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SENATE

ENVIRONMENT AND COMMUNICATIONS LEGISLATION
COMMITTEE

**Reference: National Broadband Network Companies Bill 2011;
Telecommunications Legislation Amendment (National Broadband Network
Measures—Access Arrangements) Bill 2011**

FRIDAY, 4 MARCH 2011

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SENATE ENVIRONMENT AND COMMUNICATIONS

LEGISLATION COMMITTEE

Friday, 4 March 2011

Members: Senator Cameron (Chair), Senator Fisher (Deputy Chair) and Senators Ludlam, McEwen, Troeth and Wortley

Participating members: Senators Abetz, Adams, Back, Barnett, Bernardi, Bilyk, Birmingham, Bishop, Boswell, Boyce, Brandis, Bob Brown, Carol Brown, Bushby, Cash, Colbeck, Coonan, Cormann, Crossin, Eggleston, Faulkner, Ferguson, Fierravanti-Wells, Fielding, Fifield, Forshaw, Furner, Hanson-Young, Heffernan, Humphries, Hurley, Hutchins, Johnston, Joyce, Kroger, Ian Macdonald, McGauran, Marshall, Mason, Milne, Minchin, Moore, Nash, O'Brien, Parry, Payne, Polley, Pratt, Ronaldson, Ryan, Scullion, Siewert, Stephens, Sterle, Trood, Williams and Xenophon

Senators in attendance: Senators Cameron, Fisher, Marshall, McEwen, Troeth and Wortley

Terms of reference for the inquiry:

To inquire into and report on:

National Broadband Network Companies Bill 2010; Telecommunications Legislation Amendment (National Broadband Network Measures—Access Arrangements) Bill 2011

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Committee met at 9.01 am

CHAIR (Senator Cameron)—I declare open this public hearing of the Senate Environment and Communications Legislation Committee in relation to its inquiry into the National Broadband Network Companies Bill 2011 and the Telecommunications Legislation Amendment (National Broadband Network Measures—Access Arrangements) Bill 2011. The committee's proceedings will follow the program as circulated. These are public proceedings. The committee may also agree to a request to have evidence heard in camera or may determine that certain evidence should be heard in camera. I remind all witnesses that in giving evidence to the committee they are protected by parliamentary privilege. It is unlawful for anyone to threaten or disadvantage a witness on account of evidence given to a committee and such action may be treated by the Senate as a contempt. It is also a contempt to give false or misleading evidence to the committee. If a witness objects to answering a question, the witness should state the grounds upon which the objection is to be taken and the committee will determine whether it will insist on an answer having regard to the grounds upon which it is claimed. If the committee determines to insist on an answer, a witness may request that the answer be given in camera. Such a request may of course also be made at any other time. A witness called to answer a question for the first time should state their full name and the capacity in which they appear, and witnesses should speak clearly into the microphone to assist Hansard to record proceedings. Mobile phones should be switched off. With the formalities over, I welcome everyone here today.

[9.03 am]

CLAPPERTON, Mr Dale, Legal Counsel, PIPE Networks Pty Ltd

DOOLEY, Mr Tony, External Legal Representative, Amcom Telecommunications Ltd

Evidence from Mr Dooley was taken via teleconference—

CHAIR—Welcome. The committee has received your submissions and numbered them Nos and 12 and 23. Do you wish to make any amendments or alterations to your submissions?

Mr Clapperton—No.

Mr Dooley—No, thank you.

CHAIR—Do you wish to make a brief opening statement before we go to questions, Mr Clapperton?

Mr Clapperton—If the chair pleases.

CHAIR—Mr Dooley, will you be making an opening statement?

Mr Dooley—A short one.

CHAIR—Okay. Mr Clapperton, we will start with you.

Mr Clapperton—In opening, I would first of all like to thank the committee for this opportunity to address it today on this issue which is of extreme importance to the development and maintenance of competition in the telecommunications markets in Australia, in our view. I must confess, I have been in this game for some time and never thought the day would come where I would be sitting in front of a government committee addressing it on monopoly in the telecommunications industry and Telstra would be agreeing with me. However, this has in fact come to pass.

The provisions of the NBN access bill, which are the subject of our submission, will in our view establish a de facto monopoly over the supply of wholesale fixed-line telecommunications services in this country. This will occur not only to the detriment of the existing players in the wholesale markets and their customers, many of whom acquire services from companies such as PIPE and others that they simply cannot acquire elsewhere, but to the detriment of competition in the retail markets at the end of the day. If the legislation is enacted in substantially its current form it will have the effect of completely disincentivising investment in fixed-line telecommunications infrastructure in Australia. Retailers—those who supply to the end user—will have no one from whom they can obtain those services but NBN Co. In our submission, this is not going to be in the long-term interests of end users or of the development of competition in the telecommunications industry in general.

Mr Dooley—I am representing Amcom, which is a telecommunications company based in Perth. It has been in this business for over 10 years and already has a fibre network that is based in the CBD and metro areas of Perth, Adelaide, Alice Springs and Darwin, its largest network being in Perth, where it has about 1,600 kilometres of fibre installed. Its customer base is predominantly corporate and government; that accounts for about 75 per cent of the customers on its fibre network, with the remaining 25 per cent being sold as wholesale access to other carriers.

Amcom's primary concern and the basis for its submission is that there is quite a high level of uncertainty surrounding the cherry-picking provisions of the proposed legislation. Amcom wants to ensure the meaning of the cherry-picking provisions and how they will affect Amcom and similar companies in the future. We concur with quite a few of the views that PIPE Networks has expressed and that have been briefly outlined by Mr Clapperton. Another point Amcom feels needs to be taken into account in relation to the damage to competition is that if there is a disincentive for existing network operators to roll out or expand their current network in the lead-up to the deployment of the NBN, this will have another consequence in that Telstra will have a very significant advantage in this lead-up period, which could be up to eight years. We would not like to see that occur.

Senator FISHER—My question is to Mr Clapperton in particular. Can you expand a bit more on how you think the proposed level playing field provisions will impact on your current business model given that, as I understand it, your business is already reasonably heavily involved in building and operating what you might call advanced fibre networks? Can you expand a bit more on why you think that will not be good for you?

Mr Clapperton—At the moment, PIPE has a fairly significant fibre network, the exact details of which are in the confidential version of our submission to the committee. Also mentioned in our submission is the fact that we are currently doing a dramatic expansion of that network in order to service a new customer, Vodafone Hutchison Australia, who of course is one of the major players in the Australian wireless and mobile industry.

That expansion of our network—this new, significant amount of fibre—will be installed after November of last year, that is, after the cut-off date for the level playing field amendments. Even though we were contracted to perform this expansion before the bill was introduced, because it will be installed after the magic date in November 2010, it will, on the current bill, be subject to the level-playing-field arrangements which call into question our ability to make a commercial return from that investment. Similarly it will impact on our ability to make future expansions to our network. Under section 141 as it currently exists if our fibre runs past the front door of particular premises and we install another 10 or 20 metres of fibre to connect a new building into our existing network that new building will also be caught by the level-playing-field provision. So, whether we are installing another 10 metres or another 10 kilometres of fibre, it seems to us that any expansion at all past, I think, 26 November 2010 will be caught by the level-playing-field arrangements. Potentially, depending on the exact form in which the amendments—which are foreshadowed in the government's letter to NBN Co. of December last year—are enacted in the worst case scenario it might require PIPE to structurally separate.

Senator FISHER—Do you think you can live with the regime contemplated, with some measures to rectify that shortcoming, or is it part and parcel of the regime that the government is contemplating?

Mr Clapperton—Our primary submission is that the regime is, essentially, overkill and that the underlying policy objectives could be achieved by less harmful means.

Senator FISHER—For example?

Mr Clapperton—For example, a maintenance or continuation of the universal service obligation levy or something very much like it or, as the opposition have advocated recently in the lower house, a subsidy provided by the government from the budget.

Senator FISHER—How would the latter help you?

Mr Clapperton—It would not help us except to the extent that it would make the anti-cherry-picking provisions that we are complaining about unnecessary.

Senator FISHER—Is the proposition that the ACCC gets involved in determining whether or not a layer 2 bitstream is a declared service an appropriate regulatory requirement or a bit heavy-handed?

Mr Clapperton—Historically it has been the role of the ACCC to make the call as to whether a service should be a declared service or not after balancing up the net effect on competition and what would be in the long-term interests of end users. However, in this case, the bill, essentially, forces the ACCC's hand. It requires that the ACCC, as soon as possible, declare that the layer 2 bitstream service is a declared service. Although we have not expressed a view on this particular issue in the submission, I think, that, on balance, it is probably more appropriate that the ACCC make that decision. If, in fact, it is going to be pro-competitive and in the long-term interests of end users then the ACCC will make that decision in the way the government intends after, of course, having afforded all the interested parties an opportunity to be heard on the matter and make submissions.

Mr Clapperton—Mr Dooley might have something to add on that point.

Mr Dooley—The ACCC has long-running, standard procedures for public inquiries on whether to declare a service. As Mr Clapperton pointed out, it is based upon the long-term interests of end users and whether or not it will promote competition. That does seem appropriate for the ACCC's normal procedures to be utilised.

Senator FISHER—To the extent that the proposed legislation is going to be damaging, are you, Mr Clapperton, suggesting that it could effectively make the wholesale arm of your business redundant or worse?

Mr Clapperton—Redundant is a strong word bearing in mind that the bill is still in a fairly early stage. I understand that the government intend to introduce amendments to clarify the scope of section 141, and we have had some private consultations with the Department of Broadband, Communications and the Digital Economy on those types of issues. I think it is safe to say that it could have a potentially quite serious effect on the wholesale arm of our business.

I guess one of the secondary submissions we make is that the anti-cherry-picking regime ought not to apply to companies such as PIPE that have a focus on backhaul and transmission and corporate and government

markets as opposed to a more mass market NBN style network. If I can draw your attention to page 14 of the explanatory memorandum, which states:

In summary, these requirements will mean that mass market fixed-line access networks ...

will be subject to the relevant restrictions. PIPE's network and the networks of most other corporate- and government-targeting networks are in no way, shape or form mass market networks. For that reason it is one of our secondary submissions that the regime ought not to apply.

Senator FISHER—Mr Dooley, do you have anything to add to that?

Mr Dooley—The network of Amcom targets corporate and government clients. As Amcom owns its own pipe it differs with PIPE Networks in that extent to some degree. Where PIPE will use Telstra's pit and pipe, as will NBN Co., Amcom installs its own pipes through the streets. So it runs along streets and will carve off from the street network into particular buildings where they have clients. NBN Co. when that is installed will use Telstra's ubiquitous pipe network and as such will go into all buildings.

The anti-cherry-picking requirements, therefore, are very problematic for Amcom. If any extensions are made to service new clients or to service the existing client base when they enter into a new building our uncertainty is whether (a) the extension will be caught by the cherry-picking provisions, (b) the entire network will be caught or (c)—and that is what we hope—it will not be caught at all because the network existed prior to 25 November 2010. We are seeking clarification of that. If either (a) or (b) is the intention of the legislation, we would like it reeled in to some extent so that it only applies to significant new rollouts.

Senator FISHER—And how would you define that?

Mr Dooley—We chose not to try to define 'significant'. We do consider it would apply to any greenfields rollouts for new developments, particularly if they are residential. We basically have left it up to the minister to define 'significant' with input from the ACCC and ACMA. So, from our point of view, if an existing network has some kind of creep in its size then that should not be captured by this legislation whereas, if an existing network decides to go into a large-scale competition with NBN prior to the NBN deployment, then that should be caught.

Senator FISHER—But that could nonetheless be an extension.

Mr Dooley—That is right. We have not gone so far as to try to say no extensions to an existing network should ever be caught, because we consider that that would be against the intention of the legislation. We understand that the cherry-picking legislation is to make NBN commercial and to prevent large-scale rollouts taking away the commercial objectives of the NBN. We consider that small-scale rollouts should be permitted and not be caught by the cherry-picking provisions.

Senator FISHER—So it is just a matter of where you draw the line and how you define it?

Mr Dooley—Exactly.

Senator FISHER—To the extent that the legislation effectively discourages competition in the wholesale sector but encourages it in the retail sector, what do you think of that tension?

Mr Clapperton—I think that ultimately it will work against the long-term interests of the end users. It will essentially be the re-establishment of a monopoly in the supply of telecommunications services in Australia but, instead of the competitors resupplying the services of Telstra, the competitors, including Telstra, will be resupplying the services of NBN Co. Of course there will be no other alternative to NBN Co., which essentially means if NBN Co. does not supply it, it is not available. If NBN charges it, you have to pay it. There will be no other viable alternatives if the bill is introduced in substantially its current form.

Particularly given the vibrant and competitive market that has emerged in wholesale telecommunications markets for fixed line services in metropolitan areas, and indeed the corporate and government markets especially with respect to the particular specialised products demanded and indeed required by certain segments of those markets, such as very low latency dark fibre services, which I understand NBN Co. will not be supplying but are essentially a requirement when you are talking about things like the Australian Stock Exchange's network that they use to connect with their various brokerage houses. It runs on PIPE Networks' dark fibre because low latency is absolutely critical in applications like that. Millions of dollars can be made or lost based on a couple of milliseconds difference in the speed of the service. We feel that even after the full roll-out of NBN there will still be substantial segments of the market for whom either NBN Co. services will be unsuitable or, for reasons of redundancy, that is not putting all of their eggs in the one basket, they will want

to acquire services from multiple networks. The effect of the bill in its current form is to essentially stall the roll-out of existing networks and prevent the deployment of new networks in the future.

Senator FISHER—Did you say that NBN Co. will not provide what you called low latency dark fibre services?

Mr Clapperton—Dark fibre is a layer one service. It is our understanding that NBN Co. will only be supplying layer two services at this point in time. In the interests of time, I would be happy to elaborate on the difference in a supplemental submission.

Senator FISHER—I understand how you get to that point now, thank you.

CHAIR—Mr Clapperton, you are the legal counsel for PIPE Networks. Is that an in-house position?

Mr Clapperton—Yes.

CHAIR—You say in your submission that there is a vibrant and competitive market—is that the market for fibre?

Mr Clapperton—Yes, especially in relation to corporate and government markets and especially in metropolitan areas, and especially in the CBDs and inner suburbs in many cities.

CHAIR—Would you still describe that market as representing a market failure, where other regional areas of Australia do not have access to broadband? Is that a market failure?

Mr Clapperton—It is probably that those markets are a natural monopoly. As we say in our submission, there are many areas in the country where it is not economically viable, perhaps in the absence of massive subsidies such as are being provided to NBN Co., for new entry into those markets. We accept that there have been market failures in some areas; we do not see that as a reason essentially to abolish competition in areas which are not subject to such market failure.

CHAIR—So your company has got no plans to expand into regional areas?

Mr Clapperton—We are, to an extent, expanding into regional areas. The Vodafone-Hutchison rollout, for example, is going to involve a decent amount of deployment of fibre into regional areas. I would be pleased to elaborate, subsequently in writing, on exactly where. For confidentiality reasons, I cannot say where now. But the simple reality is that we will build our network to wherever we have customers. Vodafone-Hutchison Australia have particular requirements, many of which are outside the cities and, because they are willing to pay for it, we are willing to build our network there. But what we will not do and what, with respect, no rational competitor in the telecommunications market will do is build a network into an area where it will not return a profit.

CHAIR—Your customers are the retailers, aren't they?

Mr Clapperton—Our customers are other carriers and telecommunications providers, so wholesalers. We do have some retail customers in the sense that we sell directly to many government departments and large corporations.

CHAIR—So if those wholesalers and retailers that you supply do not set up in Armidale and they do not set up in Wagga, you will not be there. That is the reality, isn't it?

Mr Clapperton—If someone in Armidale or Wagga is willing to pay what it will cost us to build to Armidale or Wagga we will build to Armidale or Wagga.

CHAIR—But I think your previous response was that it has to be commercially viable. Would it be commercially viable?

Mr Clapperton—Based on the existing demand in those areas, I suspect not.

CHAIR—Communities in Armidale and Wagga and other regional centres have to wait until the market determines commercial viability. Is that correct?

Mr Clapperton—Yes, or until the government provides sufficient incentives for someone, whether it be the NBN Co. or PIPE or anyone else, to deliver services in those uncommercial areas.

CHAIR—You indicated earlier that you see cherry picking as a problem. Do you agree with the cherry-picking rules in principle, but your problem is in relation to the detail?

Mr Clapperton—I would not say that we agree in principle with the anti cherry-picking rules. Our primary submission is that they are overkill and that the government's objectives, such as achieving national uniform wholesale pricing for wholesale customers of NBN Co., could be obtained by less harmful means such as, as I

mentioned earlier, a continuation or an adaptation of the universal service obligation regime, which currently subsidises the supply of Telstra for basic telecommunications services in uncommercial areas or, as the opposition has recently suggested, by a direct government subsidy.

CHAIR—More direct action. Have you raised these issues with the department?

Mr Clapperton—We have had consultations with the department. They do not set policy and the issue of whether or not this cherry-picking regime is a good idea is a question of policy. So we have not raised that issue with the department.

CHAIR—You have not raised that with the department?

Mr Clapperton—What we have raised is the wording of section 141 and the significant uncertainties that exist within it, most of which are addressed in our secondary submissions in our submission to the committee.

CHAIR—But you should understand how government works. You do understand that departments provide policy advice to government, don't you?

Mr Clapperton—We understand that.

CHAIR—Why would you not be raising these issues in terms of policy development?

Mr Clapperton—With respect, when the bill containing these provisions was introduced, it did appear that it had gone past the stage of trying to influence government policy via the department. Essentially, we felt that the appropriate forum to make our views on it as a policy issue known is here and now.

CHAIR—With respect, that may have been a mistake. Surely, you have to engage in the interests of your company and those of your shareholders as widely as you possibly can and, given that the department is an advisory body to the government, you would be raising those issues with them as well?

Mr Clapperton—I accept what you say, Chair. If the department is going to be willing to enter into those issues with us we will certainly talk to them or anyone else who is willing to listen.

CHAIR—You say there is a vibrant and competitive market in Australia. Why is the cost of broadband supply so high in Australia compared to in the rest of the world?

Mr Clapperton—There are a number of factors, one of which being that Australia is essentially an island separated by very large oceans from the rest of the internet. One of the key reasons that internet access in Australia is expensive is because it requires the use of very expensive submarine cable systems to get internet access from Australia to anywhere else in the world. That is one of the reasons why a couple of years ago PIPE Networks invested over \$200 million in building an undersea fibre-optic telecommunications system from Sydney to Guam via Papua New Guinea, with the opportunity for further expansion, which—as I believe Mr Bevan Slattery from NEXTDC, the former CEO of PIPE Networks, elaborates on in his submission—has had the effect of driving down significantly the cost of international internet access in this country.

CHAIR—One of the issues that has been consistently raised in relation to NBN by you is this issue of overbuild. Given that there is an economy of scale to rule out the NBN, as is indicated, given that the business plan deals with that, isn't your position just that you do not want a competitor? That is a reasonable position, but I just think we need to get it in context. If that is the case, then that should be on the record.

Mr Clapperton—Certainly. Our position is not that we do not want a new competitor. We welcome competition from NBN Co. We feel that our products and services are sufficiently different from what NBN is going to be offering that we will be happily able to coexist with NBN Co. What we do not want to see happen is that the anti-cherry-picking regime in effect nobbles us and prevents us from expanding or upgrading our network in the future so as to be competing against NBN Co. with one hand tied behind our backs.

CHAIR—Okay. Mr Dooley, would you also agree that there is a market failure in relation to the supply of fibre-optic networks around Australia?

Mr Dooley—Yes. A lot of that has to do with the size of Australia, as Mr Clapperton pointed out, and that it costs vast amounts of money to get to regional areas. As a result of that, the regional areas are definitely coming into second place in comparison to CBD and metro. The cost of backhaul between regional areas and the capital cities is one of the most significant reasons that a lot of other telcos apart from Telstra have not really got any networks in those places. Amcom has quite recently put quite a bit of network into places like Alice Springs and Darwin as a result of getting new customers there, but also with the knowledge that the black spot for broadband backhaul will be covered off by a new rollout that Nextgen Networks is doing on

behalf of the government. So, yes, from our point of view it is insufficient backhaul competition that has resulted in regional areas having very poor broadband services.

CHAIR—Have you got concerns about the cherry-picking provisions?

Mr Dooley—We have concerns. We are not absolutely against it; we understand it is necessary for NBN to have some level of protection in that regard. Our concern is what the extent of the anti-cherry-picking provisions is going to be. As I was saying earlier, we would like certainty on that and also a carve-out from the anti-cherry-picking provisions when they apply to existing networks that are doing insignificant extensions to existing networks.

CHAIR—Mr Dooley, has Amcom had discussions with the department on this detail?

Mr Dooley—Not that I am aware of and my expectation is that they probably have not. One of the problems with relatively small companies is that people sometimes unfortunately work on their day-to-day jobs and do not realise the bigger picture.

CHAIR—You are not an in-house lawyer; you are representing Amcom Telecom, aren't you?

Mr Dooley—That is right.

CHAIR—I may come back a bit later, but we will now go to Senator Troeth.

Senator TROETH—Good morning, Mr Dooley. I wanted to ask you two questions. Can you tell us whether you think the anti-cherry-picking regime is necessary?

Mr Dooley—I think it is necessary if there is a large-scale rollout of a fixed network that will occur in advance of the NBN—if a telecommunications company wanted to install a network where they were aware that they would be able to make a lot of money and they would be able to get in first and prevent NBN from coming in later and obtaining a sufficient customer base to operate commercially. That in our view is fair enough.

Senator TROETH—I gather you have some criticisms of the anti-cherry-picking regimes that are in the bill. How would you make them better?

Mr Dooley—Our criticisms stem not so much from what is currently in there but from what the industry thinks it really means. As it is currently drafted, networks such as Amcom's will not be caught by the bill because their network did pre-exist. In the current drafting, our reading of it is that even if they do significant extensions they will still not be caught, but we believe that is not the intention. We believe the intention is that extensions will be caught and that the bill will be amended to actually cover extensions to existing networks. What was your question again on that point?

Senator TROETH—If you were the lawmaker and it was pointed out to you that there were deficiencies in the present anti-cherry-picking provisions, how would you make it better?

Mr Dooley—Firstly, by clarifying exactly what the intention is by stating whether extensions will be caught within the ambit of a superfast broadband that is subject to regulation. Secondly, if that is the case, by saying that extensions that are not significant will not be caught within the ambit so that networks such as PIPE Networks or Amcom, which pre-existed 25 November but are naturally extending their networks but not in a significant manner that will impact negatively the NBN, are allowed to continue in that manner.

Senator TROETH—Thank you.

CHAIR—I think we have time for one more question.

Senator FISHER—I have a question, Chair. Mr Clapperton, what opportunity do you think you had to raise with the department the issues that concern you, particularly in respect of cherry picking, prior to the relevant bills being introduced in the House?

Mr Clapperton—I do not say this to in any way criticise the department because I am given to understand that their hands were largely tied by the government on this. We were aware that these bills were coming. We did make representations to the department that we would very much like to see exposure drafts of those bills so that we would have an opportunity to make our views known before the bills were introduced. For whatever reason—and I will decline to speculate on what those reasons might be—we found out what was in those bills only after they were introduced in the lower house.

Senator FISHER—And at that point in time you decided—

CHAIR—Senator Fisher, we have run out of time. I thank Mr Clapperton and Mr Dooley for appearing at such short notice. We appreciate your help this morning and we appreciate your attendance. Thank you.

[9.40 am]

BARDEN, Ms Tanya, Director, Energy Networks Association

DEME, Mr Andrew, Group Manager Telecommunications, Ergon Energy

CHAIR—I welcome Ms Tanya Barden and Mr Andrew Deme of the Energy Networks Association. Thank you for talking to us today. The committee has received your submission as submission No. 4. Do you wish to make any amendments or alterations to your submission?

Ms Barden—No, thank you.

CHAIR—Do you wish to make a brief opening statement before we go to questions?

Ms Barden—Yes. Thank you for the opportunity to appear before you today on behalf of the Energy Networks Association and to provide evidence in support of our submission. The Energy Networks Association is the peak national body for Australia's gas and electricity energy network businesses. We represent this industry on economic, technical and safety regulatory matters as well as energy policy issues. With me today is Andrew Deme, who is the group manager of telecommunications for one of our member companies, Ergon Energy, which owns and operates the electricity distribution network in regional Queensland. Mr Deme is here to assist the committee today, particularly in relation to issues surrounding the critical nature of electricity network communications and, if it pleases the committee, is able to provide some insights given the recent experience with Cyclone Yasi. Mr Deme was intrinsically involved with restoring Ergon's telecommunications, which was critical to the restoration of power following that dreadful cyclone event.

I wish to emphasise the main points covered in ENA's submission and to make brief comments on Telstra and Optus' submissions to this inquiry and statements made by opposition members during recent debate on these bills in the House. The Energy Networks Association's submission is fundamentally about ensuring regulated providers of critical infrastructure are able to access essential inputs in order to deliver their services. Electricity network businesses are facing several pressures to modernise their networks with smarter technologies; in particular, these include the need to meet growing demand for energy supplies, particularly in peak periods, the need to moderate electricity cost increases through the delivery of more efficient and cost-effective network services, the need to ensure that the energy networks are secure against threats such as terrorism and natural disasters and the need to facilitate a reduction in carbon emissions. Electricity network businesses are meeting these challenges by modernising their networks with smarter technologies.

The fundamental elements of a smart network are a large number of intelligent devices distributed throughout the network and a two-way broadband communications network that is ubiquitous, secure, reliable, cost effective and interoperable. Each electricity distribution business is at a different stage of determining their communications architecture and needs for smart networks, and this decision will be driven by each individual business's cost-benefit analysis of the various communications technologies, taking into account the geographic, population density and other parameters they operate within. This will involve a mix of technologies as there is no single technology that is appropriate for all circumstances. The NBN is an important candidate technology for many of the electricity distribution businesses and in order for this to be a viable option it is essential that utilities have the ability to purchase NBN services direct from NBN Co., as proposed in sections 9, 11 and 12 in the NBN Companies Bill. These sections of the bill appropriately limit the ability of utilities to purchase from NBN Co. where it is solely for the purpose of managing and charging for the network operations. This thereby eliminates any concerns that utilities may onsell these services to the public.

Some have queried the justification for utilities' wholesale access to NBN. Quite simply, the main reason is that the nature of the service that is sought by utilities does not require transformation or value-adding by a retailer or by NBN and is significantly different from the enhanced service that retailers would on-supply to the public. The reason for this is that utility service level requirements are higher than those of a retail customer. Evidence has shown that utilities need a high degree of control over communication services in order to attain the necessary service levels. Once a retailer takes an NBN Co. service and integrates this with their own network or adds their own electronic equipment, then this introduces a range of complexities and unknowns that add risk for the reliable operation of energy networks.

A smart grid depends on access to smart infrastructure and, as proven in Cyclone Yasi, a more resilient grid depends on direct access to resilient telecommunications infrastructure. Understandably, retailers would want

to service a market in which they add value to NBN's layer 2 service and on-sell that transformed product to the general public and commercial customers. If NBN Co. were to supply services further up the OSI stack utilities, then one could understand the position expressed by Mr Turnbull and carriers that NBN was competing at the retail level and seizing territory from the existing PRI-affected telecommunications companies.

However that is not the case. Utilities are not looking for value-added services either from NBN Co. or retailers so NBN Co. would not be taking away an opportunity for retailers to offer enhanced services. The energy network sector is concerned that the proposals by Telstra, Optus and the federal opposition to amend sections 9, 11 and 12 of the NBN Companies Bill would prevent electricity and gas network businesses from direct access to the NBN. This is likely to increase the cost of delivering network services in instances where the NBN's direct access would have otherwise been a cost-effective and feasible solution.

The effect of these amendments would be to leave utilities with three options: firstly, to purchase NBN services retail where experience indicates that it is uncertain whether retailers will deliver the basic service sought by utilities and, even if they do pass on a basic layer 2 service, it would be at an additional cost especially given that we are talking about connecting millions of devices. This would increase the cost of delivering energy network services.

The second option would be to purchase other retail communications services such as wireless services. However, previous experience with recent cyclones and floods has shown that commercial wireless carriers have been unable to provide the level of reliability required for mass deployment of smart technologies.

A third option would be for energy networks to deploy their own communications infrastructure. Analysis and recent experience indicate that if utilities are unable to purchase directly from NBN, the next most efficient option is likely to be for them to deploy their own infrastructure. This would potentially result in an inefficient duplication of infrastructure for the Australian community, however, and a higher cost to serve than wholesale access to the NBN.

In conclusion, the energy network sector urges the committee to recognise that the carriers' and opposition's proposed amendments to the NBN Companies Bill, which changes the effect of section 9 and removes exemptions in sections 11 and 12, may have the effect of deterring energy network businesses from using the NBN. It may encourage socially inefficient duplication of communications infrastructure and may increase the cost of delivering energy network services in instances where the NBN would have otherwise been cost effective or viable.

While my comments today have focused on electricity networks, this is due to the pressing drivers for this sector to move towards smart technologies such as the need to manage peak loads and enable the integration of renewable technologies. However, it is important that the exemptions also be retained in relation to gas network businesses to give them the option of using the NBN in the future when they consider smarter technologies to aid efficiency—

CHAIR—Ms Barden, I am sorry to interrupt you but we need some time to ask questions.

Ms Barden—That was actually my final statement.

CHAIR—So we will go to questions.

Senator WORTLEY—Thank you, Ms Barden, for a very comprehensive opening statement. In fact you have gone some way into answering some of the questions that I am going to ask, and perhaps you could expand on those. You state in your submission that proposed amendments to the bills would lead to the adverse result that you could purchase from other existing telecommunications infrastructure providers, not just the NBN. Given your experience in public policy, would you regard this as an appropriate public policy outcome?

Ms Barden—No, I would not—thank you for the question. I think that it is a perverse outcome that in legislation you would have a bias towards particular technologies, so the impact of the proposed amendments to remove the exemptions for utilities would encourage us down the path of alternate technologies rather than having the open option of using both NBN or alternate services.

Senator WORTLEY—You also make a comparison with wireless and you state: wireless carriers have been unable to provide cost-effective prices, or the level of reliability and ubiquity ... You touched on that in your opening statement; can you expand on that?

Ms Barden—Recent experience with the cyclones in Queensland has indicated that wireless networks at times of critical disasters often become quite congested. These are times in which the utilities really need

access to a resilient communications infrastructure. Having a retailer providing those sorts of wireless communication services can add an extra layer of complexity and risk around ensuring that those services will be delivered reliably.

Senator FISHER—Thank you for your submission. Taking first the three reasons that you have listed as what might be the effect on the organisations you represent of removing the exemptions. In your submission you say it may deter energy businesses from using the NBN; encourage socially inefficient duplication of infrastructure—this is from page 1 of submission—and increase the cost of delivering energy network services. But if those disadvantages are so for energy organisations, won't those disadvantages be so for other organisations that use broadband but are not able to utilise the exemptions that you currently are?

Ms Barden—You are essentially asking: why are utilities different from other—

Senator FISHER—No, it is not the same. That may be part of the answer but the question is: even if these disadvantages are suffered by your organisations, won't those same disadvantages be suffered by others who are not proposed to be exempted? A further question may be: why are you different? But I am asking you to answer the first question first.

Ms Barden—I think it is difficult for me to answer on behalf of other organisations and how they would be impacted by not having direct access to the NBN. What I can say—

Senator FISHER—Fair enough.

Ms Barden—is that utilities deliver a very critical infrastructure service and it is essential to the efficient, reliable operation of those networks that they have access to resilient telecommunications networks.

Senator FISHER—Yes, but that is like saying, 'We're special, so we deserve to be special.' It is also saying that the government's regime for the rest of the population is not good enough for you who are special, and I am not getting enough from you as to why that should be so, excepting of course the necessity of the services that your organisations provide.

Ms Barden—I think it comes down to the nature of the service that utilities are seeking and the fact that it is fundamentally different from the broadband service that will be provided at a retail level. Utilities need a basic bare service that enables them to then have a great degree of control and influence over the reliability of how it is delivered.

Senator FISHER—So what are the sorts of things that you do over the top?

Ms Barden—I might defer to my telecommunications expert, Mr Andrew Deme, to respond to that.

Senator FISHER—Mr 'Official Nerd'—I mean that in an entirely complimentary way.

CHAIR—Senator Fisher, you should be complimentary: they are here as witnesses.

Senator FISHER—I have been.

Mr Deme—Please restate the question.

Senator FISHER—Ms Barden has said that retail service providers, if I understand it correctly, require a basic service over which you put that which you need. What do you put over the top to make it work for you that retail service providers cannot or do not do?

Mr Deme—I will try to answer as best as I can. It is probably more the reverse: a retail broadband customer would typically require more value-add. They require connectivity to the internet, voice over IP capability, et cetera. They require more than a utility would require. The utility is much more interested in the most basic reliable service that they can possibly have. While the utility in the future may be interested in connectivity to the house, they are much more interested today in connectivity between points on the grid. The infrastructure needs to be designed in such a way that communication between two transformers—one that might be on fire—is instantaneous and does not pass through a POP in Sydney or a POP in Brisbane.

Senator FISHER—In one way, retail service providers are providing unduly complicated services that you do not need, is that right? Are you saying that you could not unpick those to get what you need?

Mr Deme—My experience is that it is very difficult to get existing carriers that provide retail services to provide the basic type of service that a utility requires.

Senator FISHER—You cannot really speak on behalf of universities and hospitals, but take hospitals—who are not, as I understand it, proposed to be exempt. Why would they not run the same sort of arguments, particularly the essential services argument?

Ms Barden—I think it comes down to the critical nature of the electricity industry. Hospitals cannot operate if they do not have an effective electricity network underlying them. As we have indicated, resilient communications are necessary for the electricity industry to get up and running after major disasters, and that is intrinsic to delivering so many other essential services to the community.

Senator FISHER—Nonetheless, as I understand it, many hospitals and academic institutions already have their own networks up and running, and it is likely that they will not access the NBN. Does that change your answer at all or add to it?

Ms Barden—It is difficult for me to understand the needs of the types of services they are after, but my understanding is that they would be after more of a retail broadband-type service. So they have more options available to them in the retail market to purchase a product that suits their needs than utilities have.

CHAIR—In your submission, you raised three points. You said that if you were not given an exemption you would have to purchase from the NBN at the retail level. The second one is that you would have to access wireless. And the third one was that you would have to deploy your own infrastructure. You would have to take one of those three options, is that accurate?

Ms Barden—That is correct.

CHAIR—In terms of purchasing from retail, what are the prospects of you getting the kinds of input that you need from a retailer?

Ms Barden—The current experience has shown that utilities generally find it very difficult to receive the service levels that they require from a retail service provider. Mr Deme is able to speak on behalf of Ergon, but I am also aware that many of our other energy network businesses face similar issues. That is not to say that they do not use retail telecommunications services. They do in some instances, but it tends to be where the utility's own infrastructure does not have a reach and where there is no current alternative.

CHAIR—Is it a significant cost impost if you had to purchase retail?

Ms Barden—Yes it is, particularly when we are talking about millions of devices across the country. If you are talking about a difference between \$10 versus \$5—and these numbers do not reflect anything; they are just examples—when you multiply that by millions of devices you are talking about significant cost differentials that could potentially apply if you went through a retailer rather than through a wholesale provider of a service.

CHAIR—When you say 'devices', what is the definition of a device?

Ms Barden—It can be number of things. It can be circuit breakers and reclosers, or it can be smart meters and monitoring devices throughout a network. Mr Deme may wish to add to that.

Mr Deme—That pretty much covers it. It could be monitoring the temperature of a transformer—the amount of energy a transformer uses; it could be a switch on the network for a safety requirement and if there is an issue then the switch turns the network off. They will be prevalent throughout the entire grid in the future.

Ms Barden—The reason for this is about trying to get more visibility into the network. At the moment, a lot of the businesses have no visibility about where there are problems or faults within a network because you have no way of communicating with them. One example I often refer to is that Country Energy has a 1,000 kilometre piece of line—and I am sure Ergon has the same—where, if there is an outage along that line, you have to send someone out in a truck to find that outage and to fix it. With these sorts of communication technologies, you are able to remotely detect and isolate a fault, re-route power around it and minimise the amount and length of any disruptions to customers.

Mr Deme—Probably the most important requirement that a utility has for telecommunications—and these are issues worldwide that have taken down power grids—is that, if you have a surge on part of the power grid, the quicker you can isolate that fault then the less of the grid is affected. There have been incidents around the world where large portions of power grids have shut down because they could not protect the rest of the grid in time. That is the key requirement: the fastest, highest voltage telecommunication service money can buy. Most power companies install these themselves, so they are very hesitant to use any other service to start with. You need to be able to identify the fault and turn the grid off before it passes through the grid.

CHAIR—These are devices that are predominantly used in the power industry.

Mr Deme—Absolutely.

CHAIR—So they are unique to the power industry?

Mr Deme—Yes.

CHAIR—Is there a growing number of these devices being used, or less?

Ms Barden—The scope and the scale of the deployment of these devices is rapidly increasing, certainly at a transmission network level. A lot of these types of monitoring-control devices are quite widely deployed through transmission networks. A lot of this is about taking that down throughout the distribution network and having greater visibility of the distribution network right down to the customer level.

CHAIR—So for maintenance of power supplies both in times of crisis and in normal times, these are very important devices for the power industry.

Ms Barden—Absolutely, and particularly looking to the future where we have an increased number of adverse weather events, and growing demand on the networks, which puts stress on the ability to deliver reliable power supplies. These sorts of devices will ensure that, looking to the future, utilities have the ability to offer the level of service that customers demand.

CHAIR—Do retail companies have the level of technical expertise on these issues, Mr Deme?

Mr Deme—I cannot answer that so far as technical expertise is concerned. I can say that it is very difficult to buy the service with the service level to the requirement that you need for protection services—that is the term that we use in the industry.

CHAIR—I think you answered some questions on wireless but can you remind me about the problems of why you would not use wireless.

Ms Barden—It is not that we would not use wireless per se, certainly the utilities themselves are looking at the options of 4G or radio mesh—different wireless technologies in certain circumstances. The issue again is more about retail provision of those services and, again, once you have the retailer introducing extra layers of their own equipment then there is greater scope for it to fail. Also, on those public carrier wireless networks, you do tend to get a lot more congestion at certain times. The 3G network, following Cyclone Yasi, was down for quite some time in comparison to utilities' own infrastructure.

CHAIR—How do your wireless networks operate? Do they operate off a fibre network?

Mr Deme—They either operate off a fibre network or a microwave network. Microwave is the older technology but it is very reliable. We do not need the super high-speed capacity; we need the reliability and the performance. One of the other things that we noticed from Cyclone Yasi was supplying power through to sites. After the cyclone there was no power because there was no power network, so the telecommunications at that point was very difficult to find reliable columns.

CHAIR—If you had to deploy your own infrastructure, is there any estimate of costs associated with that?

Ms Barden—Sorry, we do not have that sort of level of detail at the moment. What I can say is that each of the businesses faces their own unique circumstances, so those costs will vary across the industry depending on topology, geographic features, population density and so on. No complete assessment of that sort of cost has been undertaken.

CHAIR—If the cost were to increase, would that have to be passed on to the consumer?

Ms Barden—Certainly. What we are aware of is the relative cost rather than the absolute costs. The industry is united in the view that if you are unable to achieve wholesale access to the NBN then the alternatives will lead to higher costs.

CHAIR—Senator Troeth?

Senator TROETH—No, I do not have any questions, Chair.

Senator FISHER—Isn't the effect of what you are seeking that NBN Co. will effectively compete with retail service providers?

Ms Barden—Short answer: no. Because we are seeking such a basic service, NBN Co. is not clawing away market opportunities for retailers. Retailers would be looking to take the basic NBN service, enhance that and sell it as a more complete service to the market. It is not really taking away a service from NBN; if they were to offer a service—which is uncertain—it would only be a very basic service of the same nature, so there is no opportunity for them to value-add.

Senator FISHER—But in saying that, Ms Barden, aren't you presuming what retail service providers would want to do?

Ms Barden—To some extent, yes. But I think it is quite easy to see that there is very little incentive for retailers to offer the basic service because it would purely be a pass-through. If there is no enhancement that they are offering then there is not really much opportunity for them to add additional profit margins through that sort of transformation.

Senator FISHER—That may be subject to negotiation. That is what choice is all about. In the third last paragraph of the conclusion of your submission you say:

... the NBN is an important candidate technology being considered by many energy businesses.

Like it or not, that says to me, and probably to anyone who reads it, that those who are in your business are looking to the NBN in comparison with others to provide what they need. In my book, that puts NBN Co. in competition with others who might—even if they do not today—choose to try and compete for that business.

Ms Barden—Across a smart grid there are a number of different communications functions that the utility network needs provided. There is no one technology that is suitable for all of those and no one technology suitable for every service area. For any business there will be a mix of technologies. The businesses are at the moment conducting technical assessments of the performance and the security of different technical options. They are also doing comparisons of the costs of these different options. Any utility may end up potentially with a mix of possibly some radio mesh or some wireless with some NBN in certain areas and some of their own fibre in other areas for different functions. That is really important to understand; it is not just looking at NBN or another option.

Senator FISHER—Thank you.

CHAIR—Senator Fisher raised the possibility of some competition with those who do not exist.

Senator FISHER—Who do not provide the services at the moment.

CHAIR—I thought you said 'exist' actually.

Senator FISHER—I may well have said it, but what does that mean?

CHAIR—I am not asking you what it means, thanks. Summing up my view of the association's submission in shorthand: basically, because of the unique circumstances in your industry, the technical capacities of the industry and the technical requirements of the industry, it is better for you to have an exemption.

Ms Barden—That is right. Yes, I agree.

CHAIR—I am sure you monitor how you can do things cheaper. Do you see on the horizon any companies that, like the phoenix, are going to rise up and provide to you all the services that have not been provided over the last number of decades?

Ms Barden—It is always hard to gaze into a crystal ball, but I think what is clear is that utilities need a very basic service. Generally, when markets emerge and new players come in they tend to offer new retail products which are enhanced services, which is not the type of product that the industry is seeking.

CHAIR—Apart from the argument that you are unique and you get special technology—

Senator FISHER—And we need you!

CHAIR—Yes, Senator Fisher, we certainly need the power industry. Are there any other issues that you want to raise after listening to the questions that have been asked today? You are saying, 'We need this exemption.'

Ms Barden—I think it really does come back to understanding the very critical nature of electricity supplies—the fact that electricity is intrinsic to the operation of everyday life and the fundamental need for a reliable telecommunications service to provide it. As I said, NBN is a part of the mix. Even if we do have the ability to purchase direct from NBN, that is not to say that that will be the one and only service that we will use. But, where it is appropriate, utilities certainly would like it to be in the bag of technologies that they are able to use.

Senator FISHER—Why would a retail service provider not bundle together the bag and onsell it to you?

Ms Barden—Do you mean bundle together a mix of a wireless and an NBN service and so on?

Senator FISHER—Yes.

Ms Barden—Potentially they could. Again it comes down to whether or not it is able to meet the service-level requirements we have, and the current experience of the utilities has been that when they go to the retailers they have not been able to achieve that on a ubiquitous scale. I think that is a really important point. There may be patches within a network where you are able to receive a service from a retailer, but smart grids really require ubiquitous coverage, and that is quite a different proposition for a retailer.

CHAIR—There is another issue for your industry. I used to be a power station maintenance fitter, so I have some idea of the industry in terms of its wholesale side and the generation side. The big generators who supply the retailers are regionally based.

Ms Barden—Generally they are.

CHAIR—Yes, predominately they are regionally based. For instance, the bulk of the power supply generation capacity in New South Wales is on the Central Coast and in the Hunter Valley. They do not have access to high-speed broadband through an NBN equivalent at this stage, do they?

Ms Barden—Sorry, we are here on behalf of the network part of the industry, so I am not able to speak on the services available to the generation sector.

CHAIR—But your network runs up into those regional areas.

Ms Barden—That is right.

CHAIR—That is the point I am making. You generate regionally. Your network comes from the regions, and the area that your network runs through does not have access to NBN type high-speed broadband.

Ms Barden—Generally the utilities will have their own fibre deployed to those areas.

CHAIR—So again the utilities have done it themselves.

Ms Barden—Yes.

CHAIR—Ms Barden and Mr Deme, thank you very much for outlining your position and for assisting the inquiry in its deliberations this morning.

Proceedings suspended from 10.13 am to 10.31 am

FORMAN, Mr David, Senior Advisor, Communications and Public Relations, Competitive Carriers' Coalition**HEALY, Mr Matt, Chairman, Competitive Carriers' Coalition**

CHAIR—I welcome Mr Healy and Mr Forman of the Competitive Carriers Coalition. I thank you for talking to us today. The committee has received your submission as submission 5. Do you wish to make any amendments or alterations to your submission?

Mr Healy—No, we don't.

CHAIR—Do you wish to make a brief opening statement before we go to questions?

Mr Healy—Yes. The CCC thanks the committee for this opportunity to speak on these matters. We have a long history in advocating reform in our sector and we have taken much interest in the developments of the NBN and the regulatory reforms that have been part of that. As such the CCC supports the NBN bills because they reflect an important reality that for too long has been ignored by telecommunications policy. That reality is that the ubiquitous access network connecting people's homes and businesses to communications services is a natural monopoly and that as such it needs to be regulated. It shares this crucial characteristic with other utilities services, such as electricity, gas and water. Those industries have been regulated and separated from downstream competitive markets because policymakers have recognised that that is the only effective way to manage the incentives and the ability to behave in an anti competitive manner. The separation of the NBN Co.'s ownership from downstream retail businesses means that the telecommunications sector in Australia will finally be managed under similar principles. The bills presently being considered represent important safeguards into that future.

The CCC has identified a couple of areas where it believes the bills can be made more effective and has been in discussions with the department of broadband and communications about these issues. The most important of these relates to the non-discrimination principle and the proposed exemptions to allow some discounts in the prices NBN Co. charges access-seekers in certain situations. The CCC has thought long and hard about the non-discrimination exemptions and the principles that should guide it. After seeing the bills and considering the practicalities of implementing the principles into the reality of commercial negotiations, we have in fact changed our view from one that supported strictly limited and controlled discount arrangements to a position where we now advocate no exemptions to non-discrimination principles at all. This is based on our view that attempting to apply a principle that measures efficiencies and attempting to translate those efficiencies into price reductions on the acquisition of specific services would be such an imprecise art and would create such a burden on the regulator, access-seekers and the NBN Co. that it would likely be a path to disputation and potential discrimination over time.

The other provision that the CCC members have discussed in detail with the department relate to the 'level playing field' provisions. The CCC is of the view that these are crucial provisions because of activity that we have seen take place in a couple of locations where Telstra has cut off services to competitors under the guise of a network upgrade. Notwithstanding this support for the principle, CCC members have been in discussion with the department about possible drafting issues to ensure that there are not unintended consequences for investors in other network elements. We have some confidence that these issues can be addressed.

Senator TROETH—I would like to ask you about that last point. At the end of your submission you mention that the discussions with the department are ongoing. Without disclosing any confidential provisions, what points have they concentrated on?

Mr Healy—In our understanding, the intent of the bill is to ensure that the monopoly public benefits of the NBN are not undermined by other cherry-picking activities. That is in the NBN space, the future. However we have a situation in the here and now where we have seen Telstra upgrade its copper network and close down certain exchanges and replace them with fibre in such a manner that they no longer provide any wholesale services to competitors. So, whilst most of the discussion and the heat and light have been around the NBN situation, there is a very important aspect of preserving competition as we lead up to NBN and fibre. The discussions we have had with the department have been about ensuring that situations where Telstra attempts to foreclose the market prior to NBN are avoided, and getting precise drafting around those arrangements, as well as ensuring that no investments are unintendedly caught by these provisions. On a quick read of the bill one might think that certain transmission network assets or backhaul arrangements might somehow or other be picked up. We are working with the department to ensure that they are not. Clearly the bill is about ensuring

that there is a regulated monopoly for the access part—the last miles to the home and to the premises. That is what the focus is on.

Senator TROETH—I notice that you do not want to leave what you call ‘islands of customers’ who have no access whatever because—and correct me if I am wrong—Telstra have chosen to cut off their services, which precludes other retail competitors from providing them. Is that correct?

Mr Healy—That is correct. Where, at the moment, customers have a choice of provider, that can be removed and we can have a default position where it is only Telstra. We see that as a big step back in competition.

Senator TROETH—Thank you.

Senator WORTLEY—The Competitive Carriers Coalition generally supports the two bills, but you have raised areas that you have some concerns with here. Given that you have effectively supported the principle of discrimination, on the issue of the non-discrimination principle and prices, how would you or your members propose an amendment that still supported discrimination but dealt with your market access issues? Perhaps while you are on that, you could include under what circumstances it would be okay to discriminate.

Mr Healy—We have thought long and hard about this one. As we note in our submission, we were at first supporters of the idea that, with efficient operators who can acquire a service in a manner that would justify a cost saving to the supplier—the NBN Co—that efficiency should be passed through to consumers, by way of a cheaper access rate and then, in turn, access to more efficient services. That is the principle. When we have seen how that would work in reality, we have found that it is essentially unworkable. We draw upon our experience both of dealing with this very issue with the regulator in the not-so-distant past and looking at how it might be framed under the current bill. We would need to allow the regulator to somehow or other determine that a small change in the way a service is acquired somehow or other justifies a price reduction. That is an art, not a science. We have found in the past that, when these claims have been made to the regulator, they have been impossible to test, and it turns into a situation where it is economists at 20 paces—it is disputation and uncertainty. Any potential benefit for the consumer is greatly outweighed by the cost, the delay and the frustration that comes with trying to work these through a regulated system.

We think a simple approach, albeit it blunt, is ultimately going to be more beneficial to consumers and competition. A simple arrangement says that these are services that are vanilla; these are services that all access seekers buy at a certain price on the same terms and conditions. We see that as pro competitive and levelling the playing field. We will seek to have innovation and efficiency more at the retail level. That is where the focus should be—in efficiencies and activities at the retail level. The way in which the services are bought from NBN Co. is very much as building-block products. We think that if there was a lot of focus and a lot of opportunity to gain the purchase price at that level—to try to get a special deal from NBN Co. justified by the fact that I have a large report from an eminent economist who says it would be more efficient—that would open up disputes and delays and it would increase costs to the market across the board. If we stack all of those problems in identifying efficiencies and benefits up against the benefits that might flow to consumers, we think a much simpler arrangement and a flatter structure should apply.

Mr Forman—While we were attracted to the principle as it is expressed in the explanatory memorandum, this is an industry that is not going to be able to escape its legacy quickly. The legacy of this industry is one of disputation and gaming. As we worked through trying to understand how the bill would translate that principle into practice and how the industry players would translate the bill into commercial negotiation we thought there were so many points at which disputation and gaming could arise that it was almost inevitable that there would be some people who would fall into their old habits and that would create a situation where, with the best of intentions, we would again be mired in disputation, delay, confusion and potentially anticompetitive conduct.

Senator FISHER—On page 2 of your submission, where you talk about volume discounts, you submit that the use of demand forecasts as a basis for risk-sharing is ‘necessarily subject and therefore’. Have you missed something out there?

Mr Healy—It should read ‘subjective’.

Senator FISHER—Thank you. What sorts of efficiencies do you contemplate could be used to justify volume discounts? You are saying efficiencies should be the measure, but are there any which are measurable? Are you suggesting a scenario that can be actual and deliverable? Give me some examples?

Mr Healy—We have struggled to find an example that demonstrates an efficiency and, more importantly, demonstrates an easy alignment with a saving. It might be easy to say, ‘If I buy these things from you in a certain manner, it is going to be more efficient. It is easier for you and it is easier for me.’ But if we try and quantify the value of that benefit or efficiency, that is where we go down a path that is very much opinion. In a project like the NBN, where there is a very large amount of capital upfront, we think that to apply a discount to an individual service that flows from an efficiency that attaches to such a huge investment is a game that will be not to the consumers’ benefit.

Senator FISHER—Even though you say efficiencies should be used, you do not think that is a realistic option because you cannot see how it would ever be measurable?

Mr Healy—Yes. We have moved from the theoretical. We have said, ‘The textbooks say that this should be the way we do it.’ But if we look to the real world and we draw upon our experience of the past and how our experience of regulation goes, we say that this is not going to work. In fact, overall there will be a net detriment to consumers and to competition if we head down that path. Perhaps I could draw your attention to the chart we supplied as an attachment to our submission. With some help from some legal advisors, we have drawn out what we see as the pathway that is set out in the bills to somehow or other arrive at a price that is different from what everyone else would be getting.

Mr Forman—That is, how the exemption, the non-discrimination clause or principle would apply in a commercial negotiation.

Mr Healy—At each of those arrows and at each of those boxes we have a decision-making gate. It is either a decision that will be in the hands of the regulator—NBN Co.—or an access seeker or a competitor to the access seeker wishing to have the discount. At each of those points we have potential dispute, potential delay and lack of clarity about where the onus of proving these is. At first blush, as someone who has been in the sector for some time I look at this and say: ‘Goodness me! This is the nightmare world of regulatory gaming that we have just tried to get ourselves away from through the various reforms that we are putting through at the moment and indeed that the bill and NBN Co. are seeking to deliver.’ So, from our experience, we say that this would be a step backwards and that many benefits that we see in the future would be whittled away under the gaming opportunities and the delay. Whilst it might keep people like myself in the regulatory world gainfully employed, we do not think it is really to the benefit of consumers and competition.

Senator FISHER—Say you disregarded the criterion ‘aids efficiency’ and were to allow volume discounts solely on the basis that, for example, all access seekers in like circumstances can benefit. Firstly, what are the sorts of scenarios in which you could contemplate that that might happen? Secondly, are any of those scenarios acceptable to you? I gather not, but let us explore it.

Mr Healy—We have looked at both the efficiency side for discrimination and then at the volume discount side, which at first blush one would think may be simpler. There are a couple of aspects to the NBN that we think do not justify volume discounting. The first one is that it is an IP world, and with the traffic on the network the cost of providing the service is not increased by the volume of traffic going through the pipes. That is a different world. In the previous copper world there was switching involved, so the more traffic you had the more switching there was, and there were ways to aggregate traffic to minimise your switching costs. That kind of circuit-switch world lent itself to some notions of volume discounting and lowering costs. Those lower costs ought to flow through to lower prices to consumers.

In the NBN IP world, it is a flow of data. These networks are always on. Whether the pipe is full or just a trickle is going through it, the costs associated with the provision of that pipe do not change—and if they do change they change immaterially. Even if you could say there were some benefits flowing from the acquisition of a lot of services as against a few and volume discounts, you come back to the quantification of that saving. That is where we go back to—as I said, it is sort of economists at 50 paces—trying to determine what the quantification of any supposed benefit from the volume discount might be. In that world, if you look at the chart we have provided you, we again go through numerous gates and numerous abilities to dispute, delay and game. Again, we do not think that is, overall, of benefit.

Mr Forman—I also think it is important to note that when we talk about volume discounting we are able to point to experience, because that conduct has been evident in the marketplace in the past with Telstra. We can see just what a pernicious tool it can be, because it is so completely subjective. We have had experience whereby the commission has tried to interrogate the ACCC in instances of disputes. It has tried to interrogate the basis upon which those discounts have been offered and has found that it is impossible. As Matt says, you get into the world of economists at 20 paces. You can imagine how much chance you have of a resolution that

anybody can agree on and that can stand legal scrutiny in that world. So volume discounts is something that we have a particular aversion to, both because in the future world we think that the scarcity principle will not apply and because, in the past world, where there was some argument that there was a scarcity principle that could be used to measure it, it actually did not work.

Senator FISHER—Thank you for now, Chair.

Senator WORTLEY—In your submission, you highlighted Telstra's activity in South Brisbane as a reason to support the legislation's cherry-picking provisions. Are you able to expand for us now, detailing the areas of greatest concern should this not be included?

Mr Healy—Certainly. Our experience and our members' experience of what is unfolding in the South Brisbane exchange is pretty simple. It is a case where, at the moment, a regulatory framework supports competitors coming into the exchange building itself, deploying equipment and being able to connect customers to that equipment. That allows the customers to be provided with a slightly different type of service, different flavours of product and service and a level of infrastructure competition and choice to the consumer. All that can be undercut in one fell swoop when Telstra comes in and shuts down that exchange and decides to fibre up to the premises—or perhaps not quite to the premises, maybe to the node or the street corner. When it does that, it literally strands the assets that are in the South Brisbane exchange that the competitors have deployed there and through for which they supply competitive services—alternative services to Telstra's—to customers that are in the South Brisbane exchange area. That is the nub of it. It wipes out the ability of customers to have a choice, for competitors to be able to supply a service any different to Telstra's. Indeed, we have a situation where Telstra is going through this conduct and it is not even coming up with a solution as to what its replacement wholesale service might be. It essentially, certainly for some time, has ignored that and said, 'We're going to provide services to these customers, not you.' That is the message we get. The cherry-picking arrangements that are in the deal seek to stop, and we believe they would stop, that kind of conduct. That preserves a level of competition as we move to an NBN world. If we do not have a level of competition today, it is going to be very hard for us to thrive in the NBN world when it arrives.

Mr Forman—The South Brisbane exchange is not the first example; it is just the most egregious and the largest and there are many thousands of competitors' customers affected. But there was a previous example here in Canberra. At the subexchange in Deakin, a very similar thing happened. It was a much smaller number of customers and it was a fibre-to-the-node deployment rather than a fibre-to-the-home deployment that Telstra engaged in, but you can see the potential for this conduct to be repeated. If you project that into the future NBN world, in the absence of the level playing field or cherry-picking provisions, you can see a situation where you may have Telstra or another provider selecting the most valuable parts of the market, building islands of vertical integration surrounded by an NBN for most of the country but the key markets upon which a lot of competitors have built their businesses would be taken out of the NBN world, and you may have no competitive access, you may have some other kind of regulation that has to evolve around them which is suboptimal. So you may have a world where you have, running in parallel to the new structurally separated world, the old world that we have all been trying to get away from in these crucial marketplaces. That, I think, would be detrimental in the extreme to national competition and to the business cases of competitors who want access to customers—so the business cases of everybody in the CCC.

Senator WORTLEY—Thank you. That clarifies that.

CHAIR—Senator Fisher, I will go to you for a few minutes and then I have a number of questions.

Senator FISHER—Why don't you proceed with your questions, Chair?

CHAIR—I am going to you. I am giving you the call.

Senator FISHER—Well, I am giving it back to you.

CHAIR—I am not going to play that game. You either get the call now or you will not get the call again. I am giving you the call.

Senator FISHER—Back to you, Chair.

CHAIR—I am giving you the call. I will give it to Senator Wortley. If you do not take the call, I will not come back to you. I am not about to play games with you.

Senator FISHER—Fine.

CHAIR—You have played enough games this week.

Senator FISHER—That will be fine. If Senator Wortley has questions I am more than happy for her to ask them.

CHAIR—Okay. I will take questions, and that will take me through to the end. I have given you the opportunity. I have so many questions; I am giving you the opportunity to come in.

Senator FISHER—Thank you, Chair.

CHAIR—Do you want the call or not?

Senator FISHER—Not at the moment, Chair.

CHAIR—You will not be getting the call again, because there are an umber of questions.

Senator TROETH—Chair, that is most undemocratic.

Senator FISHER—And unusual—but proceed, Chair.

CHAIR—I am giving you the call.

Senator FISHER—I do not wish to have it at the moment, Chair; so do proceed.

CHAIR—Well, I doubt whether you will get the call again. I am trying to be fair with you.

Senator TROETH—You are being most unfair.

CHAIR—Do you think so?

Senator TROETH—Yes.

CHAIR—I will take your advice on that.

Senator TROETH—Please do.

CHAIR—I have a couple of questions and then I will come to you.

Senator FISHER—Thank you, Chair.

CHAIR—Mr Healy, I want to come back to this question of discriminatory pricing. The implementation study, I understand, suggested that discrimination ought to be allowed but with a restriction that, if different terms are given, they be given to at least three access seekers. Do you think that is a model you could live with?

Mr Healy—We did note that that was in the implementation study. Our focus to date has been on bill as drafted. The members have considered in detail—and hence our need to go to the level of detail of that chart that we have provided, for instance—the way in which the currently drafted provisions would work. If we look to a world where four, five or six access seekers all in the same position could take the benefit of the different price, I think we would be moving back to a simple non-discrimination arrangement and, in a sense, those prices would be offered to all comers.

Mr Forman—There is another thing to consider, though, I think. If we are talking about a number of providers who may benefit from that kind of arrangement as being the threshold that determines whether or not a discount is allowed, we have got a precedent that is not entirely parallel but which is, I think, worth noting—and that is what is called ‘peering’, which is the arrangement under which networks interconnect and price the data that they share between each other.

Probably 10 years ago or more there was an investigation by the ACCC into Telstra’s conduct where they charged everybody for accessing their traffic but Telstra paid nobody in return when they used their traffic. That dispute was resolved when Telstra agreed to have a peering arrangement—that is, Telstra paid nothing for traffic and charged nothing for traffic of their own—between three other providers. So they said, ‘We’ll resolve this issue. There are three other providers that are big enough that we think we should be peering with them.’ It led to what has become infamously known as the ‘gang of four’. That group of four has never changed, and others who have entered the market since and have grown to a size where they think that they should be entitled to the same consideration have never been able to break in to shift that initial gang of four. We have seen in the industry the same kind of arrangement leading to gaming and to anticompetitive conduct. So I think we would be a bit uncomfortable with even that kind of simple threshold approach.

Mr Healy—I would just note that whilst that might deal with the issue about who qualifies for a discount—if there were three or more or it would appear that there would be a known class of who might be able to get that discount—it does not resolve the other issue that I mentioned earlier, which was the quantification of the discount. Again, that is an inherently imprecise issue that discrimination leads to. The value of the

discrimination becomes the issue. Even if more than one, two or three—or five, for that matter—might be able to get access to the different price, it is the quantum of the difference of the price that then becomes the issue. So we have not moved away from that problem.

CHAIR—You indicated that there was a problem for the consumer in the approaches being taken. Surely if the ACCC is monitoring the definition of efficiency, isn't that a sufficient safeguard?

Mr Healy—Again, in the past we have had the ACCC being the gatekeeper of competition tests and whether or not services should be regulated. Certainly, on the whole they do seek to preserve the interests of the consumer and indeed that is their mandate, but in attempting to get to that outcome we have, as I say, a history of dispute, delay and neglect. When we stand back and say 'Has the role simply of having a regulator involved delivered competitive outcomes in the past?' the answer would be no because there are structural problems and problems with the way in which legislation is drafted that lead to the problem. We do not think that the commission simply being inserted at each of these steps of decision making protects the consumer and is going to lead to the right outcome. The process and the structure that underpins it may well be the problem. That is what we see here.

Mr Forman—The value to someone who is able to gain unfair advantage is so enormous that people will invest vast sums of money in trying to persuade the regulator to their point of view and they will try repeatedly. We have seen many occasions in the past where Telstra has engaged in undertakings processes with the commission again and again presenting arguments that have been repeatedly rejected because they know that the value of winning that argument is so enormous that it is worth investing many millions of dollars in gaming the process even over a number of years to try to get there.

CHAIR—You have this chart in your submission set out by a lawyer. You talk about theory and real world. Don't lawyers play a lot in the realm of the theory? Wouldn't there be lots of theoretical assumptions made in terms of this chart?

Mr Forman—I think that is the point. This bill, if passed, would immediately be presented to lawyers and they would be asked, 'How can we game?' They would look at that chart, they would identify the opportunities and they would give advice as such. That is why the industry is known colloquially as 'lawyers with wires'.

CHAIR—I might come back to that.

Senator FISHER—In respect of the exemption proposed to be provided to certain utilities, if I can put it very generally even, if their reasons—some of which you might have heard earlier today—are valid in their sphere of operation, what is your view of the argument that nonetheless providing those exemptions gives them a leg up that others would like but cannot have because they are not proposed to be exempt?

Mr Healy—Our reading of the bill is that the sorts of services that the utilities would be seeking to supply are in no way overlapping in any sense with the markets that we currently operate in nor the markets that we expect that will emerge as the NBN is rolled out. We do not see that they are really encroaching. That said, we have concerns about any sniff of the NBN Co. wishing to retail services directly to anyone other than operators. We do see that, as a core principle of this network, that needs to be maintained. However, having understood the arguments of the utilities and seeing how that is presented in the bill we do not see that there is a competition issue there even an emerging one. We see them as operating in very different markets and for very different purposes.

Senator FISHER—The previous witness in their own submission talked of the NBN Co. as being a candidate for provision of services, 'candidate' necessarily suggests that there may well be others.

Mr Healy—The key for us is the type of service we are talking about here. We are not talking about, for instance, a broadband service, we are not talking about a telecommunications service, we are not talking about an entertainment service, we are not talking about any of the types of services that we would think are going to be offered in markets that are really going to underpin this network. We see that the activities of the utilities are just kind of an adjunct to the fact that this is a ubiquitous network and that there are some efficiencies for those other utilities, like gas, electricity and water, that can be harnessed by the NBN. We understand the policy reasons as to why that is being looked at. We are concerned that it is contained and there is not what has come to be known as 'scope creep' for NBN Co. We want to keep them narrowly focused around the core provision of wholesale services. This exception we see as very, very narrow and we do not have a concern.

Mr Forman—We also have in our mind the extent of investment that these utilities have in what are in effect telecommunications networks themselves to provide to themselves these kinds of underlying services—

network management services. The need for those utilities to have their operations underpinned by what look like telecommunications services is not something that has been created because of the NBN. My reading is that they are seeing potentially the rollout of a ubiquitous fibre network as supplanting the need for them to make that investment themselves if they can just acquire it from someone who is doing it anyway.

Senator FISHER—Okay. Even though, for example, the ENA—the previous witness—said, ‘The NBN is an important candidate technology being considered by many energy businesses’, are you saying it is going to be the only candidate?

Mr Forman—No. I am saying that, at the moment, perhaps people are assuming that the other candidates are telecommunications retailers. That is not the same understanding that I have. I think that the other clear candidate would be that they do it themselves, as they have done in the past.

Senator FISHER—Okay. Thank you.

Mr Forman—That is my understanding of the types of services we are talking about.

Senator FISHER—That, however, is necessarily premised on the past, isn’t it—your knowledge and experience thus far—because it may well be that there is a retail service provider that wants to go into that market if it is able to.

Mr Forman—If what the utilities are providing is based on an underlying network carriage service, then they would have to acquire it from the NBN anyway and resell it.

Senator FISHER—Yes, that is right. Hence ENA’s arguments about why that should not be necessary.

Mr Forman—I have not seen any evidence that anybody has identified that as a market. I may be wrong. I have not seen any evidence that anybody has identified that as a marketplace.

CHAIR—Senator Fisher, that will have to be your last question.

Senator FISHER—Thanks, Mr Forman and Mr Healy.

Senator WORTLEY—Mr Forman, earlier when we were speaking about south Brisbane and a reason to support the legislation’s cherry-picking provisions, you spoke about a situation that occurred in Canberra. I wonder if you can expand on that and some of the consequences of it.

Mr Forman—That was the Deakin sub-exchange, I think, and that was a situation where Telstra claimed that they had to move that sub-exchange because the building was being knocked down. There was a later suggestion that that was not the case, but nonetheless they said they had to move it from there. They proposed to cut off the competitive services that were being provided out to that exchange and not replace them. That went into existing regulatory dispute processes with the ACCC, who tried to resolve it. My understanding of the resolution is that there was nothing more than a requirement from the ACCC to Telstra that they provide people with more time and more notice and a clearer indication of what the alternatives would be that would be provided them—the alternative wholesale services. It was clearly not satisfactory but the number of services was so small that there was not a mood among the competitors affected to continue spending money on that fight. The same principles and the same activity are being replicated in South Brisbane, where it is a much, much bigger issue and a very, very important exchange.

Senator WORTLEY—And the impact on those service providers?

Mr Forman—I do not know what the outcome was precisely in South Deakin. The small number of services that were affected related to what is called the unbundled local loop, which is where people can put their own equipment in and connect directly to customers. My understanding of the resolution that was being spoken about was that that service would not be technically capable of being provided, so I do not know whether those customers were actually lost or whether there was a separate wholesale service provided to replace them.

Senator WORTLEY—And South Brisbane, of course, is a much larger issue.

Mr Forman—It is much larger. Again, at the last exchanges that I was aware of Telstra was still not offering clarity on any wholesale service that they propose to replace.

CHAIR—We have run out of time. Can I summarise your position as I understand it: you support the two bills, you have an issue on non-discrimination principles and prices and there is an issue on level playing fields, but you will continue to discuss these issues with the department.

Mr Forman—Correct.

Mr Healy—Yes.

CHAIR—Thank you very much for coming along this morning and helping us in this inquiry.

[11.11 am]

GREEN, Professor Walter Battman, Director, Communications Expert Group Pty Ltd

CHAIR—I welcome Professor Walter Green from the Communications Expert Group. Thank you for coming along today to discuss these issues with us. The committee has received your submission as submission No. 7. Do you wish to make any amendments or alterations to your submission?

Prof. Green—No changes, thank you.

CHAIR—Do you wish to make a brief opening statement before we go to questions?

Prof. Green—Yes, please. There were two sheets of paper, one containing slides 1 to 8 and the second one containing a network diagram. The background information to these is that there are developments in the way the NBN is being constructed and built that in fact will lead us backwards in the telecom regulatory environment.

CHAIR—Professor, just before you go any further, I request, if you are seeking to table those documents, that we have the documents.

Prof. Green—I am seeking to table them. I only prepared them as soon as I knew I was coming to the meeting. Copies will be made available.

CHAIR—That is fine.

Prof. Green—The key issues that I wish to raise in my opening statement are why the NBN fees are nearly irrelevant in determining the prices paid by end users and RSPs for services; the potential for as few as three companies, or RSPs to connect to the points of interconnect offered by the NBN, regardless of the number of RSPs and how that will affect the downstream market; and the need for engineering and security audits.

Slides were then shown—

The slides are taken from a talk I gave in March 2009—that is, two years ago—which outline the UK market. These slides were prepared by somebody who works within the UK market and has a very good understanding of what is going on.

What has happened there, through complex negotiations for access to Openreach, has limited the number of people who buy services from Openreach, which is the equivalent of NBN, to 10 in the UK market. Everybody else is limited and that is what we call the UK tier 2 and tier 3 and they are forced to buy from these primary tier 1 RSPs—service providers or retailers as they call them. In effect, those 10 control the prices to everybody else. While sometimes the decreases in price mandated by Openreach are passed on to end users, there are some instances where they are not. In most instances where there is an increase in price that increase is passed on, but where there is a decrease in price there have been instances where it has not been passed on.

The NBN is currently unclear but it is looking like it is following the same path as Openreach, requiring high capital investment and making the process to get access to these points of interconnect very difficult. My expectation is that we will only end up with three or possibly four people who will actually be buying services from the NBN.

If I can refer you to the network slide, you will see at the bottom end there are triangles. They represent the points of interconnect that the NBN will build throughout Australia. While six are shown on the diagram, you will appreciate any number may be involved. It is the black line that goes from the POI up to the rectangles, which are the RSPs. The people who control those fibre links throughout Australia, and bear in mind there is substantial investment required to build those links, are the ones who will ultimately control the pricing to what RSPs and what other people generally refer to in the market. My expectation is that, because of the investment, there will only be three, possibly four. In other words, we will have a similar situation to where we had three mobile carriers, where there was limited competition and prices remained high. It took additional entrants into the market to force a price reduction, and, I might add, the ACCC also had to intervene to get price reductions.

The other thing to note is that if you look at slide 4, which is titled ‘UK 2009’, due to Openreach—the kind of network and some of the prices being forced on but not all of them—they were still able to reduce the average household bill for telephone and internet down to \$40 a month. This is nearly half what we pay in Australia. The average call for a national network call was down to less than 2c. It is absolutely imperative that

this bottleneck of the link from the NBN POI to the RSPs should not be allowed to be created. Unfortunately, the discrimination provisions that are put in there are exactly the sort of fertile ground for this limited number of tier 1 people, who can provide this link, can grow. As mentioned by the previous people, once you get the group in they are entrenched and you literally cannot move them. The same thing has happened in the US with the group of four tier 1 internet services there. Any kind of discrimination is likely to disadvantage people getting access to the NBN in the future.

Also of concern is, under the Freedom of Information Act, one needs to recognise that governance and project management on average only have a 20 per cent effect on the price of delivering a service. If you get the engineering or security issue wrong, you in fact can wipe out the service completely. In other words, you have 100 per cent impact. The difficulty we have is that the NBN was proposing 14 POIs in the first place. This should never have been allowed on management. The first is the fibre network in Australia is just not capable of providing all the connectivity that is needed to connect to 14 POIs. This is simply because if you take the 13 billion subscribers that is announced in the NBN plan of 14 POIs, it is nearly one million customers connected at each point of interconnect. This makes it an obvious terrorist target for maximum disruption but, in the event of a natural disaster, like the floods in Brisbane, you would wipe out the connections to one million people in a disaster situation. So it would be interesting to know where the 14 POIs are and if any of them are in places like the floodplains of Brisbane.

The other point is that if I refer again to the diagram on the network, the NBN is going to be seeking funding for the points of interconnect and the fibre to the customer's premises. As I indicated, the dark lines from the point of interconnect to there do not exist at the moment, and there will be other people seeking finance to get access to build this network. There will be competition for telecom investment against the NBN. For this reason it is more important that the engineering is fully understood, clearly explained and audited in order to give value for money. Based on my experiences in building equivalent networks in Western Australia, if you use one benchmark—the standards and everything announced by the NBN—we are looking at a price increase of two to four times. If you use the successful business model that was used for a structurally separated carrier in Western Australia, the benchmark price is somewhere between 10 and 20 times the price. In other words, what the NBN is trying to build it for and charge is 10 to 20 times what we were achieving in Western Australia. Thank you very much.

CHAIR—Thanks, Professor Green.

Senator FISHER—Professor Green, thank you. Your concern about volume discounts—do you think that despite the proposed or noted wholesale price of \$24 a month that NBN Co. is talking about that NBN Co. can still find ways to charge differing wholesale prices to large and small RSPs?

Prof. Green—Yes, not so much in the access from the POI to the customer but in the costs that are charged to get access to it. There is a whole second tier of tariffs and it is at that point that the gaming and manipulation can occur.

Senator FISHER—Can you expand on that a bit.

Prof. Green—If I can go back to my diagram on the network: where you have the black line that goes from the RSP to the triangle, it is the connection at the tip of the triangle. That is where the NBN has a variety of prices which in fact make it difficult for a smaller RSP to connect but make it easier for a larger one so that in effect will drive down the number of people who can provide the link—in other words, we come down to three or four tier 1 RSPs. The part that does concern me with the debate in Australia is that nobody is looking at the fact that your market is going to be very similar to the UK where you have tier 2 and tier 3 RSPs. Only a few will actually connect to the NBN.

Senator FISHER—In that scenario, for example, for sophisticated applications that need lots of bandwidth, does that mean that the volume discount means that the fees that certain RSPs will have to pay will include an amount for reserving their capacity, if you like?

Prof. Green—That is only one of many ways of doing it. I think it is worth pointing out—

Senator FISHER—Sorry: one way in which NBN Co. might extract more money?

Prof. Green—Correct. From one access seeker compared to another. That is why I am saying there needs to be an audit of the commercial conditions as well as the engineering. The audit of commercial conditions will prove that there is equitable access and that the pricing is not disadvantaging some access seekers against others.

I think it is worth pointing out that in the UK there is not volume discount. They have found that it causes so many problems it is not worth it.

Senator FISHER—They used to have volume discounts, did they?

Prof. Green—They attempted it but it became a nightmare so quickly, so Ofcom, the regulator, stepped in and pretty much forced them to say, ‘You will have the same price throughout.’

Senator FISHER—Over what period of time?

Prof. Green—This was in the very early days nine years ago.

Senator FISHER—So should the government legislate or provide a framework for wholesale pricing—as loath as I am to discuss that scenario?

Prof. Green—I would say you would be creating a can of worms or complexities for gaming that you would never get around. Already there are five generic methods that carriers use to increase prices to customers, and they are all involving ‘nonprice’. As soon as you open that particular one you will never regulate it properly because there are so many combinations that one can do to get around it. This is effectively why the UK said, ‘No, we want a simple one type of contract and one type of commercial condition and one price structure, and that is it.’

Senator FISHER—Thanks, Professor Green.

CHAIR—There are a few points here, Professor. You indicated that there was a problem with 14 points of interconnect, is that correct?

Prof. Green—Correct.

CHAIR—You might not be aware of this. Since December there have been 121 points of interconnect.

Prof. Green—I am aware that 121 had been proposed. The statement I am making is the fact that the issue of 14 points of interconnect ever got as far as it did indicates significant concerns in the way security and engineering issues are being managed at the moment. This is why I am recommending that not only the management aspect but the commercial and engineering aspects need to be audited as well. You do not want to create a single point of failure in a natural disaster or create a terrorist target—because you take out one of those and a million people lose services.

CHAIR—But, given there are going to be 121 points of interconnect, that minimises some of your concerns?

Prof. Green—It substantially minimises concerns. But the real issue is that the 121 is all that should have been offered, not 14, and the fact that they were even prepared to go as far as they wanted for 14 indicates some serious concerns. I believe it is that kind of discussion and that kind of pushing those issues that led, and it was reported in the *Australian Financial Review*, to some of the leading financial banks now saying, ‘Work on the principle that the NBN won’t happen, because they won’t get the financing.’ In fact, the audit process will help the NBN get the funding. It is important for Australia—and for WA, and I say WA because we need it more than anyone—to move to a fibre-to-the-premise environment.

CHAIR—Do you support the principle and what we are trying to achieve with that?

Prof. Green—I support the proposal. As for what you are trying to achieve, I am saying at the moment there are concerns that by not doing things correctly it could either significantly slow it down or make it not sufficiently competitive or cost effective for the bulk of the population to get access to it. I support the NBN in principle but there are details that I think need to be looked at carefully. Unfortunately, they are parts of the legislation which I believe are weakening the NBN’s case.

CHAIR—And one of them was 14 points of interconnect?

Prof. Green—Correct. To me there was inadequate engineering and security review in even letting that proposal come out to the public.

CHAIR—But you are now comfortable with 121 points of interconnect?

Prof. Green—I am actually saying the figure should be north of 200—121 is better but there is substantial investment required within Australia to support 121. If you look at today’s technology you see you are better off with 200. Let us put it this way, 121—

CHAIR—I suppose 1,121 would be even better.

Prof. Green—is far better than the 14, yes.

CHAIR—But you say you want 200 and I am saying I suppose 1,100 would be even better.

Prof. Green—Sorry, 1,100?

CHAIR—Yes.

Prof. Green—No. The optimum is somewhere between 200 and 300.

CHAIR—So we are getting close to the optimum.

Prof. Green—Yes.

CHAIR—That is good. I am glad that is not such an issue for you anymore. Can you explain how the NBN costs will be 20 times more?

Prof. Green—Sorry?

CHAIR—I think you finished with your last point being about costings in Western Australia and you said that the NBN—this is what I wrote down—would be 10 to 20 times more expensive.

Prof. Green—Yes, if you use the benchmark of what is provided within greenfields properties and you take the cost of providing fibre to the premises—and WA actually has more houses that are equipped with fibre—what the NBN are proposing, if you take their standards and implement them, is somewhere between two to four times the price of what providing fibre in Western Australia or Perth is costing at the moment. There is a business model that was used successfully in WA. If you use that as your reference point for costs, then the NBN is costing something like 10 to 20 times. The business model of the NBN needs to be looked at carefully. There are various ways you could do it. The opposition has suggested the Productivity Commission. There is no real audit or check of whether you are actually doing it the right way to deliver costs when we already have experience both overseas and in WA where we have done it cheaper.

CHAIR—But you cannot really compare the rollout of a national network across the country with the demographics of Australia to the rollout of a network in Perth as a city, can you, really?

Prof. Green—In regard to the connection with from the point of interconnect to a customer's premises, the size of Australia is irrelevant, because that is something that is local. The only thing that varies is the link between them.

CHAIR—The point of interconnect might be local but the infrastructure has to be rolled out nationally.

Prof. Green—Yes, but we are only dealing with the fibre that goes from the point of interconnect to it. Whether it is rolled out in one city or small villages and so forth is actually irrelevant. In fact, I have cases with two shires in WA where the cost of providing fibre to the premises for a small village community of 100 houses is cheaper than in many metro areas. The issue is the connection from that community back to a point of interconnect or wherever you can aggregate those services. It is the backhaul that really controls the price, not the last mile.

CHAIR—Yes, but doing in this nationally, if we are going to provide equality of access across the country and a standard price, surely there has to be some give and take in some of the high-end areas in terms of the costs to subsidise some of the other activities that are taking place?

Prof. Green—We have had to work across a variety of territory from rock, sand—all the variables. The volume of the infrastructure of the NBN is, in our opinion, excessive. You can do the same thing and yet achieve all the goals. It comes back to whether the engineering design is an optimum design. The view is that there are more economic and effective ways where you can build a national network at a lower cost.

CHAIR—That is your view?

Prof. Green—That is the view and that is my experience in actually building these things.

CHAIR—What is the biggest network you have built?

Prof. Green—It was 3,000, but I have actually been involved with three large estates and developments.

CHAIR—That is fibre to 3,000 properties?

Prof. Green—Correct.

CHAIR—This is a much larger undertaking than that, isn't it?

Prof. Green—Once you go to that size, you just duplicate that across the country.

CHAIR—Are you sure it is that simple?

Prof. Green—I am pretty sure from the engineering it is simply a project management issue of getting the right materials at the right time with the right government approvals.

CHAIR—What is ‘pretty sure’?

Prof. Green—The biggest problem is actually the connection, as I say, from the estate back to the centre of Perth, which is that thick black line from the point of interconnect, which in WA is called the head end, which is equivalent to the RSPs. That is where the costs are controlled and affected in delivering services to the end customer.

CHAIR—I am just trying to get my mind around your experience on this and it is doing 3,000 households. I do not want to diminish that experience at all, but this is not 3,000 households. The NBN is of huge magnitude compared to that. Didn’t the ACCC recommend that POIs be located where there is competitive backhaul? Wouldn’t that lead to lower backhaul prices?

Prof. Green—This comes back to the point that there is not enough backhaul in Australia. We effectively have Telstra and that is it. We have very few locations, mainly the capital cities and a few others, where there is an alternative fibre provider. In order to get three or four people who can provide that competitive backhaul, that is where additional extra investment is required. I come back to the logistics and the design. Once you have proved the design for 3,000 or even 2,000 properties, rolling it out across the different suburbs and the different localities within Australia is fairly repetitive. You are literally down to asking ‘What is the money?’ and organising the supply chain. That is the only real difference. You have to get the engineering to make it cost-effective right on the first one and that is where I am saying I think there are better, more cost-effective engineering designs that could be used.

CHAIR—Your submission basically says that, if we can do it 20 times cheaper, we can build the National Broadband Network for \$1.8 billion.

Prof. Green—That is using a benchmark with an alternative provider. In fact, looking at where I believe the NBN should have been done, there has been a substantial increase in costs because the successful WA model relied on the telecommunications being put in at the same time as pavements, powerlines and sewerage. The price difference there was, say, \$1,000 per property. Because we were doing it in conjunction with another provider we were doing it for \$70. That is why the business model was acceptable. Bear in mind that 80 per cent of the NBN is in fact putting the pit and pipe and the tubes in the ground.

CHAIR—Professor Green, I say to you that I am sure there will be ministers, there will be bureaucrats and there will be expects beating a path to your door if you can build this for \$1.8 billion.

Prof. Green—I am not saying I can do it for \$1.8 billion. I am saying there are substantially cheaper ways of doing it.

CHAIR—But that is the effect of your submission here.

Prof. Green—I am saying there is a substantially cheaper way.

CHAIR—That is a changed submission. That is okay. The ACCC rule specifies that the POI location is defined as places where there are three backhaul providers. Are you aware of that?

Prof. Green—Yes, and that is why I am saying there will be three principal connectors to the network who will provide the connections to the other RSPs—in other words, the tier 2 RSPs.

CHAIR—Coming back to this cost, I am sure you do not want the front page of the *Australian* saying that you can build this for \$1.8 billion. You are now saying it is for substantially less. Have you discussed these issues with NBN?

Prof. Green—I have had meetings but, as I said, they have chosen to do it that way and they have disagreed with me on what I have said.

CHAIR—They have disagreed with you?

Prof. Green—Yes, they wish to put in too much infrastructure and I believe there are alternative engineering solutions where they can achieve their objectives using less infrastructure at a lower price.

CHAIR—Why did they disagree? Can you outline the technical reasons why they disagreed with you?

Prof. Green—They did not give any reasons. They just said, ‘No, this is what we have decided we are going to do. That is it.’

CHAIR—But you said they disagreed with you. That is not disagreement; that is ignoring.

Prof. Green—Ignoring or disagreeing—they said that that was what they believed was necessary and had to be done. They are in charge and that is what they have to do.

CHAIR—Any further questions for the professor?

Senator TROETH—I have some. Professor, you have mentioned in part 3 of your submission:

The provisions of the Legislation with regard to the determination of when the “NBN” is complete, is vague, and subjective.

Would you like to elaborate on that? I would also be interested in your view of Optus saying that there should be a limit of 15 per cent ownership of NBN Co. by any one retail service provider.

Prof. Green—The first point is—sorry, I just need to check my papers.

Senator TROETH—I am referring to page 4, part 3, conditions for sale of NBN Co.

Prof. Green—Coming to the sale of it, I was a chief engineer in Rhodesia which was managing the changeover of the analogue telephone network to the digital telephone network. I have had to deal with a large-scale national network. A network is always evolving and changing. There are parts being removed and there are parts undergoing upgrading at any one time. I have tried to think through how to define the NBN as being complete. Using the simple metric ‘I have connected 13 million subscribers’ is irrelevant because in 10 years time we may need 14 or 15—in which case it is not complete; it is still incomplete. Or it may only get to 11 million and that may be because of demographics or various conditions, so you will never get to the 13 million.

It is very difficult to define any kind of metric which will say, ‘This network is complete.’ That is why I say that at the point in time that any government in the future should, subject to the provisions in the act, be able to say, ‘Okay, yes, it is acceptable to sell the NBN.’ There may be opportunities to get better value for money for the taxpayer by selling it halfway through construction rather than trying to wait for some nearly arbitrary decision as to when it is ready. There is no clear metric for any regulator or minister to work to as to whether it is complete. There are so many variables and it is even more complex on a 10-year project. I was only dealing with a five-year project but the changes within the first two years were quite phenomenal and I am expecting the same thing to happen here.

My second point is that I disagree with any RSP having any funding, capital or equity within the NBN because the British Telecom and Openreach still have the allegation that BT actually receives a subsidy from Openreach because there is a joint holding or the financial control is from a single entity. So you have this back path. To eliminate that particular one there is no need for an RSP to invest in it because they will automatically be seeking some kind of discount beneficiary—you name it—and that undermines the whole basis on which the NBN was formed, to get equitable access.

Senator TROETH—Do you consider that it should remain as a government owned entity?

Prof. Green—I am saying that it is acceptable for it to go to a private entity but there should be no shareholding allowed by an RSP. In fact Art Price from AXA Communications has clearly stated the only reason he succeeded was that he had no interference from his downstream purchasers.

Senator TROETH—It should be another entity, not necessarily government, but one formed strictly with the view of running the NBN as a wholesale service provider?

Prof. Green—I believe it should be wholesale only. My other concern is that there are also difficulties in determining who can get access. This is why I am saying you would probably need to redefine the business activities of the NBN from the point of interconnect to the customers’ premises. That is all they are allowed to do. It gets rid of all sorts of problems. To me the current definition in the legislation is too vague and I believe will undermine the viability and effectiveness of the NBN in delivering its desired outcomes.

CHAIR—Professor Green have you any further qualifications as an economist?

Prof. Green—No, I do not but I have had to work with pricing and seeking funding on enough cases to put the business case together.

CHAIR—The business case for a 3,000-house—

Prof. Green—This was for quite a wide range of projects.

CHAIR—But the biggest project was 3,000—

Prof. Green—I saw the funding in detail for 3,000, yes. I have also seen Telstra's funding and various other people's as well.

CHAIR—It seems to me you are coming at this almost from a test tube approach—3,000 houses—compared to what is happening. You know that moving from the test tube to real life does not always equate. The point I am making to you is that you are in the test tube area, with 3,000; NBN is in real life, building a national network, and to compare the two is just not easy, is it?

Prof. Green—I am prepared to say that, adopting different engineering designs and a different approach to the way you go about it, yes, there are significant savings and that is why I said about the benchmark that, depending on if you take the one with the different approach, the savings—and I accept there are a whole lot of things that affect this and that is why I gave a price range of 10 to one—can be reduced quite substantially. By exactly how much is going to be dependent on the cooperation with shires, local government and in fact state planning.

CHAIR—Have you done any modelling of the savings?

Prof. Green—The only effective way I could do it was to take what is the cost that we have done at not just one site but three sites, what is the cost of doing it there, now take the experience that we had where we had to do a brownfield development in Perth and look at those costs because that is what the NBN is currently using as its approach—in other words, take the ratio of those two; that is where you get the significant savings.

CHAIR—So in my terms you take the test tube results and apply them to the real live NBN?

Prof. Green—In some instances you would be able to do what was done successfully; in others you have what I call a raw brownfield where you have to dig up the pavements and everything else, and it is that ratio, how much you can get cooperation with the state planning organisations, local government and so forth, where you just have to go and dig everything up and start again, which is what the NBN is committed to. That is why I cannot say yes, I will do it for \$1.8 billion, because it assumes 100 per cent with the wind blowing behind you. It will probably be more than that.

CHAIR—I am not being critical of this—you are entitled to have a view on all these issues and I thank you for bringing your views here—but you are now into the area of liquidation, where you say that, if NBN requires a business that has got retail operations, then the divestiture of those retail operations should be undertaken by a liquidator. Why a liquidator?

Prof. Green—There are two situations that occur. A carrier might be up for sale that has point two customer premises access assets, which are what the customer will be buying it for. If that carrier has gone into liquidation there will be a liquidator in place and the instruction to the liquidator in that case is transfer the assets required by the NBN to the NBN, and the rest the liquidator needs to sell off. The other case is where by private negotiation a carrier wishes to sell its assets to the NBN, then, rather than the NBN take over all ownership and do the divestiture itself, the people who have the experts in managing the company, effectively breaking up the company, are liquidators and I am saying keep it out of NBN's hands, let the liquidator do the transfer of assets and the selling off because in fact liquidators do sell off the assets of companies that are being broken up and sold.

CHAIR—I think there would be business people listening to this around Australia who would be horrified to think that liquidators would be the ones that would be allocated the job of selling a going operation's retail assets.

Prof. Green—I understand the difficulties within the liquidation industry, but it is a case where letting the NBN get into the retail space will, I believe, undermine the effectiveness in the delivery of services.

CHAIR—But that is in the legislation. Senator Troeth?

Senator TROETH—Surely, Chair, an economist has an equally valid view on some of these issues. I would have thought that for the chair to criticise Professor Green's qualifications on this is somewhat lacking in the professional conduct of a chair. Surely it is the chance for a wider view to be taken of this, not just telecommunications specialists but an economist and other people who are equally well placed?

CHAIR—I am happy to hear your economist come and tell me this. I am happy to hear businesspeople tell me why liquidators should be allocated to a going enterprise which is simply selling off a retail business. I think I am entitled to ask the professor, given that he is putting that position to this committee, as to how that operates. I am entitled to pursue that in an appropriate way, and I think I have. That is fine. It is not the professor's area of expertise; he concedes that. He is entitled to these points of view—

Senator TROETH—Good. I am glad you acknowledge that.

CHAIR—and I am entitled to pursue what the implications are of those points of view. Professor, thanks very much for coming along and assisting us. It has been very helpful.

Prof. Green—Thank you for the opportunity to present.

[11.51 am]

STRONG, Mr Peter, Executive Director, Council of Small Business Organisations of Australia

CHAIR—Welcome, and thank you for coming along to assist us today. I note that you have not made a submission, which is fine. Do you have a brief opening statement that you would like to make before we go to questions?

Mr Strong—The belief of the council, after great debate, is that we need an NBN, something across the nation, for small business. It is something that people and a lot of small businesses have become excited about. They want it. They know in some cases it will mean high speed, but in a lot of cases when we are talking to small business they say that it means they can rely upon it. A lot of the problems out in regional areas and even in some city areas, without a doubt, is a lack of reliability from the current service. Tasmania, in particular, is a state that said they really need it; they are desperate for it. That is basically our view on it.

When it comes to the technicalities, probably the reason we did not put in a submission—besides the lack of time and resources—is the fact that our submission would basically be around the need for individuals out there who want speed and reliability.

Senator TROETH—I am sure you have discussed this many times during your council processes, Mr Strong. What is the view of your smallest businesses on the price they will have to pay for access to the NBN and on the way it will affect their ongoing business activities?

Mr Strong—The correct answer is that a lot of them do not know. This is one of the interesting things I have noted as I go around and talk to people. They say: ‘I want speed and I want reliability. I don’t want it to be expensive and I don’t want it to be difficult. I don’t want a lot of red tape but I want it.’ A lot of them just do not know beyond that, unless they are a specialist IT company, in which case they all want it. There is no doubt there: all the IT people want it.

When it comes to the shoe shop, when it comes to any of those sorts of people—the franchises out in the country towns and, as I said, even in some of the cities—they do not know a lot beyond the fact that they know they want it. It is really interesting to hear them. They are not experts on these things, and they know they are not, but they are experts on access to the marketplace. They know that the world is changing quickly with the internet. As we know, it is impacting enormously on retail. The innovative people, in particular, want to use it. The ones who do not understand and still know that they need it say: ‘I’m not sure. It’s awfully expensive.’ They certainly say that, but they also say: ‘If we’re going to keep up I’m going to have to access it. I’m going to need it.’ They are coming across as people. There are some who do not want it, by the way. When you question them as to why they say: ‘I don’t need it. I’m in the city and it’s fast enough now. I don’t care about someone in regional Australia. I just don’t want to do it.’

There are 2.4 million small businesses. They are diverse, but I think I can say with confidence that the great bulk of them want this for competitive reasons as much as anything.

Senator TROETH—You mentioned some of your country businesses. As you and I know, country businesses often make up the fabric of a small town. You would probably divide those again into ones that recognise the potential and others who know nothing about it. Could you describe some of their attitudes?

Mr Strong—There are some in retail in country towns who are quite afraid of what is happening in retail, but there are also manufacturers and other small businesses out there who are quite concerned about what is happening. They are unsure. They do not have the knowledge, and why would they? They are just little shops. But they say, ‘We do need to do something.’ The comparison I have heard several times is with the highway. They say, ‘We’ve got a national highway which we can send goods around Australia on; we want that access through the internet.’ A lot of them are not on the internet, I might add.

Senator TROETH—They are?

Mr Strong—They are not, because they have had no need. As you know, the book industry is going through huge change, caused in the main by the internet as well as other things, and a bookshop in a country town is probably a bit safer—depending on the quality of that shop, of course—than bookshops elsewhere. So they have not had to embrace it as quickly as they would have thought. But now they are being hit hard by online sales and they are asking: ‘How do I get online? Will I—and should I? Will I be able to compete online?’ But they always say, ‘If I’m going to, I want it to be reliable and I want it to be fast and I want to have access to my marketplace, wherever that is, and the marketplace to have access back to me.’

The other group of people that are really fascinating are the women on farms. I have seen a few of them use the internet quite well to sell products. Some of them, I cannot remember who they are, are selling jam—the classic product we make fun of people for—and they are making money out of selling jam online.

CHAIR—Not if it's good jam!

Senator WORTLEY—Not if it's strawberry.

Mr Strong—Strawberry mainly, but also other types of jam. They are saying they need this, and that is a classic view from anybody in remote regional areas as well. But from the entrepreneurial point of view—forgetting about health and all the other issues which are being debated elsewhere—if there are innovative people out there who compete online they need to have that highway so that they can do it.

Senator TROETH—Yes. I am also associated with a group called Australian Women in Agriculture and they have used the internet to set up quite a sophisticated professional network, which means they need not leave their homes. I take your point. In terms of the lack of certainty, do you find that the access to information so far about the NBN has been satisfactory from your public's point of view?

Mr Strong—I would say not, given what they do not know—when you get down to any fine detail they are lost on it. They know they want it for the reliability et cetera. Beyond that, I would say not. I have had some conversations myself where I have discovered more about new satellites—I did not even know about that until the other week—and a whole range of other things. So I think there needs to be a lot more information. The nature of small business makes it very hard to communicate with them, we know that, and that is because people try and do it the wrong way. I think we need to target the ones who will use it the most, which is retailers and manufacturers in particular, to make sure that they can use it. The Australian Women in Agriculture group is, of course, one you would target. Plenty of those women do business type activities so they would be a group you would go to and pass that information on. As I say, small business by its nature is too busy to be reading everything.

One comment I should make is about something I know from talking to people in the cities. Some of them are saying, 'I don't care,' and some are saying, 'I really want it.' They are seeing that it is high speed for them, but when we put to them that it is high speed for customers in areas that do not have high speed, they stop and think about it and they say that that is a new market they had not thought of. So they may have a product—like with Australian Women in Agriculture, for instance—that they can get out to people that, in their minds, they could not before because those people did not have access to high speed.

One other thing I can say in relation to the NBN—and I hope this does not go outside the terms of reference—is that one of the issues we have got in the real world is the lack of true competition in the way cities are designed around the needs of the big landlords. We all know that. Lots of little businesses die, they lose their houses and people do not seem to care—but that is another issue. We are hoping that national broadband means we can have a level playing field out there. I had a meeting with the Productivity Commission this morning to discuss the fact that we need to make sure that happens. You cannot have the level playing field without it. That gives everybody the same access to the marketplace that we do not have in the real world because of urban planning.

Senator TROETH—Are you confident that that will happen under the proposed NBN?

Mr Strong—I was confident a year ago and I am not now, because I have watched big business—and they are the enemy. They will capture search engines, and they have started doing it already. That is the other side of this. If we are going to do this we have got to make sure that it is a level playing field otherwise those women on farms and the people in country towns who are really innovative and have got the energy will not have the chance—the same is now. We have got to have that protection. It is not even protection; we have got to have the level playing field through the NBN. Again, we would not have it without the NBN, so we have got to have that go hand in hand with it.

Senator WORTLEY—Mr Strong, do you think that the NBN, for your regional members in particular, could not only be a lifeline but actually help them reach out further to new customers?

Mr Strong—It certainly will. Those that have access to high speed already are selling overseas. I have been to Indigenous communities where they are using the internet to sell overseas—they need to go elsewhere to actually make the speed work. There are innovative people in every community in Australia who, with that access, will surprise us all.

Senator WORTLEY—Indigenous communities are one area of it. With the small businesses, what other areas in small business would use the NBN?

Mr Strong—To say retailers is very broad. It is retailers, but within that there would be people that could not use it at the moment, for example, books, because the competitors on the internet are really quite difficult to deal with. That would be one that I could not see happening too quickly.

Manufacturing would be an example. I know one young man is manufacturing and selling golf clubs online and doing quite a good job of it. Sporting goods are apparently going that way. Rather than saying which ones they are, it is a matter of the entrepreneurs out there who will discover it and this is a way for them feeling more confident in doing that. A lot of the younger people, in particular, are very internet savvy, as we know.

The other thing I could point out is social networking. Younger people are using that a lot better than the older people. As you may be aware, I own a shop here in town—a bookshop, poor thing! One of my younger staff—

Senator WORTLEY—Hence your interest in books.

Mr Strong—That is why I keep mentioning it, I suppose. I am pleased to take it on board. The other people who are being hit hardest are the people with sporting goods, and the music industry in particular, who keep getting hit by these things. This is evolutionary change; this is not something that has been forced upon us by government or big business, which is a nice change.

Social networking gives the opportunity for people to use it in an innovative way. In my particular case one of my young people is very good at it and doing stuff that I never would have thought of in a million years, which is really helping to reinvent the shop around different things. And that is the access to it. When the internet slows down it is really very frustrating. She has instantaneous communications with the 800 friends the shop now has around an event that is happening at that particular time, and people will come in. When it stops sending, the next day you will get people complaining and saying that they did not know about the event.

Senator WORTLEY—That sounds very interesting. Can you tell us a bit more about that particular one? You are saying that she sends out—

Mr Strong—Yes. For example, we had an event in the shop last night around a launch of a literature journal from the Australian National University. Some of my staff—and I hate calling them staff, because we work together—were there saying, ‘This is a great event, and so-and-so just said such and such,’ and click, send, and immediately someone will reply and say, ‘I didn’t know so-and-so was there. I’ll come around. What time are you open till?’ You tell them and it is fascinating to watch. I would not have done that. It took Amy to do that for me.

Senator WORTLEY—You spoke earlier about something to do with Indigenous communities and that once the NBN is up and running it will provide access. What was the business relationship with that particular one?

Mr Strong—It was an artist. This is an entrepreneur who can paint and is selling his own artwork online. He is keeping it very much to himself—classic entrepreneurial behaviour. He does not want anyone else involved; he does not want to share his secrets, which is what entrepreneurs do. He has been using the internet to do that and is selling a lot of his works to Germany, and he mentioned to the United States in particular. With him doing that, other younger people will do other things and not just paintings. Who knows what they are going to do? That is the beauty of what we have here. It gives people with imagination and drive the opportunity to think of something that none of us would have thought of.

Senator WORTLEY—And the NBN would support and assist in that?

Mr Strong—That is right. Without the NBN it becomes too clumsy and costly. They may develop and put a lot of time and effort into something that cannot work because people cannot access that information or that product from the marketplace.

Senator FISHER—When you say that small business will benefit from the NBN and that they want the NBN, what is small business prepared to pay for access to the NBN?

Mr Strong—That is a good question. In my experience, what they are prepared to pay is what everybody is else paying. Presently, if you go onto the internet you know you pay for the setup costs. That is happening now—it might be \$10,000 or \$2,000 depending on what you want and what products you have. When it comes to access they pay what everybody else pays. I would think that what they would want to pay is what everybody else is paying. Again, small businesses are just people—they are not businesses in the sense that a

lot of people imagine. They are individuals and they will think, 'Why am I paying more in my business than I am paying at home?'

The issue comes down to what it costs—not what it costs for small business. If it costs more for small business than for the person at home, that makes no sense. It has to be the same as for other people. In the end, is a person willing to spend that money to go onto the internet to get the return that they want? If it is too expensive and they cannot see the return in their business plan they will not do it. If it is the right price they will do it. They will talk amongst each other. Certainly in country towns they will ask each other how much they are paying, who is their provider and whether it is worth it. The people who have embraced it already will be consulted a lot about the return for effort. The business associations will certainly have models out there of what you should expect to pay before you start making a loss or before you should stop and think about some other mechanism. In the end, it is like a lease—if you want to do it you have got to pay for it.

Senator FISHER—What is 'the same as everybody else?'

Mr Strong—In a country town, we do not want to have a different price for business than for a family.

Senator FISHER—What if the people in the country town are paying a whole lot more than people in another regional centre?

Mr Strong—If I know those people they will be questioning that and coming down here and challenging it. They should not pay a whole lot more—it is that simple. When a physical highway is built it does not cost you more to drive on that highway when you go from wherever it is to wherever it is. It should be the same with the NBN.

Senator FISHER—So in saying that your members want the NBN, what reassurance, if any, have you got from the government or anywhere else that they will not be paying a whole lot more?

Mr Strong—No reassurance at the moment. This is all new territory. We probably could not put the submission in because we could not put in a coherent submission except for one page saying, 'We want it.'

Senator FISHER—You cannot say a whole lot about what you do not know a whole lot about.

Mr Strong—That is right. At the moment we do need a lot more information so we can influence it. A classic small business reason is that we do not have resources. In many ways, we would like to have some resources allocated to us in the form of a seconded person who knows this sort of thing who we could brief—it might be for three months or longer—and say, 'This is what we want.' They could then brief us and say, 'Have you thought about these things?' Then we could work together to come up with a coherent response from the small business sector. But we need that expertise. We do not have it and obviously small business can never afford much when it comes to places like COSBOA and other organisations. That would be quite a good outcome if we could get that resource. I do not think it is an unfair request. If we are going to inform discussion and policy in a proper way to make it work for everybody, we need the information and the resources to do that.

Senator FISHER—Have you got any views on the prospect of the wholesale price meaning a prohibitive cost for your members to access broadband?

Mr Strong—I do not have the information to make comments on that. We have discussed this among the council, and some of them are more knowledgeable than others, but we sit there and say, 'We need some expert advice on this to make informed comment.' Otherwise it is just yes or no, with no real depth to it. At the moment we do know we want it for all those very good reasons. One of the fears that has been expressed by several council members is whether business—because you have the word 'business' in your name—will be charged more than a family. In small business you are both. That is one of the fears they have expressed—to make sure that we get charged the same as everybody else. At the moment it would be nice to know more. As I say, I did not put the submission in because it would not have been much.

CHAIR—You have raised a whole range of issues which has been, I think, quite helpful for this inquiry. But we are looking at the legislation to get NBN up and running. You have raised a number of issues that are extraneous to the legislation but which are practical issues that the government and this committee need to understand in terms of any recommendations it makes.

I have just had a quick look at your website, and I notice that you have a debate between the HR Nicholls Society Inc. and the Fabians as your headline.

Mr Strong—That is right.

CHAIR—I just wonder what help you would need to get that off your headline and to get the benefits and an educational process on NBN on the headline of your website? I think that in the longer term these theoretical debates about industrial relations are a bit diminished against this argument about the benefits for small business of the NBN.

Mr Strong—The reason we have done that is that small business has been invisible for a long time. A lot of what we are doing is to get it up there and to say, 'We are just people; let's stop treating us like we're small versions of BHP'. The Fabians and HR Nicholls were a headline grabber; it was the other night and it was—

Senator TROETH—You could always try, 'We have some questions about NBN,' and publicly ask for some information.

Mr Strong—That is right, and there is only me and COSBOA so we will chase that through. Interestingly, both sides were discussing projects for business. They said that most of the big projects are about ports and things that are for big business. Small business benefits from that by being contractors and what have you around that, but the NBN is actually for everybody.

Senator TROETH—Yes.

Mr Strong—That is one of the interesting things about it that we like. I take your point, and to get that up on the COSBOA site would not take much, but where we want to get that up is on the sites of the business associations where their members are the ones that will benefit the most: the Australian Retailers Association, some manufacturing groups and those sorts of people are the ones that we need to get to.

We are the lobby group at the peak level to do other things, and that is the sort of information where we come back to people like you and say, 'Target the ones who will use it.' For example, Australian Women in Agriculture is great—is it on their website?

Senator TROETH—Yes.

Mr Strong—There you go; whereas from our point of view, we put that up there but people go to our site to find out our attitude towards certain things.

CHAIR—But maybe some engagement between COSBOA and the department in relation to information may assist? Would that—

Mr Strong—It is like when I talked about the resourcing before; again, that is one thing we have identified. In the past—a long time ago—the government did that with certain groups. They said, 'Of course we can't have the knowledge on that and other matters, so we will give you someone for three months or six months,'—with a brief and a whole range of things. In that way, they really do inform our opinion and they motivate us. They energise our member organisations; they visit them, they give them information and they tell them where they are wrong and where they are right, and that does create momentum.

Senator TROETH—I am sure your members would appreciate more information, but at the same time—and I am sure you would be equally advised of the problems for your organisation as you would not—you would not want to be seen as a government propaganda machine? If Senator Cameron is suggesting the benefits of the NBN, my suggestion would be, 'We need more information,' or questions that need to be asked or whatever, or—

Senator FISHER—The benefits at what cost?

Senator TROETH—Yes.

Mr Strong—We do need more information, without at doubt, and I agree with you. What we have discovered in the past is that these things happen and we get promised a lot of things, but in the end big business benefits from it and we do not get the benefits that we want. There are other reasons as well, but that is our fear and that is where—

Senator TROETH—Yes.

CHAIR—Are you aware that NBN itself has a website where information can be accessed about NBN?

Mr Strong—I am, and I have been there and had a look at it.

CHAIR—Do you have a link on your site to that NBN site?

Mr Strong—No, and I have got to say that that website has only just been done in the last two weeks because we have changed over. Now we have got access we can start doing links and pushing the things that we see as important, and NBN certainly is.

CHAIR—The department also has a range of answers to questions on NBN, so there are two big resources there. I thought the answer to Senator Fisher’s question was, ‘Well, nobody really knows what is going on,’ but it really takes two to tango, doesn’t it?

Mr Strong—It does, but let me also say that small business are people and they do not look at everything. They have millions of things—lots of mail coming in. They are just-in-time people and they will be looking at the NBN when they have to. You cannot change them and we do not want to change them. Everybody wants small business to be looking at their particular thing and they do not have the time for it. That is why I say the best way to do it is to target the particular associations whose members are going to have more of an interest and then to resource it, go out there and talk with them in a language that those people understand and set up some case studies. Small business understands case studies more than anything. There is an issue there around how to communicate.

CHAIR—On this, Senator Fisher put to you that people will be paying a whole lot more. You do understand that the NBN company is a wholesaler and will not set retail prices?

Mr Strong—Yes.

CHAIR—It is actually for the retailer to decide prices in a certain area; that is a reasonable proposition, isn’t it?

Mr Strong—It is. You go to country areas and we have issues around a lack of competition. I am not sure whether with the NBN there will be a lack of competition. That is what we need to discover as we go along. We would love to be involved in the process so that we can stop and say: ‘It’s not working for us.’ At the moment we cannot because of resources.

CHAIR—You made the comment about the road: everybody should have access to the road. Isn’t that the equivalent of what has happened with this legislation? That is that there is a common wholesale price across the country. It does not matter if you are a small businessperson in Wee Waa, the wholesale price in that area will be the same and then retail competition should drive down the price.

Mr Strong—Thank you, Senator, because at the board meetings in that discussion they have said they like that.

CHAIR—They like it.

Mr Strong—They like it. They have always said, ‘As far as we understand,’ because beyond that we have no faith in big business and we know that we get treated like we are big business by a lot of government policies. So beyond that they are not sure. Yes, it makes sense, it is a good theory, it is good practice but what will happen in the end once people get hold of it and what will big business do? We would like to be involved as we go along.

CHAIR—We had the discussion about the benefits for small business, but benefits for small business cannot be seen in isolation. Is it correct to say that, if a big business is benefiting and can then contract work out to a small business or use small business services because of that access to better broadband, that will have a benefit for the small business group as well?

Mr Strong—It can. A medium business is probably the better example because medium businesses do not have a big history of destroying small business per se and there are some good big businesses out there. We know that. But the big ones who control the nation—which is the four big banks, the two big supermarket chains and the big landlords—are the ones that would use it to destroy businesses. They would use it to make sure businesses just stayed alive long enough so that they could milk them for money. That is our experience in the real world and that is the fear on the internet. As we have gone along on the debate about the NBN that fear has grown among all the council members. They think it looks great, it looks like a level playing field but, unless we stop them, they will use it to destroy people.

CHAIR—That may be a submission for another inquiry.

Mr Strong—It will be. It is all connected, as you said.

CHAIR—Coming back to this linkage, what is your definition of ‘small business’ in terms of numbers?

Mr Strong—We look at it as ‘employs fewer than 20’.

CHAIR—There are a lot of pretty powerful businesses with 20 employees using high technology around the country, isn’t there?

Mr Strong—There are and they are going very well. The definition of small business is always a great debate. We all know what it is: employ fewer than 20, but your turnover is less than \$20 million or something. It is an interesting debate. We know what a small business is: it is a company run by a person.

CHAIR—I used to live in Muswellbrook in the Hunter Valley. There are some big regional areas north of Muswellbrook that are isolated from a lot of the business activity—areas like Tamworth, Armidale, Narrabri, areas in which small business would be predominant. It seems to me that the wholesale price being equal across the country would give them a benefit, wouldn't it?

Mr Strong—It will. I lived in Inverell for a while. If you go in there and say, 'It is the same for me as elsewhere,' then it is like the highway—we all have the same cost of driving on the highway. That is fine. We will live with it and move on. To me it is within the terms of reference in that everything impacts on small business, and it impacts badly if it is not managed well.

CHAIR—All in all, you think the NBN legislation would be good for small business?

Mr Strong—It will be. If I could mention standard business reporting—internet based government reporting or the red-tape area. When that is finally in place, it will be a wonderful thing, but out in the bush you are going to need high speed to use it. Even in the cities, as red tape gets more complicated, you will need high speed as well.

Senator WORTLEY—I would like to follow up some of the questions from Senator Cameron. While we were talking I just flicked over to the website. From what you were saying—and obviously you have many members—would it not be useful for your website to have a link to the NBN Co. website? That website has a lot of questions and answers, facts and information. Access to those questions with answers via a link would, I am sure, save you a lot of time having to explain things to your members.

Mr Strong—You are right and we will put a link there. One of the things that we will do is put in links to particular explanations and say, 'This is a good explanation.' There are 2.4 million out there and they vote however they want—nobody tells them. In order to be fair we link to opinions from other parties as well. Then they can make informed decisions. But you are quite right; we have to get that information to them. Some of them out there are adamant they do not want it. Small businesses are not a coherent group where everyone has the same opinion. They are very varied. In this case, the great majority—but some of them do not want it at all, do not worry about that.

CHAIR—Mr Strong, the wholesale price that is published in the NBN business plan starts off at \$24 a month. Are you aware of that? That is the wholesale price. There are other websites where you can find this information. Do you think it would be helpful if someone from the department sat down with COSBOA and said, 'Look, here is how to manoeuvre your way through all the information'? You could then get it up on your website so that it is more effective. That might prevent you getting hit by some fear campaign that says, 'Everything is too expensive and you are going to be disadvantaged and you will not get equal access.'

Mr Strong—What you say is true. Some of our people might ask themselves, 'Is it a fear campaign or is it true?' So we have to get the information up there. I am converting that \$24 and I am thinking: 'What will that cost me? Is it going to cost me \$100 a month to access it? Will it cost me \$300?'

Senator FISHER—Given that \$24 is a starting price.

Mr Strong—Yes, that is right and I was just trying to work that through.

Senator FISHER—Good luck.

Mr Strong—That is where I would like to have someone come and work that through with someone from the industry and say, 'Right, here is the \$24, here are all the costs that you are going to have added on there and these are the likely prices that would come out of it.' I am quite happy to have someone come and challenge that, as well, because we are very used to people telling us stuff that is not true. It happens all the time: 'It is all right; everything will be fine,' and then it is not. It happens—well, I cannot think of times when it does not happen, to be honest. The problem is that big business cannot be trusted and government still treats small business the same as big in most cases. So that is what we need.

Proceedings suspended from 12.24 pm to 1.31 pm

NEEDHAM, Mr Mark, Member, Regional Telecommunications Independent Review Committee

CHAIR—I welcome Mr Mark Needham from the Regional Telecommunications Independent Review Committee. Thank you for taking the time to come here today and meet with us. The committee has received

your submission as submission No. 20. Do you wish to make any amendments or alterations to your submission?

Mr Needham—No.

CHAIR—Do you wish to make a brief opening statement before we go to questions?

Mr Needham—Yes, I would like to make an opening statement. I appear as a member and on behalf of the Regional Telecommunications Independent Review Committee, and the committee thanks the inquiry for the invitation to appear. The Chair, Dr Bill Glasson, sends his apologies. He has a full surgical list today and an alternate member is not able to appear either as he has some urgent cattle-to-market matters to attend to. So, I am here to entertain. As an opening statement I would like to provide some background to the committee's report and recommendations and how they relate to the bills in question and possibly comment further during our discussion on other relevant matters.

The committee was established under the Telecommunications (Consumer Protection and Service Standards) Act to review the adequacy of telecommunication services in rural, regional and remote Australia. This review was not just confined to internet or broadband but to the adequacy of mobiles, the plain old telephone service and the range of related matters. Five committee members were appointed in August 2007 for a four-year period. The committee in its process had extensive consultation around the country with 25 public meetings and received over 220 submissions. All that resulted in a wide-ranging report, which contains some 45 recommendations, which was tabled way back in October 2008. If the inquiry is interested I can arrange for our secretariat to provide copies of the report.

CHAIR—We would like that, thank you.

Mr Needham—Report recommendations related to telecommunications infrastructure, the availability of broadband, fixed mobile services, customer rights and representations as well as the myriad of essential day-to-day services that telecommunications delivers. In relation to broadband issues that are relevant to NBN effective end-use about big pipes and services and capabilities are all a matter for the report. Issues such as what comes first, the big pipe or the end-user service, are certainly complicated matters but, from the committee's perspective, it was essential that it was not just the services but also the essential add-ons that go to that. For example, if you are a specialist in the medical field, the essential medical item numbers to enable remuneration, and the patient to be able to make appropriate claims are just as important as having the big pipe from NBN's perspective.

The government responded to the committee's report on 5 March 2009, rejecting only four of the 45 recommendations, but the key issue is that 17 of those recommendations that were accepted were subject to the outcomes of the NBN process; hence the connection between the committee's report and those 17 recommendations and some aspects of the NBN bills we are talking about today but also many other NBN implementation issues et cetera.

Given the government's response date to the report, the legislation requires that the next review be completed by 5 March 2012. That is one year before there has to be, by legislation, another review of the adequacy of telecommunications services in rural and regional Australia. It will obviously be interesting for those who will be involved in that to see whether has been any significant improvement in the adequacy of services in regional, and particularly in rural and remote, parts by then.

The general background to the legislation is that it comes from the final sale of Telstra in 2005, when it was recognised that services in rural and remote and some regional locations were woefully inadequate and that services were not available, nor were they provided, on an equitable basis. The concept of metro comparable prices was in its infancy and the long-term interests of end users seemed only to apply to metropolitan areas. I will make some statements later about how the committee welcomes some aspects of the NBN in relation to national pricing and wholesale arrangements.

As well as setting up the legislation to set up the committee in that time frame, it set up the \$2 billion Communications Fund, whose interest was to fund the government responses to the committee's recommendations. Other initiatives that arose at the time were the ill-fated \$953 million OPEL wholesale venture. That was the one that was going to deliver the 12 megabits per second by 30 June 2009 at prices that were to be comparable to metropolitan prices. At least to date anyway, the committee has survived, and also some \$325 million of the \$400 million in the interest from the Communications Fund may be there as well. Some of that interest has been allocated to appropriate government programs that relate to improving services in rural and regional areas from a telecommunications perspective.

As mentioned, the 17 NBN related recommendations relate to backhaul infrastructure, open access arrangements, greater coordination for telecommunications services for government, competition and consumer safeguards covering issues like the structural separation of Telstra, court ordered divestiture, new uniform service standards, again relating back to the NBN, as well as a broad range of issues related to mobile and fixed voice payphones. They all relate to the USO and TIO matters.

There are a myriad matters relating to equitable service standards in extended zones. As a comment in relation to that, the last significant injection for telephone services in the extended zones was about \$150 million in 2001 for a contract that is to expire later this year. So matters relating to USO Co. and 2014 as the suggested date for service enhancements are of great interest. The gap of 12 years is, of course, an interesting time lag.

The committee did recognise the economic challenges of providing telecommunications services in many parts of rural and regional Australia, but it also noted that this should not diminish the importance of adequate telecommunications for achieving both social policy and ongoing rural and remote economic outcomes. The committee recognised that telecommunications is a changing market and there would be need to be taken into account consideration for any reform with the USO and associated consumer protections. The committee recognised the potential of the NBN to transform the consumer experience. It, therefore, recommended both long- and short-term reforms to the consumer framework.

Aspects of a number of the committee's recommendations are reflected in the current government programs—as mentioned, there has been some funding—as well as the proposed regulatory reform packages, so we are seeing some output from the report reflected in the legislation. Other aspects of the committee's recommendations are progressing to various degrees, and the committee secretariat is in the process of providing the committee with an updated detail status of the recommendations.

In general, the committee welcomes the establishment of an NBN style wholesale-only offering. The open access platform is of great importance. More important is the commitment to national wholesale pricing. It obviously sees significant challenges in the inequity that the current NBN delivers to the seven per cent of non-fibre premises. So, as a short opening statement, that is all I would like to say at present.

Senator FISHER—Mr Needham, can you go a bit more into your expectations about rural and regional having access to the NBN at metro comparable prices?

Mr Needham—It is the committee's view that metro comparable pricing—that is, uniform pricing—should apply to all Australians. The committee's perspective—and again this is based on our report in 2008—is that uniform pricing should be available in a competitive marketplace.

At present, as you are aware and as we discussed this morning, there has been a published nominal \$24 figure. That does not necessarily cover all aspects of what an end user may pay. Until the final retail arrangements are in the marketplace, so people can understand what they are, I do not think it is possible to determine what the end user price will be and whether is comparable to today's metro broadband prices et cetera. But it is a positive step that there will be national uniform prices. For the wholesale prices, we wait to see what will eventuate.

Senator FISHER—So you are living in hope, essentially?

Mr Needham—Yes. One would imagine that all end users in Australia hope that they get value for money for the products they wish to purchase.

Senator FISHER—Indeed. What do you see are the benefits of the NBN in respect of e-health rurally and regionally? Won't many of the illustrations of the use of the NBN for e-health ultimately require the patient to attend a doctor or a specialist?

Mr Needham—I can only speak based on my experience during our consultations during the review and other experience. The challenge with rural and remote is the availability of an appropriate pipe to deliver what is necessary for the specialist and the GP at the other end to do what they need to do. My initial comment is that at present there is inequity in the availability of the size of that pipe for the seven per cent and some would suggest that that is where the service is most needed.

Senator FISHER—Sorry, there is an inequity in what is proposed for the size of the pipe?

Mr Needham—Yes. As you are well aware, the government has announced that for 93 per cent of premises there will be a service that will deliver up to one gigabit per second—excellent—but for the remaining seven per cent of premises and they are not necessarily remote premises, depending on your definition of 'remote',

and they are not necessarily rural, depending on your definition of 'rural', will have a nominal 12 megabits per second service. So the service that will be available to the seven per cent will be dramatically less than what will be available to the 93 per cent. That inequity issue certainly challenges the committee at present. A comment from the committee at present would be that the seven per cent are condemned potentially to a second-tier service.

Senator FISHER—That is now fated to be minimum peak speeds of at least 12 megabits a second.

Mr Needham—Whatever it is, it is certainly dramatically less than what is available to the 93 per cent of premises that will get the fibre service.

Senator FISHER—Does your committee have a view or a comment on the insertion of the word 'peak' into the vernacular from the government just before the number 12 for the seven per cent?

Mr Needham—I need to comment that the committee produced the report in 2008 and it has met a number of times since then to discuss the outcomes of the report and how its recommendations are being implemented—hence its interest in the 17 NBN related issues et cetera. I do not know whether the committee has pondered the issue of 'peak'.

Senator FISHER—And what it means.

Mr Needham—From our previous consultations, all I can say is that it is dramatically different and that that is very significant. To reiterate the point is the seven per cent being condemned perpetually to a second-tier service.

Senator FISHER—Is wireless and satellite necessarily a second-tier service?

Mr Needham—Given the statement made by government that it will be a limited service compared to the 93 per cent, the answer has to be yes.

Senator FISHER—Limited in what sense?

Mr Needham—Throughput—the ability to be able to do the things that you need to do on the same basis as those who may live five or 10 kilometres down the road.

Senator FISHER—On the basis of wireless and satellite technology as we know it at the moment.

Mr Needham—Yes.

Senator FISHER—To go back to the question about e-health, are you saying that the proposed e-health services cannot be delivered via wireless and satellite and that it has to be fibre?

Mr Needham—No, I cannot say that they cannot be delivered. All I am suggesting is that, because of the significant disparity in the service between the 93 per cent and the seven per cent, they certainly cannot be delivered in the same fashion, whether it be to the local GP or to the local residents. Those two 'premises' are condemned to the second-tier type service.

Senator FISHER—But if you need to see a specialist you are still going to have to go metro, aren't you?

Mr Needham—We hope that is not the case. I believe it is the belief of the committee that there are a number of regional centres that will have much fatter pipes. If the additional services are provided on top of those, based on that example—including the appropriate medical item number—then you will not have to go to Sydney or Melbourne. You may still have to travel, but you will not have to travel as far. Wouldn't it be good if those services were available on the same basis in your local community? Under the current arrangement they cannot be.

CHAIR—Mr Needham, for my information, because I have not been here as long as some others, what was the genesis of your committee?

Mr Needham—It is a legislative committee enacted under the telecommunications consumer protection act of 1999. The legislation was changed in the 2005 time frame. The committee came into being as a result of the legislation in the 2007 time frame and the committee met for the first time in August 2007. We are a legislative committee. As mentioned, unless the legislation has changed, on a nominal three- to four-year basis, depending on some timing issues, the legislation says there should be a review of the adequacy of telecommunications services in rural, regional and remote Australia and the committee should report to the minister. The government needs to respond to those recommendations in a six-month time frame, and it was the case that those government recommendations were to be funded by interest from the Communications Fund.

CHAIR—So you were appointed. How long have you been with the committee?

Mr Needham—Since its inception. I am one of the five members who were appointed for the four-year period.

CHAIR—Who appointed you?

Mr Needham—The minister.

CHAIR—What minister?

Mr Needham—In this case, it was Senator Coonan. But we have done our review under the current minister.

CHAIR—So you were appointed by the coalition government.

Mr Needham—As an independent committee.

CHAIR—I am not questioning your independence. Do not get too carried away there. I am just asking for some facts.

Mr Needham—Find. I just supplemented them for you.

CHAIR—Thanks very much. You said that there should be uniform pricing in a competitive marketplace. Isn't that an oxymoron? How do you get uniform pricing in a retail competitive marketplace?

Mr Needham—If a particular competitor decides to provide services in, say, a metropolitan area and then decides to provide services in a non-metropolitan then we believe that the services should be at the same price.

CHAIR—So it is retail price regulation, really, isn't it?

Mr Needham—It just means that the underlying ability for that retailer has to be in place so that they have the ability to provide those services at the same price.

CHAIR—I will come back later on this.

Senator TROETH—I want to ask you questions about equivalence. I am taking this from the bills digest done by the Parliamentary Library, which I expect that you have seen. It offered general comments on the legislation. The response from submitters favoured arguments by which NBN Co. would be required to offer the same services on the same terms and conditions, processes and timeframes and the same information to all access seekers. That is not set out as a basic principle in the bill, as I understand it. The library commented further, saying, 'The bill does not seem to offer much guidance or certainty requiring that a NBN Corporation not discriminate between access seekers.' They have given some indication that discrimination is permissible where it aids efficiency. What was your committee's view of this? Did you take account in your recommendations of the fact that the notion of access for all access seekers has not been made particularly clear in the bill?

Mr Needham—The challenge is that the report was tabled and responded to in 2009. None of this material existed in 2009. The report contains a number of recommendations, principles et cetera as to what the committee thought should happen. All of those with the exception of four were accepted by government, with 17 being subject to what happens with the NBN. So it is difficult for me to comment in relation to the committee's report on that particular matter.

Senator TROETH—That is fine. I understand that.

Senator WORTLEY—Going back to some comments that you made earlier, given that almost 98 per cent of the population occupies one per cent of the land mass, don't you think that there has to some point at which you draw the line in working out the premises that get fibre?

Mr Needham—My question is why that should be the case. If government policy deems that 93 per cent of premises should have a particular type of connection, the question arises why it does not deem that 100 per cent of premises should have an equivalent service. That is the principle that I am talking about. In relation to rural and remote areas, one could say that those who need it most should get an equivalent benefit. At present, based on government policy that is not the case.

Senator WORTLEY—The McKinsey implementation study said that the cost of reaching 93 per cent with fibre was in fact prohibitive. The study found that 93 per cent fibre gets very expensive to deploy. Do you think that it would be financially responsible to try and reach everyone with fibre?

Mr Needham—I cannot comment on that other than to say that, if it is government policy to serve a particular proportion of the Australian population, why aren't they applying the same policy to the others?

Again, I am not in a position to comment on whether it should be fibre or whether it should be a service that is equivalent across Australia that satisfies the requirements of end users et cetera.

Senator WORTLEY—Do you know that the NBN is going to launch two satellites as well as build a new fixed wireless network that will deliver both more robust and faster services than we have now?

Mr Needham—I understand that. The 2015 timeframe for the satellites is an interesting one, given the delays that have been involved. One could ask the question in relation to the wireless network why NBN is not allowed to participate in any digital dividend spectrum that would presumably considerably reduce the costs and improve the efficiency of the delivery of a wireless network. If we are talking about the implementation of a particular technology and the government believes that it should be implemented as efficiently as possible, there is an example. If NBN were able to access the spectrum, it would be able to deliver it more efficiently. However, it has announced that has purchased some higher frequency, which means a higher cost for deployment in rural and remote locations. That is a comment in relation to wireless.

Regarding satellites coverage, obviously the newer the satellite the better the service—without question. But, as you are aware, there are some dilemmas with satellite coverage in relation to latency. Yes, that will be reduced. But not to the extent that there is near zero latency in relation to fibre and much less latency in relation to the wireless.

Senator WORTLEY—But you acknowledge that it will deliver a more robust and faster service than what is currently delivered today?

Mr Needham—When we see the specifications of the 2015 service, one would imagine that it will. In the interim, we know that they will be providing an up to six megabit service off the existing satellites. So, within reason, that is the same quality service. There is not much of a change there. Hence my comment earlier that when the next review—that is, the one to be completed within a year by March 2012—is done it will be interesting for those involved to see whether there have been any improvements in the adequacy of telecommunications in rural and remote Australia.

Senator WORTLEY—But the service quality over each type of spectrum will be the same, because NBN Co. will configure the network to deliver 12 megabits per second in a way that suits the spectrum that they are going to use.

Mr Needham—I am talking about the implementation and the efficiency of the spectrum. Your people will know that the reach of the higher spectrum is shorter. The reach of the lower spectrum is longer. Therefore, in rural and remote areas you have to put in my towers with higher spectrum and the cost goes up. We are not talking about the service that will be delivered via the wireless network. I am commenting on the relative cost.

Senator WORTLEY—But there is no doubt that the service will improve.

Mr Needham—From?

Senator WORTLEY—The service will be improved.

Mr Needham—When there is a new wireless service in, without question, yes. But that service is not provided on an equitable basis. This comes back to my comment about the 93 per cent and the seven per cent.

Senator FISHER—So you still do not know who is going to get what and how much they will have to pay for it.

CHAIR—Senator Fisher, Senator Wortley has the call.

Senator WORTLEY—Actually, Chair, I have finished for the time being.

CHAIR—Senator Fisher's timing was impeccable.

Senator WORTLEY—Her timing was impeccable on this occasion!

Senator FISHER—Sometimes I have a sixth sense, believe it or not!!

CHAIR—Have you?

Senator FISHER—Mr Needham, would you like to answer that?

Mr Needham—Would you be kind enough to repeat the question please?

Senator FISHER—You still do not know who, regionally and rurally, will get what and how much they will have to pay for it. Is that right?

Mr Needham—There are two separate questions there. Who will get what? We have got some indications from the NBN Co. maps. The 121 connect points have been released, so we have an idea of where they will be, but there are a myriad of issues about what services will be provided in particular locations. We can pick examples around the country—say, the Flinders Highway in Northern Queensland between Townsville and Mount Isa. Some of those places have two fibres available; some may have to go back to the interconnect point in Townsville. All those are retail matters and, as we do not know the details of those retail matters yet, we do not know the answer to the question.

Senator FISHER—And you do not know the cost question either.

Mr Needham—No, that is unknown at present. But the committee certainly welcomes the national wholesale price. It is a very good starting point; it is what happens after that that will make the difference to the end user.

Senator FISHER—But, as you cannot be confident about what will happen after that, that is the basis, is it not, for your hesitation in answering Senator Wortley's questions about essentially whether rural and regional users will be better off over all.

CHAIR—Mr Needham, you do not need to be led by a senator. You can actually say what you think.

Senator FISHER—Dear me, pot, I will be kettle.

Mr Needham—The significant issue here is that the seven per cent are not at present going to get the same level of services as the 93 per cent. That is the case. So will services improve? The question mark arises that some of the locations in the seven per cent already have a copper based broadband service. That copper based broadband service may provide, for those who are near the exchange, a better service than what will be available from the NBN wireless or satellite service. It is difficult to say in blanket terms—without paying-the-price issues and all the rest of it—that services will improve. We do not know yet what retail services Telstra or others may wish to provide in those locations in addition to the services that are available from NBN, or what the NBN wholesale would provide from which retailers would provide a service off that. We are not at that stage yet. There are still lots of doubts.

Senator FISHER—Thanks, Mr Needham.

CHAIR—Did your organisation come into being after the meltdown between the Liberals and the Nationals on regional telecommunications? Is that the genesis of you guys coming into being?

Senator FISHER—That presupposes that there was a date for that and that Mr Needham knows the date.

CHAIR—Is that an ongoing thing?

Mr Needham—I do not think I have the ability to answer the question, in that my fellow committee members and I were appointed under the act. The act was put in place as part of the nominal 2005 time frame. The committee first met in 2007. I am not aware of the government processes in relation to why particular legislation is put in place, so I am not aware of why particular aspects of the current bills have been put in place and nor was I aware of why the 2005 legislation was put in place.

CHAIR—But, given that you were involved in this area, and previously you were with the National Farmers Federation—

Mr Needham—I have not been with them for a number of years.

CHAIR—But you were with the National Farmers Federation. I am just wondering about some of this rural socialism that you are telling us about. That is fine; I am not criticising it. The theory of people having access to everything that everybody else has got has been out there for years. I am just surprised that a committee that was established by the Howard government is espousing that. Let us put that aside and come back to the question: what value do you add to the current debate on telecommunications in this country?

Mr Needham—The value that the committee adds is to attempt to bring to the attention of those who are interested the content of the report and the recommendations, and that those recommendations accepted by government continue to be implemented. The report attempted to reflect the views of rural, regional and remote Australia, and the recommendations put forward were accepted by this government.

CHAIR—As long as the report has some relevance, you say that is your relevance. Is that right?

Mr Needham—In relation to this current committee, yes as mentioned. The next committee needs to report within a year as per the legislation. I assume the reason the committee invited us to appear was to look at the

connection between the 17 NBN related recommendations and the current bills. We can make some comment on those if you wish.

CHAIR—No, thanks. I am interested in the bills that are before us.

Mr Needham—Yes, these bills.

CHAIR—I thought you were talking about the previous ones.

Mr Needham—There are some tenuous connections, or more than tenuous connections, or comments we can make in relation to our recommendations and the current bills.

CHAIR—Give me an example of other commodities that are supplied across the country on the basis that you are arguing—that is, complete retail conformity across the country—other than—

Mr Needham—I am not sure whether I went to the extent of saying—

CHAIR—Please let me finish—other than a postage stamp.

Mr Needham—I am not sure I went to the extent of what you are saying, but the *Hansard* will tell.

CHAIR—Do not wait for the *Hansard*.

Mr Needham—In other services like retail services, we have the large retail chains with national pricing of their products, for example.

CHAIR—You're kidding me.

Mr Needham—I understand that that is one of their objectives, that they have the same price for the same item in stores across the country, as an example. That is a completely different industry and that is an aside, but that is a response to your question.

CHAIR—That is the best example you have?

Mr Needham—No, that is not the best example I have.

CHAIR—Can you give me another example, because I have to say: if that is the best example you have, I do not see where you are coming from. I am having difficulty understanding how you can have a competitive retail market with the same price everywhere in the country.

Senator FISHER—How about the cost of—

CHAIR—Senator Fisher, just let Mr Needham answer. You have had your go.

Mr Needham—I think you may have jumped there and I may not have explained myself appropriately. I did not mean every retailer provides exactly the same price. I am talking about a retailer who makes an offering in metropolitan. If they choose to make that offering in a non-metropolitan area then they need the ability to provide that at the same price. Just as in the telecommunications market at present—

CHAIR—That is different. You say if they choose to supply it—

Mr Needham—We do not want to force people—

CHAIR—I am trying to clear up what you are saying. You said if they choose to supply it they should have the ability to supply it at the same price. That is a different issue from what you said that everyone should have access to the same price. I am confused; can you explain the difference.

Mr Needham—We can take mobile services if you want to talk about telecommunications. It does not cost the mobile user more, when they are using the services of a particular carrier, to make a mobile phone call in rural and remote Australia than it does in metropolitan Australia. In that particular case, the provider has chosen—they have not been forced, they have chosen—to provide services in those two distinct locations and they have chosen to provide those services at the same price. To me that is a far better example than what I thought you were looking for in another industry in relation to the retail sector.

CHAIR—Let me come back to the issue of principle. You seem unhappy about the government's approach to delivering broadband to 100 per cent of regional premises at the same wholesale price and that being the principle. Are you aware of any approach that comes close to achieving the same outcome? Would you be happy with an approach where regional Australia relied on taxpayer subsidy each year?

Mr Needham—There are a few questions there. The first one was again, sorry?

CHAIR—It is in relation to delivering broadband. I said that you seemed unhappy about that. There were two questions. Are you aware of any approach that comes close to achieving that outcome—that is, broadband to 100 per cent of original premises at the same wholesale price? Is there anything else that compares to that?

Mr Needham—In the telecommunications industry?

CHAIR—Anywhere.

Mr Needham—I think in the telecommunications industry a satellite service provides the same service across the whole nation.

CHAIR—At the same price?

Mr Needham—At the same price.

CHAIR—At the same wholesale price?

Mr Needham—What the wholesale prices are, I do not know, but certainly the retail prices are the same. A particular provider who wants to provide a satellite service in the middle of nowhere and provides that same service in metropolitan, which they do, is at the same price.

CHAIR—I do not want to put words in your mouth here, but are you saying that the satellite can supply as good a—

Mr Needham—You did not ask that question. I am not saying that. You asked for an example of the same pricing for the same service in metro versus nonmetro, and I gave you an answer that I thought would satisfy you.

CHAIR—Surely, the best way to get uniformity at the retail level is to have uniform wholesale prices.

Mr Needham—And the committee believes that that is an excellent approach.

CHAIR—That is good. We will finish on that positive note. Thank you very much, Mr Needham.

[2.12 pm]

LYONS, Mr Tim, Assistant Secretary, Australian Council of Trade Unions

CHAIR—Welcome. Thank you for coming down to talk to us today. Do you have a brief opening statement before we go to questions?

Mr Lyons—I do have a brief opening statement to make. The ACTU, on behalf of Australian unions and millions of working people and their families, which we represent, have long supported investment in Australia's infrastructure needs of the future and we have been consistent supporters of the NBN project in particular. We have taken the opportunity to appear before you today to support the passage of these pieces of legislation and indeed to support that occurring in a prompt fashion to allow the project to proceed.

Australians are rightly critical, we would suggest, that there is a lag in infrastructure development in many cases between what is built and what is needed—that is, we tend to have the infrastructure that we needed for yesterday rather than building the infrastructure that we need for the future. We consider that the NBN project, where a piece of infrastructure is being built that will meet the needs of Australia's future—is a good example of a better approach in respect of infrastructure development.

In November 2008, the ACTU in conjunction with our telecommunications union affiliates issued a discussion paper called *Fibre to the future* on the then NBN RFP process. We suggested some principles which ought to guide the creation of the NBN. I am pleased to say that those principles remain relevant to this legislation and that the policies announced by the government and, indeed, the plans announced by NBN Co are consistent with those principles. Before I turn to them, in the paper we did point out the very dire position Australia was in with respect to its broadband infrastructure. We pointed out that of 30 OECD countries we had the eighth most expensive broadband and we were 16th in penetration and that our services were both slow and expensive by any global benchmark.

We also, very importantly, noted what we described, as others have done, as the digital divide where specifically the elderly, the unemployed, those on lower incomes and those in regional areas were disproportionately less likely to have access to broadband technology, particularly at an affordable price. We also noted that Australia was plunging down the rankings established by the World Economic Forum for what they call the Network Readiness Index, setting out the capacity of an economy to intersect with the emerging global digital economy. In our submission Australia had at least a lost decade in respect of a failure to invest properly in broadband technology all the time while our fixed line infrastructure was decaying.

We talked about the role that NBN could play in increasing productivity, in delivering better public services, in building skills and in creating new jobs in new industries. The principles that we outlined were as follows. The first is that the NBN should be infrastructure that we need for the future and that the final goal of the project ought to be fibre to the premises which you will recall was not necessarily to have occurred at the time. Second, there needed to be genuine open access and equivalence for companies to deliver services and applications over the network. We saw that it was important that the NBN be a genuinely wholesale network. Third, we said that the physical coverage of the network needed to be as near to universal as possible to allow for access by all Australians. Fourth, Australia ought to use the creation of the network to build skills and career opportunities on new technology for communications workers bearing in mind what we pointed to as some atrophy of the skills base in that sector in Australia. Fifth, we said that we needed to bridge the digital divide, to which I referred, and ensure that access to broadband technology was available to all Australians. Finally, we said that we needed to ensure that the NBN was a platform to assist in the effective and efficient delivery of public services including smart grid technology in relation to the control of infrastructure.

As I indicated we are pleased that this legislation and indeed the broader plans of NBN Co. are consistent with those principles. We are strong supporters, as I said, of the project and we are particularly pleased in relation to this legislation that the arrangements that would apply, if and when the company is to be privatised, appropriately protect the public interest.

Senator WORTLEY—Thank you, Mr Lyons, for your opening statement and for telling us your views with regard to how it would impact on workers in Australia.

CHAIR—The ACTU have members right across Australia in rural and regional areas.

Mr Lyons—Indeed, we represent 47 affiliate unions with approximately two million members in all states and territories with a very significant membership in rural and regional Australia.

CHAIR—Are those members just ordinary working people who are members of one of your affiliated organisations?

Mr Lyons—Yes, indeed.

CHAIR—So their needs are no different to the needs of any other worker or any other family around the country?

Mr Lyons—No, indeed. That is why we have been active in this debate because what we have found is that, if you examine the current take-up rates of access to broadband, it falls as the income of your family falls. In other words, low-income families or people on ordinary incomes were much less likely to have a home broadband connection than people who are more well off. In our view that is an unsustainable outcome and not an outcome which promotes social utility. An NBN program which provides for universal access and a universal wholesale price, we say, would be the best method to ensure that Australians have equality of access to broadband technology.

CHAIR—That is what is normally described as the digital divide isn't it?

Mr Lyons—Indeed.

CHAIR—And there is lots of literature around about the inequality that creates.

Mr Lyons—Indeed, at the time in 2008, the statistics that we were aware of showed that the top 40 per cent of wage and salary earners, people with higher levels of education and people who are employed were disproportionately likely to have access to home broadband, but of people with a personal income of under \$40,000 only about one-third had access to home broadband. Many of those people, of course, will have children or there will be elderly people who face some isolation in their own homes. The extension of broadband technology to them will very significantly improve potentially the educational outcomes for children but also the connectivity of older people who are otherwise confined to their homes.

CHAIR—Has the ACTU's attitude towards this has been guided and supported by input from nurse organisations and other health groups in the ACTU?

Mr Lyons—Indeed, certainly our health and education unions are extremely supportive of the opportunities that will be provided by the NBN to improve the availability of educational services and health services, particularly but not only in rural and regional Australia. There is, we detect from talking to those unions, a good deal of excitement about the possibilities this technology can bring in improving service delivery. The rollout of broadband, of course, should not be an excuse for, for example, state governments to change services which are currently provided by real human beings to services that are provided by the equivalent of an ATM machine, if you like. This will be about doing things better and extending services. There will need to be, particularly at a state government level, a careful focus on that. That is not a matter that relates to the building of the network; it is a matter of holding the service deliverers to account. It should be the case that more services can be delivered more efficiently to more people—in particular, around education and health.

CHAIR—One of the issues the ACTU has been very involved in over a long period of time—ever since the ACTU has been around—has been improved productivity. Is there a view from the ACTU about how the legislation that is before us will assist in improving the productive performance of the nation?

Mr Lyons—Indeed, too often the productivity debate in Australia is a little too narrow. It is sometimes about ordinary workers working faster or harder or longer hours. The better and more nuanced approach is one to ensure that the availability of new technology means that people do their jobs in a smarter and more efficient way. We think there are some good opportunities potentially for the decentralisation of some work. There are some reservations that people have about people working from home because of isolation and other factors. But at the moment very large numbers of people in our community face very long commutes to go to work in places—for example, in the middle of the CBDs—where that work could be sensibly decentralised. The full availability of broadband technology should enable it to occur as well as enabling Australia to fit into emerging global industries.

CHAIR—So the capacity to build a better society is not just about the broadband being used to download movies; it is about people being able to download significant engineering plans and other complex, very detailed documents that are too slow to be done at the moment. Is that part of the approach?

Mr Lyons—Indeed, you would be aware of some of the health applications in respect of medical imaging and other things—not only video conferencing but actually the transmission of files et cetera—which will be

made very much easier by high-speed technology. There is little doubt that proper, universal connection to high-speed broadband will in the future be regarded as essential as water, power and gas.

The second point that I would make is that I do not think our imaginations are sufficiently good for us to be able to predict what use might be made of this technology into the future. In the same way, when people were laying copper phone lines down streets, I do not think they had any conception that eventually it would be put to some of the uses that that original infrastructure was put to when it was laid. So, while we can make some safe, immediate, predictions about what use some of this technology will be put to, in some ways one of the most exciting things is what uses may come down which we are yet to imagine.

Senator FISHER—Thanks for coming today, Mr Lyons. You spoke about the skills base atrophying. Can you tell me: the skills base for workers to do what? Can you detail what you mean?

Mr Lyons—Essentially, you would be aware of the levels of redundancies that have occurred—at Telstra in particular, but not only Telstra—over the preceding 10 years. What was said to us by our communications affiliates that directly represent those workers was that there had been precious little investment in training in the infrastructure of the future, that the workforce was ageing and that the workforce had been reduced in size. So this is an opportunity for us to have a new generation of telecommunications workers who are able to work more on fibre and less on copper and those sorts of things. That is really what I was referring to.

Senator FISHER—Are we seizing that opportunity so that we can realise it?

Mr Lyons—Our discussions with NBN Co. indicate that they squarely understand that this is one of the opportunities that will come out of this in terms of future skills development.

Senator FISHER—Are we doing what we need to do to be able to realise that opportunity? Are the workers being trained, for example? Do the workers exist? Do they know they have this opportunity? Are they being trained? What is being done to bring the opportunity to fruition?

Mr Lyons—Obviously, there is not one single skill set that is going to be needed in respect of the rollout of the project. As the bill commences in serious form, I think that is when the challenges will arise. But what we have seen so far is that there is a very clear focus on training, induction and safety in respect of the project, and we are very pleased with that.

Senator FISHER—Training for what? What sort of workers are being trained?

Mr Lyons—There is a variety. It depends on the specific technology that is used for the part. For example, in the trials in Tasmania, there was an interaction with the power grid which required a different skill set to where there is underground cabling. In respect of each of the forms of delivery, as the final build pattern and the sequence are determined, that will determine what skills we need and where. But what we are concerned to ensure is that at the end of this there is a workforce with a range of skills that perhaps were not as widespread or not as modern as there were previously that can then be used by other related projects or industries.

Senator FISHER—Are there any shortages of skilled workers at the moment, in any areas of the NBN build—be they geographic or construction based shortages?

Mr Lyons—Not that I am able to make you aware of.

Senator FISHER—So you think we have enough workers at the moment?

CHAIR—Senator Fisher, that may be a question you should ask NBN rather than Mr Lyons. He is an ACTU officer—

Senator FISHER—If Mr Lyons feels that way, I am sure he will say so.

CHAIR—I am just raising it with you—

Senator FISHER—Will you give him the opportunity, instead of churning up the time?

CHAIR—I am just indicating to Mr Lyons as well that either he would be better either taking that question on notice, to get advice from his affiliates, or the question is a question for NBN.

Senator FISHER—Mr Lyons?

Mr Lyons—My answer was going to be the same as to the previous question: I am not in a position to answer that question.

Senator FISHER—Are you able to say anything about the likely wage levels of workers who will be employed to build the NBN, be they through contractors or otherwise?

Mr Lyons—No, I have not been involved with respect to the industrial negotiations with the contractors. I was involved in relation to the enterprise bargaining process for NBN Co. but I am not involved in any negotiations with respect to the contracting.

Senator FISHER—And to your knowledge, is there a heads of agreement or in-principle agreement between the ACTU and any other parties in respect of wages that would be paid to workers to build the NBN, other than NBN Co's workers?

Mr Lyons—No, not that I am aware of. I will say that we and our affiliates will take the approach that we would always take in respect of the employment of people when we deal with this project—that is, we want to ensure that people work safely, that they are properly trained, that they are respected on the job and consulted about the nature of their work, that their right to organise and their right to be represented by a union, if they wish, is respected and that in accordance with the Fair Work Act they have a right to a collective bargaining agreement if they want one. That is the approach that we would take with any of this contracting chain, as we would with any private business or government instrumentality.

Senator FISHER—Are you able to reassure the committee that in respect of any collective agreements the annual wage increases agreed will be no greater than the 2.5 per cent annum wage increase projected in the implementation study for the NBN?

CHAIR—Senator Fisher, before Mr Lyons even attempts to answer the question—

Senator FISHER—Allow him to attempt chair. I don't think he needs you sticking up for him—

CHAIR—I am just trying to draw your attention to the terms of reference for this committee. It is not about the bargaining between NBN and individual unions. But I am sure Mr Lyons is more than capable of responding to you but I am just interested in trying to get you back onto the terms of reference for the inquiry.

Mr Lyons—I have indicated to you that the approach that we would take if we were involved and the approach that our affiliates would take. I have also indicated to you that I am not involved in any negotiations around the settling of enterprise bargaining within contracting chains. We do in fact have an enterprise bargaining system and wages are set directly at an enterprise level. We do not have centralised wage fixing any more.

Senator FISHER—Indeed.

Mr Lyons—So it would be foolish of me to attempt to suggest what might be the settlement in any individual agreement in a large project.

CHAIR—Mr Lyons, have your education affiliates been indicating their support for the NBN.

Mr Lyons—Yes indeed. I think I indicated in my answer to you about the views of other affiliates that there is considerable support from health and education unions for the possibilities of the project.

CHAIR—Have they outlined any of the benefits that this project would deliver them in practical terms in their professional lives.

Senator FISHER—Chair, how are those questions relevant to the terms of reference of this inquiry.

CHAIR—Senator Fisher, you had a wide-ranging set of questions—

Senator FISHER—For which you pulled me up.

CHAIR—No, I let you run and I let Mr Lyons answer it. So I am happy that it is the same game for both sides.

Senator FISHER—Indeed, I look forward to you doing so to me in the remaining time.

CHAIR—Could you answer the question, Mr Lyons.

Mr Lyons—Certainly, I am aware of strong support amongst the education unions. I do not wish to put words specifically in their mouths. My understanding is that they have been on record with a couple of statements. I would need to check exactly what that was in terms of the specifics, but I am happy to do that and provide it.

CHAIR—In terms of broadband access, are you aware of any other approach that would provide as much broadband access as this bill would facilitate in the NBN for schools and hospitals around the country.

Mr Lyons—No. In opening I referred to the principles that we set out in 2008 and of course the scope and coverage of this project in terms of delivery of fibre to premises. It is very much more ambitious than the

scope of the project we were dealing with at the time of the RFP. By the standards and for the purposes that you suggest this is without question a better project.

CHAIR—As there are no other questions, thank you very much for your contribution Mr Lyons.

Proceedings suspended from 2.35 pm to 2.51 pm

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

CHAIR—I welcome Mrs Rosemary Sinclair from the Australian Telecommunications Users Group. Thank you for coming today and thank you for being patient. The committee has received your submission as submission 19. Do you wish to make any amendments or alterations to your submission?

Mrs Sinclair—No.

CHAIR—Do you wish to make a brief opening statement before we go to questions?

Mrs Sinclair—Yes. My opening statement will be very brief because I know that we really want to get to discussion. I think that the size of the policy change that is embedded in the national broadband network policy and the subsequent establishment of the company through this legislation is of such significance that it is worth taking a moment to repeat what we are doing here. It is very easy, in these discussions, to get lost in the detail and to get flummoxed by individual positions that nosedive very quickly to very detailed propositions.

As I said in my covering letter, we are doing three things with this national broadband network policy. We are dealing with a long history of misaligned incentives when a company that is dominant in the sector is both a wholesaler and retailer. We are dealing with an important structural issue that has bedevilled this sector since its establishment. ATUG has been watching this issue for 30 years, this year—it is our 30th birthday. From 1981 to 2011 ATUG has been focused on competition on the telco sector. So if I am a bit tired on a Friday you will understand why!

Senator FISHER—Many happy returns!

Mrs Sinclair—Thank you. We are very live to that issue of misaligned incentives. The second issue that we are dealing with here is an extremely significant issue of national importance. I know those words get thrown around but I really mean them. The issue we are dealing with here is the upgrade of Australia's copper network—a national network which has served us magnificently for many years and which took many years to build. We in ATUG have been watching this issue for the last 10 years, when it became clear that all around the world—we have connections with international colleagues—people were contemplating how to upgrade their national networks from copper to fibre, separately from the discussion about wireless and mobile connections. It is a very important issue as one looks ahead 40 years to the sorts of things we will want to do as our population ages, as our workforces shrink and as we try to deal with climate change.

There are a range of issues that we will only deal with effectively if we can improve productivity, efficiency and outcomes, and the communications network that is available to a country is very important in these deliberations. The question is: how do we upgrade from copper to fibre? We have watched the industry grapple with this issue over the last 10 years. Various plans were put forward and various discussions had between players and the ACCC and between players and governments various. In the end, we came to a point where it seemed very clear that such an upgrade could only be undertaken in the private sector provided monopoly circumstances were created through legislation. That was unacceptable to a number of people, but certainly to us, because of the consequence that that would have for competition and the consequence that that would have for end users. So we find ourselves with the NBN Co. and its mandate to build a monopoly fibre network in the local access part of the market. We have preserved competition where possible in the back haul part of the market, the fibre. We think that is the only way that this upgrade is going to happen.

The third point that I want to focus on is that competition remains core for ATUG in all of this—every piece of legislation, every corporate plan, every statement of expectations, every ministerial determination, every piece of everything. I heard someone earlier talk about documents. We have read, analysed and discussed every piece of documentation that has come out around this set of policies, proposals and legislation with a view to what the impact of a particular proposal or approach will be on competition and how we can preserve competition whilst we fund nationally the upgrade of our local access network from copper to fibre.

This is very important legislation, coming at the end of a series of very important discussions. We have been part of these discussions really since 1994 when the broadband services experts group report was published, and we are pleased to be here to contribute to the committee's deliberations this afternoon.

CHAIR—Thanks, Mrs Sinclair. Can you expand on your written submission, which makes a strong case for the wholesale only nature of NBN, and advise the committee whether there should be fewer restrictions on who NBN can supply—for instance, not just carriers and carriage service providers?

Mrs Sinclair—Our view on that is that we would like NBN to be wholesale only in the sense of supplying wholesale services. We feel that the exemptions that have been included for utilities and the like are reasonable exemptions. Amongst our members we have a number of people running electricity networks, gas networks and the like, and we understand transport infrastructure, for example. Those activities have very particular communications of their own—and I always say ‘You wouldn’t want to be the minister when the lights go off.’ Those utilities need to be understood as absolutely essential pieces of infrastructure in other sectors. The communications requirements of those organisations have always been regarded as ‘special’ services. We think the exemption for those utilities is fair enough and reflects good practice.

Our own view is that we have wanted NBN to be able to sell wholesale services to anyone who wants to buy them. We have had quite an argument with industry players and others about that. At the end of the day, given the package in the legislation, we are happy that NBN is limited to wholesale services, provided we get the opportunity to see how the layer 3 wholesale market develops.

If we find that the problems in that market—the same old incentive problem of whether someone is going to be a good wholesaler if they have retail interests of their own—are not there and that the market is working effectively then we will be happy. If we find, in 18 months or two years, that there are problems in that market then we want a kind of ‘reserve power’, if you like, so that we can all, in open an open process of consultation, discuss whether NBN should be allowed to enter that layer 3 market. The model I use is Singapore, where the way they have structured their equivalent of the NBN allows the fibre builder to operate as one of the players in the next level of the market. So we watch that model with great interest but we are happy with our own model provided there is an opportunity to be absolutely sure that that layer 3 wholesale market is working effectively.

CHAIR—Also in your submission you had views on cherry-picking provisions. Do you want to expand on them?

Mrs Sinclair—This is difficult. Before I launch into this answer, and probably another, I want to say that when I have been looking at all the policy issues around this I have always used two objects. I put a yellow-face squidgy and some other thing on my desk—I know this sounds ridiculous—because I want to be absolutely sure that I am not just taking old-paradigm thinking into the new-paradigm world of the NBN. All of us need to think very carefully about whether things that ‘were’ need to ‘be’, when we make the sorts of changes we are making. We are embarking on a piece of work which requires us to rethink every single piece of policy in this sector to achieve the outcomes that we want. So when I think about cherry-picking I start with the old model. We all like infrastructure competition; we look at the theory and we see that in economics infrastructure, competition produces the best outcomes for end users—and it does—but the reality in the intervening 20 years or so is that we have not seen much infrastructure competition in the local-access, fixed-services market. So we are not sure that we are going to see much competition in that market, either.

It seems that the economics of that market requires that there be only one fixed line access point into each household or business premise. However, we would want to preserve the option for someone to come into a market if they felt that they could build in that market. That would be a reduced call on the public purse. There are all sorts of good things about that, however, the overarching interest still has to be taken care of: we want a uniform national wholesale price. We need to cross-subsidise the services and we need to make sure that all Australians, whatever premises they happen to be in, receive the benefits of the national policy on the national broadband network, which is that you get NBN-grade services and you get choice of multiple services and multiple service providers. So, if people wish to come into the market and build they need to do so within a policy framework which undertakes that all Australians will achieve these outcomes from the national broadband network policy, whether the physical link is built by NBN Co. or someone else. Is that helpful?

CHAIR—Yes, thank you. I am not sure whether you were here for the evidence from the Regional Telecommunications Independent Review Committee.

Mrs Sinclair—No.

CHAIR—The committee made a submission to say, basically, that there should be uniform pricing in a competitive market at the retail level. How do you think that could be achieved? I was thinking that competition is not about uniformity; competition is about differences to bring the price down. That is the

theory that I have understood for some time. Can you tell me what you think is the approach to uniform retail pricing?

Mrs Sinclair—We have had such an approach. It was called the price controls, and they applied to Telstra for fixed-line rentals. It is a very complicated piece of policy in this sector. Our experience of the price controls is that the price of a local access line rental has risen from \$11 to \$30. It does get complicated because offsetting the local access line rental are decreases, and quite significant decreases, in call charges. You have to put the two packages together. It is on that basis that I would be very worried about retail price control, because that is what it would be in a competitive market, in the retail part of this market.

As long as we get uniform national wholesale pricing then we can rely, I think, until proven wrong, on the retail service providers to take that wholesale price and to add all sorts of things that create different value propositions for different sorts of consumers, which mean that retail prices differ depending on what it is that you value and want to buy. But the wholesale price is uniform and that comes out of the policy.

If we got to a point where we did not see an affordable entry-level package emerging in the retail part of this market then possibly that would be one of the things that, say, the joint house may want to have a look at. If we got ourselves to a point where, for whatever reason, retailers were not effectively servicing the entry-level part of the market then perhaps for a period of time one might want to do something. But I do not think that we should intervene in the retail part of the market without a lot of evidence that that part of the market is not producing the outcome that we want.

CHAIR—You made the comment that discriminatory pricing is okay as long as transparency is maintained and terms and conditions are published. Is there a concern that this will restrict competition within smaller retailers?

Mrs Sinclair—There are some concerns about that. I think it comes from our experience—I am talking about all of us—in the old world. You have got to be very careful that you do not take old-world experience and just dump it into the new world. The old-world experience, where you have misaligned incentives with a wholesaler who is also a retailer, is that all sorts of strange barriers get erected. The problem people are worried about is an old problem, because it was a wholesaler favouring their own retail operations and discriminating against other retailers. That is not the problem we have over here. We have a wholesaler here who has no retail operations and no basis on which to favour one retailer over another.

Having said that, our view on this is that the economies of scale in this massive capital project will be captured by the NBN Company, which is the company that is going to build this thing, so whatever economies of scale there are that might lead to more efficient pricing will be captured by a single entity. We think that the benefits of those economies of scale ought to be shared amongst all the retailers. If there is really truly some efficiency that a retailer brings to the interaction with NBN Company then let's call it out, let's have a look at it through an ACCC process of some sort and if it is really there then our economics would tell us that the most efficient thing to do is to allow some price discrimination.

Sometimes I think people are getting a bit confused with efficiencies that occur within retailers' operations, which of course would then be captured in their own retail pricing, so they take a uniform wholesale price—their overheads are low, their internal processes are efficient, whatever, whatever, and so they only need to add a 15 per cent margin to get a great result for their shareholders—compared to someone else whose processes are not so good and they need to add a 30 per cent margin to get their retail price. Of course, that happens within the retailers. Once again, our position has been that we would prefer to allow the flexibility but to manage all the possibilities using transparency and accountability.

Senator FISHER—You say that your members are keen to have the exemptions that are proposed. Do you have any members who do not support the exemptions?

Mrs Sinclair—No. We talked about this at a board meeting as recently as last Friday, because I knew I was coming here and I wanted to be sure that people had not rethought their position. I should say that the policy position that ATUG always puts is on behalf of the buyers of services. Amongst our membership we have suppliers of services, because we like to have a dialogue with everybody involved, but the policies are put forward on behalf of people buying services, a number of whom do so on behalf of utilities and government agencies and so on. Provided that we are talking about the special needs of those networks, or if those companies and other companies wanted to take the option of becoming a carriage service provider, selling services to the public and whatever other service rules there are, then those people ought to be able to buy from NBN. So we did not have a different view on that.

Senator FISHER—But your submission also says that, if you had your druthers, level 2 services would be open to anyone who wished to buy them, not just to those who want to supply them to the public.

Mrs Sinclair—Yes.

Senator FISHER—If that were the case, then the exemptions would be rendered redundant, wouldn't they?

Mrs Sinclair—You wouldn't really need them, I don't think.

Senator FISHER—I am trying to reconcile the two.

Mrs Sinclair—The legislation says, 'NBN does this but there are some exemptions,' and we say, 'We support those exemptions because we understand there are special needs.' I guess what I then went on to say is, 'When we think about competition in this market, this NBN world, then we want more competition than we had.' Here I am reflecting the needs of our bigger members, who have national operations, whether they be government, banks or retailers. When they think about who can effectively provide services for them nationally, there are not many people on that list. So we come into this NBN world saying, 'It would be really lovely if we had five or six or seven people to choose from, because then we would really have a competitive market if you are a national organisation.' So we looked at that. I have had a number of assurances from industry members who say: 'Don't worry about that; it's going to be fine. NBN is national; it's wholesale. People are going to come in and, at that layer 3, offer national services to your members, and they will do so with a lot of expertise. There is quite a bit of capital investment required to develop those sorts of services. We're going to do it.' Reflecting on that, we thought: 'Let's see if that happens. If it happens, then we'll have the range of choice that we want. If it doesn't happen then I guess we'll be back to the joint committee saying, "This hasn't really worked out the way we thought it should."' But at the moment we feel that there will be a significant number of new competitors coming into that space with the way this legislation is framed.

Senator FISHER—Do you have faith in the joint committee process?

Mrs Sinclair—Senator Fisher, as I look at you I have to say I do.

Senator FISHER—I promise I did not prep that question, Chair.

CHAIR—We could wipe it from the record!

Mrs Sinclair—I will say something to this committee that I said at my board meeting: given what we think we are doing here, which is a huge, important and necessary task, the best position for ATUG is to think that every brain that is available in this place is applied to getting the best outcome, which is a different matter from all the political considerations around it. We think the idea of the joint committee is good and when I looked at the structure of where the different members are going to come from and the terms of reference of that committee, I honestly thought, 'That is the best risk mitigation strategy that we all have as we embark down this track.'

Senator FISHER—Hopefully it will be starting work pretty soon.

Mrs Sinclair—I do have faith in it. Senator Fisher, you and I have been through many and various committees on the subject of broadband in Australia and I think we are now at a point where we have a good structure where all of that experience can come into processes that will be open, engaging no doubt, and all focused on getting the best outcomes for Australia.

Senator FISHER—To go back to your proposition about level 2 services being able to be sold to any organisation that wants to buy them, given that the current requirement is that they be on sold to the public, is part of your argument that the definition of public, or whatever the precise word is, is too broad, or is your concern more fundamental than that? I suspect it is but can you expand?

Mrs Sinclair—I have not been clear enough about this. I think that we will see over the next five years the emergence of a number of specialist providers, and that is what we want to see. We want to see people looking at the e-health agenda, for example, and saying, 'We can provide communication services into that sector.' In fact, I was reading the *Financial Review* today and there is—

CHAIR—That is always dangerous.

Senator FISHER—You cannot prefer the *Australian*, Chair?

CHAIR—I suppose it is better than the *Australian*, given that Senator Fisher has raised the *Australian*.

Mrs Sinclair—a small company starting up in Melbourne to offer services to the financial services sector to enable them to use the platform that mobile and fixed broadband will provide. This is a new company. They

have been working in the United Kingdom and now they are setting up in Australia. This is jobs and all sorts of interesting things because of what we are doing. I suspect there could be service providers who are providing software at the moment who will go backwards in the chain, if you like, and say, 'We can provide highly secure, very fast communications over the NBN,' and create a kind of special interest network.

Do I say that the accountants are members of the public and therefore that provider is providing services to members of the public, or when I am thinking about members of the public am I really thinking about residential members of the public? The core issue for me is more competition and more people coming into the space. Maybe they are offering specialist network services or maybe they are offering retail services. My concern is that we are not doing this just to preserve what we have got and take it and all the players over here; what we are doing this for is to create a whole new market with a number of new players. My concern is just to make sure that for those new players, if they knock on the door and say, 'I want to build a specialist financial services network,' we have got everything in place that allows them to buy from NBN Co. and to build their services and sell them to their customers.

At the moment I think we have, so I am happy that we go forward with the legislation the way we have got it, provided we have the opportunity to watch the development of this new Layer 3 wholesale market. If we do not like what we see then we might want to direct NBN one way or the other or we might want to do other things. I am not sure we have got the full range of policy responses but I think we have got a proper range of processes that we could use.

Senator FISHER—Are you aware of anyone else running this same argument about level 3 and only accepting the current limitation provided that the minister has the power to direct or the ACCC can review?

Mrs Sinclair—I am not really. I am mostly aware of people arguing the other way: that we want to box NBN up and put labels on them. Our ATUG history in this whole debate makes us very nervous when other people say we need great clarity on this before we have even started. We would prefer, given the protections in the legislation and the various bits of risk management, to give that market a chance to develop without boxing NBN up any more than it currently is.

Senator FISHER—Nonetheless, there are significant investments at stake for the various players, and they would want some degree of clarity.

Mrs Sinclair—Absolutely. I think that we protected the vast majority of those investments with the points of interconnection decision. I say what I say, and we supported the greater number of points of interconnection because, wherever possible, we want the private sector building infrastructure in a competitive market. We feel that significant protection has been afforded to existing players through that decision around the points of interconnection.

Senator FIELDING—Thank you.

CHAIR—Coming back to this issue about what NBN can do and cannot do: we have heard the argument today that NBN should only deliver Layer 2 services. Would that be a way to regulate the kind of services that NBN offers?

Mrs Sinclair—I am sorry: would that be a sufficiently clear statement—

CHAIR—Would that be a good way to regulate NBN and the services it offers?

Mrs Sinclair—Yes, I think so. One of things that all of us on both sides have been careful to do in telco sector regulation is, funnily enough, speak as little as possible about particular technologies. That is because technologies change. Just when you have decided that green and black baubles are the thing that you want somebody to do and you are going to regulate for green and black baubles, then along come red circles. You think: 'Oh my goodness! I've been so busy regulating green and black baubles and now I've got red circles to worry about.' It is best that we leave these definitions as broad as possible but that we make sure that we have got structures and processes in place to review what is happening and, at the end of the day, that we make decisions in the long-term interests of end users. That is embedded in NBN Co.'s legislation. We are very pleased about that and we fought very hard to make sure that was there. It is in the telco act and the Competition and Consumer Act, and it goes way back to 1997. It gives us a basis to be sure that regulatory decisions will be carefully taken with proper processes that we understand and deliver in the interests of end users rather than in the interests of any one player or group of players, as far as it is possible to be technologically neutral—so Layer 2; we know what that means at the moment. We think we should just stay with that definition rather than trying to nail things.

CHAIR—So you are saying that specifying where to in the legislation would not be a good idea?

Mrs Sinclair—Not any further, yes. We say wholesale only, and then I think we have the government statement of expectations where we talk about Layer 2 and Layer 3 and so on.

CHAIR—Can I just clarify; when you talk about the green beads and the red circles—

Mrs Sinclair—Sure—that was me trying to be helpful!

CHAIR—It is a good way to understand this, but I am just not sure that someone listening in would not be confused by this argument that there is this new technology sitting there waiting to happen, and that the NBN fibre network will be redundant because some new wireless approach will come in that is going to blow the NBN out of the water. You are not saying that, are you?

Mrs Sinclair—Absolutely not. In fact, I listen to these discussions about wireless with great interest. One needs to distinguish very early in the discussions between mobile broadband and fixed wireless broadband. Fixed wireless is like fibre, but in the air—it is an individually engineered link. Mobile is where I wander into the base station and if no-one else is there I will probably have a great time. If there are 50 people in that base station then I will have a one-fiftieth great time.

The practical benchmark I use in that debate is that I ask my big members, ‘Are we going to move all our services onto the mobile platform—onto the wireless platform?’ and they say, ‘Absolutely not,’ because the capacity of that platform to support our needs is not good enough. When we are out of our offices, hospitals, schools or whatever premises we are in and we are on the road, mobile connections are marvellous; even though the quality is not always there, the convenience factor is there. There is no lack of clarity in our minds that what we want is fibre to the premises, wireless where fibre is not financially viable and satellite in the remaining three per cent of Australia’s premises. But fibre, absolutely, where we can get that result.

CHAIR—We had a discussion earlier about the same price applying, and you spoke about how that would be a return to retail price regulation. The other argument we have heard here today is that everyone should have access to the same services. That is beyond those 93 per cent who will get the fibre. Is there merit in that idea? And then the more important question is: is that a practical proposition, for everyone in the country to get absolutely the same service?

Mrs Sinclair—We have talked and thought long and hard about that, and at the end of the day we come down on the side of national affordability. When you put that as a priority then you get to numbers which say that we can affordably do 93 per cent with fibre delivering 100 megabits, four per cent with wireless delivering 12 down and one up and three per cent with satellite delivering 12 down and one up.

The history of services in remote and rural parts of Australia is that they have been getting better and better. We run a regional roadshow, and we actually go to communities as far away as Karratha, Mount Isa, in the backblocks of South Australia and every which where.

CHAIR—Careful—you are starting to sound like Barnaby Joyce!

Mrs Sinclair—So we understand the importance of communications. We also understand the realism of folk in those regions and concerns in the regions about the affordability of services. We think that the balance point at the moment between the 93 per cent, the four per cent and the three per cent is a good one because it achieves an affordability outcome. It means that the cross-subsidy that will emerge and that will have to be dealt with is manageable for all of us, and so we can achieve the ubiquitous outcome that we want: everyone is connected to this platform. It may well be that a number of people in the metro area choose the 12 megabits package.

CHAIR—We have just run out of time, so I thank you for your contribution to the committee. It has been very helpful.

Mrs Sinclair—Thank you.

[3.30 pm]

GLASGOW, Professor Nicholas, Dean, Medicine and Health Sciences, Australian National University College of Medicine, Biology and the Environment

GRIFFITHS, Professor Kathy, Deputy Director, Centre for Mental Health Research, Australian National University

STANTON, Professor Robin, Pro-Vice Chancellor (E-Strategies), Australian National University and Convenor of the Group of Eight Digital Futures Group

CHAIR—I welcome the Group of Eight, Digital Futures Group, thank you for taking the time to come and talk to us today. Do you wish to make a brief opening statement before we go to questions?

Prof. Stanton—Yes. I brought along a printed version of our statement for tabling. If it works this way, we will just speak to this document and they are available to you to have a deeper look at.

CHAIR—That is very helpful. We will table that document.

Prof. Stanton—Can I begin by thanking the committee for inviting the Go8 to present to you. The Go8 universities have a critical interest in an NBN style fabric, mainly from the perspective of the research and innovation agendas of the Go8. Because of that, we would like to present on how important it is to us, without really understanding deeply how the bills you are looking into play out in some aspects of it. So our presentation is about the research and innovation enabled by the bills you are considering.

Over past decades broadband has driven enduring change in our academic methods and the vision we have is of even greater change to come in the future. Because of that, we remain energetic creators and adopters of these technologies and services. So the decision that has led to NBN—which is, in summary from our perspective, to provide homes and workplaces with ready access to affordable broadband services—is greatly welcomed by the group.

The NBN will broaden and strengthen our research and education capabilities. More generally we also welcome the attention being paid to opportunities to address cultural and social equity issues promised by the NBN. They play out in our university interests in ways you would be familiar with.

Throughout the world, research communities enjoy broadband connectivity through coupled national research and education networks—they are called NRENs; no doubt you have come across them and that jargon. NRENs are very important to us internationally. We have created a global archipelago of universities, institutes and facilities where we live and support our collaboration through broadband services.

These archipelagos are often platforms upon which innovative applications of broadband are first proven. Increasingly, that archipelago like structure is also linked to research related sites such as hospitals, archives, sensor networks and the like, though typically, and often frustratingly, special arrangements have to be put in place for those extensions. We see the NBN as facilitating such extensions and enabling in the process a wide range of research and innovation. As we see it, the extensions to workplaces will facilitate collaborations with industry, commerce and governments. Extensions into homes will enable R&D into a range of online services, the delivery of health services being a very good example. That observation—that health services are a good example—has led to my two colleagues coming along today to talk briefly about the work they are doing.

On the home front, symmetric broadband communications also will do much to overcome time and location difficulties associated with participation in distributed research teams, especially international teams. As you would know, research, particularly in science and technologies, is increasingly international and increasingly team based. There is a smart infrastructure perspective that we are interested in that also offers a general view for us on the value to research and innovation of an NBN-style fabric. Linking home environments with the national information infrastructure, for example, allows us to deploy sensor networks which can be used for monitoring wanted and unwanted states in ways that allow them to support both management objectives and our research aspirations.

To assist the committee with more concrete examples and with a focus on health services, I will ask my two colleagues to speak very briefly about their programs and then we will leave it open for questions.

Prof. Glasgow—There are some specific examples in the document that has been tabled, but I will not just speak directly to those; I will speak to the overarching concept around those, if I may. The Group of Eight medical deans believe strongly that the international trend towards academic health science centres and

academic health science systems is really important to achieving a common mission: better health outcomes for patients and the populations that are served by these structures.

Essentially, an academic health science system is one that brings the three functions of clinical service delivery, education and training, and research together in an integrated way and brings those different areas of expertise to bear on the problem of health. We need to deliver quality health services today. That is why we have doctors, nurses, allied health professionals and all the supports that go into it. We need to train a workforce for tomorrow. That is why we have education and training. And we need to constantly ask the question: can we do it better. That is where research and innovation comes in. It is clear that, if you bring these three functions together, that is how you develop a self-improving and sustainable health system.

So the Group of Eight are very keen to see the National Broadband Network as a critical piece of infrastructure that underpins such systems—an infrastructure that does not just allow a health system to concentrate, say, on a high-end tertiary hospital but actually makes connections between hospital services and primary healthcare services in outer metropolitan, regional and rural Australia. So the broadband network becomes this vital infrastructure to allow those three functions of clinical service delivery, education and training, and research to be built.

I will give you just one example from each of those three things. First I will give you an example of clinical service delivery being enhanced. If we think about greater access and equity to health care, high-speed broadband network provides the capacity for distant doctors or patients—or midwives for that matter—to have real-time interactions with specialist colleagues in an urban setting if they need it. The consequence of that is an enhanced capacity to keep people in their own communities while delivering the care they need. High-speed broadband allows for observations to be made through high-fidelity images in real time. That means you can not only hear what a patient says or see what a record looks like but you can actually see the patients themselves. That helps you make judgments about what is going on. That is a clinical example.

Next I will give you an educational example. Say a rural doctor or health professional sends a patient in for care at their regional hospital. Very often they do not know what happens next, because discharge summaries are late in coming. Broadband connectivity allows clinicians, wherever they are, to engage in things like grand rounds—when patients of interest are discussed in teaching hospitals, people who are not physically in that building can connect in real time and participate in the questions and answers. You get continuing professional development and education as part of what is built in. So the workforce is being sustained, feels connected, feels less isolated and continues to operate in those rural and regional settings.

Finally, an example of the research potential. There is research that you would now be able to conduct because you have the connectivity of a whole region or population through high-speed broadband. You can gather meaningful epidemiological and sentinel data across that platform. Importantly, you can also start researching the applications that can be deployed on that infrastructure. You can do research about high-fidelity applications that might sit in a patient's home or in a general practice remotely—what difference they make. You could then make discriminatory choices about which ones should go forward for further development and which ones should stop because it is demonstrated they are not achieving much in the way of improved outcomes. So there is a new area of research activity that critically asks the question: 'What kinds of applications actually add value to achieving health outcomes?'—but you do that in a robust and scientific way across that academic health science system infrastructure.

Prof. Griffiths—I think there is another aspect, too, that people sometimes forget and that is the issue of self-care and prevention. Broadband internet is an ideal opportunity to provide services of both types. If I said to you, 'Imagine you are a 25-year-old male in a rural area and you have depression—what do you do?' Going to your doctor is probably not the first thing you do and, if you did go to your doctor, it is likely that the doctor might offer you antidepressants, but you probably would not want them. It is unlikely that the doctor would be able to send you to a therapist who can provide evidence based mental health care that is not antidepressant related.

With broadband internet you can provide automated therapy programs—no person involved—that work. In other words, that 25-year-old man can go online, type in—in our case, we have produced various programs—'mood gym' and do a program that will reduce their depressive symptoms, decrease their level of stigma and increase their knowledge of mental health. That is a really powerful use of the internet. The other powerful use is prevention. We have shown that if you give that sort of a program to adolescents in schools then, for every 14 kids you give it to, you can prevent one new case of depression in the future over a six-month period. That

is very powerful, too. But you need to have a system that is responsive, reliable and so forth—a system that fosters interactivity. Those are two very important things.

Another thing, which Nick raised, is that you can do research. We have done many large numbers of trials looking at these sorts of programs and how they work using gold standard methods. Unlike face-to-face research, you can actually do it with thousands of people. It can take years to get thousands of people in a normal randomised control trial. We can do online automated randomised control trials with people in their houses in a few months. I think that is another very important aspect of this sort of technology.

CHAIR—Thanks very much, Professor. There is such a wide range of issues that you have raised, and we thank you for that. I will move to some of these issues on a point-by-point basis. You talk about the global archipelago—and I must say that sounds fascinating—but we need a national archipelago as well. I am wondering about this, given that the Group of Eight are probably the best resourced and the wealthiest universities in the country. I have an interest in the University of New England and in the University of Western Sydney. How do they fit into the global archipelago and then the international archipelago? I am not sure if you can answer that question. Perhaps we need to ask them, although I am sure you would have an idea.

Prof. Stanton—I might be able to. At that level—the level of interconnectivity and broadband services—my comments about Go8 universities can be made about the university system as a whole. As a group of universities we formed a buying club in the nineties. That was to get some basic connectivity services underway. Over time that organisation evolved into a company called AARNet, which you know about. AARNet has every university as its client base. Through public policy settings and through contributions from universities, the resources have been put in place to ensure that every university has comparable connectivity and a comparable participation in the one fabric of broadband. So we have got a national archipelago that all universities and researchers, to a first proximation, live within, whether it is James Cook or even Charles Darwin now—we had some difficulties there for a while, as we did with Tasmania in getting across Bass Strait. It is now fair to say that the structure is ubiquitous across universities. It is archipelago like in the sense that, although academics and researchers live in that space, increasingly, as they build and want to build collaborative arrangements—with hospitals and other places and with other sites; archives and the like—arrangements have to be put in place to go from the AARNet national base through other service providers to try to create something that has uniformity and consistency and is seamless and so on. The expectation, the hope or the vision is that an NBN-style fabric for this country will enable those kinds of much broader collaborative research and innovation opportunities. We have focused a bit on health here. We thought it would help to focus on one particular area to see the way in which research, innovation and service delivery coexist or can be brought together in a fabric of that kind. It is very important not just for the Go8 but for the innovation network universities; to all universities it is very important. So I do not think of myself as speaking just for the Go8. The Go8 was invited here but I think you will find that the things I am talking about are true of all universities.

CHAIR—That is a good explanation. I have heard on a number of occasions that universities do not need broadband because they have their own services; universities have high-speed internet. Is this the counterargument for that—that you need NBN to get not an archipelago-like approach but a proper archipelago approach?

Prof. Stanton—Absolutely. The archipelago is a constraint; it does not let us respond to some of the things we need to do that are community based. Urban environments of the future can sometimes be talked about in terms of these network fabrics as being able to instrument and monitor what is going on, transport, energy, fresh water and so on—a stocks-and-flows kind of view. I come from the ANU, and a particular ANU perspective on that is a social sciences perspective, where how people behave, where they are and what they are enabled to do is part of a communications fabric. That is just as important. You need a communications fabric. We heard from Kathy and Nick about the importance of information being available. That is one dimension. The other dimension is the interactivity from direct engagement with behaviours.

Senator FISHER—On the point about the sufficiency of what universities already have, I would like to put to you a couple of points from a recent report on iTWire, because I am sure you have a view and I would like to hear it. On 5 August iTWire reported:

Universities for example are linked by AARNet—

Australia's Academic and Research Network—

which already delivers broadband speeds considerably faster than those promised by the NBN.

Is that factual, in your view?

Prof. Stanton—Can I respond to that question by referring to quite special applications and needs. The astronomers, for example, are at Siding Spring and at Stromlo. So we—not AARNet but the university in this case—built fibre networks there. You then gather together the requirements for that part of the infrastructure to interoperate with Hawaii or Chile, and the NRENs do deals to help us link that through. Connections into the ANU are currently 10 gigabits. Why is that? It is an aggregation of all kinds of needs. It is true that AARNet provides the universities with services that we cannot otherwise readily get and speeds that will sound very, very impressive compared with—

Senator FISHER—Ten gigs is 10 times the NBN speed—that is right, isn't it?

Prof. Stanton—Yes, and there is 40 gigs in prospect, and there is optical, but they are for special aggregated advanced research needs. I am not sure I am answering your question very well.

Senator FISHER—You are getting there—keep going. What do you mean by specialised needs. Could you expand, please.

Prof. Stanton—There is such an intensity of needs that, when you add them all, you get a big number. If you have 100, each of which can justify and use a gigabit, you are looking for 100 gigabits. That is an aggregated notion. It is not attached to a particular class of applications. It is the sum of lots of applications.

Senator FISHER—The 10 gigs?

Prof. Stanton—The 10 gigabit. When you have that capacity you can move, for example, a major data set that might be couple of terabytes. I am just making this up but I can give you some real examples. Let us say you wanted to move the IPCC database from the US. You can move large amounts of data very quickly. The wall clock time can be reduced if you have much broader bandwidths. To go back to what I heard in your question—that is, 'We do not need the NBN because we have got something else'—

Senator FISHER—Because you have already got something considerably faster. You have said if it is 10 gigabits then it is 10 times faster.

Prof. Stanton—That 10 times faster is between this site and that site, and not out in the community more generally or not out where we can build collaborative ventures with industry, and with the education and health systems.

Senator FISHER—You still have gaps, do you?

Prof. Stanton—We do not have the capability of connecting, for example, all of the hospital and medical facilities back into that strong structure that we have built. I called it an archipelago, but that was just a metaphor to try to give a sense—

CHAIR—A good metaphor.

Prof. Stanton—We can sometimes bring bits of the world onto that archipelago and experiment with it. But the NBN offers us what we want—we want to stretch out and be able to form these more broadly based teams and collaborations. We cannot do that just because we happen to have a 10 gigabit connection between Sydney and Canberra.

Senator FISHER—Mr Sherlock, the CIO of the University of South Australia, was quoted as saying that:

... the research and education sector is, in terms of telecommunications, very much in advance of what business has and needs.

I presume that you would not add to what you have already said, other than to say, 'It may well be, but we still need the NBN.'

Prof. Stanton—We need the NBN to stretch out to places that we are not now connected to at a broadband level. The fabric that moves away from the spine, as it were, out into community institutions and so on is what the NBN promises. Going out into workplaces and further out into homes has advantages. I think I made a couple of notes there about how we would value those.

Senator FISHER—I will look at it another way. Ten gigabits, for example, may well be so but it is a red herring or distraction to the extent to which you would argue universities would benefit from the NBN?

Prof. Stanton—The benefit from the NBN is additive.

Senator WORTLEY—Given that high-speed broadband is of benefit for hospitals and clinics, extending it to homes and into the community will have obvious benefits. Professor Griffiths, you spoke about one in

relation to mental health and depression with the MoodGYM. What would be the benefits for in-home health monitoring?

Prof. Glasgow—I think there are existing applications for hospitals and homes which tend to be around monitoring doses of drugs like chemotherapeutic agents that might be used in hospital settings. But I think the infrastructure provides a platform where new applications can be thought about. I could illustrate with an example from palliative care. We know that Australia has got an ageing demographic. We quite rightly imagine the needs for palliative care services are going to increase substantially over the next few years. Like many areas in health, the workforce and facilities needed to provide those services in the traditional way that we have provided them are going to be under great stress.

In the home environment, a high speed application can allow a palliative care physician remote from the community where the person is being cared for at home to support the family and perhaps the local nurse or doctor in those difficult times of terminal illness. It might be the family's first experience of someone actually dying, and for the doctor it might be one every year or something like that. A remote doctor actually having the capacity with high fidelity and real time to get a sense of what is happening, see the patient, hear the family's questions and say no, that is expected, that is normal, this is what you do, that kind of thing, could be enormously valuable to securing people being relaxed and comfortable about being managed for palliative care needs at home. You could imagine applications like that being portable—they would be deployed for a purpose, for a period of time, and then maybe relocated to a different person who needs them.

That is just an illustration. One of the problems we have is that clinicians across the board are so busy doing what they have always done that they do not have time to think about doing things differently. The NBN platform provides us with the opportunity to think differently about lots of things that we have done in one way—how might we do it differently—and if we bring the research element into that we do not just think about it and do it but we actually ask critical questions about whether what we are doing works, and if it does not work or it is not worth it, stop it and do something else.

Senator WORTLEY—In relation to the specific example you just gave, would that enable people to stay at home rather than move out of their community and travel long distances to hospitals or be in high dependency aged care and those sorts of things?

Prof. Glasgow—Exactly. Residential aged care would be another example of where you might do that. It is exactly that sort of thing.

CHAIR—We could have spent much longer on this but we have gone over time. It was fascinating to see the benefits that NBN will bring. If there are any written submissions you would like to put in, in addition to what you have told us today, that maybe helpful. I thank you for your time here, and I understand you have also attended the committee in the other place—probably not as exciting as here. We thank you for your efforts in appearing before two committees in one day.

I also indicate for the record that Mr Geoff Dawson, the Principal Research Officer for this committee and a person who has spent 20 years assisting the Senate committee structure, is moving on within government. He will be a great loss to Senate committees. I think he will be finished up before we meet again, so I place on record the committee's appreciation for the exemplary and professional work Mr Dawson has done for Senate committees over many years. We will miss him; if he wants to come back he can come back any time. He has been a great help to me as chair of this committee and also to Senator Fisher in her role as chair of the references committee. I place on record our utmost appreciation of the work he has done and we wish him well in his future endeavours within government. He is going to PMC—maybe that is a demotion but I am sure it is not.

This concludes today's proceedings. I thank all witnesses for their informative presentations. Thanks to Hansard, Broadcasting and the secretariat for the work they have done.

Committee adjourned at 4.04 pm