They are making nine million wireless connections each and every month in India, with a \$100 subsidy.

CHAIR—If I tried to peer review your suggestion, would I be able to get other people who have some expertise to say that Dermot Cox has a pretty good idea that might work?

Mr Cox—If I were a politician I would be pretty happy with that sort of proposition.

CHAIR—I can assure you that that would be the case if you could fix the problem for \$250 million as opposed to \$43 billion.

Mr Cox—I am being cheeky in saying that there are some assets out there that have been ignored. If you provided a bounty you could give sufficient incentive and create market momentum to modernise that infrastructure. I am being blunt about it. Most of the small and medium enterprises are in the western suburbs of Sydney and the western and southern suburbs of Melbourne. From manufacturing and services perspectives, they are in those markets. In regional Australia it is a slightly different dynamic. There are small and medium businesses out there, but the bang for the buck would be immense. You would perhaps also have, for example, Telstra doing something about accelerating the performance of its fixed networks in regional Australia.

CHAIR—Because they are getting a bounty to do so.

Mr Cox—Correct. It is helping their business case in the start-up phase.

CHAIR—Perhaps in really remote parts of Australia the bounty could be, say, \$400. Someone who might be watching us will write in and say: ‘That Dermot Cox is mad. It’s not that simple.’

Mr Cox—Wouldn’t it be wonderful if I were right, though?

CHAIR—It would be magnificent. I might patent your policy idea and start my own political party. I could win an election on that, I think!

Mr Cox—Like I said, I wrote this in a moment when I was travelling outside of Australia because of the complete lack of investment that is happening in Australia. I was in the Philippines and then in India. I did it from an outside perspective looking in and it being a different marketplace. You start to see things slightly differently. But I realised that the Indian government has a \$100 bounty for each wireless connection and they are getting nine million connections each month. If you talk to the wireless vendors, if you could get a \$100 bounty given to Telstra, Optus or 3, you would probably find that they could do wonderful things in providing wireless broadband in regional Australia.

CHAIR—Have you put this idea to people like iiNet or Optus, asking why they are not advocating this to the government?

Mr Cox—No, I have not. I am using this as a forum and the industry trade magazines as a way of trying to make people get out of the bubble. The bubble is that everyone is suffering from groupthink: ‘What do we do about our copper assets and how do we move to NBN too?’ I think we can come back to look at it and ask: ‘What are the tools that we have? What are the assets that we have that we can leverage?’ Hats off to the federal government of India; \$100 is driving the wireless connections there. They are talking about a similar number for wireless broadband. They are talking about having 40 million broadband connections in 2014.

CHAIR—Who is going to deliver this in India? What type of company? Is it a SingTel associate?

Mr Cox—They are the regular service providers.

CHAIR—Commercial operations, not government?

Mr Cox—They are trying to give a kick-start to the government owned network, which is BSNL. BSNL is the federal government owned wireless PSTN operator and it seems to be struggling there, but there are other people lining up.

CHAIR—Like who? Give me a name of a commercial company.

Mr Cox—Vodafone is over there. That is a brand that we know in this country.

CHAIR—Is that happening in the Philippines too?

Mr Cox—No. That is a different market altogether. It has a different dynamic.

CHAIR—Could you remind me of your background? Are you an economist or thinker?

Mr Cox—My pedigree is marketing and sales. I am at the front end of the business, which has been about trying to build business cases, looking at how we do it and then leveraging assets to do that, manipulating business cases to get the right incomes.

CHAIR—Do you mind me asking what you sell? You said you were a salesman.

Mr Cox—C-COR Broadband is an Australian company. The business is built on a pedigree of building Telstra’s pay TV network in this country. As an independent company we are going offshore to help similar organisations modernise their networks. It is sad but true that the reason I travel overseas is that there are more business opportunities outside of Australia. Business in Australia is flat. If you talk to my vendor comrades in

other markets, it is a pretty quiet time in Australia. There has been less investment happening in the last 18 months than in the previous five years because this market is dislocated. There are no decisions being made. There is business to be had overseas. We have Australian people. We employ Australians. We export services. We send people overseas to do training, installation et cetera, and we have more of that going on than we have in Australia, because Australia is a bit of a basket case.

CHAIR—Of course, Australia has 20 million people as opposed to 90 million.

Mr Cox—I suggest that my compatriots and other vendors are also suffering from a lack of investment in the marketplace. It is pretty quiet in Australia.

Senator LUNDY—What is the interest that C-COR Broadband has with respect to the NBN? Are you seeking to have a relationship with the NBN or are you going to be a retail supplier on the NBN network?

Mr Cox—We are involved in providing equipment and services in a system integration capacity—helping people build capabilities at an infrastructure level. We are not a carrier. We are not a retail service provider. MyOptus, hence, is on the assets that we have in Australia, which are the cable assets. The three major ones are Telstra; TransACT, which has assets in Victoria; and, of course, Telstra. Those assets exist. The operators of those networks suffer from an external environment which encourages them to sell services off the copper network and build wireless broadband infrastructure, ignoring the cable assets. The cable assets are perfectly good at delivering fixed broadband and they do that in other markets. Our aspiration is to say, 'Hey, there is some other infrastructure there that could be leveraged.' The operators could be encouraged to provide wholesale services off those networks so that iiNet, Internode et cetera could market retail services off the back end of that infrastructure. At the moment, they are beyond the reach of those guys because those operators choose not to have wholesale services. The infrastructure can deliver wholesale services for people who want to deliver broadband experiences off that infrastructure. Today's market industry is skewed towards taking advantage of the copper assets, and the independent ISPs sell services off the back end of the copper services. I am trying to say, 'Let's use the assets that we've got and get some innovation happening in that space.'

Senator LUNDY—And the assets that you want to be tapped into are the ones of the company you work for.

Mr Cox—No, we do not have a monopoly on supplying infrastructure.

Senator LUNDY—I am not saying you have a monopoly. I am trying to put your submission in the context of the business interests that you represent.

Mr Cox—My business interests are about getting rid of the distortions in the market place. By getting rid of those distortions and breaking down the barriers, our business may enjoy improved business prospects.

Senator LUNDY—Thank you.

CHAIR—Thanks very much for coming along and assisting us yet again. We very much appreciate your submission and your time here today.

Proceedings suspended from 1.04 pm to 2.03 pm

CORBIN, Ms Teresa, Deputy Chief Executive Officer, Australian Communications Consumer Action Network

CHAIR—I welcome Ms Teresa Corbin of the Australian Communications Consumer Action Network. Thanks very much for coming along today and for your submission to the committee. Could we perhaps start with some opening comments from you?

Ms Corbin—Thank you very much for inviting us to present. We are very pleased to be able to present, especially given that this is an opportunity to really comment on the future of Australia's broadband network and the arrangements that are going to map the future successes of that initiative. We are particularly concerned because we think this is an opportunity to entrench some greater consumer protections, right at a stage where we are building the network and we can address the public interest concerns.

Our submission tries to address concerns that consumers have been raising with us: how do we make sure that the broadband network continues to have consumer confidence and that the service provider's market power in this industry is not the dominant factor—that we have equity in access to, affordability of and availability of broadband services for all Australians? Our submission is centred on some guiding principles. We think that, if we address these principles and the opportunity of these bills to look at better serving end users in their long-term interests, we might come up with some good measures for a successful broadband network into the future.

We have put forward seven principles. The most important one is, of course, that no consumer should be worse off in the migration. That is significant. Many Australians are going to judge whether the broadband network is a success or a failure on the basis of whether they are better off or worse off. To underpin that, we could look at building into the bills some objects that relate directly to the accessibility, affordability and availability of broadband services to ensure that they enhance the lives of consumers. We think that, if we do that, we can also require the NBN Co. to report on us—to provide some kind of implementation plan and then to build in some other policy initiatives that could better deliver to consumers the access to broadband that we think they should have, because it is such an essential service.

That leads nicely into the second principle, which is about accessibility, reliability and security of the NBN infrastructure and services. We believe that the extent to which people will be willing to take up the NBN will depend on the cost but also on the reliability and the perceived security of the network and. If we do not put in some measures to ensure that these things are taken care of, the potential benefits of the NBN may be undermined. We think there is an opportunity with these bills to look at specified levels of service. I know that is a scary thing for industry, but we have gone a little bit that way in the past with the Australian broadband guarantee, and we are now at a point where we could actually go further than that.

The third principle is about consumer requirements being genuinely considered. At this stage we are not really pleased with how much engagement we are getting with NBN Co. or in fact with other government supported initiatives such as the Comms Alliance greenfield work. We have approached both bodies to be more included, and there has not been a lot of movement in that area yet. So we think we need it enshrined in legislation that we have some representation at board level on NBN Co. by a person who has a background in our end user needs and our consumer concerns. They would not, of course, represent consumers, because would be on a board. We are not asking for that; we are asking for somebody that has that background. Just as you have people with industry backgrounds on boards, we think we need somebody on the board that fully understands and has at heart end user and consumer interests. The other way we could do that is by ensuring that NBN Co. has a consumer advisory body of some sort. ACMA is actually already required to do that, and we think NBN Co. should also be.

The fourth principle is about robust consumer protection and remedies. It is to make sure that, in the competitive retail market around the NBN wholesale infrastructure, we do not go backwards by reintroducing a vertically integrated wholesaler structure. We strongly believe that having those retail elements—we know that a lot of other submissions are concentrating on this aspect of the legislation—will reduce choice and water down what previously was a fairly strong statement about a public access network. We have not focused too much on that in our submission because everybody else is targeting that well and truly and we would rather use our time to talk about consumer protection.

The area that we are most concerned about in relation to consumer protection comes down to the USO and this fits squarely into this principal area. We are very concerned that we could be stuck in the 20th century

when it comes to the universal service obligation, that we are getting left behind and that communication services are literally perceived by most of Australia as an essential service. We have not at this stage addressed how that USO framework gets brought forward into the NBN world or the NBN framework—call it what you will. We think that there is an opportunity for this legislation to actually prescribe a class of access to enable NBN Co. to meet the USO obligations that currently are taken care of by Telstra, but we need to bring it into the future. We need to make sure that universal service actually does include broadband.

The fifth principle is about migration seamlessly. This brings up the area of complaint management. It is important that the complaint management processes are clearly defined at this point because we are really worried that what is going to happen is that we will get too far down the track and we will already have a long chain of service delivery before we really think about complaint handling. We have already seen this happening in a couple of areas—we have good examples already—where there have been complex complaint handling situations and we have not always had the right provider taking responsibility for resolving the problem and it has taken months if not years to resolve issues. This particularly happens when you have a retailer who is purchasing a wholesale service from Telstra for example. You often have disagreements about who is the provider responsible for solving the consumer's problem. That is not transparent to the consumer. It is more obvious to the providers and it should not be the consumer's responsibility to find out and navigate that situation.

The second example that I would like to give that has been problematic is mobile premium services. It is a content delivery service that is provided over a network. You get a complex chain of delivery sometimes with the carrier service provider, so the telephone company, secondly with the aggregator of content services and finally with the actual content producer. We are going to have these kinds of service chains with broadband. There is absolutely no doubt about it and we have not dealt very well with these complex service chains already, so we need to have this since clarified early.

The sixth principle is about information and education. We are actually quite pleased with the way that the digital television task force is handling consumer education. It could be tweaked but really they are not doing a bad job. We would really like to see NBN Co. engaging with the community a bit more. We know that they have some community meetings planned for Tasmania in July. They really need those community meetings in Tasmania now because we are getting a lot of inquiries from Tasmania about what is going on. They are asking when they are getting their service and what is different to the ADSL connection that they have now. They are asking about the equipment they have to purchase and that kind of thing. I think there is an opportunity in the bills to actually put not just reporting requirements but also a requirement to implement a large-scale information and education campaign.

Our final point is about the broader regulatory environment. We think that we need to look at economy wide law reform to ensure that we have actually prohibited unfair conduct. This relates to the competition and consumer laws recently put up and passed. Obviously, there is a second tranche of that law reform to come. We think that we need to look at fairness as a principle and building it into all of the consumer protection regime so that it is not overlooked as it currently is.

In summary, we think that there is a real opportunity by using these principles to actually build in some measures for success to ensure that there is some consumer protection that is built in not tacked on or retrofitted later on which is never as successful as it can be if you look at it from the start. We also would go so far as to say that perhaps we should not go down the line of privatising until 100 per cent coverage of broadband has actually been achieved. Many of our members would really like to see that, particularly those in rural and remote areas. Also we need to address some of the public interest tests that we have raised in our submission. That is a summary of where I think our submission is heading.

CHAIR—Thank you very much. We have a submission from you entitled 'Broadband solutions for consumers with disabilities'.

Ms Corbin—Yes. You also have a submission—I think it is No. 121—on the actual legislation. So that one is an appendix. In fact, I have brought a copy with me. It is a publication I wrote—

CHAIR—I have got it here and I have seen it. Senator Lundy is going to start the questioning.

Senator LUNDY—What is your general view about the timing of these bills, particularly as the competition and consumer protection bills have not been through parliament yet? Does ACCAN have a general view on the need to pass those bills as quickly as possible?

Ms Corbin—Absolutely. We are really disappointed that they did not go through in the last sitting of parliament. I have to also say that we do not think that the consumer protection in those bills goes far enough either, and we raised those issues in the previous inquiry.

Senator LUNDY—Yes.

Ms Corbin—Having said that, it is still quite important that those bills go through. We understand why these bills have been tabled and the timing with them, but ultimately if these bills were to go through before the other bill it would be ridiculous because we would actually be in a situation where there would be no consumer protection whatsoever. Whilst we would like a much broader discussion and debate about consumer protection and affordability measures, which we have been asking for for some time, we would also be very disappointed if the only thing that were resolved in a legislative capacity were the access arrangements and how we privatise the entity in eight years time. That would be really disappointing from a consumer perspective.

Senator LUNDY—Thanks for that. You are a good person to talk to, because one of the issues about consumer protection engagement by the larger companies operating in the telco space with consumer needs has been fraught for many years. We have certainly all dealt with problems relating to Telstra's capacity to service consumer problems—and indeed other carriers as well. Is what you are proposing with NBN Co. a conceivable effort to build a relationship with the consumer advocacy groups such as yours? Are you asking for something different to what we have had in the past? Do you think there is a case for them to make a particular effort to build a relationship with perhaps a consumer advisory body within the auspices of NBN Co.? In your best case scenario, what would that relationship be with consumer advocates, including ACCAN and the myriad roles that you perform.

Ms Corbin—You are right; I am a good person to ask, because I have 15 years experience with various bodies of consumer representation in this space, some of them more successful than others. I have to say that the ones that have been more successful at this have actually had a commitment to consumer engagement, from the top.

Senator LUNDY—So it is about leadership?

Ms Corbin—Absolutely. If you get that commitment from the top and it is also built into the statutes or the objectives of a corporation or a statutory body—whatever the body is—then you actually have something that you must deliver on as well. It is not just a culture dependent on personalities and individual skill and expertise or awareness of the issues; it is actually built into the structure. That is why we are asking for two things to be built in at a legislative level, one being that you have to have some sort of representative who has a background in these areas. They are specialist areas. So many industry people say, 'I am a consumer; I know how these things operate,' but the reality is that, yes, while we are all consumers, in our day jobs we are required to meet certain benchmarks and deliver on certain things. If we are working for a provider then our priority is to deliver on the bottom line; it is not to be a consumer, whereas somebody who has had some real experience in thinking about what consumer needs and consumer protection should be has actually analysed and considered it from a completely different angle and taken a lot of time to hear people's stories at the end and as end users.

So, yes, there is building in at the board level and making sure your CEO is committed. You cannot put this in legislation, but if you actually have these deliverables built into the legislation then your CEO has to have at least some commitment to making these things happen. They should have some sort of KPI to make sure all these things are met at the end of the day.

The second point is that you should have a consumer advisory group. We do have to have this for NBN Co. because, at the moment, there is a very loose engagement between ACCAN and NBN Co. We are having coffee, we are having lunch and that kind of thing—we are building that relationship—but we need to actually have a structured dialogue that has some objectives, some things you are trying to achieve. You do develop a different type of dialogue that way; it has a bit more depth. The other thing that is really important in that kind of engagement is that you do not just get consumers constantly saying the same thing over and over again to NBN Co. and to each other; you get some real exchange of views and an understanding of each other's perspectives. That is when you get change, that is when you get things moving forward and you find solutions to problems you would never have expected that you could find.

So, yes, we have to have the legislative structures in there, but ultimately we have to have the leadership at NBN Co. as well. We also have to have real support from the government for this sort of engagement to

happen. At ACMA there is a consumer advisory group. It is part of the legislative requirements that they have one. At the Communications Alliance we do not actually have a requirement for engagement. There is a requirement that there be consultation about codes but there is no real requirement that there be engagement. If you look at the early days of the Communications Alliance, when it was the Australian Communications Industry Forum—a very different body to what it is now—they only had that engagement with consumers because of the leadership that was in place, both at the board level and at the CEO level.

Senator LUNDY—Thank you for that. NBN Co. intend to function at the wholesale level. I have heard them talk in the past that their primary interactions will be with their retail customers per se. We have both been around long enough to know that, if customers and consumers are having problems with their telecommunications and broadband services, the chances are that the first interaction they will have is with their retail-level service provider. We already have ACCAN in place, and we have a TIO and all the rest of it. Have you thought about whether you would like to see, from a consumer perspective, some changes to the way that broader consumer complaints mechanisms are managed through the TIO—and, indeed, the Trade Practices Act and the ACCC—in the context of NBN Co. getting underway? It is kind of a separate question to the points you have made about what NBN Co. itself can do. I am referring to something that would provide an appropriate channel for consumers who may have issues in which NBN Co. is a stakeholder but, knowing the pattern of the law and processes in the past, consumers will always be sent to interact with the first line of service, that retail service provider, in the first instance.

Ms Corbin—We have thought a little bit about that, but we have slated that in the next 12 months we are going to do a lot more work in this area. It is actually a very high priority area for us. The truth of the matter is that the TIO is already buckling under the number of complaints that it is dealing with. I probably should also tell you here that I am a consumer representative on the Telecommunications Industry Ombudsman council.

Senator LUNDY—Excellent.

Ms Corbin—I am not representing the TIO here, of course, but I think it is important that—

Senator LUNDY—No, but you do know what is going on.

Ms Corbin—It is important it goes on the record that I hold that position. There has been a lot of debate about one-stop shops, about expanding the TIO's jurisdiction and about how the TIO can actually cope with its current level of complaints. The focus has been just on that at the TIO, on its current level of complaints. That is absolutely appropriate, because their primary reason for being is to deal with consumer disputes speedily and independently, get them resolved and move forward. In doing so they have had to address a lot of things organisationally. They have had to grow very quickly and they have had to be prepared for the fact that they need to upsize and downsize quite a lot, very rapidly.

We have had a bit of a focus in the last 12 to 18 months on customer service type complaints because 30,000 of those complaints, a good chunk of the complaints, are just about customer service. They are very simple things like, 'You didn't call me back,' or, 'You didn't follow up on what you said you would actually do.' A massive proportion of the complaints would go away tomorrow if providers dealt with those complaints properly. But the truth is that there are also a proportion of those complaints that relate to highly competitive industries: bundling issues, bundling more services together; the complexity of the services; and also new services as they come on board. So, as new services come on board, you see these waves where complaint numbers go up and then people get a bit more used to smart phones, to mobile premium services et cetera. Unfortunately, there are casualties along the way—the victims, the poor buggers, that really wanted to try the new stuff but got caught out. And that is going to keep going with the NBN.

The jurisdiction of the TIO, regardless of whether or not you expand it, is still going to end up dealing with these consumer complaints because consumers are going to see the TIO as an avenue for a solution. I see that what is going to happen is that more people will actually be turned away because they do not fit into the jurisdiction, and that is going to come back on ACCAN and also, obviously, on the government and various MPs—because you will get the complaints in your letterboxes as well.

So the reality is that we have to address the structure of the TIO. We have to look not at a one-stop shop—that is too simplistic—but at what kinds of complaints we think are going to happen in the future and whether the TIO is a body that can handle it. To be perfectly frank, nobody has really done the analysis, and it is a very big question. I would not want to say right now, 'Look, the TIO can't do it', because I have no doubt the TIO would rise to the challenge of trying to deal with more complaints because, my goodness, they have done an amazing job in the last two years.

But I think we are going to end up having more people falling between the cracks, and we really do have to talk about a communications industry ombudsman. What does that involve? The complaints that do not go to them go to a provider that deals with health complaints, for e-health, or education or any other kinds of applications that do not fit within the jurisdiction of communication complaints. So it is very challenging question that you have asked, Senator.

Senator LUNDY—And you have got me thinking about lots of things.

Ms Corbin—I apologise for not truly answering it, but—

Senator LUNDY—No, no; I think what you have been able to illustrate is that it is a live issue. Looking at the current complaints and consumer support mechanisms and thinking you can just co-opt them is probably not a sophisticated or comprehensive enough approach at this point in time, so I think you have given the committee a good idea of the nature of the challenge.

Ms Corbin—I think mandating some kind of performance level at this point in time with NBN Co. would help to make sure that it is clear that NBN Co. does have a role in complaint handling. It is not the case that they are going to be able to say, ‘The retailers have to handle it.’ They are going to be dragged into it. And, if we need an example to show us how that can happen, there is mobile premium services, because the content providers are not part of the TIO scheme, they are not in anyone’s jurisdiction; they got dragged into that and they ended up having a code that applied them, and we had to retrofit a lot.

Senator LUNDY—Yes. I think the points you make are valid, without casting any judgment on NBN Co., from experiences in the past such as the duck-shoving between Telstra and ISPs in handling myriad complaints, not least of which is the pair gains and the presence of pair gains. It is a lesson that I will never forget.

Ms Corbin—Absolutely. The ping-pong ball with priority assistance is another classic example: whose responsibility is priority assistance? The number of times we had to go back to the code and reconsider the code and the fact that now we have actually got that priority assistance stuff in the first tranche of legislation on NBN shows this was a huge issue, and it was fallout from the pair gains debate.

Senator LUNDY—Yes. It is there. We just need that legislation passed. Chair, I will hand over. I do have a couple more questions; I will see if we have got time for them and, if not, I will place them on notice.

CHAIR—Fine. Senator Fisher?

Senator FISHER—Thanks, Chair. Ms Corbin, with regard to your proposition that there be a legislative provision that no consumer be worse off, do you know of any comparable provisions in legislation?

Ms Corbin—That is a really good question.

Senator FISHER—The government declined to put a provision to that end in their Fair Work legislation, for example. Minister Gillard keeps saying, ‘It’s our intent that workers not be worse off and it’s our intent that bosses not have to pay more,’ but the government has not legislated those goals thus far. So do you have any analogies?

Ms Corbin—Without making any comment on other jurisdictions or other areas of government that I am in no way an expert on, I think probably that, whilst I do not have a direct example, the mere fact that we have got a universal service obligation goes some way towards trying to address that. At that point in time, the reality was that we saw telecommunications as an essential service and we wanted to make sure that all Australians, wherever they work or live, have reasonable access to a standard telephone service. In many respects, at that point in our history we recognised that we really needed to legislate this and we went so far as to work on that on a geographical level to quite a great extent over the last 10 years, as well as in relation to people with disabilities—making sure that they are not going backwards, that they are actually being brought forward.

But the fear that we have is that we might lose a lot of the gains that we made in that time in learning about how a universal service could work and why it was important to Australia, not just to individual consumers but also to the economy. We could actually go backwards because we are not bringing it forward with the new technology and providing what people now benchmark as being a basic level of service, which includes access to broadband.

That is not really answering your question, but perhaps—

Senator FISHER—No.

Ms Corbin—it is reinforcing the fact that consumers do believe that this is a really strong principle.

Senator FISHER—Yes, but the USO is a statement of intent, if you like, and what I understand your organisation to be saying is that it should be legislated that no consumer be worse off. If that were to be legislated, how would you then measure compliance with that obligation? It involves a mapping, as of today, doesn't it—

Ms Corbin—Yes.

Senator FISHER—of where each and every consumer is at and then some measurement mechanisms along the way.

Ms Corbin—Yes, and we have tried to do that with the Network Reliability Framework—we have tried to have some mapping done. It has been proposed by consumer advocates for a number of years that it would be good to have that kind of mapping. I think we have moved on from bothering or needing to do that with copper now, because copper is well and truly last century.

The other thing is that we think that, by making generalist statements, we are not going to be able to measure these things at all, and I think that is a fine point to put forward. However, I think that, as we start to see the NBN in practice and we start to think about current examples where people are being left on the sidelines, we will be able to look at cases and look at that idea of no consumer being worse off in practice and in a bit more detail.

A good example is the greenfield issue with broadband. I am sure you are familiar with this and I have no doubt that other submissions address this matter. Already we are seeing a situation whereby consumer choice is quite restricted because there is only one provider and they provide the cable, or because the consumer may be locked into a contract where they are currently living but they are purchasing a brand new house in a housing development and so they actually have to pay exit fees to get out of their current provider contract, perhaps purchase new equipment and basically have quite an outlay to take up a service in the new housing development. That is good example of a consumer being worse off.

Senator FISHER—You are nominating a range of measurement tools there—choice in provider, necessity of purchasing new equipment—and you have not talked about speeds, access and price. It is a laudable goal and, as you said, every second person says they are a consumer. We all are anyway and we all have views. It is a laudable goal to which we would all undoubtedly aspire, but I am trying to probe its achievability. Just look at price alone. To ensure that not one person and not one consumer is worse off, aren't you assuming that there will be no averaging? As soon as you average in terms of price, someone wins and someone loses.

Ms Corbin—Yes.

Senator FISHER—So who is going to subsidise it then?

Ms Corbin—We are proposing that there be some subsidies built in. We are not proposing that we know all the detail around the issue of subsidies and we do know that it is an unpopular way forward. But, at the moment, with the USO we do have a form of subsidy. We have engaged in debates about rebalancing. We have engaged in debates about the cost of the USO. In the end, the reality is that our members come back to us and say that the greater good is that we all have access to this network because we are all on the network. The greater good therefore is the thing that should be held up here and somehow we have to achieve this in an equitable fashion. Whilst my organisation has not done the work in relation to the economics of that or done any great work about what the levels and benchmarks actually should be, we do know that over time we are moving towards benchmarks and levels of service. The Broadband Guarantee actually was the first time we did define some levels of service. With the National Broadband Network we have got 100 megabits per second in some areas and a lot less in some remote spaces. So we are getting a lot of feedback from those people who believe they are going to be in the 10 per cent. What should they expect if their service is being delivered by satellite or wirelessly?

Senator FISHER—I am not sure they know enough about the government's promise in that respect to even start to work out what they are entitled to expect, do they?

Ms Corbin—That has been a massive problem too. One of the things we propose in our submission is that NBN Co. needs to spend some more time engaging with consumers, not just at the advocacy level with people in organisations such as ours, but also with communities where they are going to be rolling it out and with communities where they are not going to be rolling it out for some time. We are really disappointed that we have not seen more action in that regard already because NBN Co. is quite a long way down the track as far as

getting its staff on board and all of those sorts of things. Tasmania will supposedly have services switched on in July. We have done some preliminary checking with members and organisations in Tasmania and they are still very much in the dark about what is happening. Whilst they have seen the government announcements and they have even seen local press about it, they have not heard anything more about what this actually means for them.

Senator FISHER—Other than with organisations like yours, is there any dialogue between consumers and someone?

Ms Corbin—Not as far as we know. It is very disappointing.

Senator FISHER—What about the five first release sites? Is there any dialogue with consumers in that respect?

Ms Corbin—That is even further down the track and I have to say—

Senator FISHER—We heard yesterday that some of them are not really, because the one in my home state of South Australia is slated for implementation in August. It is not a long time. It better be a good time.

Ms Corbin—I think that NBN Co. thinks that, if they engage with local councils and local governments, they have ticked it off, but they haven't. I am talking about residents and community groups and people who are going to be using these services—

Senator FISHER—Hopefully.

Ms Corbin—That is exactly right. I made some calls this morning just to double check that I was not wrong on this and I was really disappointed to find out that I am still right. Not only that, the person I called told me she was still using dial up. It was really sad to hear that she could not afford—and this is a person who is involved in all sorts of representational work in Tasmania—to go to broadband. Her perception of broadband was obviously an ADSL connection because she would go from \$20 for three months to \$90 for three months. That is very upsetting to hear.

Senator FISHER—To return for a moment to your proposition that it should be legislated that no consumer be worse off, are you proposing that that be no individual consumer or would it be measured by geographic regions? Otherwise we are talking about many millions of Australians.

Ms Corbin—What we think is that we should have the broader objective of accessibility, affordability and availability built into the objects of the bills that we are talking about today. From that you build out what the performance standards should be, what the consumer protection benchmarks should be, but you have got that underpinning it. At the moment, we have got nothing. We have got nothing either in the bills we are discussing today or in the legislation that is already in parliament.

Senator FISHER—Your proposition that there be a consumer representative on the board of NBN Co.—

Ms Corbin—I have a caveat on that: not a consumer representative but somebody that has a background in consumer representation, consumer issues, end user issues, who actually understands the issues. They cannot be a consumer representative, because it is a board.

Senator FISHER—That was going to be the question—although I think industry superannuation funds have an employer representative and an employee representative, and you could argue: how is that consistent with the objects of a company to—

Ms Corbin—I was just going to say that it just brings up too many problems with Corporations Law, I think, to stipulate that the person must be a representative, because they have got other conflicts that would be raised.

Senator FISHER—So you are saying a background in—

Ms Corbin—A background. Whenever you look for the representation on ACMA or Telstra or any of the big entities where we have had some input at different points in time, we always look to industry experience. That is great, but there really is a very big, strong role that needs to be played by somebody who really gets end user input, who really gets the broadband solutions for consumers with disabilities, who really understands the research that is being done out there and the reason that you need to think of things from a consumer perspective. There are all sorts of things that can be considered and will be considered from an industry level, but you cannot leave out this really important part of the equation. Ultimately, we are told, the reason we do all of this is for consumers, for the customers—the customers drive it. But if the customers drive it let us put someone who actually has that expertise and experience from their perspective at that level—

Senator FISHER—Rather than driving this thing to a destination and presuming that consumers will come.

Ms Corbin—Yes.

CHAIR—Are you suggesting that none of the existing board, as you know it, fits the category of—

Ms Corbin—Nobody on the board fits that category at the moment, just as nobody on the ACMA's board fits that category.

Senator FISHER—Your advocacy of consumer interests—and the interests of consumers themselves—can hardly be helped by the lack of an implementation study, can it?

Ms Corbin—We would really like to see the implementation study published. Obviously we have not considered from the government's perspective or anyone else's perspective why it may or may not be published, but we would really like to see that, because it is just like anything in relation to NBN—we are crying out for information, we are crying out for transparency, and ultimately we are not going to be able to sell a message of positive or negative to our membership unless we fully understand it. At this point in time, all our membership is doing is coming back to us with questions that we cannot answer.

Senator FISHER—In a perverse kind of way, you are effectively muzzled in either advocating for or criticising so long as you cannot see something like an implementation study, because, if you do not know what the end result is going to be, how can you favour it or criticise it?

Ms Corbin—I would not say we are muzzled. Do not go too far. But I would say that we are commenting in a vacuum, because the truth of the matter is that we keep being told that affordability will be discussed and addressed, but affordability is the crying orphan at the moment that is nowhere in the debate.

Senator FISHER—Then attempts will be made to silence you by saying that it is all hypothetical.

Ms Corbin—Nobody will be able to silence us, I do not think, because even if ACCAN were not a body that was working on this, I think you would find that consumers have a very strong voice in Australia, particularly on communications issues. As you know from your constituency, when it comes to rural, remote or regional issues, it is something that Australians have cared about for a long, long time, because communication is an absolutely essential tool to everything we do.

Senator FISHER—Hear, hear. Thank you, Chair.

CHAIR—Ms Corbin, in relation to your concern about someone on the board and the consumer advisory committee, is the NBN the one relevant there or is it more the retailers or the service providers?

Ms Corbin—I think it is still the NBN. Obviously that is why we have proposed it—because it is in our submission. Obviously it would matter even more if you do create this access group that we are talking about and put some USO responsibilities on to NBN. It makes it far more important to do that. There is a difficulty at retail level, of course. At least for the next five to eight years, while NBN is a public entity, it is going to be more important to have that consumer engagement and that public accountability. The concern is that, once you move into a privatised environment, the focus is more on the bottom line and less on the consumer. So it does not downgrade the importance of such a consultation mechanism or involvement engagement mechanism. It simply shifts the focus, and in fact we have found this with Telstra. Our consultation with Telstra has not diminished in its importance as a result of privatisation; it has simply morphed into something different so that we are engaging with them more in relation to issues that relate to their licensing conditions rather than as far as a public accountability mechanism goes.

CHAIR—But isn't NBN more of a railway line? It just provides the basic track, and then others get on it with their engines and carriages and provide the service and the pricing and all of those sorts of things that are what the end consumers are more interested in?

Ms Corbin—I think that is an interesting analogy that you use. If the tracks are not laid right then there are still problems for consumers travelling on the train, aren't there? So we do have to get the pipes right, and we need to have some consumer engagement to ensure that that happens, because in the end we cannot have a situation whereby people are just buck-passing when it comes to any sort of resolution of problems in the future. Also, in thinking about the design and architecture of the NBN now, we have not had much engagement at all in relation to that architecture, which I think is absolutely critical. Unless we do that now, we are going to be retrofitting something. There is a chance we might have to retrofit anyway, but let us try and avoid that if we can.

CHAIR—As you rightly say, in Tasmania it is about to start in June or July. What has been happening with complaints so far? How have they been dealt with? I assume there have been—

Ms Corbin—I do not think there are any, because nobody is using the service at this point in time. We have no idea whether anybody has considered that, and that is quite terrifying, really, when you think about it. We do not even know if they have a complaint-handling section ready and raring to go. We have no idea what is happening in that regard. Even then, we need to have some performance measurements in place. You can complain about something, but who is going to say whether your complaint is legitimate or not if it is not being measured against anything?

CHAIR—We understand from iiNet, which gave evidence yesterday about Tasmania, that they do not even know yet what prices they are going to be offering, because they have not—or not publicly—reached a resolution with NBN Co. on what they are going to have to pay the wholesaler. Is that something that your members in Tassie have raised with you?

Ms Corbin—Our members in Tassie simply do not know what is going on. I have spoken to quite a number of organisations that have simply said, ‘We know it’s coming, but we don’t know what it is or what it means.’ So they are commenting to me in a vacuum as well.

Senator FISHER—Something is coming.

CHAIR—Are some of them perhaps saying, ‘We’re doing okay now; perhaps we won’t even bother with NBN when it comes’?

Ms Corbin—That is an interesting point, because the people that I have engaged with tend to be in a category where they are vulnerable in some way, shape or form, either because they are in a regional area, have a low income or maybe have disabilities. In all instances, they have not necessarily thought that they perceive themselves as somebody that is going to migrate to the service at this point in time. They think that cost will be an inhibitor, because it already has been for them. One person said to me, ‘Why do the people in this particular area need those services?’ There are three places where it is going to be running already. I understand one of those areas is more low income, but the others are not necessarily known for being low-income areas. The person said: ‘Why do they need a broadband service rolled out? Probably they are already using ADSL 2.’ So consumers are asking the question: what is the value proposition of moving to the new services? It is very hard to assess that or judge that at this stage because we do not have enough information.

CHAIR—I did not quite catch your comment about someone moving from \$20 a month to \$90 a month. Is that an actual situation?

Ms Corbin—This is an actual example of someone who is using dial-up at the moment. They are using dial-up through a community-service ISP—Technical Aid to the Disabled—who offer internet services. They also offer ADSL. They offer dial-up for \$20 for three months. To migrate to ADSL it costs \$30 a month. So for the same period of time it would cost them \$90 to access broadband.

CHAIR—I see.

Ms Corbin—Of course, that does not include the calls that they make to access that service, but even then it is a big jump in cost for that person. This underlines what consumer advocates have been saying for years and years: \$20 or less a month is an absolute maximum of what some people can afford. To ensure that you get mass adoption across the board from all different types of groups, including vulnerable groups, you have to have some strategies. Far be it from us to suggest that they might be subsidies of some sort, but you actually have to have some strategies to make sure that people not only have access that they can afford but have equipment that they can use. This report that you pointed out earlier, about broadband solutions for consumers with disability, highlights that particularly people with disabilities can benefit from the fact of reduced waiting lines, better waiting times—better service provision, full stop—and better availability of those services. It is wonderful to think that a broadband network could deliver those things, but we have to get people on broadband in the first place.

CHAIR—Are you saying that it will go from \$7 to \$30 a month under the ADSL2?

Ms Corbin—Yes.

CHAIR—Perhaps with NBN it will become much cheaper than \$7.

Ms Corbin—Well, that would be nice. I think you would find that that person would adopt it tomorrow if that were the case, but you would also have to get the information out there so that they would know about it.

CHAIR—You are aware that NBN Co. is to be a commercially operating company and give a return on its \$43 billion capital. You would agree that there does not seem then to be much prospect of the subsidies that you dared to mention in passing.

Ms Corbin—That is a really good point. That comes back to my summary in my comments at the beginning of this evidence. Until we can actually ensure that some public interest tests have been met—perhaps they need to be built into the legislation now to make sure that they are met—perhaps we need to hold off on the privatising, because the truth of the matter is that there is not much point in rolling out a broadband network that only allows people that are using ADSL2 to go to the next level. I think it is wonderful that I am going to be able to use it, but we want everyone to be able to use it.

CHAIR—But perhaps rather than NBN Co. subsidising those people, it is a job for wider government policy. NBN Co. can charge \$50, \$60 or \$100 a month but governments, perhaps, should subsidise those with a disability to pay their \$100 a month and get a \$90 subsidy from other areas of government policy.

Ms Corbin—It is the same debate that has been going on about the universal service obligation for many, many years.

CHAIR—Yes.

Ms Corbin—To be perfectly frank, we do not have a position on where the subsidy should come from; however, we do think that that does not excuse NBN from having mechanisms and performance standards—an access group that ensures that those universal obligations are taken care of in some way. We have to develop the framework, and we have to come up with the answers. We do not claim to have them all but we really want to have the debate.

CHAIR—Thanks very much. We have gone over time because it has been so interesting. Mr Quigley is in the background, so maybe you will get the answers to all of those queries in the next 10 minutes. Remember if you do that, you have heard it here first. Thank you very much for your submission and for coming along and giving us your time and your expertise.

Ms Corbin—Thank you.

[2.55 pm]

QUIGLEY, Mr Michael Patrick, Chief Executive Officer, NBN Co. Ltd

CHAIR—Good afternoon, Mr Quigley. Thanks very much for coming. I often wonder if you do anything besides appear before Senate committees and so have time to do your other work!

Mr Quigley—It keeps us a little busy, yes, but I know this is rather important.

CHAIR—We do appreciate very much your coming along and that sometimes you are constrained in the answers you can give us. We are hopeful you might be able to make an announcement about NBN pricing in Tasmania in the next half hour, but if you do not we will perhaps understand. Would you give us a summary of where we are at and what is happening?

Mr Quigley—Yes. First of all, thanks again for the opportunity to speak to you today. I am going to give you a brief summary, not going back over old ground but sticking to the progress we have made since I was last here. As you are probably aware, I was appointed in the second half of July last year and from that point started to build the company. We have now got about 150 people, with offices in Sydney, Melbourne, Hobart and Canberra. We have got a management team in place now that has quite deep experience in telecommunications. We are also very fortunate to have a new chairman, Mr Harrison Young, who brings a great deal of experience to the board, and I am sure he is going to be a real asset for the company. We are taking now all the steps you would expect us to take with regard to establishing the processes and capability which we will need. This includes things like IT systems, financial controls and human resource processes.

We have been developing a wholesale product for some time now and we have been involved in a range of industry consultations, particularly over the past four months or so. Those consultations have involved public presentations in which we provide information on our proposed products and answer numerous questions. They have also involved detailed discussions with service providers to hear directly from them. We have released an industry consultation paper on our wholesale product proposal and we have received feedback from industry.

Overall, I would say there has been a good level of support for our product proposals and also for the technology platforms we intend to use. We believe the consultation process is important because we are currently preparing the documentation necessary to lodge a special access undertaking with the ACCC. We plan to lodge the undertaking in June this year. As part of the ACCC undertaking we will have to establish our wholesale prices. No doubt you have seen a lot of speculation on pricing.

CHAIR—We have been part of it!

Mr Quigley—Yes. What I can tell you is that we well understand that we are going to be operating in a marketplace, so we will be offering wholesale prices that are competitive. Our aim is to offer a combination to retail service providers of product features and pricing that is attractive to them compared to the alternatives which are available to them.

In parallel with the product development we have also been doing the architectural design of the fibre network, which includes fibre distribution hubs, fibre access nodes and points of interconnect. We have had some very extensive consultation on that architecture with groups such as the Communications Alliance and others, and I have stood up at events numerous times—almost once a week—making sure we articulate our architecture as we move along. I would invite anybody who would like to know a little bit more about the architecture to come along to one of those meetings. If ACCAN would like me to spend a couple of hours talking to their people about the architecture, about our product construct, about information that is in fact available on the web and our 1800 number that people can ask questions on, I would be more than happy to do so. There is a lot of information out there already if people choose to go get it.

As you would expect for building the network, the architecture is a complex dimensioning task. To ensure that we can provide the levels of not just peak speeds but committed speeds over the fibre network takes a lot of planning. I want to stress that point: there is a big difference between peak speeds and committed speeds. When people talk about wireless they are always talking about peak speeds; even when people talk about ADSL they are talking about peak speeds. There is a big difference between peak speeds and committed speeds. There is a big difference between what you can get close to an exchange or a cell tower and what you can get at the edge of a cell or a long way out from an exchange. With the fibre network we can guarantee committed speeds and we can guarantee them whether you are right next to an exchange or a long way away.

So that is a fundamental difference in the service that can be provided, which we are trying to make clear to everybody we talk to.

We are also working on the satellite and wireless solutions for the approximately 10 per cent of premises not covered in the fibre footprint and, in providing those radio solutions, the dimensioning becomes even more important for the very reasons I talked about—we have got to provide committed information rates. To implement the architecture and the designs we are doing, we will of course procure a range of equipment and capabilities. We are currently engaged in an RFP process for GPON, active equipment and services, and also for aggregation and transmission equipment and services. We ran a request for a capability statement process for our OSS and BSS—that is, our operational support systems and business support systems. That closed in March and we are currently reviewing the responses prior to going to an RFP. The RFP for passive network hardware and services has only just recently closed and we are reviewing their responses to that. The RCS, the request for capability statement for design and construction of a fibre access network, is open now and closes on 27 April. Overall, I am generally pretty happy with the progress we have made with the procurement of many of these complex pieces of equipment systems. It is no easy job putting together all of the documentation to run those systems.

We are also engaged in the planning of our construction activities, and since I last spoke to you we have taken on the head of construction who is now building up the management team for the construction activity. They will look after all the construction activities we will be doing. We are well aware of the magnitude of the construction program and the need to engage the construction industry and the need for training to provide all the necessary skills that we are going to need in the build process. That is something we are now paying increasing attention to.

We will also be encouraging engagement of local contractors in regions and towns across Australia in order to deliver the works through the federal government Industry Capability Network, a network set up to ensure local contractors are aware of, and can get involved in, large projects. Our engagement with local communities has already started. We are currently working in five sites in Australia, doing designs for our first release sites. Our meetings with local government and key stakeholders in these areas have been quite positive. We have seen considerable enthusiasm amongst some of these first sites to be in fact part of the initial rollout of the NBN. In Tasmania we have been making good progress. We are rolling out to the networks in the towns of Midway Point, Smithton and Scottsdale. We have sent letters to the residents of Midway Point seeking consent to access their properties for the drops into their homes from the network. We have opened the Cambridge Data Centre and three ISPs are currently demonstrating their services on the network in our proof-of-concept centre. The network operation centre in Tasmania is now nearing completion and we are on track for the July connection of the first operational services.

In conclusion, Senators, I would like you to know that we in NBN Co. recognise that we have been given an enormous task requiring the expenditure of a significant amount of public money, so I take very seriously our obligation to be transparent and accountable. I welcome the opportunity to appear before you where our thinking can be challenged and where you can ask questions about our methods, processes and proposed solutions. The task of designing and building a ubiquitous network that can provide high-speed broadband services is very important for the nation so it is important that we at NBN Co. are challenged to ensure that we are undertaking this task as efficiently and effectively as possible. As you would understand, I cannot answer questions on the legislation or on the Telstra negotiations, but I am happy to answer your questions on any other aspect of the network we are designing and building. Thank you.

CHAIR—Thanks very much, particularly for that last bit inviting our involvement. I might start the questions this time. As an aside, can I find out the rationale behind the appointment by NBN Co. of a government relations person, in view of the fact that your only two shareholders are in fact government ministers and hopefully you would be reporting directly to your shareholders. I just cannot understand the worth of a quite expensively paid government relations person when you are the government, more or less.

Mr Quigley—Senator, I can tell you that I am absolutely convinced of the worth of having such a person on board. In fact, I wish we had another two or three such people on board. The reason I say that is that the company is built up with telco people, people who are almost exclusively from the commercial world, as I was. When you have been in the commercial world, as I had been, interfacing with and having a shareholder that is the government is a new experience. There are lots of different parts of government and, frankly, often knowing which part you have to go to get which issues addressed is not so easy—and I am talking here about the federal government. So having someone who knows how governments work is very valuable.

But, frankly, our government relations person is spending much more time focused on state governments and local municipalities. For example, the person who called up every mayor of each of the first release sites just before we publicly announced those sites was our government relations person. He has been involved, together with our technical people, in discussions with those mayors, local communities and council offices where we are going around. In fact, today he is in Western Australia talking to some of the folks there, particularly about the power utility. So it is not just a question of interfacing with the federal government, which I do a fair bit of; it is interfacing with all of the other local councils, communities, state governments and utilities. It is a lot of work.

Senator FISHER—Yesterday we heard from a witness from one the first release sites who said that the first thing he knew about, in this case, Willunga being chosen as a first release site was when a media outlet rang him about it on the day of the minister's announcement. If your person had made telephone calls, that particular witness did not know about it.

Mr Quigley—I can only tell you that we made telephone calls to every municipality that we were talking about, the first five release sites, and I could not guarantee that every person in every one of those councils would have got to know about it before the press release came out. We obviously had to time it fairly closely, but we absolutely made sure that we called. We tried to reach the mayors of each of those municipalities and we have subsequently met with the mayors and numerous councillors and officials. I personally have been to Townsville and also down into Victoria.

The CHAIRMAN—After the announcements?

Mr Quigley—I visited after the announcements, yes, but we called them just prior to the announcement.

CHAIR—If your government relations officer has any spare time, you might get him to have a look at the evidence given yesterday by the first witnesses. He might perhaps be able to correct the record if they were wrong.

Mr Quigley—We would be delighted to correct the record.

CHAIR—Who selected these five trial sites? Was it NBN Co. or the government?

Mr Quigley—It was NBN Co. In fact, it was the engineering staff at NBN Co. who were looking at how we could test out the architecture and the bill processes, so they selected particular geotypes. We are often asked—in fact it was the first thing that I was asked when I was in Townsville—‘Why did you choose this particular area?’ The answer is that it was not me who chose it; it was our engineering staff, who chose it for the reasons of trying to test out the various bill processes. They looked at places that were inner city, that had particular types of housing, that had a given age group of housing. We tried to get a range of spectrum. There is a place just south of Sydney which is a relatively new area—

CHAIR—Kiama.

Mr Quigley—Kiama, yes, and Minnamurra and Kiama Downs.

CHAIR—So that was done entirely by your engineering staff, or perhaps your government relations officer had some involvement in it.

Mr Quigley—He had no involvement in that. He was involved after those sites had been chosen.

CHAIR—You know that there has been a bit of comment that those sites are in sensitive electorates.

Mr Quigley—If that is the case, you can blame me, Senator. In the end, when the engineers came to me and said, ‘These are the five sites,’ I went through with them why they had chosen those sites.

CHAIR—So at what stage did the government relations officer become part of the process?

Mr Quigley—Once we had established those were the sites we were going to, for good engineering reasons—

CHAIR—So you had signed off on it and then your PA brought him in and said, ‘Look, this is what we’ve decided. Give these people a ring.’

Mr Quigley—Yes. What we do then is start to put the machinery in process to do all the things we need to do—and, by the way, we are cranking around with the designs and deciding how we are going to get all this built and what these sites look like. There was a review process, so he got to know about it during that process.

CHAIR—I do not want to mislead you. Everyone who spoke to us was delighted that they had been chosen, and well they might be—although a couple of them in my office location of Townsville said, ‘We’re

delighted, very excited, but had we been asked we would have preferred to do it in the CBD, where they are doing a massive reconstruction at the moment, and it would have fitted in.' Obviously they were not consulted beforehand.

Mr Quigley—No. As you would understand, Senator, that is always a difficulty. It would be nice to go to councils and ask, 'Where would you like us to go?' but the whole exercise is aimed at proving out the architecture and the build method. So if in fact we had gone to each of the five councils and they had said, 'We really want you to build in CBDs,' we would have ended up building five sets of CBD infrastructure. That is not what we were trying to do.

CHAIR—No, not necessarily. It is just that in Townsville they happen to be undertaking a massive mall reconstruction, which would have an underground and everything.

Mr Quigley—Yes.

CHAIR—Is there somewhere we could find the criteria for which each site was selected? If that is not publicly available could you make it available?

Mr Quigley—Yes, I think we could do that. If we do not have it on the public record we could certainly list the criteria for it.

CHAIR—That would be great. Again, if someone from your organisation was not watching yesterday, could you get them to have a look at the evidence given by a training group called Communications and Information Technology Training? Perhaps on notice, if we could impose upon you, you might address some of the very real concerns they had in view of recent unmentionable instances in another industry of relatively untrained people getting involved and killing themselves in dealing with electricity. There was some real concern expressed yesterday, which the groups involved felt perhaps was not focused on enough. They might be wrong, but perhaps I could just ask you again on notice, unless you happen to have been alerted to what they said and can answer us now.

Mr Quigley—I have not been alerted to what they said but I can assure you, Senator, that, of the 150 people we now have on board, one is a chief safety officer and that occupational health and safety issues are things that certainly the management team, and also the board, of NBN Co. is paying particular attention to.

CHAIR—Yesterday we were told that there are something like, if I remember correctly, 63,000 installers in Australia currently, which surprised me. The evidence was that we need another 30,000 once NBN Co. gets going and you are connecting 5,000 people a day.

Mr Quigley—It is passing somewhere between 4,000 and 5,000 homes a day.

Senator FISHER—Because of the initial demand.

CHAIR—So you have got all the 30,000 new people we will need in hand?

Mr Quigley—We have a ramp-up. There are things that we have to do in sequence. Often one of the things we run into is people asking whether we have done a particular thing at a particular point. As you would understand, with a start-up company and with something of this complexity, you simply have to sequence the tasks, so I did not start on construction until I started getting the product development done to the ACCC and then, as you would understand, the architecture. I simply sequence things. What I am sequencing is the ramp-up into volume. It is one of the issues we are beginning to look at now in terms of what the real numbers are that we need to get to, how those training programs are going to be conducted and how we are going to make sure we have qualified people to do this job. I can assure you that we will be looking at both safety and quality very seriously.

CHAIR—I would hope so. We have had some bad experiences in Australia in recent times and we certainly would not want them repeated. I simply raise that by way of being helpful, in that the people who were speaking to us seemed to know what they were talking about. Perhaps you could get someone to have a look at their evidence and give us a note or two back about whether they are on the right track.

Mr Quigley—I would be delighted to do so.

CHAIR—I am sure we have got lots of questions, but I just want to finish by having a quick look at the Tasmanian situation. You are starting up in July but iiNet and consumers are telling us that, at the moment, nobody has any idea of the price at which the packages will be offered. We are only 10 weeks away from connection. How can that all work?

Mr Quigley—The packages will be offered by the retail service providers.

CHAIR—What you are going to charge the retailers will determine what their package is, surely.

Mr Quigley—Those discussions have taken place with the retail service providers—and I should stress that it is interim pricing. For stage 1 in Tasmania, which is ahead of the national rollout and ahead of the SAU—the undertaking to the ACCC—clearly we had to establish some interim pricing. That will roll into the national base pricing to those retail service providers in July 2011. So this is an interim set of pricing on which we have had discussions with the three retail service providers. What they decide to charge their retail customers and end users is really up to them. But we have established already the pricing between us and them.

CHAIR—You are saying that you have firm contracts with the three providers in Tasmania and they know what they are going to be paying you until 2011?

Mr Quigley—And at the end of next year we will move into the national base pricing, which hopefully will have been through the ACCC process by then and be all approved.

CHAIR—I do not want to know what it is, but are you saying to me that the deal is done, it is all in writing and the lawyers have ticked it off?

Mr Quigley—There is certainly an understanding. I would have to come back to you after checking the actual contractual position. As you would understand, you have discussions and you kick things around and then you paper it all up. As to exactly where we are on the actual contracts, I would have to check; I am not 100 per cent sure.

CHAIR—But, whether or not the prices are signed off, they are resolved?

Mr Quigley—Yes.

CHAIR—So everybody knows what you are charging them. Approximately how long ago was that done—a week, a month, a year?

Mr Quigley—Certainly in the last weeks I think that has been finalised.

CHAIR—In the last weeks?

Mr Quigley—I think so.

CHAIR—As I understand it, in simple layman's language, you take it from the footpath to the front door and then someone else takes the service inside the door. What are you doing with multiple dwellings? I assume that there is some high-rise in Tasmania, even if it is low-rise. What has been the experience there? How does that all work?

Mr Quigley—I will give you an overall picture of our intention for multi-dwelling units. It is a little more complex because some of these the multi-dwelling units are private. You cannot just go and wire up inside a multi-dwelling unit even if an individual consumer in a particular apartment would like you to do so, because they do not have title. So our first intention would be to put a piece of equipment in the basement of the building. If the building is already prewired for fibre, it is relatively straightforward; if not, we would try and run fibre in the building. We cannot force the building owners to allow us to run fibre if they choose not to. In that case, if there is copper we have a fallback solution—we could, for example, use VDSL. On a very short length of copper you can get quite high speeds—around 50 megs. That is a fallback. Our first preference would be to wire the building with fibre but if that proves simply impossible we have a fallback.

CHAIR—Finally from me in this series, is it your understanding that, over a period of years, you have to make NBN Co. pay commercially? Is that your understanding of your board's role?

Mr Quigley—Yes, the board's role is to get a satisfactory long-term return on the capital that the government invests. It is up to the government to determine what that return rate is, but we would hope to generate a return. You can have plenty of debates about what is a satisfactory return; that is up to the government to decide. But yes: that is our aim.

CHAIR—Over what period of time?

Mr Quigley—This is a long-term project. For this type of nation-building infrastructure, I would imagine that you are looking at a 20- to 30-year time frame.

CHAIR—Correct me if I am asking the wrong person here; it may be that I should be asking the minister, but his likelihood of appearing before us is pretty limited.

Senator FISHER—Estimates.

CHAIR—Is it your understanding that there is still to be a 49 per cent private equity?

Mr Quigley—Frankly, I have not had any further discussions with the government on that, other than to read what they stated in their original release of information.

CHAIR—The exposure draft of the bill which we are looking at today, of course, says there is an ability to do that, as I read the bill, but it does not seem to be at all prescriptive about it happening. Are you or your board engaged—again, I do not want to know the detail, obviously—in looking at ways of financing the private investment by bonds, issue of shares, loans or—

Mr Quigley—I mentioned that we sequence things. We are nowhere near that point yet. It is simply not practical for a company such as NBN Co. to be going anytime soon to either private equity or private debt markets. We are not even thinking about that at this point.

CHAIR—How are you forwardly projecting your capital, your spending ability and what money you have? You are paying a lot of staff; you are digging a lot of trenches; you are buying a lot of fibre; you are employing a lot of people. What funding are you using to do all that?

Mr Quigley—The government is injecting equity at this stage. They have injected three lots of equity in the company. We submit by 31 May a three-year business plan to the government as a GBE. That will lay out our projections for the business in the long term. The government, I expect, will use that to have a look at the business plan and see if they agree with it. No doubt we will have discussions about the long-term funding assumptions that we have made in that business plan.

CHAIR—So what do you have at the moment? What is your spending capital at the moment?

Mr Quigley—Do you mean what equity we have?

CHAIR—What money you have been given and what you have been promised so that you can—

Mr Quigley—I will just look that up to make sure I do not mislead you. My recollection is that there have been three injections of capital so far. You can probably correct me if I am wrong, but I think it is a total of \$212 million.

CHAIR—I am quite happy for your assistant to sit next to you if that is helpful.

Mr Quigley—Ian probably has it right there. It was \$10 million, \$50 million and then \$152 million. What does that add up to? It is \$212 million.

CHAIR—And your business plan that is going to be delivered by 31 May will tell what you want forward into next year and the following year—and how many years after that?

Mr Quigley—It is a three-year plan, but obviously for something of this magnitude we are doing business planning on a longer basis than that, because we need to look at the overall plan for the total project.

CHAIR—But, as to the contracts you have signed to date for services and supplies and the commitments you have made—and you will obviously be making some fairly substantial long-term commitments as you put these things in place—do you have that all covered so far, or does that depend on the 31 May plan?

Mr Quigley—No, we will not—neither I nor the board would—commit the company beyond the commitments we have from the government for equity injection. It would be unwise of us to do so.

CHAIR—On 31 May, which of course is 20 days after the budget, you are going to be putting forward a proposition on what the government are going to have to plan to provide to you over the next three years at least—and, in the government's case, I guess four or five years. I do not want you to comment on government procedures, but, if the budget has been and gone and there is no allowance for what you are going to suggest to them you should be getting over the next few years, how are you going to fund your operations? Or are you just assuming that the government will make provision for funding you?

Mr Quigley—I have read the government's original, 7 April, announcements. On that basis, they projected a funding of the company—

CHAIR—I missed that. Could you—

Mr Quigley—not to the extent, obviously, of the totality of the complete project, but they talked about making a certain amount of funds available. We are working within that, requesting when we need it.

Senator FISHER—Are you talking about the \$212 million in that respect?

Mr Quigley—No, the announcement was not related to \$212 million; it was—

Senator FISHER—So what was the 'certain amount'?

Mr Quigley—The 7 April announcement was talking about an amount of money that the government was allocating initially for the project.

CHAIR—I missed it. Did it mention a figure?

Senator FISHER—How much?

Mr Quigley—I believe it did. We can have a look at the record again—we can check on that—but, yes, it was certainly well above 212.

CHAIR—It was a public announcement—

Mr Quigley—It was a public announcement, yes.

CHAIR—of a sum of money. Can you just help me? As I said, I missed it. Was it in the billions of dollars?

Mr Quigley—Yes. It was an amount of money that was, when it said—

CHAIR—I am surprised, Mr Quigley. That being the total funding for your group, I would have thought that would be the first thing you would remember—

Senator FISHER—Top of mind.

CHAIR—in front of everything else.

Mr Quigley—I do not want to speak for the government. It is up to them.

CHAIR—No, but you are telling me that it is a public document, which unfortunately I missed.

Mr Quigley—It is a public document, yes.

CHAIR—But you must know whether they provided for you \$10 billion or \$20 billion or \$1 billion.

Mr Quigley—Can I say this, Senator: it is sufficient that I do not have to concern myself about it in the next little while. The reason I am hesitant to answer directly is that what I am referring to here is a press release, and, frankly, I never like to quote press releases. I would prefer to go back to formal arrangements, and the formal arrangements between NBN Co. and the government are that we project what we may need over the next little while and make an equity request to the government, and the government looks at that and then grants us the equity request or does not. So far, each time we have made an equity request the government has looked at it and granted the equity request..

CHAIR—So the government media release is simply a public exposition of what you have agreed in some other process in a formal way?

Mr Quigley—No, it was made on 7 April. I was not even appointed by that time.

CHAIR—On 7 April last year, was it?

Senator FISHER—2009, was it?

CHAIR—I thought you were talking about this year.

Mr Quigley—No, 7 April 2009. It was the release that initiated—when the government announced the formation of NBN Co.

CHAIR—So, although you do not remember it, you are confident that it is enough to pay you through to as far as you need to go?

Mr Quigley—I am confident and the board is confident that we are being quite careful to make sure that the funding of the company is not at risk.

CHAIR—And there is no expectation of your board at this stage that it can rely on any other funds except revenue plus government funding?

Mr Quigley—That is correct. In the initial phases of the company, clearly, government funding is what the company will largely be relying on.

CHAIR—I have a million more questions, but I will go to Senator Lundy and then to Senator Fisher.

Senator LUNDY—I would like to go to the issue of architecture. You invited questions in that regard, and we have heard evidence on it from other witnesses. I will ask you in the first instance to describe what a layer 2 bitstream service is and the rationale behind NBN Co.—following consultation with industry—putting that forward as a feature of your network architecture.

Mr Quigley—The layer 2 bitstream product construct that we decided upon was a compromise. You could go with layer 1, which is just dark fibre with no electronics on it. Layer 2 bitstream is kind of the network plumbing. We can move bits from one location, from a premise, to a point of interconnect. We do not move above that into layer 3, although there are certain constituencies who would like us to do so, for various reasons. Likewise, we also have people who say we should be operating just at layer 1. I have even had people tell me that we should be operating at layer zero, which means that we should just dig holes in the ground for other people to lay fibre in all over the country. There is a judgment to be made about where you can get ubiquitous coverage but make the smallest possible footprint, both in a geographic sense and in a value chain sense. We wanted to leave plenty of opportunity for retail service providers to innovate, to add functionality, on top of the layer 2 bitstream. So it was a considered judgment. We also had a look at what was going on in other parts of the world, particularly Ofcom in the UK and parts of Europe. There seemed to be general convergence that this was the right point in the value chain, in the stack, to form a wholesale only access product.

Senator LUNDY—Would it be fair to describe the approach you are taking—layer 2—as optimising the value-adding opportunities for the retail service providers that operate at layer 3?

Mr Quigley—Yes. That is absolutely the case. It provides them with connectivity that they can then build upon. It is a fairly plain, vanilla service, but it allows a large degree of innovation on top of that.

Senator LUNDY—We have heard from some witnesses that they wholeheartedly support this—for example, Optus yesterday. Can you describe the level of consultation you undertook before releasing the document about the network architecture. Can you give the committee a bit of a feel, from NBN Co.'s perspective, for what the level of support is within industry.

Mr Quigley—Overall, there is a high level of support across industry. We certainly found that in the responses we had to our product consultation paper. As I said, I present in public very regularly, field questions, and generally there is a fair degree of support for a layer 2 ethernet based and GPON based product. There are the occasional people who would like to see us go into layer 3 and even people who would like us to go beyond there. There is some confusion, by the way, with people thinking that we are providing retail services. We have to often correct people. I think Senator Macdonald's analogy was a good one: we are providing the tracks or the plumbing or whatever you want to call it. We are providing the underlying infrastructure so that the competitive market can work above us.

Senator LUNDY—I ask you specifically: do NBN Co. plan to offer services above layer 2 on your fibre network?

Mr Quigley—No.

Senator LUNDY—Not at all?

Mr Quigley—We have no plans to provide any services above layer 2—with one exception. We are embedding some layer 3 functionality in the network because we have to do that to provide some sophisticated layer 2 services, but we are not offering those layer 3 services as a product.

Senator LUNDY—At a retail level.

Mr Quigley—That is right—or even at a wholesale level. We are simply not offering that. It is just a functionality that is inbuilt into the network.

Senator LUNDY—We were supplied with the descriptions of the different layers, the OSI model, this morning, so we are developing an understanding about layers. In that regard do you expect there to be a vibrant market for carriers and carriage service providers purchasing those layer 2 services and operating in the retail space?

Mr Quigley—Yes I do.

Senator LUNDY—What sort of indication have you had from them to date?

Mr Quigley—In talking to retail service providers, not only do we do very broad consultation but we go out to specific retail service providers and our team does what we call 'deep dives'. In other words, we talk to them for some hours at length about what they need for their services. They are talking about the details of how they will interface to us operationally and I believe there are going to be customers of this network both at the retail level and at the wholesale level. In other words, the people to which we will supply our layer 2 service will then perhaps put layer 3 functionality on that and wholesale it to retailers. So there could be

multiple layers sitting above us in the overall market. There is an opportunity for quite vibrant and innovative companies to be using this ubiquitous service.

Senator LUNDY—I have a technical question that came up with witnesses earlier today. What happens in the scenario of the provision of the layer 2 physical infrastructure where you have a multiunit development or even an estate style development where in the past the market has operated in a way that the default carrier in most cases, Telstra, has been the one that has the default legislated access to those sites? Where is that at from NBN Co.'s perspective and how will you treat estate or multiunit residential developments for the purposes of layer 2 infrastructure?

Mr Quigley—If it is an estate in which there are multiple dwellings, if we established a fibre network there, our intention would be wholesale only, once again, open access. I think what people sometimes refer to is whole estates being locked up with one carrier and no option for the consumer to move. That would absolutely not be our intent because we can support multiple retail service providers so that different people in the estate could have different retail service providers if those retail service providers chose to use underlying network. We are not the people who have the relationship with the end customer. They are free to choose whatever retail service provider decides to use our network. In fact, we have the capability in this layer 2 network to supply an end user who chooses to have two retail service providers or three. They could have one for video, one for voice and one for high-speed internet—

Senator LUNDY—In the same house?

Mr Quigley—In the same house and all on the same fibre because we are partitioning the product to allow that to happen. We can provide quality of service for each of those streams. We can hand each of those streams that are embedded within the stream that is in the fibre at the point of interconnect back off to different retail service providers.

Senator LUNDY—That is good news for people in new developments.

Mr Quigley—Consumers, yes.

Senator LUNDY—I have another question about the quality of the service that the NBN will support and provide. We have had, again, a fair bit of discussion about how it compares in price terms and where entry-level pricing will be. We have had some speculative discussion as you have heard. I want to hear from you what is different about a fibre based broadband service say at 25 megabits, for example, on fibre as compared to an up to 25 megabits service on ADSL2+ if you are lucky enough to live close to the exchange and have good quality fibre and all the other qualifications that go with an ADSL service?

Mr Quigley—The fundamental difference which is certainly true for ADSL is that because it is a copper based service that is using what is called DMT, discrete multitone, it uses 256 different frequencies to try to optimise the performance across the copper. It can, in fact, rate adjust, so it can wind back the speed so that you can get a reasonable service without bit errors dependent on the impairments on the copper, what might be connected to the copper in terms of stubs and also the distance.

So while the modem at each end may be able to go up to 25 megabits per second, it will rate-adjust downwards, dependent on noise, cross-talk, length—all of that. That is why you can never be quite sure what speed you are actually going to get until you try it. That is why it is very difficult for people who, for example, are providing a video service—if they are trying to put high-definition video across such a network, they are never quite sure what speed they will get, and it is absolutely distance-dependent. Fibre suffers from none of those problems.

Let us say we are selling a block of 20 megabytes per second. That person will get 20 megabits per second all the way to the end, even if they are at the very limit of the network. It does not matter what else is going on around them. There are no questions about interference. And it is not a peak speed; it is uncontended. In other words, it is not shared like a wireless network or a hybrid fibre coax network is—it is uncontended, which means they get the full 20 megabits, guaranteed, which is not only important for residential users of services like video but very important for small business users. It is particularly important for small business users. The other important thing it is that the symmetry is much better than fibre.

Senator LUNDY—I was going to ask you whether it was asymmetrical like ADSL.

Mr Quigley—There is a level of asymmetry, but it is more like two to one. A GPON is 2½ gig down, 1.25 gig up, which will gradually improve. That is only a one to two. And in fact we can provide fully symmetrical services to small businesses—or, I should say, to retailers, who will supply them to small businesses.

Senator LUNDY—So how those symmetrical services are configured will ultimately be up to the retailers, but you are able to facilitate a symmetrical service?

Mr Quigley—That is right. We have enough flexibility, we believe, in our product that retail service providers can have innovative bundles of services, and not just their own—they can add the different bundles; they can make it symmetrical or asymmetrical, or however they choose.

Senator LUNDY—Just for the benefit of colleagues, upload and download speeds are what we are talking about when it comes to symmetry.

Mr Quigley—That is right.

Senator LUNDY—It has certainly been an issue in conversation. As social networking and sharing of content become a feature of the way businesses operate, upload speeds and that symmetry in their network connections are becoming more and more important.

Mr Quigley—Particularly, I think, as we start to move towards this new high-definition, low-latency video conferencing which will save people from getting on planes and spending a lot of time at airports and in travelling, symmetry is becoming very important.

Senator LUNDY—I know you have heard this question from me before—and you will keep hearing it! We know there are waiting lists out there for people in RIM-affected areas. We know—and we know that you know—that there are choke-points all over the network. And we now know, as a result of evidence from the councils that are in the first sites, that some of your first rollouts will address RIM-affected areas. To what extent are RIM-affected areas featuring in how you are able to prioritise the building of the physical infrastructure that we know will resolve these choke-points in the existing telecommunications infrastructure in Australia?

Mr Quigley—When we made the decisions on the first release sites that the engineers made, I cannot say I recall that a consideration of whether the RIMs were in those areas was a factor.

Senator LUNDY—We know that there are some—

Mr Quigley—There are some in there, yes.

Senator LUNDY—based on evidence—which is good.

Mr Quigley—That is good, but, as we move—as we are starting to do—into the volume rollout and as we start doing the build-planning for that, I think that is certainly one of the factors we need to put on the list: ‘Are the places where it is very difficult to provide broadband over copper because of pair-gain systems, such as RIMs?’

Senator LUNDY—Thanks for that.

Mr Quigley—Rims were good in their time!

Senator LUNDY—You do not need to defend RIMs to me, Mr Quigley! Don’t bother! On your engagement with local councils, you mentioned, and I agree, that it is a very important aspect of the work that you are doing. Can you provide the committee with a little more detail about not just how you are doing that with the first release sites but, more broadly, NBN Co.’s strategy to liaise and engage with local councils as you proceed with your rollout.

Mr Quigley—Obviously the first priority now, apart from the stage 1 in Tasmania, is the first five release sites. We are doing a range of things, not only engaging with the local councils. We are having community open days in each of the areas so that people can come along and ask questions. We have established 1800 numbers. In fact, for anybody who is down there, we have given our cards out to the companies we have chosen to do some of the detailed design—that is, turning the architecture into the detailed design on the ground—so that if anybody asks them, ‘What are you looking at?’ or ‘What are you doing here?’ they can hand over our card and say, ‘We are here from NBN Co. If you have any questions please do not hesitate to call this 1800 number.’ So we have that staffed and we are having those open days.

We expect a growing amount of community consultation. It is one of the things that we are now sequencing. As we ramp up we are putting more effort into community consultation. People are very hungry for information, which is why we put a bit of effort into trying to have the website as friendly as we can for people to get information. But the cold, hard reality is that often people are asking us questions to which we cannot yet give an answer simply because they are policy issues that the government has yet to make a decision on or they are issues that are under confidentiality agreements. We get lots of questions about Telstra negotiations.

Senator LUNDY—Another issue that came up yesterday in the hearing in Melbourne was related to workforce, which you touched on in your opening remarks. With regard to contractors, I think you mentioned the industry capability network and tapping into that. Can we hear your views on your anticipated workforce load, given the ambitious nature of this rollout, and what you are doing now in engaging with the industry training council network and those charged with the responsibility of making sure that workers or contractors engaged are suitably qualified at a technical as well as an occupational health and safety level?

Mr Quigley—We are doing two things, broadly, on that. Our head of construction, Patrick Flannigan, is building up his staff. He is engaged with the construction industries. We have started to have discussions about exactly what the job is and how we can do it as efficiently as possible, how we can use some of the latest construction methodologies and technologies to reduce the amount of work that needs to be done in the field and have more of it, for example, done in the factories—for example, preconnectorisation. On the other side, Kevin Brown, who is in charge of corporate services including human resources, is engaged with various entities discussing training needs and how qualification will take place.

Senator LUNDY—Finally, when will the first release sites be up and running? When will you be able to come back and say, ‘This is what we’ve done and this is how it’s working.’

Mr Quigley—We have four stages that we are going through. The first one is a design phase. We have engaged seven different design companies that go around looking at, given the boundaries, how you actually convert our architecture into the physicality. On paper it looks like nice neat squares—you have got FDHs and fan sites—but then you come to the ground and you have actually got to measure lengths and all that sort of business. They are doing that now. We will then move into the second phase, which is the actual construction, then into the productisation phase, where we will be working with RFPs, and then finally into an evaluation phase. In the second half of this year we will be into that second phase of construction, and later in the year we will be into the third phase. It is very important that we do this qualification. This is a massive engineering project, and we need to make sure we take it step by step and do the job well. As in any big engineering exercise, you have got to make sure you look at all the details and do not rush into something too early.

Senator LUNDY—I have got questions about consumer engagement but I think my colleagues foreshadowed that they would like to ask those questions—issues that were raised by ACCAN earlier today. So I will finish there. Thank you.

CHAIR—I will now pass to Senator Fisher, but, before I do, my staff have been beavering away on Google and they find there are two 7 April statements, one in 2009 and one in 2010.

Mr Quigley—It is probably the 2009 one that I was referring to.

CHAIR—They tell me that is the \$4.7 billion one, whereas there was a \$100 million reannouncement for the NBN for Tasmania in 2010. I only raise that to say, when you are getting back to us regarding those things, perhaps you can give us both the 7 April 2009 and 7 April 2010 statements so that we are not confusing ourselves.

Mr Quigley—Indeed.

Senator FISHER—Mr Quigley, on your response to Senator Lundy just given—stage 1, 2 and 3 for the first release—I think you said that in the later part of this year you will move to stage 3. Would it surprise you to learn that I heard Mr Hales from the City of Onkaparinga Council, a local government area in South Australia, saying yesterday that he understood that the Willunga first release site would be up and running by August of this year?

Mr Quigley—When you say ‘up and running’, it depends on whether he is talking about the build itself and actually connecting services, but then there is a qualification that needs to take place. Remember, I can only provide a wholesale service. What people are often asking about, which you need to clarify, is the retail service that will be provided.

Senator FISHER—Do you think he knows the difference?

Mr Quigley—At this stage, I am not sure; I have not had—

Senator FISHER—Have your people been talking to his people?

Mr Quigley—Our people are certainly talking to the folks in Willunga, but I have never spoken to the gentleman myself, so I am not sure.

Senator FISHER—I think he is the boss of the engineering bit and the technical bit. Staying on the first release sites: I understood you to say in response to Senator Macdonald that if they happen to fall in marginal seats we can blame you. How so, because you have also said that the engineers made the decision, so how and why would we blame you?

Mr Quigley—Probably because the engineers do not pay the slightest bit of attention to marginal seats, Senator. If you think anybody should pay attention to marginal seats, it would probably be me, but I did not.

Senator FISHER—But did you change any of the recommendations? Are the five first release sites chosen the ones that the engineers recommended, or did you muck around with what they recommended?

Mr Quigley—No, I do not believe I mucked around with them at all. To be honest, I cannot remember now whether there were a few more than the five and we looked at the engineering aspects of it, but what I can tell you is that the question of marginal seats had no bearing at all on the choice. It was not even a factor that we even thought about.

CHAIR—Or that you thought about.

Mr Quigley—Certainly that I thought about. I can assure you that the engineering folks would not have thought about it.

Senator FISHER—So the five that were selected were five that the engineers proposed to you be accepted?

Mr Quigley—They could have proposed a few more, and we talked about the pros and cons of them and settled on the five.

Senator FISHER—Can you advise the committee on notice which others were proposed by the engineers and which others were discussed?

Mr Quigley—If there were, yes. There could be a couple of others that we had on line, but we can certainly do that.

Senator FISHER—And you are going to provide the committee with the criteria upon which the decisions were made.

Mr Quigley—We are going to provide the committee with the criteria, yes.

Senator FISHER—Thank you. Did the first release sites that were chosen or any others that might have been in the mix apply to be picked?

Mr Quigley—No.

Senator FISHER—There was no application process?

Mr Quigley—No, there was no application process. I should say that a number of people expressed an interest in being part of the NBN.

Senator FISHER—Of course. Did the NBN Co.'s government relations person at any stage have discussions with the engineers about the first release sites?

Mr Quigley—No, not that I am aware of.

Senator FISHER—At no stage?

Mr Quigley—Yes, subsequently when we made the decision, of course, he needed to go out and engage with the communities, the local councils.

CHAIR—Could you just check that with the engineers and confirm what you have told us? You are giving your knowledge, obviously; you were not with the engineers every minute of the day, but could you just confirm with them that they did not have discussions with your government relations person before you made the decision?

Mr Quigley—I will confirm that, but let me assure you that there is no conspiracy.

Senator FISHER—That is your word!

Mr Quigley—We are much too busy to be playing games about marginal seats.

CHAIR—You see, Mr Quigley, this is the problem when you engage as a government relations officer a guy who has been up to his neck in political manipulation, rorting electoral votes—

Senator LUNDY—Settle down, Chair. What are you alleging? If you are alleging something specific, do it, but do not cast innuendo like that. It is ridiculous and it has been refuted by the witness.

CHAIR—Mr Quigley is saying that he can assure us that there is no conspiracy. All I am saying to Mr Quigley is that this is the problem you get yourself into when you engage highly political, manipulative people in these very senior positions. But I do not want to lecture you on how to how to run your business—

Senator LUNDY—Chair, can I suggest that you be careful how you cast aspersions on people who are not appearing, because you will generate a right for them to respond in the Senate to your criticism, as you well know.

CHAIR—I do not think Mr Kaiser would reject any description I have given of him, Senator Lundy, and he is free to—

Senator LUNDY—You think it is funny and flippant. It is actually a serious matter. I just draw your attention to it.

CHAIR—It is a very serious matter. That is why I would have thought, for someone of Mr Quigley's ability and experience, it was rather an odd appointment on the recommendation of his boss minister.

Mr Quigley—I will provide the information you requested, but I would like to put on the record here that I find Mr Kaiser an extremely valuable member of the team. He is providing a lot of value-add to the company. That is not just my view; that is shared by the entire management team.

CHAIR—I am sure he is. Mr Goss and Ms Bligh also thought he was a very valuable member of their teams, and so did the campaign committee of the Labor Party. They thought he was a very valuable member. I am not alleging impropriety of you. I just say these are the sorts of conspiracy theories that you generate when these sorts of appointments are made.

Senator LUNDY—We all agree it is a conspiracy theory then. I am pleased to hear that.

CHAIR—They were Mr Quigley's words. I said them in inverted commas.

Senator FISHER—Mr Quigley, has NBN Co. got a copy of the implementation study which the minister says he has had for some four weeks or so?

Mr Quigley—Yes.

Senator FISHER—You have got a copy of the implementation study?

Mr Quigley—Yes. As I have said on numerous occasions, we were in close cooperation with the lead advisory team of McKinsey KPMG, as you would expect.

Senator FISHER—What are you doing with your copy of the implementation study—anything?

Mr Quigley—Yes. I read it.

Senator FISHER—Does it make good reading? We would all like to know.

Mr Quigley—It depends on your bent in literature, I guess.

Senator FISHER—Or indeed network architecture.

Mr Quigley—But I would not say it is going to be a bestseller. We obviously had in-depth and detailed discussions with the lead advisory team during the course of the study, as you would expect. We were coming, as I have said on the public record, from two different angles—them from industry structure and policy advice to the government and us from technology and architecture and product design. So we were quite complementary.

Senator FISHER—In your view, does the implementation study consider all the issues that it needs to consider and provide an appropriate analysis of each and every one?

Mr Quigley—It is really not up to me to comment on the implementation study. I should say that the lead adviser—

Senator FISHER—So why has it been provided to you at this stage in advance of public release of it?

Mr Quigley—Because I was heavily involved in the discussions with the lead advisory team probably, and our views as we debated issues no doubt were an input into that study.

Senator FISHER—So why was it given to you—so you could second-guess what was recorded as your input?

Mr Quigley—No. I was in fact on the steering committee—as part of the government—that was having meetings with the McKinsey KPMG people right throughout the process. I think it is perfectly natural that I would get a copy of the document.

Senator FISHER—Was everyone else that was involved on the input end of the implementation study given a copy of it? Has everyone else so involved got a copy of it?

Mr Quigley—I do not know that. I am not sure, but that is a question for the department.

Senator FISHER—So you have read your copy.

Mr Quigley—Yes.

Senator FISHER—Are you doing anything else with it, having read it or as a result of having read it? It cost \$25 million. I hope taxpayers are getting bang for their buck.

Mr Quigley—That is a question I will leave to the department to answer.

Senator FISHER—Are you doing anything with it beyond reading it or as a result of having read it?

Mr Quigley—As you would expect, there is a complementarity between the issues that the implementation study was studying and what we are doing.

Senator FISHER—Is complementarity in any respect the same as duplication?

Mr Quigley—No. I would not use the word ‘duplication’.

Senator FISHER—So there is no overlap between the implementation study and the sorts of studies that NBN Co. has been undertaking itself at NBN Co.’s cost—for example, into the network architecture?

Mr Quigley—It is—

Senator FISHER—We will be able to tell when we see it.

Mr Quigley—In some of these very complex issues, there is a lot to be gained—a tremendous amount to be gained—by having a very productive debate from two angles. As we know, this is a project in which—

Senator FISHER—So that is not duplication?

Mr Quigley—It is not duplication.

Senator FISHER—That is value-adding, is it?

Mr Quigley—It is value-adding. If I were in private enterprise, spending on a project of this size, we would not hesitate to spend that sort of money upfront to make sure that the issues were investigated from every angle possible.

Senator FISHER—So, \$25 million was spent on the implementation study. What is NBN Co. spending on its own study?

Mr Quigley—We are not doing a study per se; we are doing the design of the network.

Senator FISHER—Have you outsourced NBN Co.’s decision of the design of the network?

Mr Quigley—No.

Senator FISHER—So that is all being done in-house?

Mr Quigley—Yes. What we are establishing is a telco—people who understand product development of telco products, people who understand architectures and equipment. We in fact have a carrier licence now, so we are a telco.

Senator FISHER—What will be the next thing that you do with the implementation study? Is it just sitting on your bookshelf? I bet it is not gathering dust.

Mr Quigley—No, it is certainly not gathering dust. We have not finished the entire design of the network, as you would expect. We have done a fair bit on the fibre network, but there are other parts of the network we need to think about. From time to time I will refer to the document to remind myself again of the conclusion that the implementation study folks came to.

Senator FISHER—So you expect recommendations of the implementation study to be implemented by the government?

Mr Quigley—That is not for me to say; that is up to the government to say.

Senator FISHER—Then why would you expect to have a look at the recommendations of the implementation study, if it is not the way that you expect the government to proceed?

Mr Quigley—I have no expectation one way or the other. I am just saying it is not up to me to speak on behalf of the government.

Senator FISHER—I asked you about your next steps with the implementation study, and you said you will have a look at it to see what the folks—‘folks’ is getting to be common language these days—recommended. Why would you do that?

Mr Quigley—Clearly, because it is a document that has had a lot of work put into it.

Senator FISHER—A lot of taxpayer dollars. The submitters to these hearings have put a lot of work into their submissions. Do you read their submissions too, to see what they reckon about the steps along the way for NBN Co.?

Mr Quigley—Certainly not every one. Some of our staff read them and, if they believe there is something important coming out, I will have a look at it. And I try to keep up with what is going on in other parts of the world in terms of network architecture and network design, as you would expect.

Senator FISHER—Does the implementation study recommend that NBN Co. do things? Does it contain recommendations about NBN Co. itself?

Mr Quigley—It is not up to me to foreshadow anything that is in the implementation study; it is up to the government to decide when they—

Senator FISHER—You have read it. I am not asking you about the ‘what?’ I am asking you whether, in terms of subject matter, it contains recommendations about what NBN Co. should or should not do in any respect.

Mr Quigley—And, as I have said, it is really not up to me; it is up to the government to decide when the content of the implementation study is made public. It is not my part to comment on that.

Senator FISHER—I am asking about a topic of the implementation study, not about it itself.

Mr Quigley—I do not believe I am in a position to comment on that.

Senator FISHER—Okay. Impasse. Checkmate for now! Will the implementation study be informing the NBN Co. business plan that I think you have said we will get at the end of May?

Mr Quigley—We will submit a three-year business plan, as we must as a GBE, to the government, on 31 May.

Senator FISHER—So you will submit it on 31 May?

Mr Quigley—That is right.

Senator FISHER—Will the implementation study form any part of the basis for that business plan?

Mr Quigley—That is a very difficult question to answer because, as we have developed our business case, and as the implementation study was studying the business, we obviously had interactions, we exchanged information. We had a view on certain things; they had a view on certain things. We compared those views. If we were convinced that their view was correct, we may have incorporated that in what we are doing—in other words, our view of things. That is a natural process that you would expect, and it was a very healthy and very productive process—which is why I made the other comment that I think it was a very reasonable and quite smart thing to do to study the problem from two angles.

CHAIR—But you could have got to where you are now without bothering with the implementation study. Your plans to date, your actions to date, have all progressed without your having even seen the implementation study.

Senator FISHER—You have done it without it anyway.

Mr Quigley—I can only tell you that if I was running a private company and I was looking to do a project of this magnitude I might get more than one implementation study done.

CHAIR—But you would do it before you started, wouldn’t you, not when you are almost halfway through?

Mr Quigley—No, it is not a question of being halfway through; it is question of having these two things going in parallel. In other words, having a company looking at the details of the technology, a telco, and

having an implementation study running in parallel was a very healthy and productive process, I found. I found it very useful.

Senator FISHER—Has the government or the minister indicated to you or to NBN Co. how it will be responding to any part of the implementation study?

Mr Quigley—No, I do not know how the government will respond.

Senator FISHER—So you might as well not have the bedtime reading in terms of the implementation study.

Mr Quigley—I do not agree with that. As I said, it was a very productive—

Senator FISHER—Therefore, what use has it served you to date? Confirmation of what you told McKinsey and Co. over the nine months gestation and cogitation of the implementation study?

Mr Quigley—No. We had numerous joint meetings on some quite complex subjects and those interactions, as in all such interactions when you get people who are studying difficult problems, are very useful interactions. They inform them; they inform us.

Senator FISHER—You did not need to see a report to know about the usefulness, in your view, of those interactions.

Mr Quigley—No. I think it is fair to say that when I read the implementation study it was not all new news to me, clearly, because I had had these close interactions over a long period of time.

Senator FISHER—So how has it helped you?

Mr Quigley—I think the process itself has been enormously beneficial.

Senator FISHER—But you did not need a copy of the report to remind you that the process itself was helpful.

Mr Quigley—No, but it is very nice to have a nicely documented summary—

Senator FISHER—For \$25 million.

Mr Quigley—of all of those discussions—very useful.

Senator FISHER—Do you think that might be useful to the rest of the world?

Mr Quigley—It is not for me to comment. That is the government's decision.

CHAIR—Did the implementation study suggest, without suggesting the sites, that you would be well advised to do these five pilot studies in different parts of the country?

Mr Quigley—On that particular issue, that was a decision we made inside the company.

CHAIR—So you did not need the implementation study for that?

Mr Quigley—No.

Senator FISHER—On the structure and governance of NBN Co., what sets out the objects? Where can I find the *raison d'être* for NBN Co.?

Mr Quigley—You can find it in the letter that was written to me as the original interim executive chair. There was in my appointment letters a set of objectives that the government has set.

Senator FISHER—When will those be formalised and how will they be formalised?

Mr Quigley—They are on government letterhead. I take them as quite formal.

Senator FISHER—You earlier said that a press release from the minister about projected funding of NBN Co. was just an indication and not binding, so why would you take a letter from the minister—

Mr Quigley—I absolutely did not use the words 'an indication and not binding'. I just said in response to the question about funding that, as far as I was aware, that 7 April 2009 document had, as I recalled, a certain level of funding that the government had put in the public domain.

Senator FISHER—Yes, but you are not prepared to rely upon it.

Mr Quigley—Why am I not prepared to rely on it?

Senator FISHER—You earlier said in response to Senator Macdonald that you would rely upon the \$212 million total for three lots of equity funding injections that you have got thus far, but no further than that.

Mr Quigley—That is a perfectly sensible process for us to project to the government what our funding needs are over the next period and then submit—

Senator FISHER—So you are going to rely on the \$212 million. Are you going to rely on anything else?

Mr Quigley—Yes, of course. All the planning we are doing is on the assumption that there will be funding available to execute the plans.

Senator FISHER—I will go to that in a moment. To go back to your objects, when do you expect to formally record, and if so in what form, the *raison d'être* for NBN Co., your objects, why you exist?

Mr Quigley—I have to check on this but I think that, as a GBE, the objectives of the company are set by the government, so I suggest that is a question that the government would be best to answer. We are quite clear —

Senator FISHER—Do you know what they are? Do you know the objectives of the company that you head?

Mr Quigley—Yes, I am absolutely clear on the objectives.

Senator FISHER—What are they?

Mr Quigley—To provide 100 megabits per second to at least 90 per cent of premises in the country and to provide at least 12 megabits per second to the remainder, using a combination of wireless and satellite technology.

Senator FISHER—Does that mean that you see your role as—

Mr Quigley—Also as a wholesale provider of services.

Senator FISHER—Does that mean that you see NBN Co.'s role as providing services, ensuring there is no gap in coverage—just to fill the gaps—or is it the role of NBN Co. to provide all wholesale broadband services itself?

Mr Quigley—As a wholesaler, not a retailer—I want to be clear—our responsibility is to make sure that every premise in Australia is covered. If in fact somebody has built already a wholesale fibre based product in a particular premise, it would be pretty silly of us to duplicate all of that. I do not suspect that is likely to happen.

Senator FISHER—So you are a gap filler?

Mr Quigley—No, certainly not. I do not agree with that. The vast majority of premises are likely to be connected with NBN Co.'s network.

Senator FISHER—Back to the reason for being, is part of your reason for being to serve the interests of NBN Co.'s shareholders as they may be from time to time?

Mr Quigley—The shareholder is the government.

Senator FISHER—Yes, at the moment. They say that within five years things will change, but at the moment it is the government. Is it part of NBN Co.'s charter to serve the interests of its shareholders?

Mr Quigley—We operate on a quite logical basis as any GBE does. The government says policies and objectives for its GBEs and we follow those.

Senator FISHER—Do you have a memorandum of association as do publicly listed companies?

Mr Quigley—We have various formal documents—constitutional and the usual things. There is no reason why we cannot make those available.

Senator FISHER—Is that publicly available?

Mr Quigley—Yes.

Senator FISHER—Presumably that would contain something about your objects.

Mr Quigley—Yes, it may. It is not a document that I refer to often. Our annual report will probably have a lot of that. What we are trying to do is make it quite clear.

Senator FISHER—Yes, although it may go more to your activities. Let's see. Thank you. You have referred to some of the contracts that you have signed. Can you provide the committee on notice with an indication of the sorts of things that are subject to those contracts? That is, the provision of services or the

provision of goods, with whom NBN Co. has reached those contracts, the length of time those contracts cover and the amount of money to change hands as a result of those contracts.

Mr Quigley—Yes. I believe we could do that. That is of course subject to any confidentiality and commercial issues. Unless there are some particular conditions that are commercially confidential for another party—we are of course subject to those limitations—we certainly can do that.

Senator FISHER—If there is that limitation, can you please identify it in your answer to the question on notice. Can you deal with that by indicating, for example, if it relates to the value of any of the contracts and deal with that by indicating the value of contracts in a particular financial year—that is, from your commencement, April 2009 to 30 June 2009 and then 1 July 2009 et cetera—for each contract signed thus far by NBN Co.?

Mr Quigley—I will certainly take that on notice and do it to the best of my ability. We will try and comply with your request.

Senator FISHER—Thank you. How do you know that NBN Co. will be able to pay its debts when they fall due?

Mr Quigley—Because we will not make commitments by the company unless the funding is covered.

Senator FISHER—Earlier in response to Senator Macdonald you referred to the three lots of equity injection from the government. I understood you to be saying that you would not enter into contracts that incurred in excess of that total. Is that right?

Mr Quigley—That is correct.

Senator FISHER—That is your only source of funding at the moment. As you said to Senator Macdonald, the only other source of funding will be revenue and you are not getting any of that yet because you do not have any services.

Mr Quigley—That is correct.

Senator FISHER—I note that there has been a public announcement that NBN Co. has signed three contracts to IBM, Oracle and Accenture for software support for your core business needs. Does that involve provision of software services to NBN—is it all about maintaining the internal corporate functioning of NBN?

Mr Quigley—Yes. Every company as it grows needs to provide an ERP, enterprise resource planning, system which has, for example, finance functionality—

Senator FISHER—So that is all about helping NBN do its business?

Mr Quigley—Yes.

Senator FISHER—Is it correct that the total value of those three contracts is \$23 million?

Mr Quigley—To the best of my knowledge, I think that is correct, but we can certainly check on that and get back to you.

Senator FISHER—Yes, please. As you told the committee earlier, you will not go beyond the equity injections that have been promised to you by the government—\$212 million at this stage. That means just three contracts, which are only about NBN's core business, and only IT business at that, are of a value of \$23 million out of \$212 million. That is more than 10 per cent of the equity you have in the kitty from the government. That is a significant swag.

Mr Quigley—This is significant capability that any company needs. This is not a surprise at all; this is what we expected to happen and what we are expected to do.

Senator FISHER—Are the other bits and pieces of what you might be doing a less significant part of your capability?

Mr Quigley—Certainly to date that is the largest amount of money we have spent on a capability. We are going to have to build a network operations centre, an integration lab and support centres. They are all going to be another expenditure that you need to make in order to support a network of the size we will be building. And, of course, at some point we are going to need to be placing purchase orders for the equipment to actually build the network. But we will do that when we have the approval and agreement of the government to spend that money.

Senator FISHER—So you will provide on notice details of contracts of that sort.

Mr Quigley—Indeed.

Senator FISHER—Earlier you talked about encouraging the engagement of local contractors. Was that in respect of the first release sites or more generally?

Mr Quigley—That was more generally.

Senator FISHER—In doing that, will you give consideration to value for money and the price to be charged by local contractors?

Mr Quigley—Yes, of course.

Senator FISHER—Will you be supporting local jobs for local people?

Mr Quigley—As you would expect, we will be going through a tender process. We will be letting contracts on the basis of what we think makes good commercial sense, but we will obviously be trying to make sure that local companies have an opportunity to bid for those contracts.

Senator FISHER—Will you set up a panel of contractors to provide services?

Mr Quigley—I cannot answer that question yet. When we get to the point where we are into the volume rollout we will do the planning for how that will be run. We now have a procurement function in the company which is working all of these issues as we speak.

Senator FISHER—No doubt you will have an eye to the expenses of Building the Education Revolution in respect of the use of contractors, be they local or otherwise. You referred in your earlier evidence to providing wholesale prices that are competitive. Will that meet the minister's Tamworth promise that there will be one wholesale price across the country?

Mr Quigley—I am not sure I recall the minister saying that. Did he not say a uniform wholesale price across the fibre footprint?

Senator FISHER—The quote that I have is:

My ambition is that there will be the same wholesale price for every household for the same speed across satellite, wireless and fibre-to-the-node ...

This will be a cross-subsidy—one wholesale price across the country. So you are saying NBN Co. will provide wholesale prices that are competitive. Does competitive mean one?

Mr Quigley—No, we will have a range of prices depending on functionality. As you are aware, you simply cannot provide the same speeds in satellite an wireless footprints as you can in fibre footprints. That why it is 100 megabits versus 12 megabits.

Senator FISHER—So your competitive prices will not necessarily meet the minister's commitment and promise to provide one wholesale price across the country.

Mr Quigley—We are absolutely aiming to meet exactly what the minister said his ambition was there. I do not read it that way. If you are talking about trying to get a uniform price across the country, our first step is to try to make sure we can design the network to get a uniform price across the fibre footprint, which is where we are focusing the attention at the moment. We will then come to the wireless and satellite parts of the network and try to do likewise. But remember: we have to do all of this in consultation with the ACCC. Even for Tasmania stage 1 we consulted with the ACCC to make sure that when it comes to pricing issues we get guidance from the regulator.

Senator FISHER—How often do you meet with the ACCC?

Mr Quigley—Very regularly. Our team does; I do not personally.

Senator FISHER—Can you let us know how regularly 'regularly' is?

Mr Quigley—Certainly.

Senator FISHER—You might also inform the committee how often NBN Co. meets with the department—though the department might enlighten us—and also the minister and/or his office.

Mr Quigley—Okay, we will try to do that.

Senator FISHER—Thank you.

CHAIR—Thank you. We do appreciate your time and the fulsomeness of your responses. There are a couple of things we would like to follow up with you. The secretariat will try to work with your staff to make that available to you. We look forward to seeing you at estimates.

Mr Quigley—Until next time.

Senator FISHER—Rest up!

[4.22 pm]

MASON, Mr Philip, Assistant Secretary, NBN and Fibre Rollout Regulation, Department of Broadband, Communications and the Digital Economy

QUINLIVAN, Mr Daryl, Deputy Secretary, Infrastructure, Department of Broadband, Communications and the Digital Economy

CHAIR—Welcome. Congratulations on your recent elevation, Mr Quinlivan. I am sorry to lose you from your former department, but it is good to see you here. I could—but I will not—make a comment about the government needing every assistance in bringing this into being! Do you have an opening statement?

Mr Quinlivan—There are some introductory comments I would like to make. The department understands that the committee is seeking an update on progress with the national broadband network implementation study undertaken by the lead adviser and a discussion on the draft legislation released for comment in February. The implementation study has been completed, as you have been discussing, and was provided to the minister on 5 March this year. The government is now considering the contents and recommendations of that report. The minister has stated that the report will be publicly released by the time of the federal budget on 11 May.

As the report has not yet been released, I am not in a position to answer questions on its specific contents, but we can say that the report deals with the three areas of the government's NBN policy objectives—coverage, commerciality and competition—and among other things addresses the detailed operating arrangements of NBN Co., ownership and structure and the longer term privatisation objective. It is a comprehensive report with hundreds of pages and many recommendations.

Given the importance of the legislative framework within which NBN Co. will operate for all stakeholders, the government was of the view that the industry should be given an opportunity to comment on exposure drafts of the legislation as soon as possible and before formal legislation was introduced. As a result, the government released two exposure drafts of NBN Co. legislation on 24 February 2010: the National Broadband Network Companies Bill, covering wholesale-only obligations for NBN Co., mechanisms for the sale of NBN Co., ownership and reporting obligations and governance issues; and the Telecommunications Legislation Amendment (National Broadband Network Measures—Access Arrangements) Bill, covering access to NBN Co. services, transparency and non-discrimination measures. These bills reflect the policy objectives of the government's NBN initiative as articulated on 7 April 2009.

A key element of the government's NBN initiative is that NBN Co. is to operate as a wholesale-only company and provide access to the NBN to all service providers on an open and equivalent basis. The government also announced that it intends to sell down its interest in NBN Co. within five years after the NBN is built and fully operational, consistent with market conditions and national and identity security considerations.

Enshrining in legislation the establishment of NBN Co. as a wholesale-only operator of an open-access network will fundamentally transform the competitive dynamics of the telecommunications sector. These draft bills build on the reforms in the Telecommunications Legislation Amendment (Competition and Consumer Safeguards) Bill, which is currently before the parliament. That bill aims to promote greater competition and genuine equivalence by addressing Telstra's level of integration and reforming the telecommunications access regime.

Under the government's proposed approach, NBN Co. is to be subject to the existing telecommunications regulatory regime that applies to all other carriers and carriage service providers, including the proposed reforms in the competition and consumer safeguards bill. Furthermore, the draft bills released envisage that NBN Co. will be subject to further regulations beyond those currently being imposed on existing carriers and carriage service providers. These further provisions take account of NBN Co.'s wholesale-only status, introduce stronger protections to ensure that it provides equivalent access to access seekers and will improve transparency around the services it provides.

There has been some commentary on the proposed exemption to allow NBN Co. in certain limited circumstances to supply services directly to end users. Under this proposed exemption, NBN Co. would be permitted to sell wholesale-type services to certain end users. There is an argument that it may be more efficient to permit NBN Co. to supply wholesale products directly to end users rather than require those end users to establish their own service providers or buy from another retail provider. In recognition of the

importance of providing safeguards around this proposed exemption power, the draft bill proposes that the minister must first consult the ACCC before exempting a service and any exemption would be a disallowable instrument and therefore subject to full parliamentary scrutiny.

It is important to understand that the end users in question would only be those capable of using the products the NBN Co. is planning to offer. The exemption mechanism would not accommodate residential customers seeking a broadband or telephony service. NBN Co. has announced that it will supply what is known as layer 2 bitstream services over its fibre network, as Mr Quigley was discussing with you earlier, and that it does not intend to sell services above this layer. I was going to explain a little bit more about layer 2 services, but I think you have covered that in the discussion with Mr Quigley. Needless to say, however, this will require a significant investment by end users who propose to engage in a transaction of this kind with NBN Co. Regulators around the world, including the ACCC, have stated that a layer 2 bitstream service offers access seekers more control over the nature and quality of the products they develop for end users and therefore better promotes competition and innovation.

If parliament were to allow NBN Co. to supply bitstream directly to a specified end user, using this exemption, that end user would still need to purchase and invest in equipment to transform the bitstream into telephony or broadband services. However, this is just a proposal. The government is mindful of the concerns that have been raised and will be carefully considering these issues before determining the final policy position to be included in the legislation.

As the minister stated in his press release, before introducing the bills the government wishes to seek feedback from key stakeholders. He also made it clear that the government has an open mind on any amendment put forward that it believes can improve the bills. Submissions on the exposure drafts were due on 15 March 2010. More than 20 submissions were received. The government is currently considering these submissions, along with the implementation study. We are also reading submissions provided directly to this committee. Given this, you will appreciate that the bills are clearly drafts and subject to decisions by government in terms of the final policy position. That policy position will be reflected in the bills that are ultimately introduced into the parliament.

CHAIR—Thank you very much, Mr Quinlivan. I guess we all have a number of questions.

Senator FISHER—Mr Quinlivan, thank you. In referring to the implementation study, if I have it right, you said—and I understand the parameters around which you couched your comments—that it deals with coverage, commerciality, competition and stuff to do with the NBN Co. itself. Is that right?

Mr Quinlivan—Correct.

Senator FISHER—Where do consumers fit in that?

Mr Quinlivan—It is a comprehensive study of issues associated with establishing this service.

Senator FISHER—So where do consumers fit in terms of consideration of consumers' interests? Where do they fit in terms of the coverage part of the implementations study, the commerciality part of the implementation study and the competition part of the implementation study? I imagine they do not fit in the bit that deals with NBN Co. itself. So where do consumers fit?

Mr Quinlivan—They clearly fit in the coverage issue, but I am not going to discuss the contents of the implementation study beyond those generic statements.

Senator FISHER—We cannot tell either, because we have not seen the jolly thing. But it is interesting to contrast that summation of the implementation study—which is all we have to work with because we do not have the study—with NBN Co.'s response to industry submissions, which it released in March this year. On page 7 of its paper NBN Co. summarises its consultation paper and talks about the overarching design objectives of the wholesale fibre network and it talks about coverage, to which you refer, as also being dealt with by the implementation study. It talks about the four Cs, basically: coverage, competition, cost-effectiveness and customer care. So it talks about coverage. Likewise, you have said the implementation study deals with coverage. It talks about NBN Co.'s consultations paper and competition. Likewise, you have said the implementation deals with consultation. Presumably, cost-effectiveness is another way of referring to what you referred to as commerciality. So you could say that commerciality is on par with cost-effectiveness. The NBN Co. discussion paper chose to separate out customer care as the fourth 'C', yet based on your summary the implementation study has not done that. It is a genuinely serious question. We are led to believe by a witness we heard from earlier today from the consumer organisation, for example, that consumers are not really being considered—even though Mr Quigley says NBN Co. is consulting and talking to consumers.

Getting to my question, can you shed any light on the disparity between the three Cs that you say are in the implementation study—coverage, commerciality and competition—versus the four Cs that are in the NBN Co. discussion paper—coverage, commerciality, competition and customer care? Where do customers fit in the implementation study? If they fit in coverage, then why has NBN Co. separated them out in its consultation paper?

Mr Quinlivan—I do not think that there is a direct comparison between the two. As far as we are concerned, it is the comprehensive analysis of the issues facing the establishment of a wholesale-only company. There are consumer issues obviously for the government to consider here.

Senator FISHER—We cannot tell because we have not seen—

Mr Quinlivan—I explained the circumstances there and they will remain the case for the duration of this hearing.

CHAIR—Is it expected that the NBN Co. will follow the implementation study?

Mr Quinlivan—The critical thing there will be the government's response to the implementation study, which will obviously follow its release. The government's response will form the policy framework which will guide the project and NBN Co. into the future. That is a critical issue.

CHAIR—Has there been any announcement as to when the government might respond, or do you have any expectation that you can share with us?

Mr Quinlivan—No, Senator, not at this stage.

CHAIR—Bearing in mind that the time left for this parliament is very limited, it may well be not until the new parliament that any response is given, or is there an expectation that it would be before then?

Mr Quinlivan—The government has made no specific commitment about timing for a release of a government response.

CHAIR—The implementation study is about implementing the government's three-page press release and other material about the establishment of a new national broadband network. Doesn't it seem to be a case of the cart before the horse? One would have thought that you would use the implementation study to establish the NBN and establish what it is to do and how it is to do it and what it is to deliver. Is that a question you could answer?

Mr Quinlivan—I think that the minister has addressed this in the past.

CHAIR—Can you remind me what he said?

Mr Quinlivan—My Quigley did before in explaining that these things are proceeded in parallel and there will be continuing analyses as the project rolls out.

CHAIR—So then in fact it does not matter what the government response is; it is already being followed by Mr Quigley.

Mr Quinlivan—The government's response will be critical.

CHAIR—But the thing will be built. If the time for this government's response to recommendation is any guide, the eight years will be up and we will have the broadband up and running by the time they get round to responding. It seems to be a strange process.

Mr Quinlivan—I cannot add anything further—

CHAIR—I appreciate you were not there when all of this was done. I know you were appointed because of your qualities, but it does cause a disruption in the continuity, one would have thought. Will NBN Co. remain a government business enterprise when it has private equity?

Mr Quinlivan—That might depend on the form of the privatisation. But if the private equity is sufficiently large then the answer would be no. But that is a matter under the shareholder arrangements in the Commonwealth for the finance portfolio to handle.

CHAIR—The press release announcing the NBN said:

The Government will be the majority shareholder of this company, but significant private sector investment in the company is anticipated.

Further on, it said:

This company jointly owned by the Government and the private sector will invest up to \$43 billion over 8 years to build the national broadband network.

Now, the exposure draft, at some length, goes into how you can sell off bits of the company, but it does not seem to be at all prescriptive about whether or not that will happen. Am I reading that correctly?

Mr Quinlivan—No, I think it is prescriptive, that it will happen within five years of the completion of the project.

CHAIR—No, that is when it will be entirely sold off.

Mr Quinlivan—Yes.

CHAIR—No, I mean that the government will be the majority shareholder but significant private sector investment in the company is anticipated. It is clearly said here, and it has been said elsewhere, I think, that NBN Co. Ltd will be partly government equity and more than 49 per cent private equity, and then, within five years, after it is finished or at some other time that the finance minister might determine—which means it could be in 100 years time—it will be completely sold off. But I am talking about that interim period, if I can call it that, where the company has government equity and private sector equity.

Mr Quinlivan—The development of the financing and equity arrangements before that completion is a matter dealt with in the implementation study.

CHAIR—I must say that answer is consistent with the answer Minister Conroy has been giving us for more than 12 months—

Senator LUNDY—That is always reassuring.

Senator FISHER—I heard a ‘phew’!

CHAIR—but it makes it difficult to understand. Anyhow, come 14 May, we will all know the answer to that because it will be in the implementation study. Is that what you anticipate?

Mr Quinlivan—It is dealt with in the implementation study, but, as I said before, the critical thing will be the government’s response, because that will determine the policy framework within which the NBN Co. will operate.

CHAIR—Sure. I am not trying to drag this out of you using thumbscrews or any boring, lengthy process, but clearly the implementation study has a procedure and a suggestion for the infusion of private equity. Whether the government accept it or not is another question. Is that what you are saying?

Mr Quinlivan—I cannot respond to the first part of that question without confirming—

CHAIR—You did before. You said it was all in the implementation study.

Mr Quinlivan—I said the overall equity and financing arrangements are dealt with in that, and that is correct.

CHAIR—Yes. So we know what the implementation committee, if I can call them that, will be recommending; whether or not the government accepts that is another question. The press release from 7 April 2009 says:

The Government’s investment ... will be funded through the Building Australia Fund—

that is the \$4.7 million, I think—

and the issuance of Aussie Infrastructure Bonds (AIBs), which will provide an opportunity for households and institutions to invest in the national broadband network.

Can you tell me what the department is doing to facilitate that?

Mr Quinlivan—We were not anticipating a line of questioning on this here and we do not have the right people at the table to respond to that question.

CHAIR—If you have heard anything I have asked on this issue—not that I expect that the department would carefully read everything I ask—a constant question from me both in the chamber and at various committee hearings has been about just how this investment will come about. Mr Mason, what is your expertise?

Mr Mason—My title is Assistant Secretary, NBN and Fibre Rollout Regulation. I look after three main areas: the NBN Co. regulation, which people have been discussing here; the rollout of fibre in new developments; and general powers and immunities.

CHAIR—Okay, but you are not the money man.

Mr Mason—I am the legislation man, I guess.

CHAIR—The people sitting behind you are not the money men from your department?

Mr Mason—I think we understood the focus was on the legislation, Senator.

CHAIR—It is perhaps on what the legislation does not say, as I commented before. There seem to be a lot of provisions that the government can sell down but nothing that discharges this commitment in this media release that there would be private equity investment.

Mr Mason—I think the way the legislation provides for that is to say that, prior to the sell-down process, the Commonwealth must retain majority ownership. So, by definition, it can have equity of up to 49 per cent.

CHAIR—Yes, I agree with you.

Mr Mason—But I am not quite sure how you legislate to require people to invest.

CHAIR—No, I would have thought the legislation might have said that, by a particular date, the government will sell 49 per cent, or up to 49 per cent—some share of it. I was quite surprised when I read the exposure draft that it did not have that. Here is a commitment in the press release that it will. The legislation says, ‘If they ever wanted to do it, here’s how they’d do it.’

Mr Mason—I think the press release says ‘invites private sector investment’.

CHAIR—No, I read it:

The Government will be the majority shareholder ... but significant private sector investment in the company is anticipated.

... ..

This company jointly owned by the Government and the private sector will invest ... \$43 billion over 8 years ...

So it is not all that long. We have gone one year already; we only have another seven years to do this. Then it goes on to say:

The Government’s investment in the company will be ... through the Building Australia Fund and ... Aussie Infrastructure Bonds ... which will provide an opportunity for households and institutions to invest ...

I am wondering how I as a household, should I calculate on the back of an envelope that I think it is ever going to make a profit, would invest in this. You cannot tell me that?

Mr Mason—As I have said, the legislation provides for private equity of up to 49 per cent until the sell-down process. That is the provision for it. At the moment, there is no further legislation on the matter.

Mr Quinlivan—The policy arrangements around financing and equity will be dealt with in responding to the implementation study.

CHAIR—But we do not know when that is.

Mr Quinlivan—I have nothing to add to the previous conversation on that.

CHAIR—Okay. Can you tell me what the line in the 2009-10 budget was for the \$4.7 billion plus the \$100 million? Where would I find allowance for those figures?

Mr Quinlivan—The latest statement would have been in the additional estimates statements. In looking forward, you had this line of questioning to Mr Quigley. The government has considered the financial arrangements for NBN Co. over the coming year, and it will be dealt with in the budget.

CHAIR—Then quite clearly, knowing the budget process as I do, I would say the government has already made a decision—not one that you would be able to tell us about, obviously—on what is going to be in the budget for the forward projections on the funding of the NBN, I would guess, over the next four years at least—perhaps eight years. Is that correct?

Mr Quinlivan—The government has considered the issue, and the funding for NBN Co. from the budget for the coming year and the forward estimates will be in the budget.

Senator FISHER—Is the \$100 million for the Tasmanian rollout part of the \$212 million equity injection to which Mr Quigley referred or is it in addition? Is it \$212 million plus \$100 million for Tasmania or is the \$100 million part of the \$212 million?

Mr Quinlivan—I think we will have to take that on notice.

Senator FISHER—Thank you. The further question is: has that \$100 million gone directly to Tas NBN Co., and if not why not?

Mr Quinlivan—Yes.

CHAIR—Again, without divulging any government policy decisions, is there a timetable for the passage of the bills through parliament? This is just an exposure draft. Is there some indication of when the bills might actually hit the parliament?

Mr Mason—When the bills were released, I think it was indicated that the intention was to introduce them in the coming sittings. The timetable, however, will also take into account the implementation study.

CHAIR—We are all going to have a very, very busy three days in May. We are going to have the implementation study released, we are going to have the budget and we are all going to have the final legislation presented to parliament.

Senator FISHER—We will not have the government's response to the implementation study, though, Chair.

CHAIR—We might have.

Senator FISHER—Of course we might have.

CHAIR—You are making a presumption.

Senator FISHER—They could do something out of form.

Mr Quinlivan—I do not think that is quite what Mr Mason was saying about the introduction of this legislation. He meant that it was anticipated that it would happen in the autumn or winter sittings.

Mr Mason—Yes. When the exposure drafts were released on 24 February, the media release said:

The Government proposes to introduce the bills into Parliament in the Autumn or Winter sittings depending on the feedback received.

Then I added that the government would also need to consider them in the context of the implementation study.

CHAIR—The autumn or winter sessions?

Mr Mason—Obviously, the autumn one has passed.

CHAIR—I can never follow these, actually. I have been here a long time and I still do not know which is the winter session. But your interpretation is that it will be done either in the week in May or in the final two weeks in June, assuming that parliament is still sitting then.

Mr Mason—No. What I said is what was in the media release that came out in February, as an intention in February. What happens next is to be decided by the government, particularly taking into account the feedback it has received.

CHAIR—I am really asking someone to help me identify what is the winter session. Does it finish before the July break, before the depths of winter?

Mr Quinlivan—Yes.

CHAIR—I am not asking you to comment on this; I am simply saying that there is one week in the budget session. The Senate then has two weeks of joy, fun and games in estimates and then we have two weeks at the end of June, which will be the only parliamentary sittings before the July break. That would be what the department is working towards.

Mr Quinlivan—I think it is really a matter for the minister. He has said that he would like to introduce the bills in that time, but he will want to make good sense of all the comments that have been received on the exposure drafts and consider the policy issues that have been raised with him. I do not have any advice from him on his timing plans, in view of the feedback that has been received, but that will be the critical issue—to make sense of the feedback that has been received and get that right.

CHAIR—Is the legislation, then, important, bearing in mind that NBN Co. is up and running? It has a board, it has lots of employees, it is spending lots of money and it is actually starting business in Tasmania in July. So perhaps the legislation is not needed.

Mr Quinlivan—I think the stakeholders you have heard from all regard it as important. Certainly the government does.

CHAIR—But, again, is it not a bit like shutting the gate after the horse has bolted? The thing is up and running. Is there any retrospectivity in the exposure draft to deal with what might have happened, what NBN Co. might have done until the legislation is passed?

Mr Quinlivan—I think the scenario you heard from Mr Quigley before was that the company has started setting itself up and is commencing with some tests. It is testing its plans and is going to an extensive planning service. But, as Senator Fisher mentioned a couple of times during that evidence, NBN Co. is not trading and receiving revenue yet.

CHAIR—But it will in July—Tasmania starts then.

Mr Quinlivan—So the legislation remains very important for the future of NBN Co.

Senator FISHER—The Auditor-General's report into the RFO process contained commentary that was less than flattering to the previous process and particularly to the department. The report said that the costs and risks were compromised by the government's commitment to conduct the process as quickly as possible, and by the department's failure to better analyse some key risks that had an adverse impact on a successful outcome. So to what extent is the pace with which the NBN is being rolled out, this time, being implemented having regard to the cautionary tale that should have been seen in the Auditor-General's report for round 1?

Mr Quinlivan—The rollout of the project is happening according to the government's judgment.

Senator FISHER—The government got it wrong the first time around, so how do we know it has got it right this time around?

Mr Quinlivan—I am just saying it is operating according to the government's judgment now about what it would like to see happen, and the exposure drafts of these bills have been released to give the process full transparency and give stakeholders an opportunity to contribute. And the overall timetable remains as the government announced.

CHAIR—Can someone tell me: is NBN Co. involved in the negotiations with Telstra, or is it just the government?

Mr Quinlivan—They are commercial negotiations—

CHAIR—Of course, but I am not asking you what they are.

Mr Quinlivan—and I am not going to talk about them other than to say that the public commentary has indicated that there are two different negotiations happening: one on a limited range of matters with the government, and another on a broad range of commercial issues with NBN Co.

CHAIR—I meant to ask Mr Quigley that. But some would say—and of course I would not want you to comment on this—that the whole exposure draft is simply a farce: that it is simply a facility whereby the government can hit Telstra over the head with a stick until they succumb and then, when that is done, the actual bill that comes forward will bear little relationship to the exposure draft. Is your department currently working on—and again I am not asking you what is in it—the bill that will come before the parliament by the end of the winter session?

Mr Quinlivan—The exposure drafts of the bills that have been released reflect the policy intentions the government espoused at the outset and which it continues to pursue.

CHAIR—No, I am sorry: the policy thing was very clear—it will be a wholesale-only company—

Mr Quinlivan—Correct.

CHAIR—it never will be a retail company. Everyone—including all the witnesses, and some of them are fairly highly advised—accepts that the government, with this new provision in the exposure draft, allows the possibility, subject to ministerial discretion, of NBN Co. being a retail operator.

Senator LUNDY—No, I do not think that is correct, Chair.

CHAIR—Well, have a look at—

Senator LUNDY—I think the contention relates to the provision of layer 2 services to government agencies as being the window that is in contention, not that NBN Co. in any way, shape or form is going to be a retailer.

CHAIR—That is not Optus's understanding.

Senator LUNDY—No, but Optus have an opinion. You are stating it as if it were a fact. It is not a fact; it is an opinion presented to the committee.

CHAIR—Every one of the witnesses before us accepts it and many of them on very highly-qualified legal advice, which Optus would certainly have had. Everybody accepts that it does have retail—

Senator LUNDY—I do not think that is a true statement—

Mr Quinlivan—I think Mr Quigley made it pretty clear what kinds of services he envisaged NBN Co. delivering, and they were not retail services—he explained that.

CHAIR—But hang on.

Senator LUNDY—So not every witness agrees—that is my point.

CHAIR—Mr Quigley can only say what is there now. If this draft legislation becomes the bill and is passed by parliament, then neither Mr Quigley, nor you nor I will have any say in whether NBN Co. can have retail services. It will be up to the minister in his entire discretion, subject to having a chat to the ACCC, on whether NBN Co. can—

Senator LUNDY—That is not an accurate reflection of the bill.

Mr Mason—I do not think that is technically correct that senators would not have a say, because the minister's instrument would actually be subject to disallowance and would be subject to parliamentary scrutiny.

Senator LUNDY—Thank you for that confirmation. That was a question raised yesterday and we did make a point of wanting to get clarification from the department if it was in fact a disallowable instrument, so you have been very helpful.

CHAIR—The secretary has pointed out to me the provision in the bill which clearly does say it is by a legislative instrument, so we accept that. The minister can exempt it after consultation with the ACCC. In the exposure draft is it correct to say that once you have a chat to the ACCC about it that that in no way legally impedes the minister in what he can do? Is that your understanding of the exposure draft in that area?

Mr Mason—The way the bill is drafted, yes, it says that the minister consults with the ACCC, and obviously the minister would take great heed of the ACCC's advice.

CHAIR—Why do you say 'obviously'?

Mr Mason—Because the ACCC is a very important body and that is why it is referred to in the legislation.

CHAIR—But the minister could say to the ACCC, 'I have consulted with you, but I and my political imperatives have a completely different view. Thank you for your advice, but get lost.'

Senator LUNDY—Then that would be tested in parliament.

CHAIR—It might be tested in parliament.

Senator LUNDY—You criticised this yesterday because there was no parliamentary scrutiny. Now that we know there is parliamentary scrutiny you are still criticising it.

CHAIR—Whether there is parliamentary scrutiny depends on what eventuates, doesn't it?

Senator LUNDY—Be a little consistent—

Mr Mason—It is probably useful for us to reiterate the point that they are exposure drafts. They were put out there for public and industry comment and we have received comment. We have heard what people have said and that is being considered by the government.

CHAIR—How many comments have you received?

Mr Mason—Twenty submissions, I believe.

CHAIR—I think we got more than that, didn't we?

Senator LUNDY—Hardly. I do have to go at five o'clock. The hearing was scheduled to finish at five. I have got family responsibilities to attend to. Can you give me some indication how long this hearing is going to go, given I have not been given an opportunity to ask questions yet because I am waiting for you to finish?

CHAIR—Be fair, Senator Lundy. All the way through this I have tried to share around the first questioner. I clearly offered it to you in this case and you could have had your questions over and done with and gone home.

Senator LUNDY—I want to ask my questions last. That is not going to be possible because we are now over time.

CHAIR—Everybody likes the right of reply, but we try to do it fairly. It was your turn to ask your questions—

Senator LUNDY—Can we finish on time? That is my question.

CHAIR—No, we cannot because I cannot wind back the clock. Senator Fisher will be very quick and then we will come back to you.

Senator FISHER—Are there installation standards for people installing National Broadband Network equipment in homes?

Mr Mason—Do you mean in the legislation?

Senator FISHER—Anywhere. Are there standards for people installing things in homes to hook up the National Broadband Network?

Mr Mason—I think that is a question that would be better directed at NBN Co.

Senator FISHER—Are there safety standards for people installing things in homes in relation to the National Broadband Network?

CHAIR—That is, is there Commonwealth legislation or are there legislative provisions—

Senator FISHER—Or anything, do you know? Has the department asked that question?

Mr Mason—There is a very wide range of standards about both telecommunications facilities and the installation practices for those. It is a very sweeping question, I am sorry to say.

Senator FISHER—It is a pretty sweeping implementation plan that has been done in some haste, in the views of some.

Mr Quinlivan—But I am not sure that your question really relates to the implementation task that we are talking about. Your question was about installation in homes. The services provided by NBN Co. will terminate at homes. As I understood your question, you are talking about what happens past that point.

Senator FISHER—That is correct. It was Mr Mason who said, ‘You ought to ask NBN Co.’ I do not think the question belongs with NBN Co.

Mr Quinlivan—I think your question, if my understanding is correct, is more one for Telstra, Optus and so on.

Senator FISHER—Will there be an independent risk assessment done of the implementation of the National Broadband Network? If so, who will do it? If not, why won’t it be done, given that we were told in the case of the Home Insulation Program, which was supposed to be worth \$2.8 billion, not \$43 billion, that an independent risk assessment was standard operating procedure? Is it standard operating procedure for a \$43 billion National Broadband Network? If not, why not? If so, who is doing it and when?

Mr Quinlivan—These are matters for the implementation study.

Senator FISHER—Ah! They are dealt with in the implementation study, are they, Mr Quinlivan?

Mr Quinlivan—The generic issue of quality assurance and handling of risk in the project is a matter for the implementation study.

Senator FISHER—Okay. What steps has the department taken to avoid a repetition of the sorts of mistakes that the Auditor-General identified that, in his view, the department was guilty of with the RFP process?

Mr Quinlivan—I do not necessarily accept the premise in the question but, as to the meaning of it, we were participants in the steering committee in the development of the implementation study.

Senator FISHER—All right. We await that.

CHAIR—Senator Lundy.

Senator LUNDY—I will place my questions on notice, Chair. I have to go.

CHAIR—Okay. I was just going to be helpful and say you should have a discussion with the department of the environment in dealing with that matter that Senator Fisher raised.

Gentlemen, thank you very much for attending today. The committee has resolved that the questions you have kindly taken on notice should be responded to by 23 April this year, if you could oblige us by doing that, bearing in mind that the committee has some work to do before it reports during budget week, hopefully after seeing the implementation study that is going to be released prior to then. Thank you again for your attendance

here. We appreciate the assistance you have given the committee in trying to understand some of the ramifications of the exposure draft.

Senator FISHER—Thank you.

Committee adjourned at 5.08 pm