



PRODUCTIVITY COMMISSION

DRAFT REPORT ON URBAN WATER

DR W. CRAIK, Presiding Commissioner
DR W. MUNDY, Commissioner

TRANSCRIPT OF PROCEEDINGS

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Continued from 1/6/11 in Brisbane

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MS CRAIK: Good morning. Welcome to the public hearings for the Productivity Commission inquiry into Australia's Urban Water Sector following the release of a draft report on 13 April. My name is Wendy Craik and I'm the presiding commissioner on this inquiry and my fellow commissioner is Warren Mundy. The purpose of this round of hearings is to facilitate public scrutiny of the commission's work and to get comment and feedback on the draft report.

Prior to this hearing in Canberra hearings have been held in Sydney and Brisbane, and following today's proceedings a hearing will also be held in Melbourne on Friday, June 10. We will then be working towards completing a final report to government in August, having considered all of the evidence presented at the hearings and in submissions as well as other informal discussions. Participants in the inquiry will automatically receive a copy of the final report once released by the government, which may be up to 25 parliamentary sitting days after completion.

We like to conduct all hearings in a reasonably informal manner, but I remind participants that a full transcript is being taken, and for this reason comments from the floor cannot be taken. But at the end of the proceedings for the day I will provide an opportunity for any persons wishing to do so to make a brief presentation. Participants are not required to take an oath, but should be truthful in their remarks. Participants are welcome to comment on the issues raised in other submissions. The transcript will be made available to participants and will be available on the commission's web site following the hearings. Submissions are also available on the web site.

To comply with the requirements of the Commonwealth occupational health and safety legislation, you are advised that in the unlikely event of an emergency requiring an evacuation of this building you should follow the Exit signs and exit the building via the stairs, and the place to gather is around the corner, around there. There will be fire wardens who will get us out of the building. The toilets are back out through the glass doors, walk around the central core, and back in the other side.

I would now like to welcome Prof Peter Collignon. Peter could I ask you to introduce yourself and give your name and organisation for the transcript. Then, if you'd like to make a presentation, we'd be very happy to hear from you. Thank you.

PROF COLLIGNON: I'm Prof Peter Collignon. I'm a professor in infectious diseases and microbiology at the clinical school of the Australian National University. I also work as a practising infectious diseases physician and microbiologist at the Canberra Hospital. But I might stress I am making a personal submission rather than representing an organisation. I might go into what provoked me to make a submission. I am obviously involved in public health issues, and I feel particularly strongly that the two things that have protected our public health in fact more than anything else, one is vaccination and the other major thing is having clean

water. I think they have done more to save lives than doctors have done over the last 150 years.

There have been various proposals around Australia to take sewage and recycle it into drinking water. My view is and where I have gotten into the debate is that that reverses 150 years of what has been public health policy, basically on the basis that we now have technology that can make it safe. My fundamental view is that none of these techniques you can count on being 100 per cent safe all the time, and I think there has been misleading information put out to various authorities showing that it's either safer or cleaner than what I believe it actually is and what is happening around the world.

When I saw comments in the media about the Productivity Commission purporting to be recommending that this be used rather than potentially other sources of water, particularly when, I think, quite rightly, the commission was quoted as saying desalination plants were - I forget the language you used, but, basically, very expensive and prohibitively going to waste billions of dollars in the country, to my mind, just on the economic point of view, I thought, "Well, this is inconsistent, because the sewage recycling plants that are supported are the same technology, they're reverse osmosis with a pre-membrane and an oxidation plant behind it."

So if there is any argument that desalination plants are economically not a smart decision for capacity, exactly the same argument should be made for recycling sewage plants, because it's exactly the same technology. In fact I would argue that it's probably going to be a bit more expensive, because there is more testing you need to add to it, and probably more controls. So that struck me as inconsistent. Another thing that really worries me - and that's why I put it in the submission - is I think there's a general trend in society and in governments to have almost forgotten how dangerous water can be, with the potential to kill lots of people.

Just as evident of that is what somebody from the water quality research, or people that put in, when this was discussed in The 7.30 Report last year. What amazed me was some of the comments they made; it was all to do about testing. My view is we should have no E.coli in water. Their view is, "98 per cent is fine," and the words were to the effect of, "Well, we come in contact with E.coli all the time. So, look, if you have a few samples that have E.coli, it doesn't matter." I worry about that, for two reasons: firstly, that it actually strikes me as being an attitude that it doesn't matter if there's some contamination every now and again because there's so much reserve we won't get a problem; and secondly, I think it misses the point for E.coli.

The point I'm making in that is when I look at the tone of the report I pick up that implicit in it it talks about that indirect potable re-use occurs all the time and nobody gets into trouble, and various other comments that I have highlighted in my

submission. I really worry about that, as an attitudinal issue, because, while it's true, most of the time if sewage gets into the water you probably don't know about it, so you never actually document it, but this argument that it doesn't matter, you can just see what is happening in northern Germany at the moment, when you do have some E.coli that are more virulent. The real problem is that that is actually an aberration, because it's probably occurring in sporadic cases all the time. That may not have come from water; it probably hasn't. The water is probably a vehicle in that, in my view, because it has come from animals or people and it's probably water that's contaminated that has been used on vegetables, or something; and that is much less likely, I think, to occur in Australia. In Canada they have had royal commissions on it, because of things that go wrong; and when you look at the things that can go wrong, this becomes much more complicated.

As an example again, in Brisbane they had fluoridation, that I think is a good idea, but it took many years of political exercise to get that put in. What I thought was amazing was there was a month where the wrong levels were in there and it wasn't picked up. Some of the people from water authorities have come to speak to me about this when I have spoken publicly about it and pointed out that they were very simple procedures compared to this; this actually requires a lot more monitoring, it requires anti-fouling membranes, monitoring membranes. My view is that if we get the simple things wrong how can we believe that the more complex things are going to go right all the time.

Am I against this technology totally? No, I'm not. The research council in the US which was the last big scientific look at this, made the point that this should be a last resort, after you have looked at all other ways of using water, and the reason is because the inherent risk is so high. I actually agree with the comments they make in their conclusion. If we had no other choice because there was no other water supply and your city or town couldn't exist without it, I would say, "Look, we have to adopt this." I do think we would then have to do a lot more testing than what is currently done, to make sure it's safe.

From what I can see, in Australia in particular, whenever this has been proposed - like, Canberra is an example - there were lots of cheaper and safer options that could have been employed; yet, if you like, the politics or the lobbying were actioned to establish this which is a very expensive procedure. I also think that the more dangerous your water source - and sewage is the most dangerous source you could find - the more testing you need to do. If you were getting water in Canberra from the Brindabellas where there's not even a farm there, you have to do some testing for E.coli and giardia and all that.

You don't have to do the same level of testing if you're taking water out of the Brisbane River, for instance, or if you're using sewage, where you have to start looking for viruses, and I think you have to do it consistently. The reason I think you

have to do that - if you look at the NHMRC and other water guidelines - if you want to make water reasonably safe you have to get a log 10, or a 10 billionfold, reduction in viruses, because they are the smallest of particles. So you might be able to stop E.coli, which is bigger, and giardia, but with viruses it's predominantly the reverse osmosis membranes that are going to take them out. If you like, the publicity or what has pushed for this says, "Look, we've got these membranes and it removes everything except water molecules. That's why it works for desalination." But the reality is it doesn't do that for desalination; it leaves about 1 per cent of the salt that gets through. Well, I don't think that matters; so it's slightly salty. It does matter though for viruses, because if you have to get a billionfold reduction, for instance, if you only achieve a hundredfold reduction, you've still left, potentially, 10 million viral particles there.

The real problem is their detection system, which picks up organic carbon and electrolytes, won't be able to pick up that level of thing. My worry is, if you've got a hole in your membrane and 99 per cent is going through but 1 per cent is leaking, or even .1 per cent, the current online detection systems can't detect that. The trouble is, all that water that's got through is now deposited in your reservoir or somewhere else, and without you knowing that it has been contaminated because you're not doing daily tests anyway. When you look at the performance of these internationally and in Queensland, even for a drug like an antibiotic, they only remove 92 per cent of the antibiotics. Now, I've found that surprisingly low - this is a published international thing - because I would have thought it would have got rid of at least 99.9 per cent. But the fact that it only got 92 per cent, now, I thought was worrying. Admittedly, a antibiotic molecule is smaller than a virus, but it still should have been removed. That's only, actually, a log-1 or a tenfold reduction. So to me that was nowhere near the performance in the hype.

When they've looked at viruses, most of the time they remove the viruses, but they do very little testing, mainly because it's expensive and they don't have this thing. Again, that's fine if you've got a reasonable water supply. But if you don't have a good water supply source, then my view is you have to do more of it. What worries me is, when people have done that in various places around the world, at least about half the time in that plan at some time they find viruses have got through the system. Again, that's not supposed to happen. What worries me is you're not doing this routine testing anyway, so how would you know.

It sounds a bit perverse to say, "Look, you'd know because people will be sick." But in the US, when they had a big outbreak of what they call cryptosporidiosis, my understanding is they had 300,000 people that probably got infected and it took them ages to find that. Also my understanding is the only reason they found it was the water supply wasn't supplied equally across the city and a chemist who had numerous chemists say, "Why are the people on this side of the city ordering more Lomotil or antidiarrheals compared to this other one," and that's what

triggered it.

Even in Australia, about 10 years ago, there was an outbreak of what we call norovirus that was involved in oranges supplied on aeroplanes, because they think somewhere in the Riverina the water had contaminated the oranges on the outside and got in there. The only reason it was found, even though thousands of people were involved, was because an AFL team couldn't play one weekend because so many of them had been on the plane and got sick. The point I'm trying to make is: you can have a lot of disease if it's endemic rather than epidemic and you'll never know. Often it's the visitors who get sick rather than the locals, because the locals after a while get immune, and when the visitors come in, they're the ones who actually get the problem.

My two major objections or concerns about the productivity report are: I don't think the economics of what I understand about recycling sewerage have been looked at - at least, I couldn't find the figures - because to my mind they're the same capital, plant cost as a desalination plant. The running costs are slightly lower, mainly because the salt concentration is lower, so you don't need the energy, but it's still substantially more than if you could have a gravity-fed dam, for instance. I thought it was a bit of a deficiency that you didn't have that sort of costing in your report, because both capital and on-going costs are a major issue. At least I couldn't find it.

But I thought, from my point of view, the major worry I had was I think there were misleading things in it. Again, while I remember, they argue that everybody else in the world does this; that's not true. There are only two places in the world that actually take their own sewerage and put it into their own water supply into a dam situation and that's Windhoek in Africa, and the other place is Singapore where it was promoted. The thing about Singapore, the reason it's misleading, it actually has a third pipeline. If you want to use this water, it's mainly used in industry, the computer-chip industry, and you've got to show you've got a separate pipeline. They put a token amount into their reservoir; less than one per cent. I'm not even sure why they do that, because it obviously makes no difference.

In Brisbane this was proposed, but what Brisbane does is it actually has a separate pipeline and uses it for Luggage Point's refinery, quite appropriately in my view. Because to get water down in the quantity they need, they'd need to dig up half the city. So they said, "Look, we've got the water down the bottom end, so to speak. Let's make that satisfactory for refineries," which they do. In my view, the advantage there is: you save a lot of piping you didn't have to put in; secondly, you're getting water that's a good quality for the cat crackers so they don't get salts and stuff; and thirdly my view is, if something goes wrong with the membrane, who cares if a few viruses go into a cat cracker. The same for using the water for their power stations. To me, again, that's eminently sensible: why use drinking water for power stations when you can use an alternate source.

It's a means of replacing potable water with non-potable; which, again, the US and everybody is recommending. But that's quite different to what's usually proposed, which is, "We will take this lake in Canberra" - and I think the same proposal in Brisbane - "we'll take the water, we'll purify it, make it the cleanest water you can get, and then we'll pump that back up to the dam." Nobody else is doing that. London and cities like that, that live on the bottom of rivers, they actually use water that's not a good source, but they don't use their own sewerage and pump it up stream. What they take is the water from the river, which is not good, they put that through whatever process, and then they might put it through this technology before they drink it, which, again, I think is sensible use. It's taking a water source that's got a risk and, by putting it through this process, making it safer. That's quite different to taking a really unsafe water supply that you don't need and putting it up stream: it's adding a risk to society rather than decreasing the risk. I think a lot of the examples put up are quite different to what I think is the reality that's going on around the world. I can get quizzed at this stage.

DR CRAIK: Thanks very much, Peter, and thanks for that. Just a couple of things first before I ask you a question: you quoted a newspaper saying that we recommended recycling waste water for potable use. I was actually surprised that you quoted the newspaper rather than quoting the report, because there is no such recommendation in the draft report, which I think you sort of admitted this morning. But we do say that decisions about supply augmentation should be based on a consideration of the costs, benefits, risks, community consultation, and the decision should be made on that basis, and that things like rural-urban water trade and indirect potable reuse should not be ruled out before they've even been considered. That's the proposal that we actually put; we don't actually advocate, as a stand-alone thing, the recycling of waste water for potable reuse.

The other comment that I want to respond to is that the positive things we say about the recycling of waste water appear to be the result of us being captured by rent seekers; in other words, those who have a commercial interest in recycling water. Can I say, I don't think a single person who happens to have that sort of interest has spoken to us or certainly raised the issue with us. I think while we're happy to admit there might be shortcomings in the draft report, it's not because we've been captured by rent seekers. One of the reasons we have this sort of process, inviting people to come along and respond, is to actually rectify errors in the draft report.

Just the other point you made: as I understand it, Singapore is about to increase the percentage of recycled water in what it consumes to 3.5 per cent from 1 per cent. I agree it's still small. I did hear the person who looks after water in Las Vegas speaking at a conference in Adelaide, Ozwater, a couple of weeks ago, where she said their sewerage is treated, put into Lake Mead, and then they consume

it subsequently, down the track. So this was the person who looks after the system, as I understand it.

DR COLLIGNON: I can imagine that Las Vegas has a problem, because it's in the desert. A lot of the places in the US that are reusing this water have got rainfalls of 300 millimetres a year.

DR CRAIK: That's right.

DR COLLIGNON: Which is half of Canberra, and they extract huge amounts. In Southern California, where they're doing this, they almost have no choice, because they extract so much water from the aquifers that the Pacific Ocean is likely to come in, and irreparably.

DR CRAIK: That's right.

PROF COLLIGNON: I don't actually know enough about the rest of it, but there are situations where you might think about doing this. My point is that in Australia, I think there's very few places that come to mind that this would be either economically sensible or health sensible.

The comment about taking a quote from a newspaper, the reality is that is how actually it is presented in the newspaper and I would be interested to know if you wrote to them and said you want it extracted, because that's the tone I get out of this. When I've complained about rent seekers, if you look at the rent seekers on ACTEW here, that's exactly what they do. The reason they are pushing this is they will make lots of money. You were going to have a plant built here for three or four hundred million dollars, producing about 15 gegalitres of water, and that's exactly the same issue in Brisbane, and the reason I think they're doing it is there's no country in the world doing it currently. People don't care about south-west Africa and in fact you couldn't do a proper health study there. Nobody is putting in reservoirs, they're putting in aquifers. So Brisbane and Canberra were almost going to be the first places in the western world that would do this, and large engineering companies would make billions of dollars out of this by using Australia as an example. In my view, on economic grounds or health grounds, I can't see how it could possibly have been justified here.

So while I might agree - I can't find that recommendation - the tone of the report that you've put out implies that this is not an issue. Things like planned potable re-use, unplanned re-use occurs commonly without any apparent ill effects, there's comments like that all through your thing that I've highlighted and I think that actually shows, directly or indirectly, rent seekers have actually captured a lot of this agenda because I for the life of me can't see if the capital cost of a desalination plant is ruled out by the commission, which I agree with - I mean, I think it's - - -

DR CRAIK: We're not actually ruling it out.

DR MUNDY: No, that's not what we say. At no point do we pass a definitive view about desal. What we passed views on was about timing - - -

DR CRAIK: And process.

DR MUNDY: - - - and about scale and about process, and the relationship with these things. In the case of Victoria, for example, where we have been quite critical, the issue is about the use of the Sugarloaf pipeline. The issue in Western Australia is about the use of the aquifers and perhaps the use of the Gnangara mound. There's no debate or discussion or analysis undertaken with re-use, to direct or indirect potable re-use. What we are critical of are processes, scope, scale and timing. Indeed, it may well be the case that the economics of desal plants, for example, in the Pilbara make a lot of sense, like they do on the Eyre Peninsula for communities which are in very arid places.

But I'd just like to come back to the question about economics. Is it your view that the cost of taking water from a treated, standard, suitable for discharge into the environment - because we just don't discharge water into the environment - is it your view that the cost of taking that treated water, say, out of the Eastern Treatment Plant in Melbourne, prior to its discharge into the ocean, particularly once the standard has been raised once the Eastern Treatment Plant is completed. Is it your view that the costs associated with taking that water in its treated state to a potable standard is the same as the costs of taking similar volumes of water from effectively an ocean state and treating it to potable levels? Is that your view?

PROF COLLIGNON: That's my view because what you have to do is put it through a pre-membrane and then a reverse osmosis membrane, so you have all the same capital costs, plus you have the energy costs of pumping it and putting it through the membrane at high pressure. Now, my understanding is that the capital costs are the same, but the energy costs will be lower because it's got a lower salt concentration. Again, my argument for that is why take sewage with a higher concentration of viruses and drugs, when if you used brackish water, for instance, and river estuary, to me - and I guess somebody would have to model this and see it - the energy costs would be the same but it would be cheaper. I am not sure actually we're in violent disagreement.

DR CRAIK: I suspect we're not, but I think we found the way you presented what we said - - -

PROF COLLIGNON: I suspect we're not. It might be the tone of the thing.

DR CRAIK: - - so different from what we had actually intended that - - -

DR MUNDY: Actually I think we are in disagreement, and I think we're in disagreement for this reason: you wish essentially for a form of supply to be ruled out on public health grounds a priori.

PROF COLLIGNON: Unless it's a last resort.

DR MUNDY: Our position is that providing water is - and this may ultimately end up in the same place, but our view is that all sources should be considered, obviously with the overwhelming caveat that they be safe. So I think there is a difference. It may ultimately lead to the same outcome. One would have thought - and I'm an economist, not a microbiologist - that people in your profession who are developing and advising governments on drinking water standards may well arrive at that place and say, "This water simply can't be made safe," in which case there would end the debate. But I think our positions are different.

DR CRAIK: I guess the question I find interesting is we reflected on the situation in the Murray River where, say, water from the ACT is treated, it goes back along the Murrumbidgee and down to Adelaide people all the way, who drink it and use it, and to me, what's the difference between - I mean, you seem to me to be suggesting there's a difference in that, so towns take it out on the way and treat it and provide it to their citizens - there's a difference between that and putting the same treated water in a dam, for instance, where it might sit for quite a period of time and it would be diluted by the natural flow, much like a river, and drinking that. I guess my question is: what's the fundamental difference?

PROF COLLIGNON: The fundamental difference is that ultraviolet light, natural bacteria in the environment all compete with pathogens and you have a log kill with time, depending on how those circumstances go. Aquifers, if it goes through the ground, actually probably have a bigger effect. The reality is most people down the Murrumbidgee don't take it straight from those rivers. I mean, Wagga, which is one of the bigger towns, has its own aquifers it takes out of. Yass, for instance, isn't allowed to access the water from the Burrinjuck Dam. It has its own catchment in the thing.

DR CRAIK: But Adelaide and a lot of the towns down the Murray do take - - -

PROF COLLIGNON: Well, in part. Adelaide, 80 per cent of its water actually comes from catchments in the Adelaide Hills.

DR CRAIK: In the last decade, but the vast majority of water has come from the Murray.

PROF COLLIGNON: There are times when you have to do this. But if you look at the concentration of viruses and drugs in the water they take, it will be a thousand or a millionfold lower than sewage. So even though you're taking from a polluted river - it's preferable if you don't - your risk is a thousand or a million times higher because you're taking it from sewage, because you haven't had the natural thing. Again, I actually agree with the US, there may be times where you have to do this, and if you have no other choice and it's a last resort, I think it's very important, but what I think the various rent seekers are doing to government and lobbyists, they're trying to say, "Look, the rivers are polluted, everything is polluted, therefore this is actually better than taking it from a river and what you're doing normally, so you should do this all the time." That is their marketing exercise and they say, "This can make it safe, purer than water." Both those I think are false presumptions. It doesn't perform as the advertising says; (b) this is still the most dangerous, by a thousand or a millionfold, source of water.

Now, if you haven't any other choice, well, you may have to do that and then I think this is appropriate. But again if we're going to use this technology, to me, the people that should use this technology are the people, say, at Gundagai that I think do take it from the river. To me, the place to put this technology is between them and the river, so when they take the water out, it lowers their risk, rather than saying, "Take your sewage, recycle it, put it through this, and then put it into your drinking water." To me, you're putting them at risks that they could otherwise avoid by having a lower source of water because even the Murrumbidgee there would be a thousand to probably a million times safer than if they used their own sewage as their own drinking water.

So to me, what we want to do is lower the risk all the time. Again, I'm not arguing that we would never use this technology. I find there's probably very few times in Australia you'd use this technology, and if you use it, I think you've got a whole series of testing that in fact it would be impossible for small towns to do. If you've got less than 100,000 people, you couldn't do it. But again I bring in the tone of the document: if you look at what was said about Toowoomba in your document, it actually says they're a bunch of hillbillies, almost. It says, "They did not know what they were doing. They should have done it, they did this other option." The tone of the document is to say that anybody who doesn't accept this and argues against it aren't appropriate, and if you look at the Toowoomba example, just the economics, what they end up doing was a cheaper option than if they had built a recycling plant. To my mind - - -

DR CRAIK: That was because of your view that their number was wrong, but that number was given to us by the mayor of Toowoomba who was promoting the scheme. I don't recall anyone criticising - there were a number of grounds, but not on that one.

PROF COLLIGNON: The figures that you gave for their capacity - and is on the Web from the Australian government - I actually can't understand how Toowoomba could say they could recycle sewage through these reverse membranes at such a low cost because that's not what was promoted in Canberra, it was not what's promoted in Brisbane, and it's not actually the figures you give to South East Queensland's water costs. I think your costs are actually probably too high for it actually. But that aside, in that you're overestimating the costs of the capital, but everywhere I look is all the examples that are given show that the most expensive capacity you can have for water is desalination and recycling plants, of orders of magnitude many times higher and probably twice as high as a pipeline. That doesn't even take into account the running costs.

But that's not the tone that came out in that Toowoomba part of it. That's my view. I actually think the tone of this - and I might say water authorities in Australia now, like the people that appear on the 7.30 Report - is that, "This is happening everywhere, this is an exaggeration, you're scaremongering for no good point and you're stopping viable options." I still take the view that there wasn't proper costings done of sewage recycling that I could find in your report.

DR CRAIK: We were quoting other sources. We don't actually do the costs ourselves.

PROF COLLIGNON: I guess one thing that is good about the Productivity Commission is that you're an independent source of economic analysis. Everybody tells you stuff.

DR MUNDY: I thought we'd been captured by rent seekers.

PROF COLLIGNON: Well, on this issue I thought you might have been, but I'm happy for you to show that you're truly independent. Dams have got a cost but they've got a political cost as well. There's a capital cost for building them. There's a capital cost for pipelines. There's a capital cost for desalination plants which I think are in exactly the same boat as these sewage recycling reviews of reverse osmosis. To me you may decide, "Look, we don't have any option because you're in the Pilbara, what else do you do?"

But to me at least it ought to be obvious because I think this is actually presented both misleading from an economic point of view and particularly the energy, and also misleading with a view that everybody does this and we can make it 100 per cent safe, 100 per cent of the time. I think that is pervasive in what is presented now in various areas.

DR CRAIK: However, there are quite a few quotes - and I think you even do Khan and Roser - examining plant indirect potable recycling schemes, including a

five-year study, "Despite more than 40 years' experience, no clear deleterious effects from planned indirect potable recycling schemes have been observed." We have the Australian guidelines for water recycling, an expert panel on health recycling in Canberra. How do we weigh up your comments, I suppose, between these so-called experts or people who are appointed to these positions to provide advice on these things?

PROF COLLIGNON: If you look at Stuart Khan's report, that wasn't an original report. That was taken from the US reports which concluded, "Only do this as a last resort." What I find misleading about those reports is that they take all the data from the US report but didn't mention "last resort". So the very conclusion of the scientific study, independently looked at, when they're actually doing this - and you have to remember those people are in a CRC promoting this technology, so they're not unbiased - they leave out the conclusion from the report that did that study, and then you look at all the advertising we've done here, plus all the other places, they say, "This removes everything except water molecules."

Well, what about the salt it leaves behind? What about the 50 per cent urea it leaves behind? What about the 10 per cent of antibiotics and other drugs it leaves behind? They finally did some testing in Queensland to look for viruses. They did about 90 tests. In two of the tests they find virus and it's a laboratory effect. It wasn't really in the water. But it was at the same time they found increasing bromine levels too which also goes with saying you might have a problem with chlorination of the membrane.

Now, I think that's unresolved but there are enough studies from the US also that show viruses do get through. You do get increased viruses with this stuff, there's no doubt about it. You get increased drugs. But it doesn't do what the promoters are saying. There's misleading advertising here. One of the problems with governments and health authorities, they do want all the viruses removed, so when they actually get the marketing that says, "Hey, this removes it all," they believe it, because I found it very difficult to find this information. You've got to go through a lot of literature to find this stuff and they're buried in obscure journals, because the real problem is the people who are promoting this make a lot of money.

The health authorities or the water authorities don't release their data. Singapore hasn't even released all its data. My understanding is they did two years of follow up with rats and there was an increased death rate in rats the second year so they never released that. They only released the favourable data. There is a real problem getting transparent data to look at this. If you could show some plant was running somewhere for five years, they did studies every day of the year, there wasn't one breach for five years, well, I would have trouble arguing as strongly as I can.

The reality is that data isn't available. We are doing this on faith because

appropriate tests have not been done. We're supposed to believe these guys because they tell us it's a great idea. Now, my view is we should not do this on faith because this has the potential to kill lots of people if it goes wrong, and until they can show this consistently produces the product they say it does, I don't believe we should use it, and they have not done that.

DR CRAIK: Okay. We should probably wind up because of time considerations. Thanks very much, Peter. Thanks for coming along today and giving us your views.

PROF COLLIGNON: Thank you.

DR CRAIK: The next person to appear is Terry Leckie from The Water Factory Company. Good morning. Terry, if you could state your name and organisation, and then if you'd like to make a brief few opening remarks, we'd be happy to hear from you. Thank you.

MR LECKIE (WFC): Sure, thank you. Our company is The Water Factory Company. It has been formed as a private water utility under the Water Industry Connect. We have some licences and are operating that organisation based in Sydney. My comments are based from urban growth in Sydney and how that might reflect throughout the urban environment in and across Australia. My review of the draft report - and a lot of the recommendations I agree with, and it's a great body of work. I agree with the need for change and I think that's what it's leading to, and to make representations that provide the opportunity to engage with the private sector; the rent figures, so to speak.

Some examples that we have in Sydney, there is an opportunity to show the best practice across the water industry and that is how you may embrace the decentralised private water industry market. Do you want me to continue on?

DR CRAIK: If you have more to say, otherwise we can start asking you some questions.

MR LECKIE (WFC): You've seen my submission, so just to talk about the first point which was that we should, in our urban water supply, include a competitive decentralised system. I just felt the documents are focused a lot on bulk water supply. It's the issue of the day and fair enough, but what I'm encouraging you is to look at the other end of the spectrum, how we may use local decentralised systems at the other end of the scale and provide water at source, of demand, so to try and spread it across.

DR CRAIK: We agree with each other quite strongly on that.

DR MUNDY: When we use the language of decentralised water markets we were talking about households having choices of multiple supplies, a bit like the electricity industry. When you use the word "decentralised" you're talking more of an infrastructure. We actually support WICA and we - - -

MR LECKIE (WFC): Sure.

DR CRAIK: We're pretty much in furious agreement about that.

MR LECKIE (WFC): Yes.

DR MUNDY: I think it may represent a need for us to change our drafting slightly

on how we describe it. But I think our view is that local solutions can be the thing. I guess one of the issues that has been raised with us was the problem of systems being installed, operating and at some point then down the track the provider of that service ends up in some financial distress and the local utility has to step in and effectively become the operator of last resort with infrastructure that mightn't be theirs that they mightn't have good - do you have any ideas about how we can deal with that sort of risk problem, because that's one of the issues Shore Beach probably raised with us.

MR LECKIE (WFC): Yes, so there are a few. I mean this is an issue for us, an issue that's going through the licence and obviously there isn't - you know, supplier of last resort isn't in place and I understand where that's at, at the moment. In our discussions with IPART and some of the regulators it has been about, "What about private industry solving that problem?" Maybe it's a combination of things, but as this market develops and grows you have varying players within that marketplace that all have those types of skills for decentralised systems and therefore could be nominated and licensed to step in, those companies that have the wherewithal to take over infrastructure immediately and assume the commitment to the community. So that's one - it's a bit like the financial markets, they have that in place where you have managers who manage assets and large funds and there is a backstop for them. Maybe you could look to that example.

DR CRAIK: In New South Wales my understanding is that under the WICA Act there has to be a supplier of last resort identified. So how do you go about that where you're putting something in and seeking approval?

MR LECKIE (WFC): At this stage in our licence there isn't.

DR CRAIK: Okay. So what happens if - hopefully it won't happen, but what happens if you get into trouble, if your company gets into trouble?

MR LECKIE (WFC): So as part of that, you know, there's a financial consideration, so there's an assessment of financial wherewithal.

DR CRAIK: Yes.

MR LECKIE (WFC): So at this early stage is that going to happen in the next couple of months, is it going to happen in the next couple of years? The likelihood is it's going to happen in the next couple of years. So we're at a stage where we're constructing infrastructure and then starting to operate infrastructure. "Are you going to go broke in the first few months of operation?" No. "Are you going to go broke in the first two years of operation?" Who knows, and there are a whole lot of drivers beside that. So we talked to IPART about us providing that supplier of last resort and for us we initiated discussions with other companies who might have the ability to step in and said, "Look, it's being sorted out. A paper is going to the

minister. That's an issue for government to resolve. We'd like to offer our assistance and some suggestions." That's as far as it has gone.

DR CRAIK: So there isn't identified currently - suppliers of last resort aren't identified where?

MR LECKIE (WFC): Not at this stage.

DR CRAIK: Oh, okay.

DR MUNDY: So your expectation would be - there was an event of failure that presumably the state would have to intervene and the local water entity, I mean Sydney Water if it was metropolitan Sydney or Hunter Water if it was in the Hunter - - -

MR LECKIE (WFC): At this stage it's - yes, it's out of my hands though, you know. We've tried to offer a solution and said, "Look, you get embroiled in the Corporations Act. We're going to change the Corporations Act so that if you go into administration then we can invoke a handover to some other party."

DR CRAIK: I see.

MR LECKIE (WFC): There are all those kinds of issues.

DR CRAIK: Yes.

MR LECKIE (WFC): And fair enough. So, "Okay, you're dealing with that." That's as far as it has gone.

DR CRAIK: What sort of barriers are there to you guys operating in New South Wales or in other states; any? Are there barriers to you?

MR LECKIE (WFC): The barriers in other states are there is no WICA legislation. So what barriers are there; it is a particular project that makes it commercially viable, and it has taken us a while to get to that.

DR CRAIK: Finding the right project.

MR LECKIE (WFC): Finding the right project and understanding the total water cycle and the revenue that follows that. So we were talking about if you just take recycled water and what is the cost of that, then, yes, it is more than drinking water or more than producing water from dams. But if you take the water cycle as a whole, so we take the sewerage and we deliver recycled water on site, then it's economic. Under a certain condition, the size of the development, the

development rate, the contribution to infrastructure up front, then we are making it work financially.

DR CRAIK: Is there a problem with people changing the connections that you put in; if you put in a third pipe system or something - I don't know if that's what you do - but if Joe Handyman/Plumber comes along and swaps them over, because we did have one submission where people had seen lots and lots of cross-connections. Maybe it was you?

MR LECKIE (WFC): No, it wasn't me. Yes, it's difficult to change over. So are you going to do it, can you be bothered. Yes, if someone has a clear, "I'm going to change," then they will. Will you get 50 per cent of those changing? No. I think we've got some programs in place; the city water showerhead program, the retrofit program, those kind of things that give us some sort of idea of how that works. I think we're starting to get some information that comes out of the basics program, five years on, that can tell us if we are achieving the savings. Once they implement those facilities within their home, are they changing them out: no. We're getting a wave of change, I think.

DR CRAIK: Okay. When you talk about a decentralised water supply, what sort of water source do you actually use? Where do you get the water from?

MR LECKIE (WFC): If we look at bulk water, centralised system, and decentralised system; looking at that end of the scale. An example is Central Park, so it's a new, vertical urban development and will have recycled water facility - or a water factory, we call it - in the basement of the building. So it draws on several sources. The idea of that is about security supply. These kind of communities are looking to have a secure water supply, to have some control over their own destiny. That, yes, they still are at this stage drawing on centralised systems. I don't see this as a centralised system or a decentralised system; it's an integrated system, and this is just one part of that.

DR CRAIK: What bit of their water do you actually supply? The washing and toilet water or something, is that what it is?

MR LECKIE (WFC): At this stage all but the drinking water we will provide, and so the sources of water are from rainwater; from sewerage within the facility; from sewerage outside the facility; from the adjacent sewer; from adjacent buildings; it is stormwater; we are doing some recirculation of irrigation water for green walls; and then there's obviously drinking water coming onto site as well. So that's a multiple-in source and we, therefore, provide multiple supply. So the supply is what we call high-TDS recycled water and low-TDS recycled water.

DR CRAIK: What's the difference?

MR LECKIE (WFC): The difference is the salt content. So one is predominantly used for cooling and in some cases sensitive irrigation, and the other is used for toilet flushing, other irrigation, and clothes washing.

DR MUNDY: Central Park, is that on the old brewery site in Broadway?

MR LECKIE (WFC): Yes, that's correct. Sorry, on that, that's an example of a site that was a brewery that has infrastructure and capacity to take 44 more of these. It's a huge capacity with the infrastructure, but the driver is a whole lot different. We're trying to reduce the amount of water.

DR CRAIK: So you do the recycling of the water.

MR LECKIE (WFC): Correct, the whole water management. So it's the billing to the customers, it's the servicing of the infrastructure within the site.

DR MUNDY: You just, effectively, buy the drinking water off Sydney Water.

MR LECKIE (WFC): Correct. That's a discussion with Sydney Water as well. Do they then provide the drinking water within the community as well, directly, or do they provide it to the edge of the community and, therefore, we have one water utility that manages all of the water issues within that community. Therefore, you can manage pressure differentials between certain qualities of water; you can ensure who is responsible for cross-connections, so we can ensure we don't have two water authorities working in the same jurisdiction.

DR CRAIK: How do you decide the price for the Sydney drinking water?

MR LECKIE (WFC): The price is already set. Sydney Water has set the price.

DR CRAIK: What about the recycled water that you provide?

MR LECKIE (WFC): That's set as well. Rouse Hill has a price for water, so the expectation of the community and the customers is already set.

DR CRAIK: So you charge them?

MR LECKIE (WFC): So I match that price.

DR CRAIK: Okay.

MR LECKIE (WFC): I'm not trying to create a price war, I'm just trying to match the price so that the people on this side of the road are paying exactly the same as the

people on that side. It's not about price, it's about value. It's about, "What about the cost of infrastructure? How do we provide that? How can we help the developer to reduce its cost, increase its return and therefore reflect that in the prices that people might pay within their homes and are therefore paying a lower cost?"

DR CRAIK: Are you obliged to charge that price, or do you just choose to charge that price?

MR LECKIE (WFC): No, we're trying to show a responsible approach. We're a water utility. We just happen to be private. It's a responsible approach as to how we provide those services. The price is already set. It's a market-driven issue and we can't get away from it.

DR CRAIK: It's because that's what Sydney Water charges. Are you required because IPART sets a price - - -

MR LECKIE (WFC): No, at this stage IPART isn't setting a price. The longer term, if you look at that, it would be - if the ombudsman was receiving a number of complaints about pricing for this private water then in time it would be reviewed. We're just looking at the market, looking at our customers. The customers are asking us, "Well, what's the price of water?" I say, "It's no different to what you would pay if you were under - - -"

DR MUNDY: Your basic value proposition is to try and knock out some avoidable infrastructure costs through integration of the water system, and therefore the developers' costs go down and then - - -

MR LECKIE (WFC): Correct. You add value.

DR MUNDY: - - - you add value that way and then you presumably share some of that saving with the developer, whilst selling the same price of water to the residents.

MR LECKIE (WFC): Correct.

DR MUNDY: Okay.

MR LECKIE (WFC): An example is Pitt Town. The water utility required that they put in some transfer infrastructure, \$24 million, to get rid of the sewage. They installed 10 and a half million dollars' worth of pump stations and pipelines which are oversized and won't be used. We came and talked to them about an alternative. It's half that cost and they didn't continue with the next lot of transfers - - -

DR CRAIK: So, what, it's just sitting there not being used, the 10 and a half million dollars?

MR LECKIE (WFC): It won't be used to its capacity and it's a large facility. It's just an example of - you can either take a centralised approach or a decentralised approach, and then what's the value, what are the benefits that surround that?

DR MUNDY: In your submission you make the observation that removing price-setting would undermine the establishment of a competitive market. This is an observation that I find a little strange. The other issue, is that motivated because you're concerned that there might be some ultra-competitive conduct? I guess the other part is, at the moment - certainly in the case of Sydney Water - IPART sets I think 66 separate prices. Would moving to a revenue cap or some sort of cap on their revenue rather than this very explicit price-setting arrangement, would that have the same effect as what you're concerned about here?

MR LECKIE (WFC): No. We're a small player in a large market, as such, which has already been dominated a monopoly supplier. The intent of WICA was to create competition yet we're still nearly five years on and we're just starting to get going, and it will ramp up. The only surety that we have is that we know what the revenue is. We know that price will stay or will continue to increase or decrease according to IPART's determination. But at least we can then understand what our revenue is, and the thing that we are able to control is cost. Our focus is wholly on cost, service and how can we help developers and how can we improve service to customers.

If it was about, "Now let's start allowing price to be" - whatever it is - then a large organisation with large revenues backed by government, it's pretty hard to compete against.

DR MUNDY: But IPART only sets a maximum price. IPART doesn't set a price, it sets a maximum, so that competitive conduct is still there. The potential for Sydney Water to knock 10 cents a kilolitre off the problem, knock 10 per cent off, is there now, so you're not protected in that regard.

MR LECKIE (WFC): Except there's an expectation and therefore in doing that it creates a precedent of which the development industry would look to. "You've given 10 per cent over here," and in fact what happens then is the price starts to drive down. I understand what you're saying - - -

DR MUNDY: With the constant debate around cost of living pressures, and the recent acts of state governments to attempt to interrupt orderly price-setting, you would have thought that that poses substantial risk to yourself.

MR LECKIE (WFC): I see our effect on pricing is to not lower the price of water but to reduce the increase in the price of water, and to show how you can add more value to the customer without changing the price of water. Some of those items -

because we've had a drought and we have had some changes, we talk about desal and alternative water supplies, we now understand the security of water. Is that important to us? Yes, it is. That's a great thing coming out of the drought and the change. We now have secure water supplies, whereas in the past we didn't. Do we understand the value of water as a customer? Yes, we understand what the value is to be able to wash our car whenever we like. We understand the value of being able to irrigate our lawns whenever we like. We've now got the value of water and I think that's important. Those changes have helped us a lot. I don't know whether that answers your question.

DR MUNDY: Yes.

DR CRAIK: Can I move on to developer charges. You suggest that developer charges are best set whereby they keep costs low. You've got the developer and the water utility control over the timing, and infrastructure and share costs on a cross-utility basis, a portion of new development infrastructure. Do you think that the current developer charges provide adequate signals for the costs of servicing new development?

MR LECKIE (WFC): They're applied differently across all states, aren't they? If I look at the change that occurred in Sydney, in New South Wales, where in 2009 the developer charges were abolished for sewerage and water, and initially it was for those areas that were - inner city had been already paid for and created a differential between greenfield and brownfield.

DR CRAIK: So they were still retained for brownfield sites?

MR LECKIE (WFC): They were still retained for greenfield sites - - -

DR CRAIK: Greenfield.

MR LECKIE (WFC): Submitted to government and then they were dropped, all bar recycled water. It is difficult to understand if we're adding value, if we don't know what the cost is initially. What is the true cost of providing that infrastructure for that greenfield landfall? What is the allocation of cost to that growth area. Once we know what that cost is under a centralised approach, then we can look at: are there sensible alternatives that might reduce that cost? If we don't have that then it's tough.

DR CRAIK: How do you operate without knowing them?

MR LECKIE (WFC): In some areas there are still some council areas, there are still developments, various plan charges being applied. In those areas it's easy. In other areas - and an example is south-west sector - where there was a commitment to

provide recycled water by Sydney Water and then developers committed to that also put in dual reticulation and then Sydney Water developed its business model for the whole of that region and found that they felt it was too costly or cost prohibitive, and therefore told the developers that they wouldn't be providing recycled water. They make their commitment, potable water into - you'll understand that issue. What that did was, initially it set a developed service plan, so it's on the expectation for \$5600 per lot to provide recycled water and developers committed to that. Then when Sydney Water said, "No, we aren't going to be providing that. We won't provide recycled water to that community and to further development," then, effectively, now the starting point is zero. So we come along and say, "Well, we can provide you with a fully integrated water cycle, we can look at providing you with some local systems, we can look at improving your sustainability objectives, and we're starting from a zero base." We can provide that system for the 5600 per lot, but we can't provide it for nothing. It has just distorted the playing field, as such.

The alternative for those communities is that they are having to put in a rainwater tank, which isn't as effective, the sustainability scoring is lower, and the cost of those, we thought, was about \$6500. Therefore, it shifts the money from the developer, paying for that and charging the person or the new owner, to the new owner having to pay for that as an imposed cost on that land. In Pitt Town we are getting pricing of nine to 11 thousand dollars for a rainwater tank. The threshold for recycled water for Sydney Water was about 13 to 14 thousand dollars a lot. Not only is the costing model not quite working, but the shift in cost is cost back on to the community. Eventually it will even out and the cost of land will reduce when you have a rainwater tank or increase if you have recycled water, but it's not there yet.

We're also finding that because of that, then the continuation of recycled water in the north-west sector is, no, not going to continue. Once Rouse Hill was at the next stage, not going to provide that. I think that's a shame, because what you start to do is you start to embed water use within our communities. You start to develop growth areas where you are not focusing on dealing with wasted sources, you are not focusing on providing a community that understands water management, has a variety of different water, can control their own water usage and supply.

DR MUNDY: You touched on brownfield sites and you mentioned Central Park. One would have thought there was a reasonable amount of pre-existing water infrastructure sitting on the site of that old brewery and, I guess, that raises the question, particularly with the brownfield sites, that, presumably, the costs of your business on the brownfield sites are particularly site dependent. Doing a development on an old brewery might be very different to doing one on an old railway yard, because the infrastructure that's attendant - and the age is an issue too. Is the issue about that, does that lead you to a view that developer charges on brownfield sites - particularly, I suspect, old, industrial, inner-city sites - having a developer charge is actually more problematic than it might be on a greenfield site

where you're out in the urban fringe in the south-west growth corridors. Is that an issue? Whether you find a site that is adjoining an existing waterway, or an existing creek, or something like that?

MR LECKIE (WFC): There are different drivers. So it is quite a different driver in inner city, and it's an apartment facility we're trying to differentiate. The driver is not only price point, but it's also rate of sales. What Frasers has found by implementing these green initiatives is that they've been able to keep the price point in a difficult market and increase the rate of sales quite dramatically, to the point where it has given them and their financiers confidence to go along to the next building 12 months earlier. In a difficult market it has really proved its worth. Developer service plan charges don't even come into the equation on that, so it's a different driver there. When you look at what water services we would be able to connect into the sewer and able to connect into the drinking water, so much water comes from within that community itself that they're lesser players; that will increase over time.

We have a situation where we're providing a lot of water to cooling, but that's because it's a tri-generation facility and, yes, they're providing chilled water to residential, of which there are 2000 apartments, so a lot of cooling to both residential and commercial and there are reasons for that. But over time that technology may be changed to hydrogen fuel cell, for example, and the product of hydrogen fuel cell is water. So instead of being a water user it may become a water producer. That then leads to our discussions with the City of Sydney and City of Sydney are leading/facilitating the issue of this grid. Is that the right way to go or not? Is that a good strategy? It's pretty out there.

When we start looking at using a city-wide grid, then there are a whole lot of efficiencies that we're going through. One is that you don't put a blackwater plant in a 20,000 square metre commercial building next door, which is always going to be losing money and is a cost impediment on the building owner and the tenants in that building. You can provide water from something that is already commercially viable. It also means that you can balance your water balance without having to use potable water; so now you have a grid that can provide balance either out or in. Your efficiency increases, you don't get systems that are installed just to get Green Star ratings that aren't efficient.

DR MUNDY: These new developments at Central Park, are those properties being individually metered?

MR LECKIE (WFC): Yes, they are. It's driven by Green Star. So Green Star require that you meter the drinking water, not the recycled water other than on a building by building. We'll probably take that a little bit further and put smart meters on each floor so that we can then get some information on usage and trends on

recycled water.

DR CRAIK: Who builds them; Sydney Water and you?

MR LECKIE (WFC): At the moment the proposal - because it's not built yet - is that Sydney Water would provide billing for the drinking water and we would provide billing for the recycled water and sewerage service and the central thermal plant would provide billing for hot water.

DR CRAIK: They'll get three water bills, effectively.

MR LECKIE (WFC): Several, that's right. I think, though, what you'll find is, over time, that will become one combined entity and you'll get a bill from that micro-utility. At this stage we're there in a water sense, but you get these communities - so this is the opportunity that will be created by a decentralised, competitive market place; you get these local systems reducing the demand in its growth areas, so that it takes the pressure off bulk water. It doesn't substitute it, but it just takes the pressure off that. We talked about potable re-use before; I don't think that's the rent seekers. I think that is because we have a centralised system that is very difficult to augment, and to put dual reticulation to throughout an existing city is costly, and why would you do it anyway. The financial drivers are different: you've got a water utility that spends a lot more money on infrastructure for recycled water to sell the same amount of water at a lesser price. That doesn't work for me.

DR CRAIK: Okay. Thanks very much, Terry. That's been really interesting. We'll watch with interest how Central Park goes. Thanks very much, that's very helpful.

DR CRAIK: Okay, now we have the Riverina Water County Council, thank you. Hi, could ask the three of you to state your names and positions, and then if one of you would like to make an opening statement, we'd be happy to hear from you.

MR KENDALL (RWCC): Firstly, I'll introduce myself. I'm Rod Kendall. I'm the chairman of Riverina Water. I have with me Mr Graham Haley, who is our general manager, and, on my left, Mr Greg Finlayson, who is the director of engineering at Riverina Water. As an opening statement, could I say that our submission deals only with regional and rural water supply authorities and that it doesn't comment in regards to major urban water supply authorities, such as Sydney. In summary, our submission calls for the wide government retention of ownership and control of water utilities but that continued efficiency gains should always be explored by councils and that there should be recognition that one size does not necessarily fit all, and that virtually applies to inland areas as against coastal areas, to some extent.

The county council model, we believe, has proven to be a very effective water supply model over a long period of time, in excess of 50 years, but that the same effectiveness will not necessarily flow to sewer collection and treatment. The Riverina Water Council in New South Wales has supplied water to over 22 local government areas. Many councils already have benefits from shared services, and a good example is the recent integrated water cycle management plan that was undertaken by Riverina County Council in conjunction with its other constituent councils.

Just as an example of how the current water supply model in New South Wales in regional areas has worked well, in New South Wales there is in excess of 99 per cent compliance with drinking standards, which we believe is an important measure. Graeme would now I think like to just outline basically some of our response to your submission, and then we're quite happy to answer any questions.

DR CRAIK: That would be great, thanks.

MR HALEY (RWCC): I think you have a copy of my brief comments; very brief, there was no point in elaborating, since we agreed with most of the findings of the Productivity Commission. No need to go through those comments again, except to point out that there is no rate-pegging on water charges in New South Wales. One of the cost pressures that general purpose councils have is rate-pegging. It is now set by IPART. My personal view is that IPART has an almost impossible task, to come up with a suitable factor, because every general purpose council is different. My background is from general purpose councils, by the way. So I do understand the position.

Water supply charges aren't pegged, so that we are a relative free agent in

setting our charges. However, there is no desire to just make a profit, there is no profit motive. We just need to make sure we have sufficient funds on hand to supply and maintain good quality water supply and to replace those assets when needed. At Riverina Water we are currently investing a lot more in capital infrastructure than what our depreciation charges show, it's almost double. Whether that's a measure of us being really good or our depreciation being too low is uncertain. Depreciation itself is a generalisation, where you generalise rates, and how accurate they are I don't think anybody knows. But we do have a long-term business plan in operation. It is currently being reviewed.

Long-term business plans for water and sewerage operations in New South Wales are not new, they have been operating for approximately 15 years now. Riverina Water is in the process of developing a 30-year business plan. Our integrated water cycle management plan is being finalised in the next week or two, and we believe that process is well in hand. Our business plan will flow from that, with that long-term asset management plan being part of the business plan. We think we are doing it quite well in our region. We do have a good working relationship with our constituent councils. It remains to be seen, when Wagga City Council talks later on today, whether they support our case or not.

Riverina Water has a long history going back to its predecessor, Southern Riverina County Council, which goes back to 1938. We haven't had any council try to withdraw in that period, so we think we must be doing something right. We do run only water, not the sewerage. The sewerage is run by the general purpose councils, which, if you think about it, with such a wide area - which would be over 20,000 square kilometres, with a number of disparate towns and villages - it doesn't make sense to have a centralised sewerage treatment plant; whereas we do have a centralised water treatment which can distribute water. We do have a lot of other sources. Only one-third of our water comes from surface water, two thirds comes from groundwater.

DR CRAIK: Thanks very much, and thanks for coming along today in such force.

MR HALEY (RWCC): It's purely self-defence. I've only been on board for four months. I've got a good general history of that region, since I've worked there for 30 years, but I'm still picking up the intimate knowledge of Riverina Water.

MR KENDALL: We think this is a pretty important commission.

DR CRAIK: Thanks. In the dot points that you provided, and one of the issues that we have been exploring, is this economic rate of return that you guys are required to report on every year, and the New South Wales Office of Water reports on it, and you have pointed out the key questions, whether there is enough revenue being generated to replacement assets as they wear out or consume and to ensure the

network can grow. Do you consider that regional water utilities in New South Wales are earning sufficient revenue to recover their costs and to have enough to replace the assets and to expand as the network grows, or should grow, and is Riverina Water specifically doing that?

MR KENDALL (RWCC): I'll answer that, to some extent. Firstly, we are covered by the Local Government Act that mandates us as a not-for-profit organisation. So therefore obviously you've got that balance between not-for-profit and also having a budget that in the long term will cover the costs. I think our track record to date would indicate yes. We have been in operation over 50 years. There has been no breakdown in the network of any sort in that period of time. We have had a long-term financial plan in place now; there has been generally a 10-year plan to date, and we are in the process of preparing a 30-year plan that has indicated balanced budget situations with borrowings and surpluses over various periods of time.

DR CRAIK: Do you get subsidises at all?

MR KENDALL (RWCC): We have no subsidies whatsoever. Sorry, we put out water supply new pipeline into Urana, that was commissioned last year, and I think there was a 10 per cent subsidy on the construction of that pipeline. There were greater subsidies available if we surrendered some of our water supply licence, but we felt that we would be surrendering more than we would be gaining, particularly given the security of water into the future. So essentially we operate without subsidy and our water supply charge is, as you probably know, very economical.

That's based largely on the fact that we cannot continue to accumulate surpluses without any identified need. From our point of view, certainly our financial plan indicates that all costs are covered, all future replacements and extensions of infrastructure are covered. Borrowings are under control. Currently we have no borrowings, but we plan to go into significant borrowings in the next several years, as we replace our major water treatment plant in Wagga.

DR MUNDY: Will you fund the repayment of that debt through some sort of sinking fund or will you just carry it on the balance sheet?

MR KENDALL (RWCC): It's already factored into our charging regime.

DR CRAIK: So do you think then that the measure that the New South Wales Office of Water uses, this economic rate of return, or return on assets being greater than or equal to zero, is right? What is your view about that?

MR KENDALL (RWCC): In actual fact if you're not allowed to make a profit, at the end of the day your average rate of return will be break-even. So to have a

positive rate of return, to make a profit in the long term, is not in our mandate. If you want to change the mandate, then we'll change our rate of return. But to date, by my measure, a zero rate of return is where your costs exactly match your benefit. That's our mandate.

DR CRAIK: That's interesting, because we had a discussion about this issue with IPART and what sort of rate of return they think would be necessary to run the business.

MR KENDALL (RWCC): It just depends where you take your cost point. If your cost point includes all of your expected outgoings, your depreciation, your replacement into the future - and we believe it does - then that's costed into our cost side of the budget. That's what we have to cover.

DR MUNDY: Your notion of cost includes financing and repaying debts.

MR KENDALL (RWCC): Absolutely.

MR HALEY (RWCC): Also you realise that there is some reluctance amongst local governments in New South Wales to accumulate too much in the way of cash reserves.

DR CRAIK: Because they have to give it to the council?

MR HALEY (RWCC): The history of the state: took electricity - county councils - off local government in 1995 and some hundreds of millions of dollars went into the consolidated members of that - - -

DR CRAIK: Right.

MR HALEY (RWCC): There's a real defence mechanism about that at the present time. It's long corporate knowledge.

MR KENDALL (RWCC): There was a bit of - - -

DR CRAIK: What was the problem?

DR MUNDY: There was a bit of cash in the tin.

MR KENDALL (RWCC): Some would argue therefore the consumers actually now pay for their infrastructure twice, but we're not here to debate the electricity privatisation.

MR HALEY (RWCC): But I just want to give a bit of a background why there is a

reluctance to accumulate too much in the way of cash reserves. It has been a policy to actually invest in assets rather than cash.

DR CRAIK: Can you just pick up the issue that you raised about sewage and water. You said that it's appropriate that sewage is treated kind of by each town, I suppose it is, but you've got a central treatment plant for water, the amount that's piped out. Why couldn't you do the same for sewage?

MR KENDALL (RWCC): Centrally, it's a transmissibility factor. Water once treated is readily transportable over long distances without degradation. Sewer waste needs to be treated within a certain period of time or it will become septic. It's also a different product to pump it. It's a different product.

DR CRAIK: Sure.

MR KENDALL (RWCC): Even though essentially it's water. A director of engineering probably wouldn't have issues with it, but what that essentially leads to is that in large - especially in the sparsely populated rural areas you can't centralise, for example, by pumping sewer waste back from Lockhart to Wagga, or from Urana back to Wagga which is about 140 kilometres.

DR MUNDY: So the difference here is an engineering and geographic reality rather than any great issue of principle.

MR HALEY (RWCC): The factor of distance, plus the consequences.

DR CRAIK: Would the county council be able to look after the kind of distinct sewage treatment plants? I mean, is there any advantage in you having control of the whole water cycle, even though the water may be connected but the wastewater is separate?

MR HALEY (RWCC): It's possible, however, there would only be an advantage if there was a breakdown in the relationship and the integrated water work wasn't working. In all our consultations through the greywater cycle management, there were no issues of relationships - - -

DR CRAIK: So while you get on well it's okay.

MR HALEY (RWCC): Well, we have to get on well because those councils - our board is made up of representatives of the council as well.

DR CRAIK: Okay.

MR HALEY (RWCC): But just getting back to the difference between the water

and the sewerage, the environmental consequences are much different if there's a break in the water main. All you do is make something wet and lose some water, but if you have a major break in a sewer line you do environmental damage. The consequence is a lot worse.

MR KENDALL (RWCC): Getting back to the efficiencies, would there be efficiency gained, for example, in staffing issues and things like that. I think that's a question that is probably better put to the small councils of whether or not they believe that their current water utilities who operate a stand-alone sewer treatment plant is efficient in its own right.

DR MUNDY: Is your geographic patch covered by Rewoc or Centroc?

MR KENDALL (RWCC): Rewoc.

DR MUNDY: It operates similar to Centroc?

MR HALEY (RWCC): It's a voluntary alliance.

MR KENDALL (RWCC): It's a voluntary alliance that works very, very well.

DR MUNDY: They're looking at particular issues about training skills.

MR HALEY (RWCC): They have made a submission to this commission which on the whole we agree wholeheartedly with, because we're still quite mindful of the consequences for those general purpose councils if they were to lose a significant part of their operation.

MR KENDALL (RWCC): One interesting thing is that a county council in effect is an alliance, but rather than being a voluntary alliance a lot of it has been given statutory power.

DR MUNDY: Councils can effectively withdraw at any time from the county counselling principle, can't they?

MR HALEY (RWCC): They need permission. There is a process and it needs to be signed off by the minister.

DR MUNDY: The minister needs to consent. So it's a bit more binding than an alliance?

MR HALEY (RWCC): That's right. The minister has to consent for them to join and he also has to consent for them to leave.

MR KENDALL (RWCC): We know of no history of any rocky periods. We all know that sometimes it's nice to have a more difficult withdrawal process.

DR MUNDY: That is fair enough too.

DR CRAIK: One of the things that Midcoast Water, I think it was - and the county council said last week - that when they set up - because of the concern of councils that they would lose that kind of skilling issue - they advertised the positions to the councils first, the positions they were establishing. If they did take someone from the council - and mostly they didn't because nobody actually applied - the council replaced them anyway and there didn't seem to be any kind of loss or jobs or skills from the council as a result.

MR HALEY (RWCC): It all depends. If, say, Riverina Water took over the sewerage operations from Urana and Lockhart I believe there would be some significant effects on those because you'd tend to centralise the management and they would possibly lose some professional staff. You wouldn't lose your operational staff, of course, but you would tend to lose the professional staff. At my previous council they were very fearful of losing it because it made up 38 per cent of their revenue.

That revenue, it didn't underpin their surplus but it underpinned the cash flow. It really gave them a bit of scale when it come to employing professional staff. That multiskilling of professional staff in the general purpose council, that's their strength. Whereas in Riverina Water's case and the county councils, our specialisation is our strength. So you're looking at different things in effect. We are conscious, and we do work very closely with our general purpose councils.

MR KENDALL (RWCC): My background is actually as a civil engineer as well. I started in local government engineering but I moved away from that a few years ago. Certainly the tradition for the small rural councils is that they're engineered with a bit of a GP. So he'd know how to build roads, he'd know how to deal with his sewer treatment plant. One of the issues for the small councils is they didn't have that generalisation and that ability to give people a mix of skills. Would they still be attractive for the remainder of the employment skills that they would offer, and that's a question outside of my level of expertise today. I don't know how people are thinking in applying for jobs but I think it's probably worth considering, whether or not it would actually be a detractor in the overall sense or not.

DR CRAIK: Yes.

MR KENDALL (RWCC): Our belief, quite frankly, is there's an ability to form alliances to create efficiency gains if they are there to be gained under any voluntary or compulsory structure that's currently in place.

DR CRAIK: Was there a history of looking at a statutory water corporation prior to the county council being established, or because it evolved out of the Southern Riverina County Council?

MR KENDALL (RWCC): I wasn't around when the electricity was taken away from the two county councils. I wasn't involved in council. My understanding is it was looked at, whether or not Golden Hills Water, which was part of the old Northern Riverina County Council and what became Riverina Water, which was the area taken up by the original Southern Riverina County Council, should combine as one authority. After all they largely take their water from the same catchment and from the same water source to some extent. At that time it was decided that there weren't any advantages for them. Apart from that history, I don't know. But it was certainly considered that they would be the one county council and I think that was originally envisaged, but through the process of losing our complexity and looking at the new business structure, it was decided that they would both become separate county councils.

MR HALEY (RWCC): Basically, they were two completely separate networks. I've got a feeling that, at the time - - -

MR KENDALL (RWCC): Separated by the river itself.

MR HALEY (RWCC): Separated by the river. But at the time I think the employment effects on the smaller towns in the northern Riverina County Council area wanting Goldenfields Water would have been taken into consideration, because if the township of Temora was to lose Northern Riverina County Council it would be a dramatic effect. It was bad enough losing the administration of Northern Riverina County Council, but if they lost Goldenfields Water, which was a little bit remaining, it would have been a significant impact on that dam.

DR CRAIK: I take it you guys don't pay a dividend to your member councils?

MR KENDALL (RWCC): No.

DR CRAIK: Do they ask you for one?

MR KENDALL (RWCC): No. To pay a dividend - and I think Greg is probably more aware of the act - you have to be 100 per cent compliant with the best-practice model, where we're still yet to sign off on our integrated water management plan, which is the only thing that prevents us from doing it. But then I believe you still need to be a registered water authority.

DR CRAIK: What are you?

MR HALEY (RWCC): We're running the Local Government Act.

DR CRAIK: How do you become a registered water authority?

MR HALEY (RWCC): Apply.

DR CRAIK: You have to apply?

MR FINLAYSON (RWCC): There's only about five in New South Wales. Sydney, Hunter, Gosford Wyong, and a couple of others.

DR CRAIK: Why would they do that?

MR KENDALL (RWCC): As chairman I've got no objections to paying a dividend back to the general purpose county council. To what effect? It's the same rebates.

DR CRAIK: No, I'm just curious.

MR KENDALL (RWCC): So to pay a dividend, we would increase our water charges. No opinion on whether that should or shouldn't happen. But, effectively, you would just be giving that dividend to your rate payers. So if the total income from consumers was what you needed, all you're doing is shuffling the deck of cards. If, however, you are looking at a way of increasing income to general purpose county councils that wasn't covered by their rating base, then that's a different thing and we haven't explored that.

DR CRAIK: And they haven't explored that with you guys either?

MR HALEY (RWCC): Basically, the consumers are the people who built the network. We think they should benefit by lower prices or improved infrastructure.

MR KENDALL (RWCC): We do undertake work within those councils that is of benefit to them. For example, at present we have applied to run a subsidy scheme for encouraging people to replant their footpath verges, and the Commonwealth government has given us a grant of half a million dollars over two years that we will match to encourage people to create water-efficient footpaths. Effectively, we are sponsoring that. It's our income that's doing it, so effectively that's a dividend to the community. There are other schemes similar to that, but we don't pay a dollar dividend.

DR CRAIK: Okay. Why do you see that as within your role; sponsoring people replanting their footpath verges?

MR HALEY (RWCC): It's part of our demand management program, which we have in place as part of our business plan. I'll use very rough, rubbery figures. There's a difference between spending, roughly, \$20 million on a new water treatment plant and \$40 million on a new water treatment plant. We've got to manage that demand going into the future. One of the biggest areas of demand for water in the Wagga Wagga community is lawns. We hope to encourage people, by seeing that they can have a nice looking nature strip, but with native grasses and low-lying shrubs: "That looks nice there," it could also look nice on their own block. It is being used as a pilot to encourage people to have much more water-efficient gardens.

MR KENDALL (RWCC): The water plant is sized on your peak demand, not on your supply over the 12-month period. By cutting the peak demand, then we can cut, very substantially. You're not necessarily cutting significantly on your total yearly water use, but you're cutting significantly on your peak demand. That has been identified in the integrated water management plan, it can have some significant impacts on our capital expenditure.

MR FINLAYSON (RWCC): If I can just add, that demand management strategy came out of the recent National Water Commission Project where Wagga was one of the two case studies. Wagga and Brisbane were the case studies for an integrated resource planning project, and that project is within that demand management strategy.

DR MUNDY: You indicated in our submission that a move away from postage stamp pricing might have major impacts in remote areas. In understanding the geographic nature of where you are, I guess my question is would it be your view that, in the event that you had some areas of relative affluence that were high cost to serve, would you have the same view?

MR KENDALL (RWCC): We haven't got that situation.

DR MUNDY: Yes, I appreciate that.

MR KENDALL (RWCC): So it's hard to know. In actual fact the exact opposite generally applies, where the remote townships, if they had to stand on their own, probably would not be able to afford town water. You would be probably encouraging them, by the pricing structure that you'd have to put in place, to consider other water sources.

DR CRAIK: Putting their own tanks in.

MR KENDALL (RWCC): Putting tanks in - and a non-regulated, non-tested

supply regime. Part of the postage stamp pricing regime of course encourages public health. We supply to some very remote areas, and they get that water at a very efficient price.

DR CRAIK: What is the smallest sort of township?

MR FINLAYSON (RWCC): I can answer that. The village of Morundah, out near Narrandera, would have possibly about seven houses.

DR CRAIK: Seven, and you provide reticulated water.

MR FINLAYSON (RWCC): It's an independent supply as well, it's not on the end of the pipeline. It also benefits from one of the first risk based water quality schemes in Australia, which is based on Hassett, which Riverina Water introduced. So they get all those benefits. The postage stamp pricing is pretty critical for Morundah.

DR MUNDY (RWCC): I think our concerns in the draft report were about postage stamp pricing that applied statewide and encompassed parts of north-west WA and its south-west corner, and things like that.

MR HALEY (RWCC): We have differentiated our pricing. We do have an urban price which applies just to the urban area of Wagga Wagga. Then we have a non-urban price. The non-urban price is slightly higher, probably 5 per cent.

DR CRAIK: On the basis of what? Wouldn't that be cheaper to provide?

MR HALEY (RWCC): No, the non-urban is much dearer to provide.

DR CRAIK: That's what I'm saying. Wouldn't it be the other way round for - - -

MR HALEY (RWCC): Yes, the non-urban is 5 per cent higher than the urban price.

DR CRAIK: Sorry.

MR HALEY (RWCC): Yes, it reflects the costs some way.

MR KENDALL (RWCC): There is no doubt that the major urban users in the city of Wagga support the region around it. But to the greater area of course there's benefit. We're about supporting a community that supports - - -

DR MUNDY: The viability of small hamlets and things is important to the economic wellbeing of Wagga.

MR KENDALL (RWCC): If you then have a look at what the economic cost to the consumer in Wagga is, and you have our charging regime, I think you'd have to conclude that they're not suffering too much.

DR CRAIK: Their regional prices are pretty reasonable.

MR KENDALL (RWCC): Yes.

DR CRAIK: Do you have a hardship policy for consumers?

MR HALEY (RWCC): Yes.

DR CRAIK: So what is involved in that?

MR HALEY (RWCC): "Come in and make arrangements," and we give them time to pay, nil interest. We don't charge interest on our water charges.

DR CRAIK: Do you have a disconnect?

MR HALEY (RWCC): We put in a restricter as a last resort, which gives them less pressure; enough to flush the toilet a couple of times a day and boil a kettle, and that's about it.

MR KENDALL (RWCC): Keep in mind that there is a public health involved and not just a business issue.

DR CRAIK: Yes. Do you have a consumer group that you consult? Or when you walk down the street you know that if something is wrong you'll know about it?

MR HALEY (RWCC): We find out pretty quick.

DR CRAIK: Is that your customer policy?

MR HALEY: Our consumer group is the nine councillors appointed by the constituent councils. In local government the local councillor finds out very quickly if there's something wrong.

MR KENDALL (RWCC): However, we do survey our users, and I can tell you that we are currently surveying, because I have just been away from home, I got home last night, before coming back here, and there was a survey sitting in my post. So there is a current consumer survey out there at this stage.

MR HALEY (RWCC): It's done annually.

DR CRAIK: Asking about what? Their satisfaction, and that sort of thing.

MR KENDALL (RWCC): Yes. Things like your operational plan, advertised publicly, for comment.

DR MUNDY: Do you get much comment back on that sort of stuff?

MR KENDALL (RWCC): No. Sorry?

MR HALEY (RWCC): Two.

MR KENDALL: It closes today actually, I believe.

MR FINLAYSON (RWCC): The consultation part of the integrated water cycle management strategy invites possibly 40 different groups, and a small handful turn up. I think that apathy supports the fact that most of the community have been very happy with the level of service for a long period.

DR CRAIK: Yes. You'd know if they weren't.

DR MUNDY: Consultation processes find that things are wrong, but they're working on them.

MR KENDALL (RWCC): If they turn the tap on and they get water, they're happy.

DR CRAIK: So what does your integrated water cycle management plan involve? What does that include? How is that different from just planning for water for the future?

MR KENDALL (RWCC): Greg was much more involved in it, so I'll let him answer it in more detail, but it takes into account all aspects of the water cycle within the Riverina Water area. So it involved all the councils. It was water supply on our behalf, sewer on behalf of the councils, and stormwater, and just looked at the infrastructure, the supply requirements, the costings. Greg, you can go into the details.

MR FINLAYSON (RWCC): Yes, it generally follows the New South Wales Office of Water recipe for conducting integrated water cycle management. But, generally, it's just a 30-year strategy. So instead of using things like NPV, it requires triple bottom line analysis of options. It only looks at the broader options, it doesn't go down to the detail. So you look at major asset replacements and water treatment plants and growth and demand management. So it has very effectively done that. The outcome there normally leads into a strategic business plan, which has a lot more

detail with regard to the outcomes. With regard to the integrated component, that's a requirement to look at the scope for integrating waste water, stormwater and water supplies. Being in the Riverina environment, the drivers aren't there as in the case for recycling sewerage or re-using stormwater, because the river is a common denominator in all water accounting.

MR KENDALL (RWCC): Just to comment on that, with regard to my earlier comment about one size doesn't fit all, we do recognise that there is a very significant difference between coastal communities and inland communities.

DR MUNDY: We understand.

MR KENDALL (RWCC): Particularly when it comes to the recycling and the capture of stormwater. If you look at somewhere like Wagga, for example, there's something like two and a half thousand miles of downstream water use. Capturing all of the run-off from Wagga and keeping it on site doesn't necessarily help any of those downstream communities if you're not reducing your total water use. The critical thing is not whether you're recycling the water out of, say, a sewer treatment, it's what your total community use of water is. So if you're trying to get water efficiency, it's not just recycling, not when it comes to an inland community. A coastal city may well be far different, because there isn't a lot of downstream re-use of the water before it becomes highly saline.

DR CRAIK: Do you guys believe in mandatory water efficiency measures, like, mandatory dual flush toilets or - - -

MR HALEY (RWCC): Standards are introduced for all new buildings. If that's a standard that has been put in, we'll ensure that they're carried out. Well, I think the city council ensures with their building inspections that it's carried out.

MR KENDALL (RWCC): With the rider that says that we need to keep in mind - and I'm not talking about internal use - that we and lots of our community would live in a semi-desert, if it didn't have water, and we need to keep in mind the community benefits, the social benefits, the mental benefits from having access to water and to use water in some ways that on the coast you might say was wasteful. Certainly in an inland, semi-arid area there is a critical social need for that green space and the allowance for that use of water in that green-spacing area. We need to be mindful of that, without being wasteful. Certainly recognition is that footpath subsidy scheme that we have applied for. We are not in the business of just selling water, we don't make a profit from it as such; the community benefits, but there is no driver for us to sell water for the sake of selling water. However, we need to be efficient.

MR FINLAYSON (RWCC): With regard to BASIX, it was essentially developed by the Department of Planning in New South Wales, in Sydney, and then in the next

12 months - this is about six years ago - it was going to be introduced in the rural areas. There were some substantial flaws in it, and the Department of Planning actually came to Wagga and used Wagga as a test case to actually reduce the targets and the points required, because they realised that the water cycle inland was totally different to the coast and that "rainwater tanks and re-use" had a totally different meaning inland than what it did on the coast. BASIX virtually has extremely low impact on the demands in Wagga, because most of the water is used outdoors in the summertime.

MR HALEY (RWCC): We do have some permanent control measures, which means that use of sprinklers in the open between 10 am and 4.30 pm or 5 pm - - -

MR FINLAYSON (WRCC): Yes, we have a permanent conservation measure.

MR HALEY (WRCC): Permanent conservation measure, because the biggest loss of water in those circumstances is through evaporation. Our local authorities generally had their main watering systems at night. We encourage that for our landholders as well.

DR CRAIK: Horticulturally it may not be sensible, but do you think if people are prepared to pay it's not unreasonable that they can use it whenever they like?

MR HALEY: I think pricing is a pretty blunt instrument.

MR FINLAYSON: Can I just add to that? A lot of the coastal infrastructure is based on annual demand, because their biggest items in the infrastructure are dams. All our infrastructure pretty well is based on peak days, basically pumped out on either bores or the river, and treated and distributed to meet the peak days. So all the infrastructure is sized on the biggest days, and if your biggest day is three days of 43 degrees obviously it's best to manage three days than deliver the infrastructure. Because most of the water is used outdoors, it lends itself very much to targeting the peak days and targeting the outdoor use for our demand management measures, and that's why rebating washing machines and showerheads hasn't occurred in Wagga, because it's a very small bang for your buck.

DR CRAIK: That's interesting. That has been really helpful. Thanks very much for making the effort and coming along. We will now break for morning tea, and resume at 11 o'clock. Thank you.

DR CRAIK: Terry, could you state your name and affiliation for the record, and then if you'd like to make a brief opening statement we'd like to hear from you. Thank you.

PROF DWYER: Terry Dwyer, economist and solicitor, Canberra. I'd just like to make a brief statement. I was extremely disappointed by the draft report, as you will have gathered from my submission, because I thought I'd made some points clear in my previous evidence, but I'll go over it again. What concerns me is that I don't think the commission has really understood the meaning of capital or the meaning of factors of production. At times when I read the draft report I feel you're operating in a non-spatial economy where there are only two factors of production, or even some sort of jelly capital.

The fact is that when you look at water, water supply and infrastructure, you are looking at something which is of its nature spatially fixed. Water supply is a land improvement work, and traditionally in Australia we recovered the costs of land improvement works by arranging the lands benefited. What I was trying to point out was that Australia was far ahead of the USA or England in this regard, we had a superior method of financing infrastructure by rating the beneficiaries and supplying water or supplying highways at zero or low short-run marginal cost, and that is the economic optimum.

Let me put it this way: if you follow the logic of full cost recovery on bogus costs, inflated costs, you end up with white elephant infrastructure that nobody uses. The classic example of this is the cross-city tunnel where hundreds of millions of dollars have been wasted building a tunnel under Sydney that no-one uses because it's priced incorrectly. The optimal way to do these things is price at nil, or virtually nil because in fact it's more trouble than it's worth to collect tolls and block up the traffic, than recover all the costs from the land-holders.

When Sydney Harbour Bridge was built, it would never have been built on the current sort of pricing paradigm the commission has put here. The Sydney Harbour Bridge would never have been built. What you would have done is you would have said, "To build a Sydney Harbour Bridge we would need to charge 12 pounds for every car that crosses the bridge," or whatever, and you'd make estimates of traffic and you'd be left with the same mess with the Sydney Harbour Bridge as you've been left with the tunnels in Brisbane. But instead they were smarter then, they actually recovered a fair bit of the costs of the Sydney Harbour Bridge by rating the land-holders on both sides of the harbour.

The state Treasury, in contrast to ripping out money as we heard it did with the electricity authorities, contributed money because it realised it would be a beneficiary, and the users only paid a small amount. But William Vickrey, the

American Noble Prize winning economist, if you go through his work, has pointed out that effectively Australia had a better system. In fact, if you go into the history of economics, there is a theorem which I pointed to in my submission called the Henry George theorem, or the George-Hotelling-Vickrey theorem. Martin Feldstein, my old professor at Harvard has written on it. Stiglitz has written on it, Arnott has written on it, and other people.

But basically the idea is that you can achieve an optimal pricing system by rating the land serviced by the reticulated infrastructure, be it an electricity network, be it a water pipeline, be it a road. You get over this problem of non-connectors by rating them because it's the availability of the service that adds value to their land. This allows you to make the infrastructure available in an optimal way. That's what really concerned me.

On the other hand I should say I was pleased that the commission did recognise that desalination plants were grossly wasteful and excessive use of money in places we've been. I'm just sorry you hadn't been in that battle some years before, and you might have saved the taxpayers in New South Wales and Victoria a lot of money. I'm glad you've also recognised the stupidity of water restrictions and their counterproductivity.

I'll stop there, but one point I would like to make is that when we think about this we should think of who owns the water. Water belongs to all the people. Everyone has an equal right to water. That is why people get very resentful when they're told they have to pay for what they know is theirs by right. Everyone has a birthright, under common law, to go to any river, dip his hand in it and feed himself or his cattle or whatever. There is no ownership of water in the Crown. There's no ownership of a monopoly. There's no ownership in the state Treasury.

So when you think of water, the best way to think of it is as a club; people getting together to supply themselves with water at the cheapest possible price to exercise their common rights to get what they want in the cheapest possible way. I think what has infected a lot of economic thinking is that economists have forgotten the fundamental. The fundamental purpose of economics, and the fundamental purpose of all economic activity, is not to maximise profits. It's not to maximise scarcity rents. The fundamental purpose of all true economic science is to obtain what you want at the cheapest possible cost. With a natural monopoly the profit-making incentive is quite the reverse. It's to make sure the community is gouged as much as possible.

The only limit on price exploitation is the ability of the natural monopolist to correctly judge how much the market will stand. Sometimes they get it spectacularly wrong, like the cross-city tunnel. Then we have a perfect social loss. The consumers have lost, the motorists have lost, the state Treasury has lost and the monopolist has

lost. That is an absolute perversion of economics, and that I fear is what we're heading to in what is described in the report as water reform. I don't see it as reform at all. I see it as further decay and corruption, moving away from a better system we had than the Americans. Having said that, I'm open to questions.

DR CRAIK: Just a couple of things. Thank you for your comments and thank you for your submission. The comment about desal plants - and your suggestion that we're against desalination plants in favour of wastewater recycling, and we accept that there are no new dam sites. I guess our view would be that that's not what we're trying to say. What we said about desalination was we think the times that it was used, the process was not correct, and that all the options should have been on the table and the appropriate timing of all the options should have been on the table. Our criticism is that in the cases that we looked at we believed that there were better, less expensive options. It was either too soon, too big or there were cheaper options available.

In relation to the comment on no new dam sites, our view about that is that all the options should be on the table, they should all be assessed with their costs, benefits and risks, and the community should be involved in the final consultation. Yes, we do think that new dam sites ought to be considered in the suite of options that are put up for supply augmentation - - -

PROF DWYER: I'm pleased to hear that because when you look at the commonsense of it, the Melbourne Metropolitan Board of Works had a plan years ago to tap the Mitchell and Macalister Rivers, feed them across to the Thomson Reservoir and then across to the Upper Yarra dams to make sure that they mitigated the floods that used to hit Lakes Entrance. In fact we still have floods at Lakes Entrance through the drought. They were going to mitigate that and supply the surplus into the Murray-Darling Basin, whereas now we have the absurdity where everyone is running around, "Save the sacred Murray-Darling Basin, save Guyra," or whatever, and Melbourne is pulling 90 gigalitres a year out of the Murray-Darling Basin.

I mean, this is what has really annoyed me as a Canberran that we have been put to destroying all our gardens in this city for the sake of letting Melbourne pull out twice as much in a year as we use. It's absurd.

DR CRAIK: The other point, your comment about water is a common resource of everybody, I guess our view is that governments have - and obviously they can - improved economic efficiency by assigning copyrights - - -

PROF DWYER: My view is this is where you're sliding into dangerous territory. What you've got to look at this, is like the enclosures. Think back to the medieval open field system. Everybody had a right to use the open fields and eventually

people said, as the population increased, "This is inefficient. Cattle and people are trooping over each other's corn," or whatever. We didn't have fences. "Let's fence it in." But what happened? What really happened? There was a grab for power. If you read Cobbett and Bright and the history of the enclosures, the common people were driven off their land. They said, "We've got to be scientific. We've got to improve productivity," and so on. Of course they improved productivity by getting people off the common fields and enclosing them, but that productivity went to whom? It went to the landlords. The common people were deprived of their birthright and shoved off into the cities to become the factory fodder of London and the people who Karl Marx studied in writing *The Communist Manifesto*.

If we bugger this up - and I assure you the Productivity Commission is looking at bugging it up now, to put it in plain, good Australian language - we will create the same system with water. We will create a system of tax farming similar to the method of revenue-raising in pre-revolutionary France where the Treasury sold off the right to tax the peasants on the necessity of life through the salt taxes.

We will then privatise these bodies, flog them off on the stock exchange, the Treasury will make money in the floats and eventually there will be rebellion and people will be lined up against brick walls and shot, and that's about what they deserve if they're that stupid. These things matter to people. People get very angry about this.

The necessities of life are important to people for very good reason, and Adam Smith recognised that, and that's why Adam Smith bitterly opposed the taxing of the necessities of labour. He realised that anything that impoverished the ordinary people, was hardly going to be good for the welfare of a society. So if we're going to say, "Okay. We will abrogate the basic common law ancient rights of the people in favour of a rational system approach and allocating it," the crucial question we've got to ask ourselves is who gets the rents?

That's why I made the point in my submission that if you are going to price and you're going to have scarcity rents, the scarcity rents should be not put into consolidated revenue, but earmarked towards augmentation of supply to make the water available to the people at the cheapest possible price. If you have to price because of scarcity, plough it back to augmenting supply and only when you can't augment supply then give an equal per capita of dividend. Do not let it go into the Treasury because then you create a horribly perverse governance incentive.

You create an incentive for treasuries to abuse monopoly power, as they have, through their appropriation, and we just heard about the county councils, their money being stolen by the state Treasury, and the word "stolen" is appropriate, just as the water assets, as I pointed out in my previous evidence, was stolen by the state Treasury. The state Treasury say, "We want a rate of return." As I pointed out in my

submission, that's absurd. If somebody came along to you and said, "Get out of your house, it's mine, I'm taking it from you," and then turned around and said, "By the way, I'll let you back into your house providing you pay me a rent, and I'll calculate the rent on the basis of the replacement cost of your house. You bought it for 100,000, it's not half a million to rebuild. The rent should be about \$50,000 a year," you would be outraged.

But that is exactly what has happened with utilities which have been stolen from ratepayers who paid for them, put into the balance sheets as corporatised, state-owned enterprises and then used as revenue collection mechanisms. Take the ACTU, for example. All the land in Canberra was sold as leasehold. The leaseholds were made available by service land. You could not buy urban land in Canberra unless it was supplied with reticulated services, such as water and sewerage. The price you paid reflected that. You have already paid for much of the infrastructure, and similarly the rates to build it all.

There has been massive double dipping going on. Really, the commission ought to go back and look at Bob Walker's critical study on replacement cost accounting - it was done in about 1990, I think it was - where he ripped to shreds any idea that water or electricity utilities were inefficient or not making abundant returns on their capital. He made the point that frankly they had never invested the capital, the ratepayers had paid for it all. It was simply monopoly pricing.

DR MUNDY: I don't know that we have actually said that water utilities are inefficient.

PROF DWYER: The Industry Commission did at one stage and said they had to raise their prices to become efficient. Now, they claim to be efficient because they're making profits. This is what I'm driving at, is for a monopoly to say it's efficient because it makes profits is really telling you they're screwing you, just like Sydney airport.

DR MUNDY: With the greatest respect, Prof Dwyer, neither Dr Craik or I were on the commission in 1992, and perhaps the world has moved on slightly in the intervening period of time.

PROF DWYER: That's what I pointed out, the area has multiplied.

DR MUNDY: I'm interested in that argument. You make a lot of the work of Hotelling as if the debate was then settled, circa about 1938. You seem to have ignored the subsequent work of Kose, the subsequent work of Khan, and the debate that ensued in the United Kingdom post the Second World War; the work that James Meade did as well. Now, it strikes me that whilst I do understand the evolution of this area of economic thought, it seems that you have a very partial quoting of it.

Hotelling himself in his 38 work suggested there were distributional consequences of the methodology you propose which were uncertain and tried to predict them.

PROF DWYER: No, he didn't. He advocated land values and he said they were superior, and as for the following discussion, Vickrey debated Kose and, as far as I can see, got the better of him quite clearly, and Kose now looks, in retrospect, a fairly naive Chicago school economist. As for further debate, the work of Stiglitz, Arnott and Feldstein I think have shown the optimality of land value rating.

DR MUNDY: So Prof Khan we can just put to one side as well - his observations about infrastructure, pricing and incremental costs being the things that really matter?

PROF DWYER: Well, I think you can still basically go back to Vickrey and say, "Look, you can recover all these things through rating and you can provide the optimal expansion through rating and amortise it over time."

DR MUNDY: I think we'll just have to accept that the literature is at variance at various points and perhaps it's not always compelling.

PROF DWYER: But going back to the UK, all I can say is if there's an experience that you do not want to repeat, it is what the UK did with Thames Water. That was one of the grossest abuses - - -

DR MUNDY: I'm talking about the economic literature, not the actions of the Thatcher government. They are actually separate and different.

PROF DWYER: I just wanted to make sure I got that point because I'm an investor in Thames Water and I only invested because they have screwed their customers. If you can't beat them, join them.

DR MUNDY: I've read both your submissions. I find them interesting but not compelling in theory.

PROF DWYER: What is it that you don't find compelling?

DR MUNDY: What do I find that's not compelling about them? Basically it seems to offer very little. I mean, it seems to presume that the state has an infinite capacity to finance things. It seems that there is, in a world which you rightly identified where marginal costs are likely to be quite small, that it doesn't also acknowledge that there are production costs in augmentation of water which are quite hollow, which will need to be recovered. The traditional theory of infrastructure has not really - and indeed probably where it has fallen down in water, as it has been assumed that there was no scarcity value and that you could in fact price it as

infrastructure.

I think recent events have shown that that's probably not right. It's not like a road. The pipes might be like a road, the drains might be like a road, but water itself is not - there are two things being provided in the water business, there's infrastructure and there's a product called water. The literature that you cite doesn't bring itself to that question.

PROF DWYER: Well, with respect, if we look at the ACT we actually have a water restriction charge in this territory which is supposed to represent the scarcity value of water. So there has been a price put on water as such, regardless of infrastructure cost. Now, I agree - and Hotelling admitted - that there can be scarcity rents, but if we recover the infrastructure costs, the fixed costs, through land value rating, that seems to be optimal. If then we say, "We've still got a scarcity of water" - as we did through the drought in Canberra - "and therefore we should let the price of water rise to reflect the scarcity," then surely the corollary is that the price should fall when water is abundant. The dams have been overflowing in this town for several months.

DR MUNDY: I'd absolutely agree with you.

PROF DWYER: Yet has the ACT government reduced the water extraction charge? Not at all. It's going to the High Court to say that it's a legitimate price. I'd be very interested in seeing whether the Productivity Commission has a view to express on that sort of economics.

DR MUNDY: I think you actually might find in the report where we discuss scarcity pricing, we do actually acknowledge exactly that point - - -

PROF DWYER: That's why I'm coming back - - -

DR MUNDY: - - - and going one step further we actually suggest that consumers of water who differentially value scarcity (indistinct) sort of scarcity supply, you know, that reflect those values through the way that people bill. In that arrangement precisely the sort of outcomes you describe would occur.

PROF DWYER: Okay. Now, let me take it back. So water is scarce. Shouldn't we apply the same logic to mandated environmental flows? Shouldn't they be charged?

DR MUNDY: Your point is that water is scarce at some times but not at others.

PROF DWYER: Exactly. So what I'm driving at is if we know we're going to have cycles of drought and abundance, shouldn't we be applying some sort of

scarcity pricing principles to environmental flows? Why should they be taken for granted as a good, regardless of the needs of the community?

DR MUNDY: But this inquiry is not about environmental flows, it's about water supply.

PROF DWYER: Well, hang on, if it's about water supply, environmental flows are a use of water. Shouldn't they be subject to some sort of rational economic cost-benefit analysis?

DR CRAIK: Our view is - and I think the PC has already opined on that issue in a previous report on the Murray-Darling Basin water buy-back (indistinct) utilities operate within the water-sharing plans which are already decided where the divvy-up of water between the environment and consumption is already made, and we're looking at the focus of the water utilities within that context. So we're not dealing with how that decision is made - - -

DR MUNDY: We do actually say that decisions about environmental impact should not be made within the water utilities themselves, they should be made on a cost-benefit basis.

PROF DWYER: So I would be very interested if you've got any views to offer to us here in Canberra on how our water scarcity was managed. Now, in 2000 the environmental flow requirements were raised by the previous government in this territory but we were still left with, I think, a human use allocation of about 250 gegalitres of about 494 - don't quote me on these figures, it's roughly that, you can check them yourselves - and that has now been reduced from 250 or 210 to about 40 net. Now, how can a stroke of the pen reduce the amount that's supposedly available for human use and turn it into a scarcity by taking a figure of 210 or 250 and bringing it down to 40 without any real cost-benefit analysis or any charge? I mean, I'm curious that the ratepayers of Canberra paid for the dams in Canberra. These dams are now being used to send water down the river rather than to service their gardens. Now, what sort of economics justifies that?

DR MUNDY: Well, Dr Dwyer, we might actually agree with you.

DR CRAIK: My recollection is that that may well have been a function of the Murray-Darling Basin water cap, capped for extraction, that particular action, and I guess - - -

PROF DWYER: But I never really saw any economic analysis to justify it. In other words, this is what I'm driving at. You can have a manufacturing of scarcity which is extremely profitable for governments sitting in control of water authorities. If you have a system of pricing where the scarcity rents are not ploughed back into

the expansion of infrastructure, you will maximise the incentives to abuse the consumer.

DR CRAIK: You're quite right, that the Murray-Darling Basin cap was not established before the current water planning exercise, but it wasn't established on the basis of any cost-benefit analysis.

PROF DWYER: Exactly. So where - - -

DR MUNDY: In our report we say that those environmental considerations should be subject to precisely the sort of analysis that you reflect upon. Now, that the ACT government or other Commonwealth agencies who may have had responsibility for water flows is not a matter for us to defend. We agree with you about the process that should be undertaken, and it is clear in the report that that is the case. Similarly, we say the same thing about health outcomes and about water quality. So to say that something has happened and therefore we support that it's happened, we actually say it shouldn't be subject to the sort of arbitrary decision-making that you're talking about. A very large message in the report is to remove arbitrary decision-making from the whole of the water system. It's one of the major messages of the report. Now, if we didn't communicate that, we'll have a look at the drafting again.

PROF DWYER: Please do.

DR MUNDY: We have been stridently critical of arbitrary decision-making by state governments like restrictions, like desal decisions, like the refusal to use assets which - - -

PROF DWYER: And critical of arbitrary and environmental flow decisions too then, I take it?

DR MUNDY: We're critical of all arbitrary decisions.

DR CRAIK: Within the context of what a utility does, but we haven't ventured out into the territory of who decides how much more goes to the utility in the first place or the environment. These decisions have already been made.

DR MUNDY: Other than to say that those decisions should be made in a transparent, rigorous way, underpinned by a robust cost-benefit analysis. That's what we say and obviously you - - -

PROF DWYER: Which is not in evidence in reality.

DR CRAIK: We're suggesting things for reform based on our understanding of where - - -

DR MUNDY: We say these things should happen. There is little more that we can do other than to say it and to recommend it to governments.

PROF DWYER: Well, I'm pleased to hear that and I hope you write it in red lines and send copies to relevant treasurers and to the newspapers. But I do think it seems that you accept the points that scarcity rents should not be appropriated willy-nilly by treasurers, should be ploughed back into expansion of capacity where possible. They shouldn't be used just as a monopoly revenue-raising mechanism. I take it you accept that?

DR CRAIK: I think our view is that governments establishing water utilities may well have a right to dividends.

PROF DWYER: Why?

DR CRAIK: Because it's a government utility, and if the utility happens to collect more funding than they happen to need for the immediate planning future, then it would seem only proper that it goes back to the state.

PROF DWYER: I think this is the central problem because you're creating an incentive there for a system of disguised indirect taxation where prices above short-run marginal costs are levied on every consumer and producer in the country, and ultimately destroy the international competitiveness of this country. If you apply that principle through pricing for essential utilities, you do open up a risk of stinting supply in order to maximise scarcity rents. You have created a very perverse governance incentive. Treasuries are in a wonderful position. They can turn around and say, "Look, Sydney Water is five million people, six million, we'll just keep on putting up prices and never do anything more to supply, and keep pushing them up and just pocketing the profits."

DR MUNDY: What do treasuries do when treasuries come into possession of this revenue? They presumably spend it on public purposes.

PROF DWYER: That's a naive assumption if ever there was one.

DR MUNDY: Well, then, where does it go?

PROF DWYER: It goes to buying influence. I'll give you an example. Take ACTEW; ACTEW is a totally corrupt government-owned monopoly which spends a lot of money buying influence by putting advertisements in the Canberra Times to - - -

DR MUNDY: ACTEW is not a treasury.

PROF DWYER: It's subject to ministerial direction and - - -

DR MUNDY: It's not a treasury.

PROF DWYER: - - - and its dividends go to the ACT Treasury.

DR MUNDY: It's not a treasury.

DR CRAIK: Our view is that in setting up the water provider, the government should provide a service charter that includes pricing principles to the utility and - - -

PROF DWYER: Wouldn't it be better to go back to the old system and say, "Look, these water utilities are owned by the ratepayers and the people directly and not outside the central treasury," and make them accountable to the consumers? Think of this as a collective buying mechanism. Just as we use the Pharmaceutical Benefits Scheme to prevent ourselves being exploited by American monopoly patent owners called drug companies and drug cartels - legal drug cartels - why don't we think of water utilities as the servants of the people living in the areas they serve, and make them accountable to those people and impose a non-profit requirement on them and force them to plough all their profits back? You'd expand capacity - or operating on a non-profit basis, as the Local Government Act used to.

DR MUNDY: That would be the reason why we have put forward the idea that there may be some merit in those jurisdictions that have statewide water authorities that they should develop more locally based solutions.

PROF DWYER: We had them. We had the City Water Board and we had the Melbourne Metropolitan Board of Works and we abolished them.

DR CRAIK: I think we're going to have to finish here, as interesting as this discussion is. Thanks very much, Terry, for coming along. Thank you for your submission and thanks for your thoughts.

PROF DWYER: Thanks, Wendy.

DR CRAIK: We'll move on to our next appearance, the Australian Services Union.

MR McLEAN (ASU): Good morning.

DR CRAIK: Greg, if you could state your name and affiliation and - - -

MR McLEAN (ASU): Certainly.

DR CRAIK: - - - make a brief opening statement, we would be happy to hear from you, thank you.

MR McLEAN (ASU): My name is Greg McLean. I'm the assistant national secretary of the Australian Services Union, and in my union's national structure I head up the public sector or public services areas of my union, and appearing also with me today is Robert Potter. He is from our US branch in New South Wales, and you may be familiar with that branch insofar as they provide a submission under their state registered name to the global inquiry. I think you also have a copy of their submission that we passed on to you as part of your current inquiries.

DR CRAIK: Thank you.

MR McLEAN (ASU): Just a couple of things. Firstly, for the water industry, my union's basis is predominantly local government. Whilst we do operate in a number of other industries, local government is still by far the largest area that we work in and/or our members work in and we work in. We have been around local government, and local government supply of water actually since about 1871 and recently read some of the minutes of Sydney City Council's minutes back in 1871 where they were providing public water for the growing parts of the city of Sydney.

A couple of things: broadly our concerns, as I mentioned earlier, are around the employees that work in the industry and for us that means the members we represent in the corporations of Sydney, Southern Queensland and also at Melbourne Water, and also for our local government membership in the states of Queensland, New South Wales, Victoria and Tasmania. We have a limited interest in water in Western Australia and South Australia, simply because of the historical basis of our union coming from a local government base, rather than state public sector if that makes sense.

We also deal with these days Public Services International, and through that we're aware of the national debate that's taking place around water services and the growing work that Australia does both at an international level and also through agencies such as the Asian Development Bank and also partnerships that are now starting to emerge under the UN models, in particular models such as the public partnership model of companies across borders, so water authorities working across

borders, working with one another, and also the possibility of those sorts of models taking place a little bit more in New South Wales.

We're also heartened to see some of the advances made in the water industry by local government over a number of years, and you see some of the services provided in areas such as Coffs Harbour, Port Macquarie, Shoalhaven in New South Wales, and also the regional centres throughout far western New South Wales and Queensland, of course. That also means that those water services provided within towns that are sometimes isolated for various reasons - including floods, bushfires and others, having the availability of plant and equipment in a town that's owned by the local council that may be used in the provision of water infrastructure, road graders and suchlike and items of plant - clearly with those items of plant being based in those towns, along with employment, not only has the benefit of money spent through second and third level jobs generated, but it also provides security to those towns when they're in need, ie, large grader operators are often used to prevent bushfires and save towns from floods, and things such as council's infrastructure and council's equipment provide a very important service there.

One of the things that has to be thought about in any development of services by councils and possible alterations in models is keeping jobs in those towns, local employment in those towns, local trading opportunities, and also the items of plant and equipment that can be used for other purposes. It can also be quite minor things, such as if you move the services of water provided by a public body such as - and I'll take, for example, Bega Council, for instance; whilst we were able to achieve an enterprise agreement there that maintained all the benefits to the employees and saw their rates of pay continue moving in line with local government workers, we nevertheless saw some things move out of the service of that council. They didn't have to calculate payroll for a number of employees any longer, so only a little bit of work that's done now at the council admin centre. The local motor vehicles are no longer purchased through a local motor vehicle dealer in town, but come from the western suburbs of Sydney, for instance. So here is an example of some money spent.

Also if you look at the money that was spent recently in, say, Coffs Harbour when it rebuilt its dams and water infrastructure up there, a substantial amount of money was spent by way of a regional partnership model which has provided a provision of services, hardware stores and suchlike, all through the development of it. As I mentioned earlier, ownership models are important to us, and whilst our favourite model is a continuation of that used by local councils, we do realise there can be benefits in what I'll call the traditional county council model that has worked effectively in many towns and cities across Australia, and in particular New South Wales where it has been used as a cooperative-type model where two or more councils come together, as you know, for a common purpose. That can be anything from flood mitigation through to airport control, management of weed eradication,

also through to the provision of water services.

We also do understand there's a necessity there for those models to be financed in such a way that they continue to operate. I notice that there was some discussion, just as we came in the room today, around where that money gets spent. I suppose if it's by a state-owned corporation as a shareholder, that state-owned corporation can decide through its own statement of corporate intent with the board of that state-owned corporation how much money it would like to receive back by way of dividend, and that's a fairly open process that state government Treasuries are involved in at the moment, and there's always an argument about how much money needs to be spent on the infrastructure.

We find that on the other side of the coin there is an important part for regulation, and I'm noticing, for instance, that electricity supply has now been moved from state regulation to federal regulation under the AER determinations for cost recovery for poles and wires businesses, means I think that there's a move towards a necessity and an opportunity for us to look at some national regulatory frameworks around the water industry. Again that may have to depend upon an ownership model and also what's expected, bearing in mind the ability of isolation of local communities and what their expectations are.

We do support the ideal or some positions of a national water standards benchmark against international models and we realise there may be some differences in the attainment of those standards in Australia, simply because of how much money do you spend in a small town, compared to how much money you spend in a larger town area. We do like to see councils spend more money on the development of their water services and do these over long-term plans, where possible. The Coffs Harbour example, I think, was over a five-year plan, so they actually put some moneys aside, starting with how they were going to develop it, and took a long-term approach.

We'd like to see those long-term approaches binding upon not just the councils that implemented them but successive new councils as those models change. There may be some room there around funding support or other mechanisms provided by federal government that may be binding upon current and successive councils, if I could use that term. On the issue of infrastructure there, to some degree, whilst we do like to see the money spent in the local community for infrastructure construction, we do understand sometimes that's not entirely possible. It needs to be in a percentage way. Our main concern, I suppose, is the operation by those councils and not the government authorities after - if I could use that term.

The classic example of last week with Fair Work Australia's decision in respect of the Transport Workers Union in Sydney showed the restriction that can be faced by local governments when they sign a contract that doesn't allow for them to make

changes to their contract during the term of its supply. As an example, you might enter into a contract with a private sector supplier for water services, such as has been done by some councils, and alterations to those models, changes to how they're undertaken, may not have the entire scope you want to have because they're bound by a contract, rather than your supervision and day-to-day operation. Again we'd like to see plant and equipment, and jobs maintained in those towns and cities once the infrastructure has turned the key.

In respect of the training aspects, I don't think there's a union in the country that's more supportive of the national training agenda than the ASU. We have people that sit on a number of industry skills councils, probably more than any other union, and also want industry advisory committees that reflect local government. You'll find that within Infrastructure Australia's interim report, or interim advice to the water industry, it also makes substantial reference to Government Skills Australia which is the VET sector box around local government and the water industry. So we do support substantial investment in the VET sector by local government and state-owned corporations are involved in the water industry for those training outcomes that are at certificate level III, IV and diploma level.

Clearly there's a lot of work that's executed in the water industry that doesn't require engineering qualifications and if anything, we've probably underestimated the value of some of the VET sector boxes for some years in favour of sometimes employing too many professionals in some areas and not looking closely enough at the skills required at those trades and cert III and cert IV and diploma levels. That's one of the issues that we currently have to grapple with nationally, the shortage of skilled workers in this country. Some sort of - I won't use the term "mandatory" - but an encouraging model that may see water employers, whether in local government or state-owned corporations, be encouraged to take on a specific number of traineeships and apprentices during a term would be a valuable exercise.

We are also facing an ageing work population and that is no different in the water industry, where working persons are ageing. It's happened across a lot of the utility industries as well. We should be in a position where we should be investing more in skills and training for the future, as those people choose to exit the industry. We should have the supply of labour to continue that work in turn then.

DR CRAIK: Thanks very much for that. It was very helpful. Can we ask you a few questions?

MR McLEAN (ASU): I don't know whether Robert might want to add anything at this stage and then it might make it easier for you to ask questions.

DR CRAIK: No, that's fine. Robert, do you want to add anything?

MR POTTER (ASU): Thanks, Dr Craik. My name is Robert Potter. I'm from the United Services Union, which represents members in New South Wales. The workers support currently the alliance, whether it's a mandatory or voluntary alliance, in New South Wales and we will consider also the county council model. This is also supported by an options paper that Davis, Paddon and Chong in 2008 wrote from the LGSA and provided to the Gellatly-Armstrong report, where they sort of say that a one size fits all approach is inappropriate. One of our delegates, who isn't here today unfortunately, in the water industry works in the Lower Macquarie alliance and in and around the Centroc alliance, which was six water utilities and 17 water utilities respectively. We notice the draft report from your commission highlights that as a successful model, one that is working at the moment, and I just want to portray our wishes of our delegate and the councils associated with those alliances that they would like to see their particular model continue.

Why that is the case is from some of the work that we have already put into the New South Wales inquiry, which talks about - that technical and managerial efficiency is provided without making a large corporation. So in an alliance, we encourage that councils in that alliance look at using their market force to obtain better managers and get that technical efficiency. Why we're opposed to large corporations also stems from the Allen report, which was provided in 2006. The Allen report says in one particular instance - - -

DR CRAIK: Sorry, which Allen report are you referring to?

MR POTTER (USU): The Allen report in 2006 that was provided - - -

DR CRAIK: Was that the one for the LGAT group?

MR POTTER (USU): It's entitled Are Councils Sustainable, so I presume it was provided to the New South Wales local governments themselves.

DR CRAIK: Okay.

MR POTTER (USU): It says:

On the question of scale economies in water and wastewater services, it's observed that expert opinion was negative, due to the fact that water pumps and sewage treatment works are locally based with short networks. However, if within a reasonable distance of a water-rich council, there were councils that were water poor, it would be to their mutual advantage to establish a joint water reticulation authority.

Building from that and also just trying to place on record some words out of the Australian Journal of Regional Studies, volume 15, number 2 of 2009, which is

entitled An Analysis of the Relative Efficiency of Wastewater Utilities in Non-Metropolitan New South Wales and Victoria, authored by Joel Byrnes, Lin Crase, Brian Dollery and Renato Villano, just a short excerpt from this says that - and this is leading on from the Allen report:

However, an interesting trade-off appears to be present. While the generally bigger utilities in Victoria appear able to attract better management expertise, giving rise to technical efficiencies, set against this is the loss of scale efficiency, insomuch as the results suggest that Victorian utilities exceed optimal size. This finding adds weight to the argument that bigger is not better in local public service delivery -

that's also seeing a Dollery document in 2007 -

with the obvious caveat that this result is confined to wastewater services -

which is what the document is written for. I appreciate your draft document also looks at the community aspects of it, and Greg did touch a little on the impacts on community if water utilities are removed from local government. What we're looking at here is that I actually have represented a small town, where there were two people working and operating the water and sewer service of the town. That actual water operator was the football coach on the Saturday. Of this small town, the banks had already left the town some years ago and so local government was, I guess, one of the larger employers of the town.

The water operator's wife was a teacher in the local school and when we had a look at what would happen if his water operation was operated from a large regional centre where he had been expected to live in a large regional centre, we would see that a teacher of the school would leave, we would see that the local community football team would be without a coach, and also something that Greg touched on earlier, he was able to also put apprentices on from that small town so that young workers could actually come through experiencing a wide range of services that are provided in the water industry. Thank you, Dr Craik.

DR CRAIK: Thanks for your views. Can I ask, first up, do you represent people who work in Sydney Water or not or just - - -

MR McLEAN (ASU): Yes.

DR CRAIK: You do.

MR McLEAN (ASU): We have two branches in New South Wales. One represents those at Sydney Water and then the other one is the larger branch that

covers the local government.

DR CRAIK: I see how it works. Okay.

MR McLEAN (ASU): But it's the same national union.

DR CRAIK: What sort of percentage of employees in these water utilities do you represent?

MR McLEAN (ASU): To the higher end, might be a nice way of putting it, particularly the local government areas. Traditionally water operators remain in the industry for a fair while. The longer one stays in the industry also, the larger the chances are you're a member of the union if you remain there. That also means that the longer a person stays, the more valuable they become to the employer and in addition to that, the cheaper their training was in the first place over 40 years, as opposed to 20 years. The electricity industry, for instance, you would expect people to be there for 18, 20 years minimum. In respect of the water industry, it certainly will alter from place to place, but in New South Wales, we cover blue and white-collar paras professionals in the water industry.

In Queensland we cover supervisors, paras and professionals with the AWU dealing with the broad outdoor worker and in Victoria we cover top to bottom again, simply because those state-owned corporations in Victoria were previously models of local government, the same as in Tasmania.

MR POTTER (USU): So in WA and South Australia CPSU.

MR McLEAN (ASU): They're mainly state public service areas and that traditionally is the SPSF, the State Public Sector Federation is - - -

DR MUNDY: So when functions were taken out of councils in Western Australia, they went over.

MR McLEAN: They probably would have gone over in those days, but that would have been - you're testing me here. If it was pure local government and it was in the last 10 years or more, we would have been following those members, the same as we've done for electricity reform going from county councils to state-owned corporations.

DR CRAIK: Did you generally support the Armstrong and Gellatly recommendations?

MR McLEAN (ASU): Our support, again weighted by the views of our people in New South Wales, was I don't think they were entirely supportive of that report,

principally because of the employment of the local government models versus statewide corporations, again because of the employment losses we've seen in the small towns. Once you take those functions of the council, you then start to question the council's critical mass, for instance.

Just as an example, when the two towns of Albury-Wodonga were looking at being merged some years back, I went and had a look at the annual reports for Albury Council and I found there was \$250,000 a year that moved from the water service in Albury Council across to the council to pay for whatever. One of our first questions to the then minister for local government in New South Wales, Harry Woods, was, "What are you going to do with the million dollars a year the New South Wales government is going to give to the Victorian government?" and he really knew what we were talking about because the new council would not provide a worse service, there's no doubt about that, it would have to change its operations, and more than likely the Victorian Water Corporation would stretch across the border. That's not uncommon in the electricity industry today. There are networks that stretch from New South Wales into Queensland, and New South Wales into Victoria, that are run by state-owned corporations in New South Wales.

DR CRAIK: Do you have a problem with county councils?

MR McLEAN (ASU): No, county councils tend to have a good model because whilst they're not necessarily the council model, they're made up of councillors and a local government model that's based around that larger local community, if I could use that term, and you usually find that the thoughts, the views, the supporting mechanisms that that board of directors - being the county council type model, a representative from different councils - brings to the table, ensures that there's depots and services located in those local towns to keep those towns surviving and growing. As Robert pointed out earlier, we all know what happens when you start pulling jobs out of local councils and start centralising them.

DR CRAIK: In respect of the jobs, I mean, county councils appear to be a model that works in a few places.

MR McLEAN (ASU): Yes, most surely. A county council, I suppose, is nothing more than a couple of councils that come to a critical mass, so they do something - - -

DR MUNDY: They stick together.

MR McLEAN (ASU): - - - and that was the point of the creation of the act in 1936 or thereabouts, when it was implemented, and it's still an act that works very well with councils that say, "Look, we're this town, this town and this town, and we'd like to combine to do something together." That can also allow them to have a build-up of expertise of workers that can actually still live in that town but work across a

couple of other areas, and small villages and hamlets as needed.

DR CRAIK: Okay.

DR MUNDY: You mentioned that you were generally comfortable with the alliance model. Do you have a sense of when that model might be more or less appropriate than, say, a county council model?

MR McLEAN (ASU): I suppose while Robert is thinking, I'd have to argue that an alliance model is nothing more than another name for a county council type model, or a county council alliance model.

DR MUNDY: Without ownership of the asset.

MR McLEAN (ASU): Yes. Then it does get to the stage that I think sometimes, if you look at the alliance model that's sort of like emerging in Tasmania, whilst we've been out there negotiating for new enterprise bargaining agreements that are bringing all these smaller ones together, I think people are realising that there's a fear down there that some of these services are being used from local governments, and that might ask the next question about what's the financial viability of that council. Then when you start to go behind that, you then start looking at the domino effect of, "We're going to close the depot here so there won't be that service there any more."

I think we've learnt enough as a country that maintains services based in local communities is not only good for the local community but long term it's also good in a whole range of other ways - training, skills, new opportunities. People that are encouraged to leave school and go and work for the local council, get married to the local boy or girl down the road, raise a family, buy a house in that town, is really, really important because that's self-generating.

DR MUNDY: What has occurred in Tasmania is a response in part to the inability of local authorities to meet drinking water standards. A number of bore water notices and mains was noticeable. These entities that have emerged do have a characteristic of county councils about them because they are owned by the constituent council. If not that model for Tasmania which seems to have some rough edges exposed, what would have been preferable to deal with those very legitimate policy failures that were occurring in Tasmania?

MR McLEAN (ASU): I suppose it's a case of why has the policy failed in the first place. What was the regulatory structure behind it? What was the funding behind it? What were the benchmarks that councils were encouraged to take? If you're in a state government you can say, "You as a council will do X. If you're not going to do X, we'll dismiss you as a council and we're going to put a manager in."

DR CRAIK: Isn't there a responsibility on the council?

MR McLEAN (ASU): That's what I'm saying. If you go out as a state government and say, "This is the compliance mechanisms, this is what we want you to do - - -"

DR CRAIK: But doesn't the council have its own responsibility to provide services to its constituents?

MR McLEAN (ASU): It most assuredly does.

DR CRAIK: Safe drinking water and safe sewerage services.

MR McLEAN (ASU): But there are also some times that if those councils are failing that can be the failure of those councillors that are there at the time or that management structure. That's why, in this country, councils aren't forced into mergers or amalgamations when they fail. Council administrators are placed in to get them back on track and give them back to their local communities. That's what I've seen at Port Macquarie, that's what I've seen at Bega, that's what I've seen at Wollongong and that's what we see in a whole lot of other areas. There's no need to throw the baby out with the bath water.

DR MUNDY: Yes, but in some of those cases - we've seen it particularly in the case of Wollongong - there may have been questions of a legal or ethical nature; whereas the problem in Tasmania was more a systemic one about service provision. Wendy raised an issue of funding. I think it's fairly well known that Tasmania is not a jurisdiction that's flush with resources.

MR McLEAN (ASU): I also do remember the time that the Local Government Association of Tasmania was supportive of that model as well, for whatever their reasons are. I don't know whether they have second thoughts now but they were certainly supportive of those models at the time, and the assets do remain with the local councils and in the local depots and towns and such.

DR MUNDY: There's been some recent controversy in South East Queensland with councils getting in and out of structures that they may or may not have been induced or seduced into by government. Have those developments in South East Queensland in recent times raised any concerns for the union?

MR McLEAN (ASU): Yes, they have been of interest to us, simply because persons have moved from a local government authority to a corporation-type model. Their employment arrangements have altered. That could be different rates of pay, different sick leave, different hours, different structures, different career paths, whatever it might be, and the primary concern of our branch that operates in that part of Queensland - our services and authorities branch up there - has been concerned

that if those people come back into local government, seek to maintain as "present occupant only", whatever the words are, their current circumstances of employment and also to seek guarantees on their employment for three or five years, the same as we achieved with the local government mergers in Queensland.

DR CRAIK: The local government mergers in Queensland, which presumably would be the amalgamation of water businesses of those local government entities that have been merged, did that impact your members in terms of any job losses?

MR McLEAN (ASU): In Queensland we negotiated an arrangement that was around basically three years, no-one can be made redundant, if I can use that term, so there was an opportunity for internal people leaving, moving on, and you retain your basic core workforce rather than see a whole lot of skilled people leave, and then five years later you're looking around for them, so there can be benefits all the way around. It also keeps depots and offices and things like that open because you have to look at that.

In New South Wales, when that has been done over probably the last 30 years that I would be familiar with, there was always the argument about keeping the jobs in the local towns, keeping the depots open, keeping the admin centres there and keeping the people located, and that's what taken place during the last rounds of changes in New South Wales where they operated on the basis of core staff numbers, I think was the term - Robert might know a bit more about it - where the council had 500 employees or 200 employees, that was the number that was maintained and then they worked around it.

It's been more a case of not so much running out and handing people out large sums of redundancies or moneys but trying to absorb the workers internally. Sometimes that doesn't actually work as well. If I could give you an example of the electricity industry, say, in New South Wales is now at the same staffing level numbers as it was in 1996 but there's been a lot of redundancies take place in that period of time and a lot of re-employment and there's been a lot of people thinking that these assets are about to fall down unless we start to put workers in that can be prepared to maintain those assets and also are going to be there as the retirement age continues.

DR MUNDY: Can I just bring you back to South East Queensland. Presumably when that institution framework was set up there was a reasonable amount of consultation.

MR McLEAN (ASU): Yes. We normally don't have too many problems with consultation. It's a union and an industry - as I mentioned earlier - that people do see themselves as being long-term employees. The people are very highly committed to the industries and the areas they work in, and they're there for a long time, so they

have a lot of pride about their employment. That means that there's things they think that are really important to them; skills and training to our members is a lot more important than skills and training to a person to person that works in, say, the hospitality industry. The turnover in the hospitality industry is very, very high as you probably know. A lot of money is invested, a lot of people move on. We expect people will remain in local government and other industries for a long period of time.

It also means that new work models come out, for instance, clerical admin officers in both electricity and in local government have a degree of technical knowledge. Supply clerks at, say, EnergyAustralia - now called Ausgrid - have to know their wiring rules. You go down to your local council to see building inspectors and you deal with a senior, well-trained admin officer that knows what has to be done, so the building officer spends their time on the job, so to speak. The councils see these people also as being part of the community. We normally find that consultation takes place. Yes, there can be a bit of argy-bargy; yes, there can be the odd rally and protest and such, but I don't think there's ever been a case in our industry where there has ever been harm brought to the community by those things. The last thing we want to lose in any of our disputes is community support.

DR CRAIK: Okay. Thanks very much, Greg and Robert. We will now adjourn for lunch and we will resume at 12.30 with Wagga City Council.

(Luncheon adjournment)

DR CRAIK: I'll ask you to state your names and positions and if you'd like to make a brief opening statement.

MR KAUSCHE (WWCC): My name is Heinz Kausche, I'm the director of infrastructure services for Wagga Wagga City Council. To my left we've got Geoff Veneris, he's our manager of waste and stormwater section with the council, and Daryl McGregor who is a consultant with us. I think you guys have met Daryl before.

DR CRAIK: A number of times.

MR KAUSCHE (WWCC): We're here to talk about the submission we made to your draft report. Wagga Wagga City Council recognises the potential for the water reforms both nationally and in particular for New South Wales, and we've made previous submissions to the state inquiry, also the more recent Infrastructure Australia report, and the Productivity Commission's initial inquiry in November and the subsequent draft report.

We were fairly pleased with the content of the Productivity Commission's report, and we congratulate the Productivity Commission on that. We felt it was quite a comprehensive review of the urban water sector across Australia. Is it appropriate for me to provide a quick insight into Wagga Wagga City Council?

DR CRAIK: Sure. That would be good.

MR KAUSCHE (WWCC): Our LGA occupies an area of 5000-odd square kilometres. It services a population of about 63,000 persons. It's the largest inland city in New South Wales. Although 90 per cent of the population resides in the city area, the LGA also includes the villages of Collingullie, Galore, Mangoplah, Tarcutta on the freeway, Humula, Ladysmith and Oura and the surrounding farmland. In respect to water, Wagga Wagga City Council manages an extensive sewer and stormwater system, flood management, flood mitigation.

We also have a little bit of effluent re-use onto our sporting fields and we also have our salinity infrastructure, in that Wagga Wagga is dealing with dryland salinity issues. These systems are managed by a fairly well-resourced and multiskilled team. The supply of water in Wagga Wagga is currently undertaken by Riv Water, who presented earlier today. We are fortunate to have a fairly strong working relationship with Riverina Water, as they referred to earlier in their submission. This is particularly demonstrated during the recent flood events. We were impacted by three floods in 2010, all significant, and Riverina Water really assisted us in responding to those events and the provision of resources, expertise, all those sorts of things.

We are fortunately fairly well resourced. We manage our assets as per our asset management plan, which is a 30-year forward works program. We'll spend around about \$184 million, committed to capital works, over that 30 years, and another \$468 million in infrastructure maintenance and renewal works. We are well advanced in implementation and in best practice management elements, as stipulated by the Department of New South Wales Office of Water.

I suppose the only area where we're noncompliant is in the application of water based consumption charges for sewer. We are working very closely with Riverina Water at the moment in aligning our database, so we can charge as per best practice. We're an active member of the Riverina Eastern Regional Organisation of Councils, REROC. We're one of 13 general purpose councils in that group, including Riv Water. The group provides for sharing of information and resources across the member councils, which we find quite useful. Would you like me to continue on with some of the key points of our submission?

DR CRAIK: Yes.

MR KAUSCHE (WWCC): We have limited our submission to the areas that we thought were of greater relevance and concern to Wagga Wagga, we chose not to focus on some of the areas that are not directly relative to us, and with which we are largely comfortable. Foremost on council's mind is that we are opposed to any state ownership or control of the water and sewerage asset. We truly believe that the community is better served by the provision of water and sewer services at a local level. I think that's fairly clearly demonstrated in the performance of both Riv Water and council in delivering those services.

We endorse the establishment of regional alliances for those local water utilities which share a mutual relationship in the management of water. We feel that that is our preferred way forward, if you like. We support the continued application of best practice management in New South Wales, as with New South Wales Office of Water; we find that to be a very useful process and are working to be fully compliant with that. We suggest that some of the constraining issues surrounding re-use of recycled water be reviewed. We find difficulty in rolling out re-use schemes, addressing the risks between what is fairly adverse and then that conflicts with the need to try and maximise water conservation through re-use.

We consider that upgrading of assets in smaller socially disadvantaged areas may need support and subsidies, particularly in areas where population growth is negative, going backwards. Regarding pricing, I know Riv Water has already covered off on a lot of this stuff, and it probably is more relevant to them, but we felt we'd like the opportunity to provide some input into that. We obviously don't support the scarcity pricing, because of getting water out to some of these smaller villages, and our sewer services. We're sort of supporting a review of the

75:25 residential usage charge rule in New South Wales, in that that proved to be problematic for some of the water utilities during the drought periods.

We recognise that Australia is one of the world's highest per capita consumers of water, and we're also the driest inhabited continent. So we need to give that some real consideration as part of setting the demand management objectives and pricing for water and sewerage services. As I have said before regarding water reforms, council supports an alliance-type arrangement, it supports the general concept of charters for urban water utilities, it supports the formation of representative consumer groups that suggest that we set a selection of protocols and processes, maybe in association with the key stakeholders, like Local Government and Shires Associations, and Water Directorate.

Council agrees with the suggestion that appeals regarding regulatory environment and health regulation decisions could be best managed by the Australian Competition Tribunal. One of the issues we were discussing a fair bit was trading of water between regional water utilities; so we support lifting the bans on that. We suggest that town water entitlements in regional New South Wales are in need of some review, in that some towns have very restricted entitlements, struggle to stay within them, and another towns seem to have very excessively high entitlements. So there's a historical issue there that we think needs to be addressed.

Regarding water reforms in the regional areas, we agree with the recommendation regarding alliances of water utilities and would appreciate if the commission could support or provide some additional dialogue into an alliance of counsels and county councils, in that that is specific to our area. We are aware and encouraged by some of the initiatives that have been developed by Lower Macquarie, and, more recently, central. So we are watching those fairly closely, and we see some benefits in doing something similar in Wagga.

We strongly believe that there is case for aligning or re-aligning the water supply and the waste water services in our area. They are currently provided through separate organisations. So we really see that there's some opportunity here to realign that and we think that is very relative to obviously Riverina Water, Goldenfields and Wagga Wagga, in general. That basically brings us to the end of our key points.

DR CRAIK: Thank you. Do either of you other two want to make any opening statement?

MR VENERIS (WWCC): No.

MR MCGREGOR (WWCC): No, madam chair.

DR CRAIK: Just picking up that last point that you were mentioning , Heinz, if I

heard you correctly, you were saying you thought it would be worth exploring some kind of alliance between being Goldenfields and the Riverina and the councils themselves; so having some kind of mega alliance which picks up the councils and some of kind of alliance with the county councils.

MR KAUSCHE (WWCC): Yes.

DR CRAIK: What would that do?

MR KAUSCHE (WWCC): We could have a look at this. I think there's some fairly significant efficiency advantage that could be gained out of that. Some of the things for us are fairly basic things. We currently bill separately for sewer, for water, both organisations need to do it; under an alliance type of agreement, maybe we could do that collectively, so one bill goes out to the customer for both water and sewer. At the moment we have issues with customers having a consumption charge for water. We do a consumption charge for sewers over a different period so the bills don't align and all those sorts of things, so things like that.

Obviously multiskilling of staff, running a crew out to Tarcutta or Mangoplah or somewhere to deal with a sewer issue, they could also deal with a water issue while they're there. We have multiskilled our staff, in that we manage our stormwater, our salinity, our re-use and our sewer with the same team of people, the same plant and equipment; for example, the jetter truck, the combo truck that we use to clear sewers and maintenance, we use it on our stormwater system, and camera trucks inside. So there's some synergies there that we are already working on within our organisation, but I can see that that could be rolled out regionally for efficiency.

DR CRAIK: Have there been any discussions in that direction?

MR KAUSCHE (WWCC): Yes, we have had some discussions. Councillor Kendall referred to the infrastructure, the integrated water catchment management plan, and some of the work we have done there. As I said before, we are working with Riverina Water in aligning our databases so we can share data across customers and probably get to that billing-type arrangement.

DR MUNDY: So there's no impediments to you doing that; it's just a case of getting it done.

MR KAUSCHE (WWCC): Yes, I think so. At the moment we have REROC, so we work together and share resources and information through that. But I can see that that could be improved on and built on with a more formal-type arrangement and formal process that sits under that, similar to what has been done with Central, Lower Macquarie.

DR MUNDY: Briefly you touched on the town water entitlements and that some towns seem to have, for historic reasons, more than they need and others by implication have got less than they're going to need in the long run. This is something which we have heard a little bit about from time to time but of which we have never have actually been able to get evidence. Can you sort of flesh that out and give us a hint about where we might be able to acquire a bit more information on this?

MR KAUSCHE (WWCC): I'll probably refer that to Daryl, if that's okay. Daryl is more across the water industry - - -

DR CRAIK: Since the hospital crisis.

MR KAUSCHE: - - - than what I am.

MR McGREGOR (WWCC): In terms of where to find evidence, New South Wales went through an exercise some years ago now - it would be 10 years ago I suppose - where they determined what would be a reasonable entitlement for all the cities and towns within New South Wales. For fairly obviously reasons, that didn't proceed. People were given an option to take up the reasonable entitlement offer or stay with what they had. The reasonable entitlement was typically less than anyone had at the time, so no-one took up the reasonable entitlement offer.

So the work has been done, if you like, based on that of some time ago. There are particular examples in the irrigation areas of New South Wales where the towns have had substantial entitlements given to them, as opposed to other parts of the state, I think that's where the anomaly largely lies, and that's probably because of the situation, being in amongst irrigators and so on, there was a great propensity to think they had more water than elsewhere. I don't know.

DR CRAIK: My understanding was - and I don't know if this still applies - that as towns grew they got increased entitlement from - which was kind of taken off irrigators - just administratively written-off irrigators' entitlements, so it reduced the security of irrigators' entitlements to increase the town entitlement. Is that right?

MR McGREGOR (WWCC): There are examples of that.

DR CRAIK: So that's not universal?

MR McGREGOR (WWCC): The legislation gives cities and towns the right to claim an increase in their entitlement, because it's an annual entitlement, if you like, with a permanency attached to it. So it differs from an irrigation entitlement, as you well know, even high security entitlement it differs from. They have got the option under the legislation to apply for an increase based on growth. Some apparently

have been able to obtain further entitlements, through the political process I guess.

Typically these days with the cap on and supplies in the Murray-Darling Basin, the answer that comes back these days is more, "You will need to buy water on the market or you will need to put in demand management measures before we will even consider it." So it has been a driver for some towns to do demand management strategies and so on, to say, "We have done all we can and we still need more water." But I think the market mechanisms now are that people are encouraged to buy on the market, and buy from irrigators obviously.

DR CRAIK: Do many towns do that?

MR McGREGOR (WWCC): Yes.

DR CRAIK: Do many towns own high security water entitlements?

MR McGREGOR (WWCC): Yes.

DR MUNDY: Someone suggested that towns can't trade their water entitlements with each other.

DR CRAIK: Unless it's really high drought or something like that.

DR MUNDY: Yes.

MR McGREGOR (WWCC): That's true, they can't. There's no provision for transfer of water between towns at the moment.

DR MUNDY: Is that because that itself is prohibited? Can it sell it back to the irrigator? You see what I'm getting at?

MR McGREGOR (WWCC): As a result of the drought, the sale to irrigators was cancelled, or the option for that. Prior to that, yes. I have been involved in selling town water to irrigators, on a temporary transfer basis, 12 months only.

DR MUNDY: Yes.

MR McGREGOR (WWCC): With a town entitlement, if you've got, say, 10,000 megalitres a year, for example, and you only use nine, then that 1000 is carried over to irrigators, not to the town. So there's some benefit in revenue for towns in managing their water and knowing this. But then the argument comes up, "Well, if you've got water to sell, you've obviously got too much," so again the equity thing.

DR CRAIK: So if a town needs to increase its supply, given that you can't trade the water, you can't buy the water from another town if they have got spare water, you're at least limited on that option, aren't you? That's basically ruled out, that option?

MR McGREGOR (WWCC): Yes, but it applies more to the larger centres, the Alburys, the Griffiths, and so on. If they perceive in their planning that they're going to have growth or if growth is occurring and they're looking to attract industry, they will buy permanent water, high security water and have that. Theoretically, they can sell that on an annual basis. But the town entitlement is sacrosanct.

DR CRAIK: Is there a registrable list, do you know?

MR McGREGOR (WWCC): Yes.

DR CRAIK: Where is all that?

MR McGREGOR (WWCC): The Office of Water would have all the trades. The trades in New South Wales are - - -

DR CRAIK: Yes, all the trades, I suppose. But the actual register of each town and how much is permanent water and how much is - - -

MR McGREGOR (WWCC): The register of entitlements is with the New South Wales Officer of Water.

DR CRAIK: So we should be able to check that.

MR McGREGOR (WWCC): State Water actually, sorry; State Water has the entitlement.

DR MUNDY: State Water has got the entitlement. We could find out from the Office of Water how much in each town. So we could match them up hopefully.

MR McGREGOR (WWCC): Yes, hopefully.

DR CRAIK: You don't sound overly optimistic there.

MR McGREGOR (WWCC): No, the information will be there.

DR CRAIK: A comment you made, Heinz, that was really interesting is this 75:25 rule.

MR KAUSCHE (WWCC): Again that's in relation to water. It's not a direct issue for Wagga Wagga City Council, it's an observation we have made around the period

and some of the issues with which that the water utilities have been dealing, and then obviously recovery costs when usage is down.

DR CRAIK: So are you aware of where that has caused real problems?

MR KAUSCHE (WWCC): Not specifically. Again I'll have to refer that to Daryl. He might have a better idea of whether that has been a problem.

MR McGREGOR (WWCC): It has typically been a problem in inland New South Wales, because 75 per cent of revenue from usage during a drought is very difficult for a lot of them to model, and therefore get enough revenue in. Then, unfortunately, at the end of the drought you get floods, so no-one is buying water then either. So planning ahead and having sufficient cash flow and revenue on an annual basis has been a problem for most inland towns.

DR CRAIK: What was the basis for establishing that 75:25 in the first place? Do you know?

MR McGREGOR (WWCC): I believe I know, but I'm not prepared to divulge. It was based on that notion of getting demand down, and it was based on a trend overseas where some very large cities around the world for all these sort of services sell on a user-pays basis. So there was a push to say, "Well, why can't we have a full user-pays system?" The reality of that is that it's fine if you're a very large centre where people have pretty well have got fixed habits and so on, so you could plan to know, drought or no drought. Most of those cities that we used as examples don't necessarily suffer the droughts that inland New South Wales does. Probably 50 per cent of water used residentially in most inland areas is for watering lawns and gardens. In a drought they don't water the lawns and gardens, so your sales go down the same amount.

DR CRAIK: Do you know the reason 75 and 25 were chosen, and what would be the consequence of just removing it, so each county council or council, whatever it is, decides it by themselves?

MR McGREGOR (WWCC): No, I couldn't really comment on the split. The split was discussed at 90:10, 80:20, all sorts of things, and I think a decision was made at a political level to make it 75:25. That created some angst and anger, which caused a change to the fifty-fifty rule for those with less than 4000 connections, because they were sort of in the driest areas, if you like. So it seems to me that it's a flexible thing in terms of doing it, but I know the country mayors in New South Wales have for some years now sought to have it reviewed and removed, and probably they would support what you just said.

DR CRAIK: What, that each of them makes their own decision?

MR McGREGOR (WWCC): Yes.

DR MUNDY: Putting aside periods of drought, and I don't know whether you might like to concede it as normal, but what would be - in terms of costs - the costs in these businesses? Is it 75:25? Our proposition would be all the fixed infrastructure should be recovered by fixed based charges, and the variable costs which are associated to the production of water should be recovered through that mechanism. It's in chapter 5, I think. Is the distribution of costs actually the other way round, it's more like 25:75?

MR McGREGOR (WWCC): That's very difficult to answer without sitting down and doing the sums, because I think it varies - - -

DR MUNDY: From where you are.

MR McGREGOR (WWCC): From where you are. It depends. Some places are lucky, they live right on a very big dam or a big river, and others are - - -

DR MUNDY: Having to pump water out of bores.

MR McGREGOR (WWCC): - - - pumping water out. Riverina Water is an example of communities where water is moved a long, long way. That's part of the reason why I think it's best to have it sorted out by the people who manage those businesses.

DR MUNDY: So a move towards people reaching that determination themselves, on the basis that the cost of providing the services to their communities is something which wouldn't meet a hue and cry.

MR McGREGOR (WWCC): No, certainly. I think in this room we know that there are fixed components of these businesses that you just have to recover.

DR MUNDY: Can I come back to sewage. You also mention moving on to volumetric charging for sewage.

MR KAUSCHE (WWCC): What we're doing is we're looking at complying. Best practice requires that we consider, yes, the volumes as part of that charge. For residential, you need to understand what your water consumption is, and basically I think it's as simplistic as dividing it amongst the number of service connections and applying your charge that way. So it is consumption based for residential, but it's still the same charge per property, if that makes sense.

Then if you go to non-residential customers, some of your industry,

commercials, those sorts of things, depending on the nature of their business, yes, to meet best practice we'd also charge on the water consumption against that business. So if it's a business that doesn't have much of a garden or irrigation or anything like that, they have got a higher factor, you apply a factor to the water consumption charge, and that determines your sewer charge. Does that make sense?

DR MUNDY: Yes. That's something similar to what the Victorian metropolitan utilities factor in, some of them bill sewerage on the basis of the water bill.

MR KAUSCHE (WWCC): Yes, that's basically it.

DR MUNDY: So that it ups the price of - - -

MR KAUSCHE (WWCC): Yes, and being separate organisations we need to line up our property databases, if you like, so we can match up our data and apply those charges.

DR CRAIK: So your revenue goes down during a drought?

MR KAUSCHE (WWCC): Yes.

DR MUNDY: Even though the effect in water use is probably happening outside the garden, in the periods of drought the correlation breaks down.

MR KAUSCHE (WWCC): Yes. During periods of drought we don't have a lot of change in the effluent; the effluent volume pretty much stays fairly consistent.

DR CRAIK: Even with water restrictions - - -

MR KAUSCHE (WWCC): Yes, because the water restrictions mainly apply to outdoor water use, so we don't get a lot of change.

MR MCGREGOR (WWCC): But there is a trend occurring as a result of communities becoming more water conscious; as they have during the drought, there's a tendency for less water to be used inside the homes. So you'll find across New South Wales that the volume of sewerage per unit has gone down between 15 and 20 per cent over the last 10 years, which is good, because it prolongs the life of your sewage treatment works and so on.

MR KAUSCHE (WWCC): One of our sewage treatment plants just serves a purely residential catchment and it hasn't had much growth, and we're seeing exactly that, we're seeing a drop in the amount of effluent we're receiving, purely because the indoor use that Daryl is referring to is reducing. So we're seeing a slightly higher concentration in that case.

DR MUNDY: So that's dual-flush toilets, same number of people?

MR KAUSCHE (WWCC): Yes, showerheads, all those sort of things, yes.

DR MUNDY: Yes. The increased density of the effluent, is that creating concerns for you? Do you think that's long term going to drive opex up or redesign or - - -

MR KAUSCHE (WWCC): At the moment it hasn't. It's still mostly water basically, even with that reduction. But it's something we need to be mindful of and adjust our processes accordingly.

DR MUNDY: Do you have any idea of the rates of cistern replacement? You say it's an area that's not growing, so presumably it's - - -

MR KAUSCHE (WWCC): Yes, it's caught at the Koorringal sewage treatment plant, so the catchment that feeds into that is largely residential. There's no growth, in that that area is fully built out. So we're actually seeing a decrease in the amount of effluent that comes in, if that makes sense.

DR CRAIK: What do you guys do with stormwater - - -

MR KAUSCHE (WWCC): Yes, we're sitting on the Murrumbidgee River there, so most of our stormwater finishes up in the 'Bidgee. We have got a lagoon system. We do a bit of stormwater recovery, but only a small amount.

DR CRAIK: What do you do with it?

MR KAUSCHE (WWCC): Just use it for irrigation. We have what we call Wollundry Lagoon; a significant stormwater system discharges into that lagoon before it goes into the river. It serves as a detention basin. So we can draw on that water to irrigate the parkland around that lagoon.

DR MUNDY: So you really just trap the rubbish and the litter in it, and then just let it flow into the lagoon and then ultimately into the river?

MR KAUSCHE (WWCC): Basically.

DR CRAIK: Do you think in regional towns you can use - if there's any scope, to use prices rather than restrictions to manage demand? I know you're at the other end of the system.

MR KAUSCHE (WWCC): Yes, we're sort of at the other end. So it's probably more a question for Riv Water.

MR McGREGOR (WWCC): I think we should restate that restrictions are not used in New South Wales to manage demand, they're there to cope with emergency or drought situations. Demand management we see as a separate entity and one of the biggest successes - - -

DR CRAIK: So when does it merge from demand management into drought management? When you say, "Well, no, we're doing demand management now, but tomorrow we're going to put on restrictions, because that's drought management," what is the trigger?

MR McGREGOR (WWCC): Each utility has a drought management plan which has triggers. If the dam gets to a certain level, then we start level 1 restrictions, if it gets worse we have level 2. When it picks up, we remove those restrictions. You're not meant to have permanent levels of restriction, they're only there to cater for emergency situations - you know, if the main pump breaks down or you have got a prolonged drought and you can't supply. But to go back to your original question, in terms of demand management, pricing is the primary means of reducing demand. There's no two ways about that.

DR CRAIK: In terms of if you're not meant to have restrictions, then some things are phrased as permanent water conservation measures, which in fact are restrictions, aren't they?

MR McGREGOR (WWCC): They are, except they're not enforceable, whereas restrictions are.

DR CRAIK: Okay. So these permanent water conservation measures aren't enforceable?

MR McGREGOR (WWCC): No, they're voluntary only. Under the act you can't prosecute someone for breaking a voluntary restriction. But you can prosecute it if restrictions are on and you're not abiding by the restrictions.

DR MUNDY: And the restrictions are motivated by triggering from a drought.

MR McGREGOR (WWCC): That's right.

DR CRAIK: That's interesting. Were many people prosecuted during - - -

MR McGREGOR (WWCC): It's a difficult thing, and I shouldn't talk on behalf of any particular utility, but, yes, people were prosecuted. It depended where they were and what the situation of their drought was. But if people were cheating, they found themselves paying a hefty fine.

DR CRAIK: We heard - it was interesting - that in some towns it was remarkable that it only rained over the backyard, rather than the front yard.

DR MUNDY: Can you just give me some idea of a normal household water bill, just your bit, not the Riverina bit.

MR KAUSCHE (WWCC): Our sewerage charge, I think it's up to \$380 a year.

DR MUNDY: A year?

MR KAUSCHE (WWCC): Yes, from memory. That's just for the residential.

DR CRAIK: You have got an interesting comment in your submission, that an anomaly in New South Wales is that whereas environmental noncompliances are freely available on the EPA web site, water quality noncompliances are not. Are they published anywhere, water quality noncompliances?

MR KAUSCHE (WWCC): I don't believe so.

MR McGREGOR (WWCC): No, not publicly published. If you're a town and you want New South Wales water quality monitoring results, you can access them via your user name and code, but you can't access anyone else's.

DR MUNDY: If I'm an ordinary citizen and I'm wanting to access the water quality information - - -

MR McGREGOR (WWCC): You'd have to go down to your local water utility and ask them - probably under the Freedom of Information Act, I suppose - if they would show you their results. They're provided to the water utility only. But on the EPA site, for noncompliances under the POEO act, they're freely available.

DR CRAIK: It would seem reasonable that a constituent could know what the water quality in the area was, would it not, or don't you wish to be drawn? If there is a break in a sewerage line somewhere, does that fall under environmental or water quality?

MR KAUSCHE (WWCC): I think it falls under the water quality. It gets recorded under the same thing. So if that's not available - - -

DR CRAIK: Even though it also may have environmental consequences.

MR KAUSCHE (WWCC): - - - the same would apply, yes.

MR McGREGOR (WWCC): There's a protocol there. It's reported for New South Wales Health, and if it gets to a certain level of risk, then it's made publicly available. If it's a low-level risk, it's not.

MR KAUSCHE (WWCC): It goes on 1000 kilolitres, or something like that.

MR McGREGOR (WWCC): I don't remember the exact numbers, but, yes, it does get reported to the public if it becomes serious enough.

DR CRAIK: What generates a boil water alert or don't you have them ever in New South Wales anyway?

MR McGREGOR (WWCC): Yes, boil water alerts are generated by the minister under the Health Act.

DR CRAIK: What prompts him, what criteria, rather than getting a minute from his - - -

MR McGREGOR (WWCC): New South Wales Health under their monitoring program of drinking water quality, if E.coli show up, then they will do an immediate replicate test; if the E.coli is still there, they will advise the minister to advise the council to introduce a boil water alert until the source of that contamination is found and/or it is fixed to their satisfaction.

DR CRAIK: Is there constant testing by New South Wales Health?

MR McGREGOR (WWCC): Yes.

DR CRAIK: That has been really helpful. Thank you very much. Thanks for coming along.

DR CRAIK: I think we're going now to have the Water Services Association of Australia. If you could both say your name and position and whether you'd like to make an introductory submission.

MR LOVELL (WSAA): Adam Lovell, acting executive director, Water Services Association of Australia.

MR FENTON (WSAA): Craig Fenton, I'm a partner with PricewaterhouseCoopers and we're engaged to help facilitate the preparation of the submission for WSAA.

DR CRAIK: Thanks. Yes.

MR LOVELL (WSAA): Thanks, Wendy, and thank you very much for the opportunity to talk to you this afternoon. We have been a strong supporter of reform in the water industry for quite a few years now. I think we have demonstrated quite a lot of success in embracing reform and delivering on that reform. I just wanted to run through some really high-level contextual information that the urban water industry is looking at over the next 10 to 20 years, and then start to get into a little bit more about our report, on which I will just run briefly into an overview, and then Craig will talk on top of that overview, and get to some questions.

Probably the number 1 issue that's facing the water industry at the moment is the climate variability and the extreme climate shifts that the urban water industry has faced over the past 10 years. The drought was obviously the number 1 issue on everybody's lips. Just looking at even the past six months - record rainfall in Darwin and the tropics through to record low inflows in Perth and record temperatures over summer in Perth and floods in New South Wales, Queensland and Victoria - has just shown the extreme events the water industry has had to try and manage, both from delivery of safe drinking water quality and delivering on wastewater services. That is one thing.

The other emerging issue is the pressure on skills and the growing labour capacity constraints, particularly in the bigger states with a more sparse population. The water industry, probably like many industries, faces large-scale retirements over the next five years, and that's a really big issue. We have got growing populations and certainly a change in demographics, with the strong impetus now from communities for increased levels of service. In fact the increased level of service is now manifesting itself particularly from an environment compliance point of view, where we're seeing sort of a gradual screwing down of standards; yet coming with that is increased capital costs, with a degree of scrutiny which we think is at this point in time lacking.

We have also got increased energy costs, which obviously impacts the more climate-independent water sources such as water recycling and desal. In terms of

water conservation and water restrictions, we very much view water restrictions as an emergency measure in the future. In regard to desalination, there is some departure in agreement from the Productivity Commission's point of view in your draft report. Our view is that we're looking forward to reform here.

The decisions made about desal were complex. They were clouded by incomplete governance, and, if we view it in that way, let's look forward to reform and improving the way decisions are made and governance structures to support the right decisions. Recycled water of course continues to grow. It is up - for instance, 32 per cent in the areas of Sydney - and we have got increased private sector involvement and we support wholeheartedly legislation such as WICA to increase that private sector involvement.

Just to go back to some principles of reform, it's interesting that certainly the focus of the report thus far has been on potable water supply. But for most water purposes, particularly vertically integrated, 55 to 60 per cent of the cost is attached to wastewater. That's often overlooked and it's often thrown into the too-hard basket, yet if you look at some of the environmental compliance issues you can see that some efficiencies can be gained out of better governance and better regulation in that area.

Our number 1 principle for reform is: do the reform options benefit customers? If they benefit customers, then it should be investigated further. Do they maximise community value? They're the number 1 themes for any sort of reform. On top of that then we're looking at other reform options, and we think that you've struck more or less the right balance in there between pragmatic reform options and academically driven reform options. So we're supporting trials wherever we can; for instance, of customer choice, in tariffs, scarcity pricing, such as Sydney Water and the Sydney Catchment Authority - we'll be entering into an agreement this year. We do have some caution on the terms of that customer choice.

If you look at the papers last week about the damning look at telcos and the number of complaints to the ombudsman, I don't think the water industry wants to see itself in that sort of position, where we're offering green caps, security caps, water restriction caps, with 10-page contracts in six-point font; that's just not the model we want to head into. Ultimately, though, where does this all go? We note that the beneficiaries are the states and governments immediately and local councils. We feel though that in principle, there will have to be some sort of an event in centralisation to make this happen.

I just want to touch on some clear issues that we certainly are in agreement with, and I guess depoliticisation of urban water is the number 1 top priority, having clear objectives for all the players in the urban water sector. But we are concerned at this point in time that there's actually some drifting away from the corporatisation

model for urban water utilities, and there seems to be a drift to governments getting involved more in day-to-day decision-making, with which we don't agree.

Just a sort of minor tangential point, we note your objectives with the urban water industry, but we would actually like to explicitly have the protection of public health and the protection of the environment we think are clear objectives that should be stated from an urban water utility point of view. I guess a depoliticisation of urban water is particularly important in Queensland at this point in time. That's where the major drifting away has happened and that's of particular concern.

For us, all options on the table, we don't believe there's any technical impediments for all options being on the table, and I noted that presentation by Prof Collignon. I'd just like to bring to your attention, for instance, that the western corridor scheme - which is a major IPR scheme that may or may not be turned on - has seen over 120,000 water quality tests, only a handful of noncompliances, which probably fares better than what might occur in drinking water. The extent of testing has been massive, it has been every two days and all round the treatment process as well. If we believe that we live in a zero-risk world, then we may as well curl up into balls and not do anything. The key thing is about managing risks, and we believe there is no technical impediment to managing those risks in the future.

In terms of reform and regulation, we note that a lot of the conversations thus far have been on the difference between independent economic regulation and price monitoring. We understand your point of view though that as a package of reform options, it makes sense moving towards price monitoring. Our position at this point in time is that may be just a bridge too far, but we are certainly, for the bigger utilities, looking for much more light-handed regulation. Having an economic regulator go through and determine 114 charges does not allow for any sort of flexibility, doesn't allow for innovation, and so we should be looking to go to that next step, and certainly even potentially looking at revenue caps.

There have been advantages in independent economic regulations, it's introduced rigour, it's introduced that oversight which gives the community some confidence - and I won't say complete confidence, because I don't think it's a depoliticised process - but gives some confidence that we're moving in the right direction. Finally, before I pass over to Craig, we wholeheartedly support your recommendations in terms of regulation in the public health and environmental area.

DR CRAIK: Thanks.

MR FENTON (WSAA): Just some additional remarks: the submission itself, given the nature of WSAA, is obviously a compilation of views from WSAA's membership. A number of those companies are intending to and have made separate submissions on issues specific to them. What the submission sought to do was to try

to bring out some key messages, and it's the nature of a response to the draft report as you tend to focus on issues of contention and concern. But I think it is worth noting that there is clearly a lot to commend in the Productivity Commission's report, and that sometimes doesn't come out in a draft submission.

While the submission runs through and talks through planning, pricing, governance and regulation, I guess through it there's probably three key themes that were recurring and came up in a lot of the discussions. The first is around that focus on the benefit of cost equation. So irrespective of the decision, the structural model and so forth, keeping in mind what is the relative benefit of that option as compared to alternatives was very much front of mind. The second one is around the role of the customer. Inevitably it's the customer's eyes through which value should be measured. There were quite a lot of comments also around understanding fully how customers will behave in response to future issues as an important input to planning decisions.

The third theme is around really just recognising the practical challenges and the constraints within which the utilities operate. It's not intended as a defence of the status quo, but rather to put on the table that there are rigidities, there are things that don't work as well as you might otherwise expect, and these things need to be worked through. Understanding those is probably more important to the transition path rather than the end goal for reform.

DR CRAIK: Thanks very much. We might as well start with the issues and the objectives that you raise. You believe that making a statement about public health and environment in the actual objective for the water sector is worthwhile. We took the view that other entities in governments would set those public health and environmental objectives and that the role of a water utility has to actually operate within the policies that are set by government, because they wouldn't be the only two that would apply. So I'd be interested in teasing out a bit more why you said that needs to be right up-front, because it's not as if we're not saying that that's part of that package - - -

MR LOVELL (WSAA): No, and I understand that there are differences about who owns that objective. Our background has always been that that is always a priority for urban water utilities. They're not responsible for setting the standards to meet. That's ultimately why we're here. People often lose sight of the fact that that's why utilities were originally around. The common view is that that needs to be firmly up-front. I understand that it fits within a general objective of being economically efficient as a sector, but that's a general feeling. For instance, we would support the National Water Commission objective in that regard, but it's not a major point of departure.

DR MUNDY: You mentioned that on the one hand you want to get elected officials

out of the business of decision-making - we can have a debate about what should and shouldn't be done by elected officials - and then on the other hand you're suggesting that our views on desal plants, which were that decisions should be made on the basis of their merits, that our view was that perhaps these processes have been politicised, that that was the cause of the problem. With respect, I don't think we're very far apart.

MR LOVELL (WSAA): No, I don't think we are either.

DR MUNDY: It just strikes me that have our recommendations caused some disquiet to those who appoint your members' directors?

MR LOVELL (WSAA): I couldn't comment on that.

DR MUNDY: Let me put it another way: who is setting 114 prices? The best I could come up with was 66.

MR LOVELL (WSAA): For IPART?

DR MUNDY: IPART.

MR LOVELL (WSAA): If you total up what happens between IPART and Victoria, that's the total.

DR MUNDY: Okay.

DR CRAIK: But it's equated here for 66.

MR LOVELL (WSAA): Yes, that's for one particular - - -

DR MUNDY: That's IPART, okay. You said that regulators have to have a degree of certainty and public confidence in this, and we had evidence in Sydney and we had a discussion with IPART about the fact that opex for Sydney Water doesn't appear to have changed for a decade or so. I guess it begs the question, if you feel as an industry that regulators are there and they're performing that public confidence function, it begs the question, what do the boards of these utilities actually deliver, because you're saying that regulators effectively perform a governance function which seems to be having a second look at what directors have had a look at before they have signed these plans off. What is the role for directors? Should we be paying them less perhaps? I think it begs the question, what is it that they do? What's WSAA's view?

MR LOVELL (WSAA): WSAA's view is that the boards are notionally completely independent, particularly the state-owned corporations. I can't say that

that's true across the board but certainly for the state-owned corporations. They are notionally independent. Whether in practice that plays out that way, one could, I'm sure, bring up a number of examples where it hasn't, but they notionally - - -

DR MUNDY: You're satisfied that that sort of pressure that you're concerned about being brought upon directors, has never been brought upon a regulator?

MR LOVELL (WSAA): I'm sure it has.

DR MUNDY: So they're just another set of unelected officials being influenced by elected officials?

MR FENTON (WSAA): I don't believe the view is put that regulators are a perfect foil to pleading on intervention, but it's more - - -

DR MUNDY: Well, they certainly haven't been in New South Wales, Queensland or Tasmania.

DR CRAIK: No, that's right, not recently.

DR MUNDY: Or Victoria.

MR FENTON (WSAA): Talking about Queensland, given what actually hasn't been regulated in Queensland - - -

DR CRAIK: I think price monitoring.

MR FENTON (WSAA): The intervention that's occurred has been outside of a proper regulatory role, if you like, or a fully developed one.

DR MUNDY: I think it's possible to argue that the response of the Queensland government was exactly the QCA coming up with an answer it found uncomfortable.

MR FENTON (WSAA): But is that not the point that we're trying to make, that we've had a regulator that's tried to depoliticise the process? The counterfactual might be, had we not had a QCA report that said these businesses aren't overcharging, how much additional pressure would have been brought to bear on these three distributor retailers. The point we were trying to make in the submission was one to say that where regulators are involved there's an inherent level of transparency. Political interference becomes more obvious and some of it is still opaque but it generally becomes more obvious. Where there's no regulation whatsoever, there's no transparency whatsoever.

DR CRAIK: But there can be, and we were proposing to set that up with the

charter. The whole purpose of the charter and pricing in the charter would be public and we would expect annual performance reporting. You'd expect if they were setting prices, as a consumer group that's involved in putting some input into the price-setting, so I guess we were trying to replace the economic regulation by an economic regulator, a separate organisation, and put that process within the utility itself, run by the directors.

DR MUNDY: Indeed, we've just heard from WSAA's point of view, the most critical issue being public health, the regulator in New South Wales of public health doesn't in any meaningful way provide to consumers the most important thing that they probably might want to know and that is what is water quality.

MR FENTON (WSAA): It does actually - - -

DR MUNDY: So the regulator, of themselves, does not deliver transparency.

MR LOVELL (WSAA): That might be true out of the Sydney Water and Hunter Water areas of operation where they're required to report quarterly to their customers on key water quality characteristics, but we would agree that that transparency needs to be built in, absolutely.

DR CRAIK: But why couldn't the same deal be on price for transparency? You've got directors that if the government doesn't like what the directors do, and the population objects too much, I mean, governments can change the directors.

MR LOVELL (WSAA): That's true. As I say, in principle there's not a disagreement to moving to that. We believe though as a collective that's just a bridge too far at this point.

MR FENTON (WSAA): I think the phrase that was used in the submission was that that was an ideal environment, so I don't think there's disagreement as to that ideal end point. The comment was raised that we've had two decades of governance in these reforms that on paper look a lot like what's in the PC's draft recommendations but haven't been effective at countering those incentives for political involvement. There's some reticence to say if you take out an IPART and ESC and an ERA and made those changes, would it be enough or is it a transitional change that needs to occur?

DR CRAIK: Perhaps if you set these corporations up under the Corporations Law that might be a step in the process.

MR FENTON (WSAA): There are examples presently in the electricity sector where you have state homes, electricity distribution providers, under the Corporations Act with, I would argue, all of those governance requirements in place

or largely in place within the economic regulation occurring at the national level, and you still have the state government coming in over the top and making judgments about the appropriateness of those price increases, and commenting through media outlets and through direct direction to those businesses on levels of cost recovery.

DR MUNDY: Obviously this issue of political interference must exercise the minds and be of great concerns to directors of water utilities. Has one ever resigned as a result of these concerns?

MR LOVELL (WSAA): Not to my knowledge.

DR MUNDY: Could you come back to us on that?

MR LOVELL (WSAA): Yes, I can check that out for you. I think in particular the area of interference has come through the options that have been considered for water supply. That's where it has manifested itself.

DR MUNDY: But there is a longstanding principle in those who hold public office that if one is invited to go too far, then the appropriate course of action is resignation. It isn't unknown in other areas of the public service. We had some evidence this morning about relative costs of water recycling as opposed to desal, and it was suggested to us that really at the end of the day the technologies were pretty similar and therefore any cost differentials would be relatively minor. There might be some issues about energy costs pumping the pressure up to get the salt out of the membrane. Is that something that you're able to enlighten the commission on, or is that something you could perhaps go back to your members and ask for their views on?

MR LOVELL (WSAA): We could certainly come back to you on that.

DR MUNDY: It's not for us to cost these things.

MR LOVELL (WSAA): That's right. We can come back to you with more information but I would say that if you were moving towards a direct potable type scheme, it's not coming close to desalination.

DR CRAIK: Is that right?

MR LOVELL (WSAA): Yes. The biggest costs associated with it is reverse osmosis. You've got less than half the salt than you do from desal.

DR CRAIK: What about the viruses and other things?

MR LOVELL (WSAA): That's UV disinfection and chlorine and ozone, whatever

is the process. It's not comparable.

DR CRAIK: Okay. If you could come back to us with the numbers that would be good.

MR LOVELL (WSAA): Sure.

DR CRAIK: My next question, based on what we heard this morning, would WSAA share the view we heard this morning that IPR should be looked at as a last resort or should it be on the table equivalent with everything else?

MR LOVELL (WSAA): It should be on the table equivalent with everything else. There's Australian guidelines there for potable reuse. The technology is there, the health regulations would be set up already for it. It's about risk management and, yes, we don't necessarily believe it should be last resort. It may turn out to be your last resort. It's very site specific. So we wouldn't rule it in or rule it out at any particular point in time. But if you go into an evaluation exercise saying that it is your last resort, you can guarantee it will be your last resort.

DR CRAIK: What about the fact that if there is a problem it's likely to be human error or some kind of machinery breakdown, it won't be discovered until after the fact?

MR LOVELL (WSAA): That's not necessarily through - - -

DR CRAIK: The consequences might be significant.

MR LOVELL (WSAA): Well, I'm not sure that I agree with the view that there's the potential for thousands to be killed. There are potential health issues associated for that, but the most likely is that from an acute health risk you'll always have a chlorine residual running distribution system anyway, so I'm just not sure that those risks are as large as what some might say they are. There will always be the risk of human error associated with any sort of process but I can honestly say that a lot of the schemes that have been planned, have been put in, for instance, the Bundeena plant up in Queensland has gone through the most rigorous testing, looking at all the different ways you can actually evaluate the performance of the RO membranes on line. If you pick up the problem it can be switched off, the water is taken out, gone, doesn't see the distribution system.

DR MUNDY: Somewhere in your most recent correspondence I think you were slightly also at odds with us on views about inclining block tariffs. Then you also say the principle concern is what's to the benefit of the consumer, and certainly some of WSAA's members entertained the notion of a range of tariffs that were being offered. I think our proposition actually was that that was a preferable outcome,

subject to there being a default tariff that that would be a simple single block two part tariff.

I guess what leads on from that is if it is the view that customer choice is the way to go in allowing people, effectively, I suspect, to reflect their own personal evaluations of security at the end of the day, doesn't that really mean that the current price-setting arrangements have to be relaxed to something that looks like a revenue cap because otherwise the regulator will then just be plucking out another set of numbers which will be another set of tariff schedules that will proliferate and you're forced into that situation every time.

MR FENTON (WSAA): I think there are two issues there. On the inclining block tariffs issue, the view that should be trying to come through in the submission is that generally there's acceptance across the industry to move away from inclining block tariffs. I think debate has been had and won on inclining block tariffs.

DR MUNDY: That's not how we read it.

DR CRAIK: I'm curious to know why you asked us to provide more justification.

MR FENTON (WSAA): Because the point that was being raised there is to move from current levels of inclining block tariffs to some future flat rate two-part tariff is going to have distributional impacts for some customers and could involve various transitional costs and so forth. If you thought that was going to generate enormous benefits, you would do so quickly. If you thought that the benefits were rather small then you might stagger that change in accordance with other things. If you had to do a major change to your billing system to accommodate that change and it was going to cost whatever the amount would be, you would want to be convinced that the benefits would be there. So it was more of an understanding - - -

DR MUNDY: You price all subsequent blocks to zero. So it's not going to cause a lot of pain in the billing system.

MR FENTON (WSAA): You need to think through particularly the distributional impacts as well in understanding - - -

DR CRAIK: That will be a case-by-case basis.

DR MUNDY: It's 2 or 3 per cent of even the lowest quintile, so a change in the structure, I mean, I can't imagine causing huge distributional concerns.

MR FENTON (WSAA): The issues that water businesses will be based on will be more around the very ends of that distribution. The average change might be 3 or 4 per cent and you'll find one customer will earn its 20 or 30 per cent, and it will be

that customer that will be on the front page of the Sydney Morning Herald.

DR MUNDY: It's 2 or 3 per cent household expenditure. Even if it's 20 per cent household expenditure - - -

MR FENTON (WSAA): I'd probably counter that to say if you felt that those income statistics were an indicator that water issues weren't important to the community, you'd wonder why it gets so much press in the media.

DR MUNDY: I think we've expressed a view on that.

MR FENTON (WSAA): We think the debate on inclining block tariffs has been won. It's a question of how quickly you would move to that change. It was simply saying you don't do so overnight because potentially that introduces large distributional changes, and if you thought that was actually a fairly small efficiency gain you might have incurred a loss of cost to get that but not much benefit. The second point was around flexible tariff options, and I think on that point we would absolutely agree with you that we wouldn't see a role for six state and two territory regulators to be seeing voluminous tariff schedules with lots of menus of options. We would see, moving back to a tariff basket type approach, something with more flexibility to the businesses to be able to define those options.

I would probably hold a view that I suspect it's in the non-residential sector. You might get better efficiency gains there. I suspect there's a lot more homogeneity between your average residential customer and the likelihood that they would be looking to having multiple tariff options is perhaps down the track. But there's a lot more differences between your non-residential customer base than you might find the relative evaluations of security versus reliability versus other quality parameters is perhaps higher. That might be where your best investment is placed.

DR CRAIK: Aren't there a couple of groups in residential, the ones who are quite happy with water restrictions, very small amounts of water, and then those who really do want to use a lot of water who really haven't been able to exercise their choice or it's been un-Australian to speak out in recent times about that view?

MR FENTON (WSAA): I think some of these issues have probably been aired in some of the business specific submissions where they have done some research. In the interviews now I think the phrase was "did want choice but not too much".

DR CRAIK: Not too much, yes.

MR FENTON (WSAA): And concerns around proliferating too many options and whether they actually understand - - -

DR CRAIK: The water utility should make those decisions based on its customer preferences. We're not trying to tell the water utilities what to do. We're really saying in our view that would be up to you, what the customers want and - - -

MR LOVELL (WSAA): True. I agree with Craig though, it's in the non-res sector where that's got real advantages because you're not only working with your industrial customers, you're working with the potable water supplier who's working on the wastewater side of things. That's where the regulation of various prices set by the various regulators is getting so intrusive. It's really limiting the ability to negotiate one on one.

DR MUNDY: Do you have any sense of - I mean, water utility X rocks up to regulator Y and says, "Here's my proposed tariff schedule," and the regulator goes off and does what the regulator does and comes back. Do you have any sense of how much variation ultimately comes out of that process, particularly for these non-res uses and stuff like that? Is there an awful lot of variation coming out between the proposed prices and the actual finally approved prices?

MR FENTON (WSAA): My experience is where the variation is first at the aggregate level where you might have a wastewater revenue line, the regulator will have a view about whether it thinks that your target level or cost recovery is the right one.

DR MUNDY: So that would be an inquiry into the asset base and all that sort of stuff.

MR FENTON (WSAA): Correct. Future capital programs and so forth. That's seeing the aggregate so that might affect - if you felt that you were increasing charges by a given percentage, you might have to tailor that percentage by small amounts. I suspect the regulators are less concerned if you have a relatively stable tariff regime going from one view to the next, and they will look at percentages that they will view things relatively hands-on. You're looking at major shifts moving from an inclining block to a non-inclining block, moving from a flat rate sewerage charge to some form of volumetric equivalent, that they will be more inclined to really try and pull that apart and say, "What's going on behind it? Who are the customers that are going to be disaffected or benefited by that charge?"

DR MUNDY: What's their motivation for doing this? Is it essentially distribution?

MR FENTON (WSAA): No, I don't believe so. I think they approach it with a customer mind-set, not necessarily from an affordability perspective, but just trying to understand whether there's something either untoward or deliberate or inadvertent in those proposed changes and charges; whether there's a level of cross-subsidy between particular customer groups. If there's any bias I suspect it's a view that

businesses have a proclivity towards charging more for the non-res customer base than the residential customer base and then having to look through those sort of changes.

DR CRAIK: Do you have any idea what it costs the utility to go through the process with the regulator, like a big one?

MR LOVELL (WSAA): I'm not sure. I mean, I can try and get those costs. I know we get some costings out of Queensland. We can have a look at that. There's extensive teams dedicated to the whole process which may include - I'd have to pull out the health and environment, but we can have a look and get back to you.

DR CRAIK: Does WSAA have a view on the fact that numerically more water utilities set their own prices than are actually regulated? In fact one might argue that the people in some of the larger utilities have extraordinary skills, or are extraordinarily skilled in terms of their ability to set prices. You wouldn't think that they were any less capable of setting their own prices than some of the smaller utilities that set their prices. There seems to be this curious view that those who might be well equipped to do it aren't able.

MR LOVELL (WSAA): Aren't able.

MR FENTON (WSAA): I don't think it's a technical competence issue. I don't think we have any qualms about Sydney Water's capacity to come up with a workable system of tariffs. The point of view is that we think they're put through too many hoops and hurdles to justify that schedule, as compared to really focusing on some constraints and saying, "Look, as long as you operate within these boundaries we'll leave you with discretion and flexibility within that."

DR MUNDY: Which is ultimately what a well-formed charter periodically reviewed would precisely do, if you look historically at the way that price caps and tariff busters worked in the UK the utility is typically left alone pretty much, we find, well, depending on the sector and the regulator, pertinent regulator, and the level of maturity. I think there's an acceptance of that that is actually a very important issue that after a decade or so one would think that any perverse institutional arrangements would have been eliminated or the regulator has failed.

MR FENTON (WSAA): I mean there certainly was some discussion amongst the reference group members of, you know, the last decade or so has been a time of fairly significant change for water utilities and not reflected in the average size of customer bills. So issues that perhaps 10 years ago weren't generating the level of input and interest at the political level generally are now. So there has been that change. So yes, we've had a decade or more of experience with corporatisation and governance reforms but we've also had an increase, if you like, or a reduction in the

pain threshold, so to speak.

DR CRAIK: Would it be fair to say that the utilities don't want the responsibility of price setting, because then they cop the opprobrium when the price goes up, so it's easier for someone else to do it?

MR LOVELL (WSAA): While, I'd say at this stage it's easier to have a third party seen to be there as the overseer on behalf of the community, but I think it comes with all its warts attached to it. But in general that's the principle which everybody was happy with.

DR MUNDY: So would it be WSAA's view that it's who minds the gaoler? I mean your sector, unlike a lot of other regulated sectors in the economy there is precious little redress from those who are aggrieved by the conduct of regulators. Is it your view that some sort of appeal review mechanism should be made available to regulatory decision-making or because there are no private shareholders that can be aggrieved that's not necessary?

MR LOVELL (WSAA): It's probably more the latter. I mean we haven't got on to that level of conversation within the membership - - -

DR MUNDY: So if a regulator makes a manifest error then it's really left for the government to deal with that?

MR LOVELL (WSAA): I mean the biggest issue at this point in time in areas of redress is certainly in terms of environmental compliance. You see the cost, particularly from sort of overflow programs. It's so contentious about what's the actual objective that you are trying to achieve. Once the EPA sets that in any sort of state that tends to be it. So we would like to see, I guess, some sort of redress put into that process that those costs are examined, their benefits - - -

DR CRAIK: Can we go on to the issue of water security, because you raised this issue of water security objectives. I guess our view generally is that the retail distributor has got an obligation to serve a particular area, make sure that they provide water to that area so that when someone turns on the tap they have water, regardless of the tariff offering - service offering that they're actually - so in our view that would be the water security objective: you turn on the tap water, it comes out according to how much you want. Does WSAA have a problem with that sort of view and the water utilities' obligation to ensure that they actually meet that contract they have with their customers?

MR LOVELL (WSAA): No, I don't think there's any issue.

DR CRAIK: That's how we read it. That's our view of water security.

MR LOVELL (WSAA): Yes. I don't think there's any departure, do you - - -

MR FENTON (WSAA): In fact I think the submission acknowledges that of all the areas of improving clarity of objectives and business security is probably one of the highest.

DR CRAIK: I was going to say, do you agree that utilities should have the responsibility to procure the water? That was one of the big changes too. So Sydney Water would have the responsibility for making the decision about what the next augmentation is.

MR FENTON (WSAA): The comments in the submission were around that option should be assessed as one of a number, if you like, so without prejudging whether it's better or worse than the others, we would certainly say that the onus should be on governments and utilities to periodically retest the arrangements that are in place and to come up with revisions and amendments if they feel that's appropriate. But that doesn't automatically mean that you would go through each of the mainland capital cities and say, "We're now moving to option 4. We're now moving to this having independent procurement." That may be appropriate for some or it may not be appropriate for others.

DR CRAIK: What would be the criteria on which you would decide whether the utilities are appropriate or whether the government making decisions like this is appropriate?

MR FENTON (WSAA): I don't think that was the question that you asked. It wasn't a question of whether government would make - - -

DR CRAIK: But why it's generally the government if it's not the water utility.

MR FENTON (WSAA): To me it comes down to again understanding what are the arrangements in place at that point in time. The first step - if you were indeed going to make the first step - in Western Australia with Water Corporation, might be very different to the first step that you would make for a change in Victoria.

DR CRAIK: Correct.

MR FENTON (WSAA): The factors you'd be wanting to look at would be who has control around potential options for future procurement, augmentation and so forth. You may come up with a different institutional model where there are seen to be multiple sources that you could be drawing down. If there's only one logical option it's going to be quite hard to come up with an independent procurement model where one party has definitive control over what's going to be the only potential future

source.

DR MUNDY: But we're not talking about an independent procurement model.

DR CRAIK: No, we're not.

DR MUNDY: We're talking about the utility that has the obligations to ply the end customer making the decision about procurement; not an independent entity.

DR CRAIK: A retailer distribution.

DR MUNDY: In the Victorian case, Yarra Valley would make its procurement decisions. South-East Water would make theirs. "That's the model that we propose."

DR CRAIK: Sydney Water in Sydney would make their decision.

MR FENTON (WSAA): But certainly I think there was a general agreement that having those objectives held accountable at the distribution retail level was appropriate. There was question and probably less agreement amongst the members, and less understanding about how it would actually work, and generally how would that operate, given institutions are in place at the moment, or spatially what were the options that were available to those parties and what level of countervailing power might they have.

DR CRAIK: I guess in the case of Sydney we've seen where Sydney Water would have contracts with the Sydney Catchment Authority, contacts with the Sydney desal plant. In the case of Victoria it's obviously more complicated where you've got three geographic retailers drawing off the same sources. You might end up having to put in place some kind of grid management system and they would own the water entitlements and they would make - - -

MR FENTON (WSAA): I've read those issues that were commented on by Yarra Valley Water and it talked about that pool environment model where at different times they have looked at trying to have a different form of that model and it's been quite a complex issue for them to try and unravel.

DR MUNDY: Yes, and that's probably an issue to do with whether you think water should be the same price across the three utilities as well, a complicated issue. This doesn't relate to your submission but in chapter 2 we present some data about aggregate employment in the sector. It seems to us that in the last while, employment growth has been quite substantial based on the ABS data. Do you have any sense of that general employment trend occurring in the industry, because we've heard a lot about increasing productivity and shedding of a lot of labour, and there's obviously some statistical and classification issues going on that I think to climb over

the top of those - but do you have any sense of current employment trends in the industry?

MR LOVELL (WSAA): No strong sense. I can say that just last week we uncovered massive classification issues under ANZSCO, so we're trying to sort those out at the minute. If you try and look for a wastewater operator you actually have to look under the code for machine fitter under the ANZSCO, so we now have huge problems with the classification. In terms of overall trends though, I would say it's sort of plateaued over the past little while and that's mostly because with growth, and certainly with maintenance of treatment and distribution systems, it has become a little bit more complex - just a little - and it's trying to manage those. In general I'd say it's plateaued, but we can have a look at that data and then get back to you.

DR MUNDY: It just struck me when I was looking at it a couple of weeks ago that there's this trend that looks like that, and the other looks like that, and it's probably a whole range of things, but perhaps if you can have a look at it and get back to one of the team. We're just keen to understand what's really under the data.

MR LOVELL (WSAA): Yes, sure. We had a whole lot of guys ready for retirement who, through 2008, decided it wasn't such a good idea at the time. So that's changed the employment rules.

DR CRAIK: Yes, I guess that's right.

DR MUNDY: Define benefit of superannuants who didn't superannuate.

DR CRAIK: The ACT government put a water restriction charge on water which was supposed to pick up the cost of environmental externalities, I suppose, given that their pricing is set by a regulator, and I would have thought that one of the roles of the regulator was to include the issue of externalities in the price-setting process in the first place. Does WSAA have a view about that water restriction charge added on to the price of the regulator?

MR FENTON (WSAA): I don't think there's an issue we spoke to the membership at great length about. I suspect that's a question for you, not for us.

DR CRAIK: I did have it in my mind. Okay. Adam, you mentioned that you thought there were a lot of efficiencies to be had in wastewater. Do you have any particular thoughts in mind about much greater efficiencies in wastewater that we have not referred to?

MR LOVELL (WSAA): Wastewater by its very nature is a complex beast. In general it comes down to transporting a really ugly mix of stuff, but if it is still mostly water around the place over long distances that's what drives a lot of the cost,

and maintaining the systems which - you know, it's quite an impressive medium as well. Probably one of the key concerns for the water industry is low-lying assets associated with wastewater because of the salt intrusion. It comes down to what your treatment plant assets - salt intrusion; you've got degradation of the assets that are carrying this stuff around. So a lot of the efficiencies tend to come not so much from the treatment side of things, the issue of treatment is the increased levels - expectations of levels of service - which is increasing the costs because treatment has got to be upgraded. But the biggest cost by far is in the actual transport system itself.

I couldn't tell you exact things but in terms of the way you try and manage extreme events - rainfall, stormwater ingress - all impact on the way you actually operate a wastewater system. But again it's one of those areas that because of the very complex nature of it, it's hard to get your head around and not many people will look at it.

DR MUNDY: I accept all you've described but they seem to be technical engineering issues. They're not issues that are amenable to - other than perhaps getting better clarity and certainty around it and perhaps being able to prevent unnecessary regulatory creep. They're really not issues that are tractable from a public policy response, they're technical engineering.

MR LOVELL (WSAA): Unless you think that in the future we get away from these policy matters and indirect potable so that opens up that sphere. That's where it becomes more interesting. But I still think that's maybe a little bit for the future - - -

DR CRAIK: If that occurs and you get legislation in place and things start opening up a bit.

MR LOVELL (WSAA): Yes, That's right.

DR CRAIK: Developer charges. Do you guys have views about developer charges?

MR FENTON (WSAA): Developer charges are a very complicated subject and they have been the subject of many specific reviews, both as to the methodology and the purpose and so forth, and the landscape is changing quite rapidly. There's been changes in Queensland, for instance, around putting caps on top of charges. The purpose for raising it is really in the context of the discussion around postal stamp charging and saying there is potentially some merit for the application of the developer charge that allows for some locational differentiation in the charge rate. It's applied at the time the development occurs, so it might be seen to be a more effective locational signal on the development.

It's applied at the time, if you like, the bill configuration is potentially still

being developed so it allows you some scope to modify that rather than differentiating the charge after the fact where the infrastructure is in place and the structures are already in place. Different utilities certainly applied a great deal more emphasis on, you know, perhaps not so much a postage stamp charge - and we're moving away from that - but on the developer charging strategies, potentially to try and keep the same objectives. That was really the comment or the theme we were trying to get across in the submission.

DR CRAIK: Okay.

DR MUNDY: Because we had a discussion earlier on today about particularly brownfield and infill sites. It seems that really the challenge there is, I suspect on brownfield sites, the same. We were discussing, if you're sitting on an old brewery site you're probably going to find a lot more by way of water services than you're going to find on a disused railway yard. It would have struck us that a very location based approach which ultimately did build into property values was the better way to go, whereas the broad brush approach is almost a WICA type approach, you know, "What do you want to put the infrastructure on here?" "No, thanks, I'll build it myself to standard," and it might actually be a better way of discovering efficient pricing on those sorts of developments we heard about this morning.

DR CRAIK: Okay. Thank you both very much, it was very helpful.

MR LOVELL (WSAA): Thank you.

DR CRAIK: Our next speaker is Geoff Dickinson. Would you state your name and your affiliation, and if you'd like to make a brief opening statement we'd be happy to hear from you.

MR DICKINSON: My name is Geoffrey Jules Dickinson, 42 Flinders Street, Beauty Point, Tasmania. My affiliation is as a citizen. My occupation is a doctoral student on intergenerational justice and a demographic activity based costing analysis.

DR CRAIK: Right. Would you like to make a brief statement about why you wanted to come along today.

MR DICKINSON: My concerns are two points. When the treasurer of Tasmania forced the three water corporations in Tasmania to amalgamate as such, the evaluations due to the change of the accounting standards robbed each one of those councils of something like 22 to 30 per cent. That represented, in the case of the nine councils - the Ben Lomond one - about a quarter billion dollars. That's eight years at \$1 a second. That value has evaporated. I have asked why and I'm told it is accounting standards.

You'll notice in the papers I have provided you, I've provided the 1994 New South Wales parliamentary inquiry papers where they talked about the problems with accounting standards. The accounting profession, of course, has gone through an enormous, shall we say, promotion of international accounting standards which started back in about 1992. However for active changes, very little has changed. I have asked the state auditor does he have the formula that was used in calculating those reductions in value to which I was informed that he was unable to tell me because he's the state auditor. I had already asked the council accountant and the only way I can get it is to take it up and get a politician to ask at a business enterprise hearing.

Now, I'm not one to cause that type of thing but in the Tasmanian mentality that evaporation of value, not matter how it is described by the accountants, has evaporated. I don't accept the accounting method. I may accept it if I was able to get the details, but it's like Salome's Dance, and it's the dance of the four accounting firms.

DR CRAIK: Tell us, is it your issue that in fact the formula used is untransparent?

MR DICKINSON: Untransparent and the accounting standards, if this occurs in other places other than Tasmania, could be a cascade event. One of the important things in submissions on these things are that you have some brilliant brains working on them, but submissions give you the chance to say, "Hell, how did we miss that?"

and that's my first concern: how did you miss it, if it is a problem. I don't accept the answers I've heard to date and I don't mind being thought of as a narc. Is that enough on that one?

DR CRAIK: I think that gives us an idea. Why can't the Auditor-General give you the formula? Is there a reason? Thank you. Confidentiality provisions.

MR DICKINSON: Yes.

DR CRAIK: Not the Audit Act?

MR DICKINSON: And the act, it's attached beneath it.

DR CRAIK: Section 46.

DR MUNDY: The only thing that is public are the expressions of the council.

MR DICKINSON: Of course, each council had a different proportion of private labour and material, and land. So how does that effect it. Are you with me?

DR CRAIK: Can the council give you the - - -

MR DICKINSON: No, I have one from the member, saying, "I can't do anything either."

DR CRAIK: No help from them either.

MR DICKINSON: I will provide the information; I've just kept that back from you at this stage. To me there's a big fan that needs to be turned off.

DR CRAIK: Are the councils interested in providing a devaluation?

MR DICKINSON: 29 councils in Tasmania were ambushed. I can give you my personal reason of why it was essential to bring the water boards into that situation: they were debt-free organisations and by getting them under the state umbrella you most probably can then protect your credit rating. But that's cynical.

DR CRAIK: Weren't there a few other issues, like permanent boil water alerts and sewerage package problems?

MR DICKINSON: There are, but not in all councils. With that I have no problem. But the councils did work together and did own these bodies that have now been forced into a corporation; it is the change of corporation of level is the worry. It will occur with other councils.

DR CRAIK: From local to state.

MR DICKINSON: Yes, and you must be aware of it. Water is basically the abundance and distribution of animals, and without water there're none in that area. That's your field.

DR CRAIK: Indeed.

MR DICKINSON: Most probably I was affected by the same lecturer.

DR MUNDY: Putting aside the issue of the accounting, what is your concern at the consequence of this?

MR DICKINSON: The consequence of this is, people who are looking for an emotive reason to cause trouble will turn it into one. It doesn't have to be logical. All they can do is say, "That money has evaporated, where is the reason? We can't get it."

DR MUNDY: It's arguable whether money has - just because an accounting treatment has changed, doesn't necessarily mean an amount of money has - - -

MR DICKINSON: I can agree with you on that, but I can also disagree with you on it.

DR MUNDY: Yes. Our concern here is, in this inquiry, is about the provision of urban water services. What I'm trying to get at is, how has this accounting treatment affected you or the provision of water services in the state of Tasmania.

MR DICKINSON: It could affect you being able to bring forward certain structures that you may need to bring into governments, if this issue became a populist focus.

DR MUNDY: Can you expand on that for me?

MR DICKINSON: Let's say, people against the pulp mill. They don't necessarily need to apply logic; they apply emotion. They apply emotion, the papers will jump on it. You'll have manufactured agents that will be coming in against you. The value of what you're trying to achieve will be devalued to the lowest argument level they can achieve, and that's why I was concerned. I'm not against the situation, because we've got private labour and material, and now we have regulations for accounting and ethics, that's been the other part of the argument.

DR CRAIK: What is your desire for us to do?

MR DICKINSON: I can't give you an answer. I'm making you aware of it. If the fan gets messy, you're aware of it.

DR MUNDY: I have to say, I suspect the body who might actually be more - for our sins, neither of us are accountants. The public accounting treatment of public assets, when transferred between agencies, has always been as much an art as a science, and often a black one.

MR DICKINSON: That's exactly what I would agree with you.

DR MUNDY: That's certainly the case, and there has been a body of reform over decades that has tried to bring public accounting standards towards normal accounting standards, and also continue to recognise the peculiar nature of public accounting. They're better than they were. Are they fit for purpose: that's probably another issue. I would have thought these concerns are probably best brought to someone like the Accounting Standards Board, who have a responsibility not only for private-sector accounting, but the production of public accounting. There is a committee of treasuries that deal with these sort of things.

MR DICKINSON: Treasury has got a new paper out, last week - it's a proposal paper - on the tax treatment of water bodies.

DR CRAIK: This is the Federal Treasury?

MR DICKINSON: Yes, Federal Treasury has got the proposal paper out. It came out 27 May.

DR MUNDY: I suspect our colleagues on the other side of the lake may be interested in this; it's more a matter for them.

MR DICKINSON: Yes, but you're doing this now and this has come to take advantage of the situation. I have made submissions to various bodies before and the Productivity Commission, as far as I'm concerned, is the only one that still earns my respect.

DR MUNDY: Okay.

MR DICKINSON: Going to the next reason why it's important to me: addressing PPPs. I, in the early 90s, was so gung-ho for them, people used to think I was stark raving mad. However, we have the situation now that the government people and the politicians have actually been gained by business, as far as I'm concerned. That's another area that will affect you in getting that correct. Water and its treatment is a transport problem, so it'll be right in Dr Mundy's area here. You go back to, say,

Campbelltown's original census, they had a teacher, a baker, a butcher, and a water carter; that's how water is made a transport problem. A dam is nothing more than an upside-down warehouse. Adjacent to transport infrastructure is that second issue that I've raised: the concept of value capture, which is the unearned capital value that accrues to property in relationship to other property, being here transport infrastructure. You get a water pipe going past your house, even if you don't hook onto it, you've got a value increase on your house equivalent to a water cartage cost over a net present value in time.

It's an area where there are, what I call, value capture taxes - and I may have mentioned in that paper I've given you there, which I contributed to in 94, rates, stamp duties, land tax, and capital gains tax. In time, take that in future evaluations, get that tax increment back in the long term. However, developers are called on now to put the capital in and yet they're not getting a credit on the future value cap for taxes. I'm not worried about which way you look at it, but it is a financing technique that can be developed. It was very well developed with the Chicago-Kansas City toll road in the early 90s. That's where I was concerned to try and get those things in. I have a concern to get it right. I don't have a concern in grinding anyone's particular axe.

DR CRAIK: Okay. Thanks. Can we ask you, leaving aside those issues, do you think that the recent reform of the sewer and water sector in Tasmania is going in the right direction, in the interests of Tasmanians?

MR DICKINSON: I'll look at West Tamar Council because I've done that analysis in the past. The situation was that the nine councils own Ben Lomond and they bought it wholesale and sold it retail. From my calculations they were doing 25 per cent to 30 per cent cost of goods. They were keeping rates under control because of the efficiency. However, other councils haven't made the effort and we do live in a community. The reform concept I can live with. I think the process was so contaminated that we might need radioactive suits, but that's only a personal point of view.

DR MUNDY: Do you think the end result now will lead to better outcomes for water?

MR DICKINSON: I'd like to think so but until you get the water meters in the Hobart end, which should have been - I put it to the treasurer in 2000 that every house when it's sold should not be sold unless it's got a water meter, and in 10 years' time they would have solved much of the problem. But two-part pricing is an essential aspect.

DR MUNDY: The Commonwealth in the last while announced it was going to provide, I think, an amount of \$10 million to provide water meters for a large number

of homes in Tasmania. Would your view be that that's a reasonable expenditure of Commonwealth money or should that have been foisted upon the citizens of Tasmania?

MR DICKINSON: The Calvinist in me says it's an unreasonable amount of money that shouldn't be spent. The councils at Glenorchy and Hobart, they have had the advantage of the value capture taxes over the previous years. We've wasted the money in the process. Let them borrow and pay for it. That's my position. I'm sure I'm not popular.

DR CRAIK: I'm sure you're not.

DR MUNDY: Neither are we.

DR CRAIK: Can I thank you, Geoff, for coming from Tasmania - - -

MR DICKINSON: That's okay.

DR CRAIK: - - - to give those views to us today.

MR DICKINSON: You could have come down and actually increased our tourism - - -

DR CRAIK: We could have but we were appealing to your Calvinist sensibilities. It was cheaper to bring you here than it is to fly the four of us to Tasmania.

MR DICKINSON: Yes, I do appreciate that. I encountered water at my mother's farm. It has town water, it has tank water, it has a permanent stream with all rights on it and it's adjacent to the sewage farm and parks and yet my mother still does not waste water. So we've been brought up to conserve water.

DR CRAIK: The right way, yes. Thank you, and thanks for coming from Tasmania. We do appreciate it, and thanks for raising those issues and we'll cogitate on them.

MR DICKINSON: I don't know what you can do with them.

DR CRAIK: No, neither do I but we'll have a think about them anyway. Thank you.

MR DICKINSON: Thank you.

DR CRAIK: We now have the ICRC. If we could thank you for coming along today and ask you to introduce yourselves and say your position for the record and then if you'd like to make a brief opening statement we would be happy to hear from you.

MR GRAY (ICRC): Thank you. My name is Malcolm Gray. I'm the senior commissioner of the Independent Competition and Regulatory Commission in the ACT.

MR BUCKLEY (ICRC): Mike Buckley, commissioner with the ICRC.

MR GRAY (ICRC): We have alerted you recently about the appointment to these positions. I've been with the commission since 1 March this year. We have, coming down the track at us - towards the end of this year and through next year, to the early part of the following year - one of the five-yearly reviews of the ICRC in respect of water supply in the ACT. We've been turning our minds to some of the issues locally that the Productivity Commission has taken up nationally in its draft report.

We made a submission to you and that submission in part looks at some of the issues that confront us in the ACT. There are particulars in this jurisdiction in respect of water supply and water regulation. It's a large conurbation by anyone's standards in Australia and it is inland, so it's away from the sea and many of the water provision options that that gives rise to. The ACT has its own system of water collection through catchment areas and so on, and a particular structure that has grown up to support that in terms of corporate structure and so forth.

Because the ICRC has regularly reviewed the situation in the ACT - it has been on, as I say, this five-year recycle for some time now - the commission - as distinct from the two commissioners in front of you - has had occasion to visit some of the issues that the commission deals with in the report in some detail. We draw on some of that work in making our submission to you. We think that in respect, particularly of some of the pricing issues, that the issues are a little more complex than the draft report of the commission suggests and that the professional literature that deals with those issues is more equivocal, certainly in some of the conclusions it draws, and in some cases the weight of the evidence may be in a different place that the commission has come down on. We think that's worthy of your attention. We're happy to answer questions on that or to provide you with any other material, including the material from our own classwork that you might find useful.

If I can move on to that and just make some general remarks, as you would no doubt be aware, Canberra itself has been through a fairly searing experience, you might say, over the last five years or so in terms of the sharpness that some of these issues can produce for a community. We had a long period of drought which we

chose to manage, one should say, by the application of what turned out to be quite stringent water restrictions which undoubtedly imposed real and substantial costs in the ACT community. There might be a great deal of controversy about exactly how one measures those costs but there can be little doubt that they were substantial.

In response to that, certain decisions have been taken through the decision-making structures that we have in the ACT, and the commission itself has visited some of those decision-making structures, and there's a report on the public record and we assessed that. I think what those episodes do point out though are a couple of things: first of all, this is a very difficult industry. It's hard to think of an industry that's like it in terms of the key characteristics it has and, in our view, it is very important to have regard to those special and peculiar characteristics when one comes to consider issues like pricing, regulatory regimes, and so on. If one tries to draw energy between water provision and electricity provision, there are some features - the ones of which they don't have - which create difficulties for it. We're all familiar with the way the NEM operates: it provides a wholesale market which provides a five-minute, half-hourly average price signal. If you invest in new a generating station, you know what the capacity of that generating station is. Subject to the gas, coal, or whatever it is you're drawing on being available, you know how much power you can generate from that capacity.

In the case of water, there is no similar pricing mechanism to the wholesale price in the NEM and, certainly for an inland jurisdiction like the ACT, because you're dependent on the weather to provide a key input to your production process, all you can do is vary the quantity of capacity that you have to take advantage of those periodic rainfalls. You confront very great uncertainty about how much of that capacity will actually be utilised and actually be capable of delivering water in the future. That creates some very difficult decision-making problems for the community as a whole, not simply for a particular corporation. The way communities try to resolve those issues has given rise to questions, in the case of the ACT, of whether it was done particularly well or not.

I think that some of the things that are in the draft report are valuable, in terms of providing some guidelines about how those decision-making structures might be established. But I'm not sure that the draft report has gone far enough in really exploring the role of government, particularly where in so many cases, including in the ACT, the government's interests, as it were, are divided or there is tension within the government decision-making process. Because, at the same time, the owner of the assets, whose rate of return is being determined by these decision, whose investment time path is being determined by these decisions and is, on the other hand, in some sense responsible to the community as a government for the welfare and well-being of the community, including in providing its water services.

I think that, for example, although we think that some of the guidance you

provide, in terms of the way boards of water utilities ought to be operated, is useful, and we think that much of what you suggest is already in place in the ACT, but there are further things we might do. Drawing on that, there is still, I think, that - Mike will talk for himself in a moment - there's a failure to penetrate, in some sense, the difficult decisions that the community has and a failure to properly reflect those back in the mechanisms as a suggestion for their resolution. I might leave my remarks about that. Perhaps if Mike wishes to say a few things that occurred to him as he reflected on these issues.

MR BUCKLEY (ICRC): Thanks, Malcolm. I think what Malcolm was talking about there, that it is a sensible to have a separate board operating a utility, and I think that structure has been around a while. But you still only have the one shareholder - sometimes you might have two shareholding ministers given split responsibilities. It's the issue of, how do you then align the responsibilities of that corporation: as a corporation it should be acting in the best interests of the corporation, so it should have a corporate goal. But essentially what you're trying to achieve is, how do you maximise public welfare, and can you really expect a corporation set up along commercial lines to have the objective of maximising public welfare; how do you build into that process to create further tensions.

The regulatory process in the ACT is modelled on access regimes elsewhere, but it's not an access price. You're not trying to create a price to generate competition in upstream or downstream markets; the objective is to set a price for the community which takes account of, as you observe, some conflicting objectives. The ICRC Act has broad objectives; the State Owned Corporations Act, which the act has to work under, has broad objectives. The regulatory process adds transparency to that process and it brings out information which allows others to assess the relative efficiency of that business. Because in just setting up a corporation, putting a board in place, particularly as its a monopoly enterprise, it doesn't have the same pressures on it to operate in an efficient manner. It can recover its costs, but you have no certainty that the costs which it is recovering are efficient costs. I think that's one of the issues and that's why governments set up tensions in the process; to try to put into the public domain further information on the operation of these businesses, even though they've put in place an independent board to manage them.

DR CRAIK: Okay. Thanks very much, and thanks very much for the submission and the suggestions on references. Very useful. Our view would be that if you set up a corporation with a particular charter, we just want set down a lot of the responsibilities of the water utility, particularly in relation to pricing, in relation to its obligation to serve and things like that. That procurement, all those things, were set out; it had an independent board and was reviewed once every five years or so, so it's a public review; it had to report transparently annually on anything. We're curious, what is insufficient about those arrangements to achieve the sorts of outcomes, of setting prices efficiently and those sorts of things; where's the problem in the

arrangements that we've organised? Because you can involve the public and put out a draft pricing report, much as the same as you people go through that process. Where's the deficiency in those who are set up to run the show doing it, as opposed to you people who come from outside.

DR MUNDY: And given they don't have an information asymmetry problem.

MR GRAY (ICRC): The directors don't.

DR MUNDY: Well, they presumably have less of an asymmetry problem than us. I take your point that, in absurdum, you would let management do it all by themselves, because they've got even less of an asymmetry problem.

MR GRAY (ICRC): I think I'd make two points - Mike may want to make some different points, but let me make my two points and then I'll pass over to him. My two points would be, you're expecting a lot of a board of directors to do what you're asking them to do.

DR CRAIK: Isn't that their job?

MR GRAY (ICRC): No, I can think of one board of directors that I happened to have served on for a little while that was like the one you're describing, but I can't think of too many others. The board I was on was NEMMCO, which was AEMO's predecessor. Without the benefit of a charter, I might say, which would have been very useful, we tried to do what you're describing. My experience was we thought we were doing it quite well and we were certainly conscious of what it was we were trying to do, but it was actually hard to measure, even for people who wanted to measure it. Leaving myself aside, there were an extraordinary group of people on that board. To expect an entity like ACTEW to command a board of people that would have the clarity of thought to approach the kind of charter you're giving them I think is quite demanding. It's a very different proposition to manage an organisation according to the kind of charter you're describing from a commercial board of directors managing a listed company in Australia, whose task is, in my view, a great deal easier than the task that you're giving your board of directors. That's the first point.

The second point I'd make is that there is an information asymmetry and it is hard for outsiders to judge and, in my experience, it's hard for the board itself to judge. But it's even harder for outsiders to judge whether the board is performing well or not. Five-year reviews might give you an opportunity to do that to some degree but even in my limited experience of the ICRC over the last several months, I know how difficult it is to be sure I understand what it is that ACTEW is doing and we're almost in continuous contact with them.

To expect some outside entity to overview a board of directors of this kind I think would be extremely difficult. So assessing whether they were performing in accordance with their charter or not, for them - and more importantly for the community as a whole - would be very hard.

MR BUCKLEY (ICRC): I can only agree. Like Malcolm my background is more in the national energy market than water, but even there you have the same issues. I refer you to the recent Parry-Duffy report on the operation of the New South Wales electricity distribution businesses and a relationship between the boards and the shareholders. There's one thing about having a charter; it's just getting that charter right I think would be an interesting piece. Certainly I think there's advantages in what you said in the shareholder should explicitly find the expected rate of return. I think that would be a tremendous advantage. Then making the board responsible for the dividend policy and recognising their separate role, again I think there's some good corporate governance there.

But what are the performance indicators you're going to use to assess the performance of the board. I think that is much harder. It would be much harder in a situation where you're looking at the operation of that board five years down the track and not necessarily having benchmarks against which to judge the performance of the board. Coming out of the national electricity market, the businesses have had to put forward their programs for a five-year period. You at least have something there in five years' time to assess their performance against. You at least have what they said they were going to do and how they're going to do it. Whereas, as I took your process, it wasn't clear to me what would be the performance indicators against which you would judge the operation.

DR MUNDY: In which case we should have been clearer. But the circumstances you describe - I mean, I'm a director of the Commonwealth chair here. We aren't subject to regular price - much the same as the post office. The post office gets about its business and if it wants to amend the price of a postage stamp it goes through a procedure which is a process of review similar to the one that we describe; similarly Airservices Australia which I'm a director of. Commonwealth GDEs, as you're no doubt aware, have to receive a statement of expectations from ministers and come back with a statement of corporate intent which is published and probably tabled in the parliament, and we can all have a debate about how ferocious those processes are from time to time.

However, I guess what we're trying to get at, and perhaps reflecting on the discussion we had earlier with WSAA is it seems to us that the price-setting arrangements in water are particularly onerous. IPART set 66 separate items in the tariff sheet, whereas in other industries there might be a revenue cap or even more flexibly a tariff basket. I guess the question is, if you're concerned so much that you have to get right down to those individual pricing levels or would a broad revenue

cap or tariff basket arrangement set in advance over a five-year period, reporting back to yourselves - like most of the UK regulators have managed in different sectors - would that be something that would also - - -

MR BUCKLEY (ICRC): I think you're taking us beyond our experience in terms of setting the ACT, although we have approved the recent price increase but that was - - -

DR MUNDY: What do you normally set? Do you set the whole tariff sheet - - -

MR BUCKLEY (ICRC): No, no.

DR MUNDY: - - - or are you more like an AER type where you set a revenue?

MR GRAY (ICRC): No, we set up something between the two. I mean, what we set are three or four key parameters that the pricing schedules have to conform to and ACTEW then comes back with it. It details certain schedules which have to average out to those. In some cases they simply implement them.

DR MUNDY: Your approach isn't as detailed? There is a lot more discretion left in the hands of - - -

MR GRAY (ICRC): We set full price.

MR BUCKLEY (ICRC): It's not clear to me that you actually have the operation of the electricity price-setting right. In my former role with the AER, going through the New South Wales electricity distribution businesses you'd set prices, direct controlled services, standard controlled services and negotiated services throughout, so that when you drilled down into it, yes, you did not every current class - that was done under the revenue cap - but there was miscellaneous service charges which needed to be set, public lighting charges which were set separately. There is a large number of tariff classes which are set. It seemed to me far more - without the experience of actually undertaking the water in the ACT. I found the water actually to be a little more straightforward than the - the simplest one is probably the gas one.

MR GRAY (ICRC): This is reviewed every time we go through one of these exercises but for the last couple of review periods in the last decade or so we've been on a five-year time path that we consider at the end of the five years, in respect of the four prices I've talked to you about which are a wastewater charge, a fixed charge in the provision of retail water and then we have the two prices to be set and a volume at which the switch point occurs. That's it. Then there have been provisions, because of the length of the five-yearly time path and the uncertainty, both in terms of volumes of demand and in terms of whether certain investment activities will take place or not. There have been reset provisions or review provisions built into the

time path.

It's not an extraordinarily onerous process in terms of the administrative detail of the pricing itself, it's a process of some complexity every five years to revisit a lot of the issues. But I think that cost - the cost of that five-yearly review - is the cost, particularly in the present circumstances, that the community is happy to bear because it wants those issues re-examined and it wants the opportunity, at least from some quarters, to express its views to a government entity which is paid to listen to them basically. These are issues which are of vital importance to the community, and I think the community wants transparency and consultation opportunities because of the vital importance of these issues to it.

My judgment would be that if you asked ACT citizens, the community in some sense is happy to bear the cost. I think whether that is preferable to the alternative regime is simply not fair to us. We cited in the submission we gave to you some evidence from studies overseas that have compared different regimes and asked questions about costs and benefits, pros and cons, of different regimes. We think it's actually quite equivocal, but it does contain some examples which fairly clearly identify benefits from price regulation type regimes.

DR MUNDY: Declaring an interest - and I am a citizen and resident of the ACT, and it's fair to say I'm a relatively informed one - how do I understand what costs are being incurred on my behalf to deliver this regulatory framework that you think is justified on the basis of its cost? How is that communicated to me on a transparent basis?

MR GRAY (ICRC): It isn't.

DR MUNDY: It isn't.

DR CRAIK: Do you have any idea of what it does cost to set the water prices every five years?

MR GRAY (ICRC): Do I have one in my head? No.

DR CRAIK: No, no. I mean, can you get back to us on that?

MR GRAY (ICRC): Yes.

MR BUCKLEY (ICRC): We can come back on that.

DR MUNDY: I presume you know how much it costs ACTEW to comply, because, presumably, you are passing through that as an efficient cost; the efficient cost of compliance with a regulatory framework must be passed through, plus

whatever costs - so that's a cost to the community, because I've got to pick that up in my bill. I'm not sure, are you one of those regulators who charges a fee to the regulated entity or are you just funded out of consolidated - - -

MR BUCKLEY (ICRC): No, the former.

MR GRAY (ICRC): It's a licence.

DR MUNDY: So it's a licence? It's a licence fee. We're interested in the scope of the cost. You say that it's a cost that the community is prepared to endure, but I'm not sure how even someone who is vaguely professionally interested in questions of economic regulation; how I would actually, if I wanted to satisfy myself of what the costs were being incurred on my behalf, how I'd form that judgment. It's not transparent.

MR GRAY (ICRC): I'm just trying to think. I'm not sure how much of the financial position of the commission is just made public through the budget process, and the ACT would relay that information to you. Because we're not largely a budget funded agency, we don't have the kind of structure which would reveal that. We could certainly tell you what the number from our point of view is, because we have to keep the records, because we have to match up as a regulated industry. So we have quite detailed and explicit records of what's been incurred in order to do particular pieces of work.

DR CRAIK: That would be useful, if you could. Do you have a view that, even after, say, a utility has been regulated and set the prices for X years - I don't know how long you've been doing for ACTEW - but after a period of time it would be appropriate to move to price monitoring and what the different costs might be? They've done this in Melbourne Ports, where they went through the price setting, price monitoring, actually now they've moved to a point where they don't even monitor the price for a couple of the ports in Victoria. Do you have a view about the appropriateness of moving from price setting by a regulator to price monitoring for a utility, if the utility has been shown to get it pretty right.

MR GRAY (ICRC): As an experiment, do you mean?

DR CRAIK: No, I mean as a possible way to moving to a utility setting its own prices. This is the pattern that has happened in Victoria: there was regulated price setting for a couple of Melbourne ports, then they went to price monitoring, now they're setting their own prices and there is a complaints mechanism. Right now you're price setting; is there scope, do you believe, or would it be appropriate to move to a price monitoring?

MR BUCKLEY (ICRC): Thinking back over what the ICRC has done over the

years, at one time gas prices were regulated. The ICRC provided advice and that stepped back. In terms of the electricity prices, retail prices, that's now subject to a review by the Australian Energy Market Commission, whose given some advice on whether or not there is sufficient competition in the market for there no longer to be ICRC involvement in setting the transition tables. Once you have achieved a certain market position, then I don't see why you wouldn't transition and reform the regulatory process. I think that represents the success of the National Competition Policy reforms: that you set up these markets, you provide assurance to customers about prices, you put in place processes to drive efficiency, and governance of those organisations and then you can step back.

The decision would be a decision for the ACT government, in terms of water, and it would be to do with having access to information. Because the cost we actually have to look at here aren't incremental costs. You would hope the organisation had all its costing models, what it was going to do. What is the incremental cost of putting that information in the public record through an inquiry process; how much extra cost for them to be transparent in that way, to expose it to a scrutiny and outside evaluation.

DR MUNDY: I'm sure you're aware, the literature is replete with the costs of regulatory error. Regulators form institutions, they have institutional purposes, they're subject to error. This isn't a comment on any given regulator; as you know, the literature is replete. Then is it a question of the costs, on the one hand, that you describe, that may not be substantial; but the risks on the other side may be quite substantial, particularly in delayed investment costs, which we have seen particularly in the electricity industry as you'd be more aware than I. Some delayed investment, perhaps, in the past, which has now become a serious public policy concern. No less a person than Professor Garner is expressing concern about the efficacy of the way we have regulated those markets and whether there has been a cost to the community as a result of the way that regulation and public ownership has interacted.

MR BUCKLEY (ICRC): Going back to the electricity one, the objective of the regulatory process was to ensure the timely provision of investment after significant investment booms, let's say, in the early 80s, and the extent of excess capacity you wanted to have in the system. There's a cost of excess capacity as much as there is a cost of under-investment. The savings of the regulatory regime was actually in improving the timing of the delivery of the investment assets. The way the regulatory regime worked in electricity is that if the capital investment in New South Wales had have been higher earlier, then electricity prices would have been higher earlier. The pick-up in electricity prices now is a step up from prices which reflected a lower level of investment.

DR MUNDY: But they may also reflect an overall increase in real terms which, if investment had have been phased differently, may have been different.

MR BUCKLEY (ICRC): You'd have to have some idea of the optimal electricity network, and it's not clear to me that our forecasting models are that good. They tend to use engineering models anyway.

MR GRAY (ICRC): The counterpoint I would come back with though, in terms of the point about water, is, going back to your question, Wendy: what might lead me to make the kind of change you put to me, would be the belief that it would produce a superior outcome. You have asserted to me that it would produce a better outcome, you've given some examples of other activities where there has been a shift. I don't know whether those shifts have been evaluated to see whether they did produce a superior outcome or the extent to which I might regard that as evidence that could translate into the water area. I was not persuaded by the arguments in the draft report that such a shift was justified. I think that the shift would bear costs. I don't think we could do that tomorrow, and we would simply not produce the next five-year report; we would turn the responsibility over to our colleagues. But there would be some costs in making the shift. I think there would be some very substantial risks in making that shift and I found it difficult to conclude, with the enthusiasm that you obviously did, that such a shift was justified for us in the ACT.

DR CRAIK: You may well not have be aware, given you've only both recently come into the job, but were you aware if anyone actually did any analysis when ACTEW was set up and decided that price regulation by an independent price setter, to say what the costs and benefits of having an independent price setting entity were, as opposed to not? The Productivity Commission's view of the world is: identify the problem, look at the range of issues, look at the alternative ways of dealing with it, and look at the costs and benefits of all the alternatives. Our view would be, the shoe should be on the other foot, demonstrating that independent price setting is beneficial as opposed to not.

MR BUCKLEY (ICRC): I suppose my problem with that is that we're not actually dealing with a private - we don't have private operators delivering water services. What we have is a government arrangement. It is a government-owned entity. What the government can set up is its own internal governance structure to assure itself on how it is getting appropriate prices. Now, the transition in most of these public utility sectors has been to move from a system of under recovery of costs to one where consumers are facing prices which are meant to reflect cost recovery.

The next step is to say, "Look, are you getting recovery of official costs?" You create another incentive regime to try and get that delivery of efficient services. Then the next step in the process is that as electricity and water, your major costs are capital - return on and return off capital. Are you getting the best decisions in terms of the optimal timing and composition of the capital investments? How do you make those process? Hopefully you get a board of people who are expert in that and you

just put them to the side and let them make the decision, and you have a process by which other people can input information into that process. This is not price regulation over petrol or milk, it's an entirely different situation.

DR MUNDY: Well, we recently thought about price regulation of petrol and decided it was a profoundly bad idea.

MR BUCKLEY (ICRC): It was transitioned off actually.

DR MUNDY: Yes, a long time ago. You mentioned that you put in place an incentive regime but you've described a circumstance which I don't necessarily disagree with of a government utility in public ownership, probably not particularly contestable given the nature of the place, and then you say you want to put in another incentive arrangement to get capital investment decisions right. What's the incentive? If there's an incentive arrangement, presumably it's providing the incentive to someone. That's what an incentive is. Who's the incentive provided to and how do they receive it and what do they do with it?

MR BUCKLEY (ICRC): It depends how you structure the business.

DR MUNDY: Let's think about the directors who have presumably been incentivised to do the right thing.

MR BUCKLEY (ICRC): That's the process by which the decisions are made over the investment process which you would hope - you have to put forward the information on. What is the expected future demand? You'd need that information. You'd need information on the community's willingness to pay forward. You would need information on the options for meeting the delivery of those expected order needs. You would put in place then assessments of what's the least cost way of delivering that additional supply. I think you, in your report, talked about real options analysis, putting in place - but requiring boards or entities to apply real options approaches. What you need is good investment appraisal techniques to be there. I think that's the way you do it.

But on the other point, how do you ensure that the cost of it is actually efficient. You can separate out the ownership of the asset from the delivery of the construction of it. So while you can't have competition in a natural monopoly market, you can have competition for the provision of the service, so you can entirely contract out the construction work, contract out the maintenance work so you can have an entity which is the owner of the asset but they contract out all other services so you can get an idea of the efficient prices of delivery.

DR MUNDY: We do that in building schools and hospitals as well. That's fairly standard government. I mean, the days of day labour forces in government

departments is long gone. We now don't even have road gangs. My question is this question about incentives because it seems to me that your argument is that we need to provide an incentive framework to get efficiency and I'm still not clear who's being provided with the incentive. I absolutely understand why it's important to have efficient procurement and assessment processes, but the incentive in a private trading enterprise is the maximisation of profit, and the literature is replete with the difficulty of how do you, in a public sector circumstances, provide incentives.

Now, the directors of ACTEW, I don't think - I might be wrong, but certainly most GBEs their remuneration is fixed. So their only incentive, it seems to me, is their professional reputations or the threat of action under some form of statutory sanction. It's not clear to me why that group of individuals doesn't have an incentive and the proper motivation to pursue a set of investment policies which are in the public interest, any more or less than a regulator would, or, for example, a government business enterprise oversight unit in the Treasury.

MR BUCKLEY (ICRC): That may be the case but they may also be risk averse, after all if your issue was with excess investment, well, why wouldn't that be the case that - - -

DR MUNDY: I'm concerned with under-investment.

MR BUCKLEY (ICRC): Under-investment.

DR MUNDY: In fact I'm probably more concerned with that - - -

MR BUCKLEY (ICRC): My reading of the report was that you were concerned that too much investment had been brought forward.

DR CRAIK: Well, there was a case of under-investment then we seem to have seen the reverse.

MR BUCKLEY (ICRC): We sort of lurched from polar cases.

DR CRAIK: That's right, exactly. Given we're going to run out of time in a minute, can I just ask a question about tariff options for consumers. Do you think that consumers should be given tariff options in terms of a different water service offering different prices to meet their particular choices?

MR GRAY (ICRC): The difficulty with doing much in this space is the limitations of the water meter and technology that we have in place and the cost of doing very much about changing that technology.

DR CRAIK: If the utility - - -

MR GRAY (ICRC): What sort of variations did you have in mind?

DR CRAIK: Well, if the utility enters into a contract, so someone who only wants to use a small amount of water, you might give them something like an inclining block tariff so for the first X they pay a certain amount, and then after that they pay a lot more. Then someone - because they only want to use a small amount, but someone else who wants to use lots of water, likes their garden, is prepared to pay a higher price to have unlimited access to the amount of water they use. In both cases you only have to read the meter every quarter, it seems to me, to get the answer. We leave the number of options up to the utility.

DR MUNDY: People may have a different preference for security. They may have a small number of fruit trees in the backyard and they would be prepared to pay a reasonable amount of money for a small amount of water to avoid restrictions or, for example, some of us who live on sloping blocks in the ACT might have a different water preference because of our foundations, than someone who lives on a slab on the flat.

MR GRAY (ICRC): I'm not sure at what point in providing a variety you hit dimension returns, but one of the things that the inclining block tariff - that we've had in the ACT for some time - is supposed to do is to in part provide what you're talking about. It's to provide essential use water, if I can use that phrase, at a reasonably low cost but also provide the option for people who want to use a lot more water on extensive gardens or whatever it is to do that, but at a higher price. There's that degree of flexibility built into the inclining block tariff.

DR CRAIK: But they have no choice. There's one option for everybody, pretty much.

MR GRAY (ICRC): Well, presumably everybody would be entitled to pick up any of the tariffs that were on the table under the system that you provide, so I'm not entirely sure. What you're talking about is more variety. I don't know whether you want - - -

DR CRAIK: More variety without restriction because there was also the issue of restriction at the same time.

DR MUNDY: Yes, that ability to do what I might want to do because I've got half a dozen fruit trees on a steeply inclining block when restrictions are on, is removed from me, and I may have substantial investments which are sunk and sunk for good reason, like I really can't afford the fact that I live on a sloping block.

MR GRAY (ICRC): We're now talking about, I think, something - - -

DR MUNDY: I think the issue is more the interaction of restrictions with the ability to price.

MR GRAY (ICRC): Sorry, that's a different question. Sorry, I wasn't addressing the right question.

DR MUNDY: I'm not as fussed about my security entitlement when it's raining a lot; my fruit trees are really happy - I don't have any fruit trees, by the way.

MR BUCKLEY (ICRC): In some ways, the question there is, how would the ICRC evaluate that, if the business proposed it.

DR CRAIK: That is the question. Yes, how would you or could you?

MR BUCKLEY (ICRC): We'd have to look at the reasonableness of their forecast, if it's within the paradigm of recovery of efficient costs, and to the extent to which you would deal with forecasting errors which are made around that. Who would bear the forecasting errors in terms of - because the tariffs you'll end up paying all depend upon the quantity of water, and that has to be forecast, and the differences are then picked up later in adjustments to tariffs going forward.

DR CRAIK: I guess, one of the economic regulators did rule it out when one of the utilities proposed offering a variety of tariffs.

MR BUCKLEY (ICRC): It would be on the strength of the submissions that came in.

DR CRAIK: I don't know that there was a thorough review of it; I think this was just a reasonably rapid response.

DR MUNDY: No, just that they were told, "No."

DR CRAIK: Without any kind of structured process to consider it. We're just interested if you've considered it, I suppose. We're not trying to put you on the spot.

MR BUCKLEY (ICRC): We hadn't considered it.

MR GRAY (ICRC): There have been suggestions made around the water restriction situation, which is your sloping block, fruit trees - and this goes in the direction I think you're thinking of - that people should be able to trade their water quotas under restriction regime, so that people who actually don't need much water, to whom it's relatively low value at the margin, can trade it with your guy on the sloping block who wants to make sure he gets his whatever it is.

DR CRAIK: I suppose that's the effect of the thing - - -

MR GRAY (ICRC): That's been looted and discussed, hasn't been proceeded with and, to my knowledge, hasn't been formally considered by the commission.

DR CRAIK: I think, regrettably, we're going to have call a halt to this, because we're already over time. But thank you very much, Malcolm and Mike, for your submission and your comments; it's actually been very helpful.

DR CRAIK: Can we now call on ACTEW. Could the two of you introduce yourselves and state your position for the record, thank you very much, and then if you'd wish to make a few brief opening remarks, we'd be happy to hear from you.

MR SULLIVAN (ACTEW): Thank you. My name is Mark Sullivan. I'm the managing director of ACTEW Corporation Ltd.

MR McILWRAITH (ACTEW): I'm Kerry McIlwraith. Formerly the CFO when I appeared before, but I've now retired and I'm just consulting back to the ACTEW Corporation.

MR SULLIVAN (ACTEW): Wendy, I think we'd just like to make a short opening statement, but we're pretty satisfied you understand who we are and what we do. We're a territory owned corporation for the ACT government, a company under the Corporations Act. We own the ACT water and wastewater systems, including storage, treatment, and reticulation reuse facilities. They have a combined value of approximately a billion dollars. We're a licensed provider under the Utilities Act 2000 to provide water and sewerage services to Canberra, we provide bulk water to Queanbeyan, we are subject to economic regulation by the ACT's Independent Competition and Regulatory Commission and we partner with Jemena who are owned by Singapore Power International in ActewAGL Distribution, which manages the water and wastewater networks under contract, and with AGL Energy in ActewAGL Retail, which provides call centre and billing services in respect of water.

We also are a water utility which has a significantly increased capital budget at the moment, with the construction of the Cotter Dam, with an eventual storage of 78 gegalitres on the Cotter River, and pipeline and pumping facilities to transfer water from the Murrumbidgee River to the Googong Reservoir. We've also been in the water trading market and we own water rights which we are planning to be able to transfer in times of need from the Snowy Mountains Tantangara Reservoir, across to the Googong Dam through the Murrumbidgee-Googong pipeline. We've given you two submission to this review and appeared before. We welcome the commission's draft report and we're pleased to be able to be here.

We think that the report has given substantial consideration to the issues, such as the legal framework for economic regulation, the price to give urban water and planning, decision making for supply augmentation, including the recommendation on the value of real option analysis, and I think these issues are essential to progress in improving efficiency in our sector and we really do encourage you to continue through to the final report. We're very interested in a broad definition of economic efficiency of water and wastewater services; we think they must include health and environmental costs and benefits not priced in markets, and greater accountability

and transparency of regulators in these areas, a better delineation of roles and responsibilities of the various bodies in the urban water sector, a wider consideration and adoption of flexible or dynamically efficient water pricing, and a wide adoption of net economic benefit measures and acceptance of real option techniques of assessing augmentation proposals. We are in strong agreement with our colleagues at WASA on the analytical complexity of real options techniques and that they do pose a challenge in terms of regulatory and public acceptance, although we're probably more sanguine than WASA on the merits and applicability of dynamic pricing: we think dynamic pricing can work.

The other thing I just want to say is, I think the issue we have as a water utility - and, I think, the water industry has is - is presenting a value statement to our users, our owners, and others about water. I think, in the past, it's fair to say, that water value, as determined by price, has been insignificant to many people and it has not got into the thinking of whether or not this is a product I value or not, and when you think about the value statement about water, I think you'd think of two key elements. One is safety. We tend to see safety somewhat taken for granted by consumers, but it is an extraordinarily important thing. We think of safety, I think, in terms of the safety of drinking water, but I think we also have to think in terms of our catchments; if you're a river based system, such as we operate in, you must think about safety in respect of your discharges and what the impact of those discharges is going to have on other communities of users. We have to think of the safety of our staff and the safety of our treatment processes, but I think safety is a very important value proposition to people.

The other is supply and security of supply. I think people have to put their mind to security of supply. In terms of the imposition of reasonably heavy-handed restrictions, we took away that debate and we've basically said, "You can't have it." That was a government policy decision and it's a valid policy decision of government to make. But I do think it is very, very important to engage our community in this issue of, what are they willing to consider in respect of value of security. I was at a water conference recently where an expert got up and said that the water industry has for decades and decades dealt in probability, and have been reasonably confident in dealing with probability, and that probability no longer is as easy as it was. Therefore, we deal with possibility. They saw as a natural consequence of that, that dealing with possibility rather than probability you would spend more. You will cover the possibilities. I think we do have to engage with everyone in terms of what value do you see in having security. In Canberra, the ACT, and through it, Queanbeyan, we are saying that with the augmentation to our capital works and our back-up insurance systems, if you like, that we now believe that we have satisfied the government's policy objective of one in 20 years' restrictions.

We now believe we can satisfy the impact of increased population growth in Canberra and satisfy that population. We now believe that if climate change impact

is contained somewhere around the circa 2030 predictions we can provide a very strong measure of water security for the residents of the ACT and Queanbeyan for the next 30 years at a cost. When we talk about water we talk about the \$363 million that the Cotter Dam will cost us, or we talk about the fact that we've got a \$2.33 tariff and \$4.66 tariff come in as a review point.

I think there's an onus on us and others to basically say, "What sort of a value composition does that put and what do you think of that value proposition? Do you think paying \$4.66 for the first kilolitre of water above 200 is too much?" It's a different answer to maybe an answer which says, "Would you pay for the fact that you can water those fruit trees in your backyard if you want to pay?" or, "Are you happy that if it gets to a point where it is decided to intervene with restrictions that's going to prevent you watering those fruit trees?" I think on that note if you want open discussion - - -

DR CRAIK: Thanks very much for your comments and your submissions. Going back to the debate we were having previously, a lot of people who postpone an inquiry like the government's and institutional reforms that we propose, but generally there's a disagreement about moving away from independent regulation of prices, and I'd guess we'd be interested in your views about that and where you stand on this issue of independent regulation of prices, given the sorts of precursor conditions we propose where you have an independent charter, an independent board, and all the things we set out in the charter. The utility is actually set in the price. What's your view of those and the reasons for your view?

MR SULLIVAN (ACTEW): We meet a lot of those requirements that you suggest are good requirements. We're a corporation which imposes certain responsibilities upon directors and officers of the corporation. We have an independent board. While the board is appointed by our owner, the ACT government, there is no-one who sits on our board as the government representative. They sit on our board as individuals. Their remuneration is fixed, and fixed by the Remuneration Tribunal of the ACT. The only directors' remuneration which is not fixed in that way is my own which is fixed by the board, so I'm probably the only one who escapes your definition of what other incentive do you have from doing the job properly or well in that I do have incentives to do the job well and properly.

I think like any monopoly you take some comfort in having someone independently report on how you're doing it, what you're doing, whether it's reasonable, whether it's efficient, whether you're meeting the sorts of standards that you should be expected to meet as a utility or as a corporation. At the same time I like, in running an organisation, to have responsibility and accept accountability for what I'm doing. If I look at, for instance, the recent price rise announced in Canberra for water, one element was to account for the costs of the Tantangara transfer, a project under the control of ACTEW as a result of a government policy decision, and

it certainly added to the price, but the great majority of that price rise was to deal with a variation of volume of water that had been sold to consumers in first two years of the agreement.

The price determination had allowed for the fact that if that volume had an impact of more than 7 per cent on revenue, it was open for us to seek a change or to provide the data to the commission for it to determine a change in price as a result of volume. I think if you go back to the water price determination, you have a submission by ACTEW as to the volumes of water it expects to sell. Based on that submission that falls into a price setting. You have other submissions around volume and then in the end you have a determination by the commission that says the estimate of volume is this. Now, I would think that most consumers in the ACT would believe that the change in price as a result of the underestimation or the overestimation of volume was my responsibility and something that I should be reasonably accountable for. Yet it was not my estimate. It was a volume estimate above what ACTEW had recommended. It's not claiming that ACTEW were better at it, it just was that our estimate turned into something closer.

Yet I don't think there is a real accountability of the regulator to the fact that two-thirds of what is seen by the community as a fairly significant price increase was due to a volume forecast problem the commission had determined. So I would like to see a scheme where basically I could be tested. I do like to see a scheme where my monopoly can be curbed somewhat. I think things like revenue caps potentially can do that. But then I would like to see a scheme which would say that I would then accept the accountability and the responsibility for water pricing within that broad framework. I think in the ACT we've moved from a reasonably broad framework of regulation, slowly and slowly towards an extraordinarily controlled set of regulatory frameworks to the point where we do have muss in our price.

I cannot say, "Well, I'm allowed to charge you \$4.66, I'll charge you \$3, or if you agree I'll charge you \$6. I must charge you \$4.66 once you go over the top or \$2.33." Now, there's a whole set of schedules in fact that we produce, but in the end I think we are a reasonably heavy-handed regulatory regime here and that's a decision for others. We have in the past been, I think, as your report paints the industry, probably guilty of under-investment as opposed to over-investment, a utility that has moved into - because we've not only had the issues of drought and the issues of climate change, we've not only had the issues of one of the most devastating fires which really upset the framework of our water supply, and we have moved massively in terms of both what was seen as immediate drought contingency measures, water treatment measures as well as long-term security measures.

DR CRAIK: Is there anything in our model that you think is lacking in terms of accountability for the utility; in terms of the model we've proposed, which would give people who are uncomfortable about that model now more security about the

proposed model? Can you think of anything that we've left out that would help?

MR SULLIVAN (ACTEW): I don't think you'll take argument out of the scheme. Again, I think, I look at us and, in respect of our capital works, our recent augmentation bids, I think they fit a very good policy framework. The decision on considering options, as to what the do to Canberra's water supply, was a government-led policy consideration, in terms of, "What are we seeking to achieve," and then it was the utility coming back with a series of options. I think we are probably ahead of the industry generally in respect of our desire and willingness to engage in economic analysis to determine what options we want. That economic analysis that we have engaged in to date is not free of controversy, and even our regulators have pointed out that, while they liked the framework of our economic analysis, they didn't like the rigour of its implementation; we may have selected values, where values could be selected, which help make the case and, probably, in what is seen as a risk-averse industry, took a fairly steep test of risk aversion, as opposed to a light-handed test of risk aversion.

The real options work, that came very much out of the regulator's review of the costs of Cotter Dam, where we debated with the regulator economic analysis. Certainly, coming out of that discussion, was a desire by us to improve it even further. It certainly has taken us down that pathway of real options and understanding. What we struggled with was whether our project, as a portfolio, had more value than each of our projects added together. Was there value in doing them together, what was the value of saying, "No, let's not do it yet." I think your report picks it up well; if you can put numbers against probability, it would be wonderful, and you can do nice analysis then and say, "Well, are you able to pay a lot of money for a five per cent chance." The thing I think a water utility faces under the current value system that consumers have for us, is that there is a feeling that the community, when faced with it, is very risk averse. The analysis side is still going to be open for question.

I know our board worked very, very hard at understanding that many of our construction options came up with negative net economic value at a set of scenarios and positive net economic values at another set of scenarios, and then what do you do. I think the advantage of our board was they put themselves in what they viewed to be the place of the consumer, the economy, the government, and others and said, "Well, I think this is what we'll do." I like the simplicity of the model. Holding monopoly power is something that, I think, is onerous, and I think any monopoly provider, at one level, gets a lot of comfort out of saying, "It wasn't me," but I shouldn't have all the comfort of saying, "It wasn't me." All I do is take my case and someone else determines what I can charge you; that's their problem. But I do like the idea - and I know you posed the idea - that there continues to be oversight and, probably, some industry-specific and expertise oversight of how we get to where we get to. But I would like the responsibility and the accountability of doing that to be

placed more and more on the shoulders of the corporation and its board of officers.

DR MUNDY: Would you see a better circumstances where things are clearly specified as to what and how you will adopt a real options approach to augmentation, with, effectively, a backward looking "How have you gone?" sort of arrangement, perhaps even with some trigger mechanism for intervention if there is substantial evidence that you have abused your dominant position? Because that would then put you in the accountability position you'd like to be in

MR SULLIVAN (ACTEW): I've got no problem with the idea that the detection of an abuse of a dominant position should be dealt with and dealt with properly, and I think that is, if you are found to be in abuse of a dominant position, I think - I really find it hard to cut the tie to the ICRC. For me, I would like it to be lighter.

DR MUNDY: The challenge that we're struggling with is that we actually think that accountability mechanism is really important too. I think Yarra Water in particular have made this point; that there may be good reasons in an early stages of institutional reform, you might throw up other reasons - the challenge, in my mind, is that, when mistakes happen in infrastructure industries, they tend to persist for a hell of a long time. The question is, how do you deal with those sorts of issues. We've seen in South Australia, Victoria, and New South Wales, consumers are going to live with the mistakes for a long time, and to be fair to the regulators in those jurisdictions and indeed to the water supply utilities, they weren't of their making. The one thing I think is challenging is, how do we make sure that major, persistent capital mistakes don't occur.

MR SULLIVAN (ACTEW): I think one is to focus on the policy and the processes that led to decisions, and a very clear understanding of what drove from, perhaps, the owner's perspective of government, of policy position, and then from the utilities' perspective, the construct or other decision. There's no doubt, for instance, at worst case, if it rained consistently in Canberra, evenly, and provided X millimetres of rain per year for the next 30 years, we could live on a dam; we would look at Bendora Dam and say, "Wonderful." That would suggest that any other capital works you did other than that were superfluous.

I wouldn't want to roll dice and say I'm going to be judged on, now, what happens. I'd want to be judged on the basis of saying that, "This is what we are seeing in respect of climate, this is what we're seeing in respect of inflows, this is what my worst case looks like, this is what my best case looks like, and I'm having trouble delineating between worst and best case. This is why I think you need to do this one, which is a natural rainfall occurring system. This is why I want you to do this one, which is basically the utilisation of a river which we haven't ever fully utilised in terms of our water security situation, but it may reflect a different climate to what's happening actually in the ACT catchment, and this one is an insurance one.

In doing that, I believe that I have now covered most of those bases. Have I gone too close to the improbable on either end?" That's where I would like to see more debate.

If you read the water options policy papers that came up before the decision, I think some people read them from a policy perspective and read them saying, "Are you right or are you wrong?" I think some people who are generally antagonistic towards decision making by my corporation, I would say, probably even read them better and argued at that level. Whereas most people talk price: "It's going to cost us this, it's going to cost this much. What's it going to do for water prices?" Any way to encourage that debate at the start of processes - a willingness to pay for a survey in Canberra, it would cost us about a million dollars to do. Part of me says, "I can understand tremendous value in having that material from people and understanding those people." My board likes to see independent economic analysis of options, so we really have been utilising the services of both the University of Canberra, the Australian National University, International Economic et cetera, et cetera, because, I think, the board says, "Well, are you too wedded to what you want to build?" Getting that side of the process, and then it is testing the efficiency of how you proceed then. That's pretty simple stuff; it's not that hard.

The Cotter Dam is a good example. We (1) wanted an independent review of how we were doing it, and whether we were doing it right. Government wanted the ICRC to review how we were doing it and whether we were getting it right. At the efficiency, construction-type measures that were reviewed, they're identical reports. It's reasonably safe, standard stuff to say, "Yes, they've delivered the project well." That's where I'd like to see greater focus, saying, "How did you work to the point of decision-making?" That requires some work on our standards. I don't think we could convince the ICRC fully of how we went through that for the Cotter Dam, and yet we were first confronted by any suggestion that we didn't do it fully, it took us a little while to sit back and say, "If we can't convince someone who knows us well and knows our industry well, we've done something wrong." Either we haven't done the right analysis or we haven't been able to present what we've done properly, and we should. We were able to say to our board; they were convinced. I can't convince a third-party, so that's a focus I'd like to see more and more into. Economic analysis is so important in water and I think it has been somewhat deficient.

DR CRAIK: I think, regrettably, we have to wind up matters. I'm sure we can find other things to ask you, but that's been really very helpful. Thanks, Mark, and thanks, Kerry. That completes the formal appearances today. For the record, is there anyone else who wants to appear today, briefly, before the commission. I adjourn these proceedings then and we'll resume on Friday, 10 June.

AT 3.38 PM THE INQUIRY WAS ADJOURNED UNTIL
FRIDAY, 10 JUNE 2011