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TRANSCRIPT
OF PROCEEDINGS

PRODUCTIVITY COMMISSION

DRAFT REPORT ON URBAN WATER

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

TRANSCRIPT OF PROCEEDINGS

AT MELBOURNE ON FRIDAY, 10 JUNE 2011, AT 8.38 AM

Continued from 6/6/11 in Canberra

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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 Melbourne, hearings have been held in Sydney, Brisbane and Canberra, and following today's proceedings, which will conclude this round of hearings, we will then be working towards completing a final report to the 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 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 health and safety legislation, you are advised that in the unlikely event of an emergency requiring an evacuation of the building you should head out the front door.

I would now like to welcome Alan Moran from the Institute of Public Affairs, who has agreed to come on first because we are organising the technology for a slide presentation for Market Reform.. Alan has kindly agreed to come on first. Alan, could I ask you to introduce yourself and give your name and the organisation you represent. Then if you'd like to make a brief statement, we'd be very happy to hear from you. Thank you.

MR MORAN (IPA): Thanks, Wendy, I'd be pleased to do that. I'm Alan Moran, director deregulation, at the Institute of Public Affairs which is a public policy think tank, private think tank. We make comment on a raft of issues on regulatory matters on privatisation, on taxation et cetera. We have undertaken work on water for many years now, mainly in terms of the rural water aspects because rural water is more important in terms of the size of the take of water from Australia.

Urban Water - you will see we made a submission. Let me summarise where

we see the issue in terms of urban water. We don't see a particular shortage of water. There clearly isn't a shortage of water continental wide. There's only 3 per cent or something of the water which falls on Australia that's actually used in the right places, but even so, given Australia's climate et cetera, there is no real shortage of water for urban usages. 80 per cent of water is used and we've only really got one river system which is the Murray-Darling and about half of that water is used in some way or another, but 80 per cent for agriculture and a somewhat less proposition for industrial use.

None of the major cities are short of water insofar as they have depleted or used all their low cost resources from natural measures. What we would draw attention to in this is that there are obvious alternative ways of collecting water. Easily the cheapest is catchments in high dams, as long as they're available, and they're clearly available in the city of Melbourne, Sydney, Brisbane and also in Adelaide and Perth to lesser degrees. By trawling through the literature - which I'm sure you've done as well - we've estimated what the costs are of the water itself from one source and another, and by and large the costs of water collected in high dams is anything from a third to an eighth of the costs from alternative sources.

There are other ways you can do it. There are some recycling ways which may well make sense in some places at some times. Certainly desalination plants make sense in some countries, for example, Israel. They clearly don't make sense here, even if we had the sensible Industrial Relations process to bring it on time, but the costs of a desal plant here are three or four times the cost of an alternative dam. There are some measures of stormwater which I think you have drawn attention to as well in the commission's report, and stormwater engineering possibilities can deliver water relatively cheaply, but again it's small beer, it's not big licks, and it's basically got to be not retrofitted, it has got to be undertaken with the commencement of a housing estate or other infrastructure.

The cost of the water is the first aspect we look at, and clearly if you're going to be sensible about this and not waste public moneys then when we need more water we should be building dams and not trying to avoid building dams. The effect of a dam on an area is relatively minuscule and certainly the water it collects is relatively cheap. By and large, because the dams in Australia are in the high areas, they are gravity fed to the urban areas and there's relatively little pumping costs, and that's in contrast to some either means, especially desalination plants which by definition are on the coast and have to be pumped et cetera.

The aspects of the costs are, firstly, the collection of the water; secondly, the delivery of the water. The transmission and distribution costs of water are typically - if we went for the lower cost sources from natural sources - about 80 per cent of the cost. To a great degree - this being a natural monopoly - one way or another is normally run by government institutions, and like any government institutions which

run infrastructure it tends to be gold-plated and undertaken rather less efficiently than is the case with private sector operations.

There are ways of getting around this, and some countries are semi-privatised or have long-term leases on water provision and that might well resolve some of the excess costs which seem to be endemic whenever you have it owned by government.

One aspect which is quite in vogue at the moment is, in terms of taking pricing action for water, to encourage its conservation. Certainly it's the case that pricing ought to be cost-reflective. One of the problems with pricing action, for urban water anyway, is to what degree this would encourage the sorts of conservation people want to encourage. The typical demand elasticities are something like minus 0.1 minus 0.3. Given the fact that 80 per cent of the water is actually distribution costs, when we're talking about applying that elasticity at the consumer level we need massive price increases before we can actually see reductions in demand.

I suppose one of the issues is that there's really little case for those price increases. For the valuation of the water for urban usage there certainly isn't the shortage that has been suggested, and the shortage that might exist is simply politically directed, because governments refuse to allow the building of dams. So pricing, yes, it should be cost reflective. If we were talking about a sensible pricing level there'd be flagfall price of probably about 80 per cent of the costs on average; and the usage would be about 20 per cent, which reflects the costs in general.

Basically our view is that there is no acute shortage of water. Water is scarce, but, like any other goods, it should be brought to the market in response to consumer demands. While it's difficult to price some of these things - in terms of the natural monopoly of the transmission and the distribution networks et cetera - these two ought to be cost reflective in some way.

DR CRAIK: Thanks very much, Alan. Your submission seems to imply that you think that we dismiss dams. That wasn't our intention. I guess we were trying to reflect the sorts of commentary that you see about dams, rather than a commission opinion. Leaving that aside, do you think the recommendations that we propose - in terms of the government's reforms, removing policy bans, changing the institutional arrangements the way we have proposed, and trying to remove the level of political intervention that has been there - would actually lead to better supply augmentation decisions?

MR MORAN (IPA): Yes, I think it would. Clearly the problems we have had around Australia with water shortages are political. Essentially, we build dams with a capacity for two years' supply of water, or more. If you're living in western Europe you've probably got two or three months' supply of water. They have occasional droughts, which are quite mild by our standards, and there's one in England at the

present time, that lead to problems because they haven't got much storage. Nor should they have much storage, because it doesn't make sense, it rains all the time.

Here we can go years without rain, and people recognised this 100 years or more ago, that we have to have high dams, vast storage capacities, which sometimes take a while to fill. The reason why we don't have them is because politicians are terrified of somebody in a koala suit standing on a dam wall being pictured in the media, and so have contrived ways to avoid having dams, and indeed have tried to avoid having work undertaken to estimate the cost of dams.

You could have looked in vain a year or so ago in the Victorian web site to try and find what the cost of the dams were. They had done the work, obviously - they're not stupid; they had had SKM and various people estimate what the costs would be, but they didn't really want the public to know, because if the public knows what it costs to build a dam and supply water that way, compared to desalination plants, it demonstrates the incompetence of the government.

DR MUNDY: Just on this question of dams, you beg the question, "Can we identify why certain dams didn't proceed?" Certainly in the case of Traveston, it was stopped by the Commonwealth environment minister exercising the obligations that he had under the Environmental Protection and Biodiversity Conservation Act.

My recollection is that the information about the benefits of the dam were fully available, both to the Queensland government and the minister, and the principal objectors in that case were not people in koala suits but small farmers and landholders. Wouldn't you agree that in some cases these disputes are over alternative uses of the land which have an economic and productive element to them as well as issues about certain listed species? That was the case in Traveston, and might not be elsewhere.

MR MORAN (IPA): I agree. It's the case elsewhere as well. Certainly the National Party had made statements in this state to say, you know, "Melbourne should farm its own water and not take our water," or whatever. I don't know if that was official policy there, but some MPs were making those sorts of statements. Yes, there is always and there has traditionally been opposition to dams which are "taking the farmer's water". Essentially, a farmer is a businessman, and really this is a question of the price. If in fact we are talking about environment organisations, they really don't attach a price to it.

Farmers can be compensated, and, if it is their water, would be compensated of course. It probably isn't, but nonetheless there are means of allowing things to go forward. There are suggestions of, "Well, a community is going to be flooded by this," and you look at what the community would be and you might see five houses. I mean, it's a trivial cost, in terms of the aggregate requirements for the state. Yes,

there are many involved, and traditionally the farmers have sought to avoid having water sent to the urban areas, because they recognise that urban areas can pay far more for it, value it far more than they themselves and that would - - -

DR MUNDY: But you'd surely agree that there may be circumstances where a dam does not proceed because the community's valuation of the alternative uses of the land and the other resources may well be higher than the need to provide urban water supply.

DR CRAIK: Or they're prepared to pay a high cost for some other source instead.

MR MORAN (IPA): If they are, they are. If the people who owned the land or had a stake in it - not in the sense of a stakeholder being everybody in the world, but those that have a stake in it because they are affected - - -

DR MUNDY: They'd be the freehold owners of the land.

MR MORAN (IPA): Freehold owners, or having some other stake as is normally defined under common law. Yes, if they valued it such that they said, "No, we're not going to sell our stake." Maybe you have come across them, but I can't think of a case like that, in Australia anyway.

DR MUNDY: You gave back to us some data that we put together on capital costs on desal. Do you have any views as to why it seems to be a lot cheaper to build desal plants in Western Australia than anywhere else?

MR MORAN (IPA): No, and it seems cheaper still on Israel. I find it quite perplexing. In fact it's near competitive in Israel to build - - -

DR MUNDY: It may have something to do with general levels of construction costs, but you'd expect they'd smooth out over Australia. If you expected construction costs to be elevated anywhere, I suspect it's probably Perth, for industrial construction.

MR MORAN (IPA): Exactly. Yes, it does seem odd that that was there, but it was a while ago and perhaps it wasn't costed as vigorously as the Melbourne plant.

DR MUNDY: The bidding up is very recent.

DR CRAIK: One of the things that we have recommended is changing the institutional and government's arrangements for water and suggesting that the utilities should set the prices for water themselves rather than an independent economic regulator; or at least a move to price monitoring, as opposed to price setting or revenue caps, basically move away from an independent economic

regulation of prices. Do you have a view about that?

MR MORAN (IPA): I think it's going to be too difficult, unless you did it rather like it's done in electricity where you set a transmission or natural monopoly price and leave the residual to individual firms. It's so difficult to envisage how that would be done. Where you might try and do it is have a bidding process - and this comes back to the French system - where you put the water provision and the sewage disposal provision up for tender to firms and they bid on the basis of known facts and various other aspects, and perhaps bidding also a particular tariff, and the most attractive bid wins.

That might well be a way of getting rid of some of the gold plating which seems inevitably to follow with the natural monopoly. I don't know if you could just simply leave the prices to the market because they're in the market as such.

DR CRAIK: No, that's right. But our view is that the utilities essentially propose something to the regulator, the regulator reviews it. I mean, why is the regulator in a better position that the utility that actually runs the business, the people that run the business? Why is someone independent better at identifying what the price should be? We have heard one interesting example where the regulator decided their water forecast was better than the utilities which led to higher prices but the utility copped the blame.

MR MORAN (IPA): Yes.

DR MUNDY: Because you make the point that these businesses are gold plating, and regulators have been regulating these businesses in Australia for, in most cases, well over a decade. So if the gold plating persists then clearly the regulator isn't getting rid of the gold plating. Why then don't we just get rid of the costs associated with the regulatory activity and accept the gold plating as a fact of life, at least as long as we are prepared to insist on public ownership. Where is the regulator adding value?

MR MORAN (IPA): Well, probably not. I mean, Wendy's point is quite accurate. You're coming into the position of that which - Stephen Littlechild, the first regulator of electricity, his idea of regulation was just him and a couple of guys. They would do it all, just CPI minus X and just carve it down year by year. It might be worth reapproaching that and saying, "Okay, well, here's the cost, we want somebody to bid for it, and you're going to reduce it year by year willy-nilly. We don't need a regulator to go through all the individual facets of it."

DR MUNDY: But Prof Littlechild now acknowledges that over a period of time that form of regulation, assuming it was successful at the start, now has probably run its course because it's particularly useful at getting rid of lazy opex immediately

post-privatisation or post industry reform. But at some point the opex is what the opex needs to be and you don't need to pursue that, and it's not particularly efficient at driving out capital inefficiency. We've seen that in the case of Sydney Water who IPART very helpfully provided us some data on.

But I guess what's coming to us is, whilst there may well be a need for some oversight by a regulator, it's the business of - for example, in Sydney - IPART sets, I think, 66 different individual prices. Would there be a better way, do you think, of constructing a framework that would give the public confidence and that's what I think ultimately what a lot of this is about. If we're going to have regulation, what's the best form of it, accepting it's the second best perhaps?

MR MORAN (IPA): There probably isn't a best form. Certainly the UK electricity facilities - or the electricity regulator - was more successful in driving down the prices than has been indicated in Australia, but that's according to Littlechild's current work. Our system for electricity was not dissimilar from the UK but it didn't appear to be as vigorous in pulling down the prices, certainly not in the states where the system remained nationalised.

I mean, what you're getting at, there's got to be a simpler way of regulating this than dead weight costs with the regulator and that's clearly the case. I don't know the solution to it but if you can get to what you were earlier referring to, some sort of quasi market situation whereby you allow people to bid, I mean, there are a lot of water firms around the place now who would bid for a price and for an asset that, of course, you've actually got to figure out what that price would be. As you say, having 60 different prices makes no sense at all. There ought to be a two-part tariff on this as a connection cost which would vary a little bit with the pipes et cetera, and then there's the cost for water which would be relatively in variance.

If you can get a situation whereby people are able to bid, even people within the public sector - and that's been successfully done in some US states - bid for the ongoing work, then you would get the competitive tensions in to drive down some of these costs and perhaps reduce the amount of duplication you have whereby the regulator does exactly the same work as these water companies.

DR CRAIK: Okay. I think we'll have to wind up, Alan, but thank you very much for your submission and your presentation, and thank you for your comments today.

MR MORAN (IPA): Thank you.

DR CRAIK: I think we're right for our next participant, Market Reform. Can I ask you to say your name and organisation before you do your presentation. While we're getting set up, the evacuation procedure, just so you know precisely: downstairs through the exit, and the assembly point is Flinders Street Station across the road. If the alarm goes off, someone will come and tell us what to do. But don't wait too long, just move on.

MR RUFF (MR): I'm Larry Ruff, associated with Market Reform, local consultants.

MR SWIER (FSC): My name is Geoffrey Swier from Farrier Swier Consulting.

MR RUFF (MR): Thank you. I apologise. I didn't quite understand the format this morning. I thought there was going to be a big group and so I prepared a presentation which isn't going to work too well on this little screen but that's okay, the basic ideas, we have already talked about to the commission and the staff about some of them, so this is more of an elegant statement which will be in the record, so there it will be.

First of all we commend the commission and the staff for its work, it's very good, most of it. We agree with 95 per cent of the findings but there are areas in which we have concerns, having to do primarily with the issues involving structural reform and competition in large and complex metropolitan systems, which we call metro systems. Where this is concerned, we think the draft report to a certain extent mischaracterises the options and the best way forward, underestimates the potential importance of network effects in these systems, but that it can and should be easily improved.

Our credentials for talking about this are that we have been involved in restructuring of electricity and gas systems worldwide for over 20 years, have been working on metro water here in Australia for a couple of years, and we bring this background to this problem. The only thing that we are going to talk about are these structural reform issues in metro water; we won't offer advice in other areas. In the summary of our reviews on the draft report our basic concern is that the draft report essentially ignores the complex network that is at the core of a metro water system and directly affects what is physically possible on that system.

Therefore, the conclusions that are reached, while they may be very sensible - and they are on the whole very sensible in ordinary situations - are at best oversimplified where a metro water system is concerned, because they may not apply there and they might actually be wrong in specific situations. More specifically, the draft report does not recognise even limited contestability on such a system. We're not talking about some full grown competitive market, we are saying even limited

contestability can be inefficient, disruptive and ineffective unless prices reflect network and operation realities, and they can't really do that unless pricing and trading is coordinated or even integrated with the central processes that actually control operations.

So reform efforts should focus early, not after you have discovered you have got a big problem; you have got to think about it ahead of time, think early about how to integrate pricing with operations, at least enough to deal with the potential network congestion, in any case. We also think that congestion is going to turn out to be bigger than anybody thinks ahead of time. So one of our basic recommendations is that the commission should, even at this time, encourage the development of the kind of network market concepts that will be necessary to go very far in restructuring if in fact these networks are at all congested, which they are likely to be.

In the draft report the commission sets out four structural options for metro systems that it regards as worthy of consideration, involving increasing levels of unbundling - and we'll talk about that picture in a minute. They also discuss but reject in option 5 what is called "decentralised competition" as not feasible or efficient, at least not at this time. We illustrate these options with some pictures, which are basically taken from the draft report, and I have added the yellow stuff and some of the explanatory words.

In simple terms, we start with the box there, within the yellow part we have the basic system: we have a series of bulk suppliers, we have a retailer-distributor in the middle that gets the water, distributes it around, and down at the bottom there's stormwater, and later on there's wastewater - I'm not going to talk about that very much, but that's also part of the system. Option 1 is you basically just put it all in one big box, and that's a monopoly; that's option 1. You could call it option zero I suppose, because that's kind of the baseline. Option 2, you spin off the water suppliers into contestable entities that compete for contracts with the retail distribution monopoly.

Option 3 is the same thing, except you also spin off the wastewater; and perhaps the stormwater, I'm not sure exactly what the recommendation is there. But in simple terms you sort of spin all that stuff off into contestable activities, leaving a retail distribution monopoly in the middle of it. Option 4, the recommendation is - which makes sense - you break up the retail distribution monopolies into parallel geographic monopolies that do retailing and distribution within their geographic area, they buy in the water and sell it on, deliver it to their customers, and also take care of stormwater and wastewater, and so on. The point is that the monopoly element at that point has reduced to the network - up at the top of the diagram.

With option 5, which is called decentralised competition, the draft report

doesn't have any diagram of it but describes it as "decentralised supply and demand decisions coordinated using market prices". I have looked at that and said, "How do I diagram that?" The answer is that you don't, because that's not really a structure at all, that's a process. In fact if you broaden the view of what you mean by "market prices" it's the basic coordination process in any structure with any degree of disaggregation, including any of those structures set out in options 1 to 4 in the draft report. So basically it's not a structure, but a process. It could be any process. The description is very general, it could apply to essentially any process in which people get together and coordinate by exchanging money.

However, the discussion in the draft report makes it clear that option 5 is meant to represent the kind of process used in electricity markets in which a spot market plays a central role, and just for shorthand we'll call that a NEM-type process because it's similar to what is used in the national electricity market, and the draft report refers to that a lot. We'll call it a NEM type, even though it wouldn't look a lot like NEM if you applied it to water. What the draft report is rejecting, at least at this time - the qualification of " at least at this time" crops up in the appropriate places - is not any specific structure of a metro system, it's essentially any coordination process based on a spot market. We really doubt that is what the commission means to reject; and if it is, we would urge them to reconsider.

There is a better way to describe these options, and we think probably this is what the commission means, something along these lines. They start off and say there is a spectrum of structural options ranging from vertically integrated monopoly - option 1 - to multiple competing or contesting entities in all parts of the system, except the network - that's option 4. I think option 4 is as far towards restructuring, at this conceptual level, as anybody has proposed doing.

If you look at option 4 the only monopoly in there is the network. There is competition and contestability in bulk supply, in wastewater treatment, in retailing and distribution. At least geographically there's not competition really at the retail level, but you unbundle those. Option 4 is about as far as anybody would want to go. So you have got this spectrum. But there is also a spectrum of coordination process options, from one extreme, command and control - the monopoly just kind of tells its employees what to do through bilateral contracting to a NEM-type process, or what the draft report refers to - incorrectly, we think - as a structural option 5; it is not a structural option, it's a process option.

What the commission is trying to say in the draft report I think is that at this time any of its four structural options is feasible but an NEM-like process option is infeasible for political reasons, if not for technical reasons, that nobody wants it and so you can't have it. We agree with that, we agree with everything there; we don't think that a NEM-type process option or market is feasible at this time or desirable, for technical as well as political reasons. But we also think that that has implications,

and so we agree with this except we think that, if you don't have what we're calling a NEM-type process, any structure that allows significant trading to which the network operating entity is not a party, such as the option that is described there, will be at best inefficient, and probably infeasible, on most metro systems.

While we agree with those statements - what we think the commission is trying to say - we do disagree with what we interpret to be the statement of saying that they think option 4 would be just fine, except they don't want one of those spot market thingies going along with it. One way to look at this - that I thought about walking over here this morning - is that basically you've got a list of structural options, starting with monopoly at the top and going down to this complete unbundling, and you've got another list of process options, starting with command and control and going down to a very sophisticated spot market, and you could put them up there in parallel.

What you'd be saying is, "Look, if you want this structure, the best process to integrate it and coordinate it is this one. If you want this structure, use this one. If you want this structure, use this one," and as you go down that list you're going to more sophisticated and complicated structures and along with it you're going to more sophisticated and complicated coordination processes or markets. Ideally, you will design a coordination process or market to fit a specific structure. Each structure is a little different, you have to design it just right to get the best of the best. You don't need perfect, you can sort of take this structural option and you can say, "We can use a range of process options to coordinate that within that structure and that will work," but you can't get the structure too far ahead of the process.

As the structure gets more and more complicated and sophisticated, the coordination processes do too. What we're saying is if you can't have a NEM-type market then it limits the structural options that are in fact available. The implications of that, we don't disagree that it's infeasible, the NEM-type market, but we also think structural option 4 and things like it is not feasible. If you can't have a NEM-type market there's no way to make it happen. For example, Melbourne, which already has created a structure which is similar to structural option 4, have an independent network, three parallel retail distribution monopolies with bulk entitlement, multiple water sources et cetera, will continue to be stuck with its entitlements pooled and managed by Melbourne Water as they have been for 10 years. Unless you move beyond this, you in effect can't get much beyond options 2 or 3 in which a monopoly entity is a single buyer reseller and a network operator.

That's what you used to call in electricity, a single buyer model. Instead of creating a market you just set up a monopoly in the middle, they buy in the power from the contract resources or build their own. You can't build, you have to buy in. All the power is sold to them and then they sell it on, either to retailers or customers and that's sensible. I think John Swerian described it as a portfolio manager model. I

think that's what he meant. Maybe that gets you 80 per cent of the benefits you can get from reform. You can get contestability and competition among the bulk suppliers and maybe that's in fact the most the pay-off is.

If you're happy with that, that's fine, but you can't go beyond it unless you have a more sophisticated market. Anybody who wants to move behind this kind of single buyer reseller system operator monopoly should start pushing for development of the network market concepts and processes that will make that possible. Having said that, step back a minute, looking at these diagrams - I've spent 20 years in this business of creating and analysing markets that operate on networks - the most striking thing about the options described in the draft report is the network is invisible. It's got to be there, there is a network there, but it's invisible in all this discussion of options or very passive. I'll go through that.

If you look here, going back to these again, there's option 1. Where's the network? There is no network in there. There's no network in there at all. It's buried somewhere in the monopoly. There's a network in there. The monopoly operates the network, uses it to use its own resources to satisfy it's own demands and so on. But the network isn't shown there at all, it's not in that structure. Where's the network here? Well, there is no network. Of course there is a network, it's in there somewhere. It's in the retailer distributor. What this option really assumes is it's a retailer distributor monopoly and it's also the network operator. There's no separate network, so the network is actually part of the retailer distribution function.

Option 3 is the same thing with stormwater and wastewater taken out. The network, which again doesn't show up, is buried in there somewhere, inside the retailer distributor monopoly. Option 4 does have the network. There is a network that's separate, but the network is up there in the clouds somewhere. The network is actually not down in there where business is getting done. The network is just this entity that's out there. You just send them cheques. You send cheques to the network so they can keep the wires up, but that's all, they've got nothing to do with what's going on in the system. They're totally divorced. They sit up there and do whatever network operators do, but they don't have anything to do with the people that are down there buying and selling and carrying on.

What's wrong with that? Why worry about the network? If the network has so much capacity and flexibility that is never congested, meaning that it can handle any plausible combination of storages, flow, pumping, treatment and so on that these various people that are using it might ask it to do - and we say it's not congested - you can ignore it. The network can be ignored and contracting, trading and pricing - and people have got to do their thing and send the network operator a cheque. Once they've done their deals, they tell the network to take the water where they said they wanted to put it in the system, and deliver it where they said they wanted to take it out, and the network does it, no problem. You don't have to worry about it in terms

of all these commercial arrangements, it's just the service provider that sits up there and doesn't muck around in your business.

But if there's significant risk that when we all do this trading, all these buyers and sellers decide where they want to get their water and where they want to take it and where they want to use, and then they call up the network operator and say, "We want you to deliver all that," and he says, "I can't, it doesn't work, there's not enough capacity, I don't have enough storage, I don't have enough treatment capacity. I don't have enough pipeline to do that." Then you've got a problem, then you've got congestion and you can't ignore it. The network operator could just say, "Well, you can use some, you can use some, and you can't." But that's not going to work if you've got these decentralised entities out there trying to do business.

In simple situations it may be possible to define stable bottlenecks in the system and seller allocate these as tradeable capacity rights and tell somebody they have to own capacity or storage or a treatment plant before they could tell the operator to store or treat their water and then they trade them. That can work in simple situations. But in many cases when you involve enmeshed networks and complicated things, there may be no practical and efficient solution to this problem except to consider all the proposed deals, and the network constraints simultaneously, and then select a set of these proposed deals that maximises the economic benefits of the transactions and come up with an optimal situation. That's the kind of integrated, operational trading, pricing mechanism that we're calling a NEM-type system or a network market.

The bottom line is a potentially congested network cannot be safely ignored in any reform proposal involving competition or even contestability. That doesn't have to be atomistic competition among a thousand generators and 20,000 customers. As soon as you start breaking things up, so you have several people buying and selling with each other and not just with the system operator, you can't ignore the network if it's potentially congested.

"Well, we never have any congestion here, that's not our problem, so why worry about that?" Well, the network of an integrated monopoly never appears to be congested. System operators know when and where the system constraints are so they plan and operate to avoid them. The higher costs just flow into the cost pool of the monopoly and if anyone ever bothers to look at what they are at all, they forget about it, it doesn't matter. If some smart alec consultant comes along and asks the system operator if they ever have congestion on the system, they're going to get offended and say, "Of course not. Are you calling me incompetent? I know how to operate this system within the constraints. I never let this system get near the constraints. We don't have any congestion here."

If you say to him, "Okay, how high were your congestion costs last year?" he

won't know and he probably won't even understand the question. The fact that you go around and ask everybody, "How's the congestion?" and they say, "We don't have any of that," I don't think helps very much. Things change fast when independent entities start using the system because they will soon want to do things the system wasn't designed for and they're not going to be happy when you call them up and say, "We don't want you to put any of your product under the system today because we can't handle it," and he has to pass up a chance to make a hundred bucks. Individual private entities aren't going to be happy doing that, or anybody who's interested in the success of their enterprise.

I've been in a lot of network restructuring situations and I've never been to one yet where you walk in and the system operator doesn't say, "We don't have any congestion here," and then once your system starts operating, congestion comes out of the woodwork, so to speak, or out of the ground, or out of the methane, the gas, or whatever it is, once the system starts operating. So I think you do have to worry about congestion. A word on what the draft report has to say about decentralised competition. I'll just go quickly here. The draft report rejects what we're calling a NEM-type process, at least at this time, because of some concerns about things, some misconceptions, about the operations and role of such a market.

I won't spend much time on this, but an important one that we see is the notion that a spot market reflects only the instantaneous supply-demand balance, and hence can't deal with a storable commodity because people won't think ahead about storage. Even in a single-period spot market, market participants can and do make bids and offers that reflect their expectations about the future, which they have to do whether the commodity is storable or not. So it's not fundamentally different in that way. The balancing market in a storable commodity can clear more than one period simultaneously, so that it can take account of stores flows from one sort of storable part of the system to another storage part of the system.

For example, in the Victoria gas market they use several periods - I'm not sure if it's four or six hour periods, but it's something like that. In some work we're doing for Colabin on water the system optimises for 52 weekly periods over an annual period, so you can take into account the storage issues and so on fairly easily there. You do have to worry about end-of-period storage, but what we're calling spot markets can and do handle storable commodities.

Another misconception is that a spot market that deals only with imbalances is somehow different from and more acceptable to one that deals with the entire volume of trading; this notion that somehow it matters whether the spot market is a gross market in which all of the commodity goes into it and is priced and traded and so on or the spot market deals only with the stuff that's not sold under contract. For a non-network commodity this is an important distinction. Somebody loads a certain amount of it on a truck and hauls it over and delivers it to his customer over there,

and if there's a little bit left he takes it down to the central market and trades it, and all the central market sees is this stuff that's left over, these little incremental bits, because most of the stuff is delivered through some other system.

That's fine for most commodities, but in a network market it doesn't work, because all the stuff has to go through the network. Every molecule that goes into this network has the same effect on the system whether it's traded spot or under contract, it has to be reported to and managed by the system operator the same way, the entire amount of the commodity put into the system is used to meet the entire demand on a system, with the balance between supply and demand determining how the system is operated, determining what the price is and everything. It's the total quantity that has to be modelled, dealt with, optimised within the system.

In regards to commodity being traded under contract, people will have signed contracts among themselves to buy and sell the commodity which flows through the network. The market that runs on this network, you can set it up so that the system only prices and requires payments for the stuff that's not under contract, you just do a little accounting entry, you say, "Half of this was under contract, so we take it out. The other half, we apply the price," which is determined considering everything, the price will just apply to what is left over, and make the payments accordingly.

So the only difference is a matter of accounting within the settlement system and how the money flows. That has some effect for risks, it matters whether you owe the spot market operator for your whole quantity or just for an incremental amount, but it has nothing to do with operations or pricing. Even if all the commodity is priced and cleared in the spot market, the so-called gross market, or pool, most of the commodity will be covered by financial contracts that are substantively the same as physical contracts - whatever that means in a market with a transparent and universally accessible spot price. I won't go into that, but in such a market a physical contract doesn't mean much.

Third misconception, that with a spot market investment is driven entirely by the spot price, making it hard or impossible to justify and stimulate long-term investment, and, for example, according to the draft report, there are concerns that NEM is stimulating inadequate investment in generation. Well, again, most supplies in a spot market based system are traded under contract, whether the market is net or gross; the incentives and mechanisms for taking and hedging investment risks are unaffected by the existence of a spot market, except that the greater flexibility and efficiency of a spot market actually reduces contract risks. It's very risky to sign a long-term contract - for example, to buy a fixed quantity - if you don't have any way to get rid of it if you don't need it; you're going to be stuck with it.

What a spot market does is allow you to say, "If I don't need it, I just dump it in the spot market. I might not get the high prices I'd like, but I've got something to do

with it," or, "If my contract quantity I bought is not enough to meet my needs, I can go on the spot market to buy it," it makes it much less risky to contract. On the NEM question, a recent report - I don't know exactly what the situation is in NEM - by an investment review committee that has something to do I think what the carbon market said that:

> NEM has worked well to ensure secure reliable and efficient generation of electricity and has delivered timely and efficient investment in new generation capacity.

What we suggest for the final report, which I guess is what this is about, is that the commission should first of all clarify this difference between structural and process options, as suggested above. These aren't necessarily in order of importance, by the way, I wouldn't be sure how to rank them, because I think it's very confusing the way it's laid out in there. Make the network a visible and potentially important part of its structural options for metro water systems. If you want to say, "We think there's no congestion on the network," well, go ahead, and then we'll find out whether or not you're right later, but don't pretend it's not there. Recognise it's there; it's a potentially important part of the system, and in reform you have to think about it.

Avoid suggesting that any coordination process based on a spot market is a bad idea, even "at this time," and instead endorse efforts to start adapting and applying network market ideas to metro water. Don't wait until you find out you're in a mess, that all these fancy reforms you've put in place don't work because you haven't developed the coordination arrangements necessary to make them work efficiently; start thinking about them up-front and encourage people to start trying to make them work.

Either drop or improve the discussion of how well a NEM-type process might work in metro water, because I think it's very misleading the way it stands. Make it clear that structural options with significant contestability, even without full market competition, may be, and I think probably are, infeasible until better coordination processes - which are going to be some kind of network market, which we're calling here some NEM-type process - are feasible, politically or technically. Don't say, "Oh, we're going to go racing down this road over here towards structural reform, but we're going to drag our heels on coming up with the kind of coordination processes and markets that are necessary to make a complicated structure work." That's it. Done.

DR CRAIK: That was perfect timing, because you have used exactly your 30 minutes.

MR RUFF (MR): So no questions. I don't have to answer your questions.

DR CRAIK: No, so you don't have to answer any questions. I should just let everyone know that we did have a long discussion with them last night for a couple of hours.

DR MUNDY: I just want to make one observation. You make a lot about the diagrams that are presented in the report and the fact that they don't show where the network is. Where the diagrams are presented is in a section called Institutions. The network appears when the network becomes an institution. So I think it's a little bit disingenuous to suggest we have ignored this in a structural sense when the diagrams positioned in the text refer to institutions primarily, not to structural and operational issues. Network appears in the diagrams when the network provider becomes an institution. You might have another purpose for using these diagrams, but the diagrams were for that purpose.

MR RUFF (MR): Fair enough, although I think my basic point is still valid. If you're going to start talking about, "Here's structural options," as part of thinking about structural options you need to think about the institutions that are going to be required in there to do the coordination and the pricing.

DR MUNDY: I have made my point about the diagrams.

DR CRAIK: Thank you very much for the discussion last night and for your summary today. I think that's very helpful. I think you have given us plenty to think about.

MR RUFF (MR): I can give you an electronic version of this.

DR CRAIK: Yes, if you can give us an electronic version that would be good, because then we can attach it to the transcript so that people can actually see what you referred to and then we'll regard it as part of the transcript. Thanks very much for your input. Thanks, Larry. Thanks, Geoff.

DR CRAIK: We'll move along now to our next appearance which is from Peter Wilson from Waterwise. Peter, if you could say your name and institution and then if you'd like to make a brief statement we'd be very happy to hear from you, thank you.

MR WILSON (WS): Thanks. My name is Peter Wilson and I'm a director of Waterwise Systems. We have worked for the last nine years in the community addressing the use of water on gardens. In that time we've spoken with literally tens of thousands of people on a face-to-face basis about water. It has been a long haul and we have seen a lot of changes in the market in that time. As I say, primarily we're concerned with the area of - in densely populated urban areas as opposed to urban regional areas - the use of water and how that can be managed.

DR CRAIK: Sorry, I thought you were going on.

MR WILSON (WS): Sorry. Thank you very much to the commissioners for the - - -

DR CRAIK: No, that's all right. It's a pleasure.

MR WILSON (WS): - - - chance to talk today.

DR CRAIK: No, thanks very much for coming along today and thanks for coming early. I guess - I think you have a few - probably slightly different views from the ones we've presented in the report. I mean you support some of the things that we've put forward but clearly you probably don't agree with some of the other things that we've proposed. You seem to suggest that you see a much a greater role for water conservation and re-use like greywater as an alternative to costly supply augmentation. I think you suggest that subsidies for firms who produce those sorts of things would be a good idea, and that would significantly reduce water use. I guess our argument is that you really should look at the costs and benefits of all of these and that often the stand-alone systems, if they're mandated, as opposed to if people choose to put them in, can be a very expensive way of dealing with water shortages.

MR WILSON (WS): Exactly. From a water provider point of view, for example, Melbourne Water needs to look at the needs of the entire city of Melbourne rather than relying on individuals but the reality of it is that we have an enormously inefficient practice in the irrigation industry to the point where it has actually distorted the water demand projections that are being put together and the basis of the desalination plants. I've just returned from Perth and spoke to an expert over there who says that a typical irrigation system cycle is consuming 5000 litres of water per cycle.

DR CRAIK: What's a cycle?

MR WILSON (WS): A cycle, so in West Australia - reticulation bans on at the moment but a cycle is each time that irrigation system switches on 5000 litres of water is consumed by the system.

DR CRAIK: Sort of like a day or something?

MR WILSON (WS): Yes, well, in an hour or two hours.

DR CRAIK: Okay.

MR WILSON (WS): Whatever the permissible amount of time is. We regularly see this where people look at their water use for the first time before and after that their irrigation system is running. This is an enormously inefficient practice. When we multiply it out by many hundreds of thousands of homes or millions of homes, a very large slice of our water, a disproportionate slice of our water, is being consumed on gardens. That's not to say we should lose gardens, because they do form an important part of our quality of life, I can't - - -

DR CRAIK: Are people using 500 litres because they're getting poor advice from the people who have advised them on putting in these systems or?

MR WILSON (WS): Essentially, yes, is the short answer to that, although not - at times, no. I spoke with one irrigation professional here in Melbourne and he goes and he sets up the systems on water efficient cycles running for about 10 minutes per zone per run. When he comes back to do a service he finds that the consumer or the householder has actually extended that period due to the need to feel like we're nurturing our gardens. But in practice when we look at the information that came out of Sydney Water or - you know, there's probably 20 per cent of households that consume a vast amount of water on their gardens. Again, that equates to hundreds of thousands of households around Australia.

So it's very easy for us to say, "We'll build additional desalination capacity," but we're not looking at that - what's happened here is essentially that cost burden, the cost of building that desalination capacity is spread across the entire community. So somebody living in an apartment here in the city is paying for somebody in the suburbs' water supply through their charges. Now, what we're suggesting is that we do need to look at the efficiency and - I know that South East Water, for example, a couple of years back was going out and literally knocking on doors of high water users saying, "What can we do to help you use less water?" As population grows we've got this essential drag-back of - we look at suburbs like Werribee spreading right out around the outer suburbs, and the same in Melbourne, Sydney, Brisbane,

Perth, we've got this drag-back constraint of an enormous of the water produced is being consumed on gardens.

On the other side we've got - so we've got the supply issue there. Then on the other side of things as these new homes are being built we've got an enormous cost associated with disposing of the wastewater of homes. When greywater is used properly it actually substantially reduces the amount of wastewater coming out of a home as well, which is a benefit to the community as a whole and the householder involved. The irrigation technology that's being used today is generally about 50 years old: drip irrigation, which was developed in Israel and was a major step forward at that time. But when we looked at this whole thing - and the reason I'm essentially here today is when my son was born I wanted to do something about - my great fear is that in 50 years' time people will be working three days a week to pay for their water. Industry experts that I've spoken to have said that's not inconceivable.

When we look at what can be done at a household level we've got a monopoly situation. Again, our water providers are among the best in the world: they're transparent, they publicly report, they fix water leaks, they make sure the tap turns on. But at the same time they don't have that capacity. They all have water efficiency units which do an excellent job and we can see by the trend down in water consumption over the last 20 or 30 years that they have done an exceptional job. But to provide meaningful one-to-one advice with a million customers or four million customers it literally would be pulling resources out of the essential role that they provide, which is making sure the tap turns on and that we've got sewage being disposed of.

Where we look at - in 2007 Australia did have an absolute world leadership position in the area of water conservation or what I call return providers. That's all changed due to the global financial crisis and a number of other impacts or things that have happened, the rains here on the east of Australia. But we've certainly - many of the companies operating in this space who are doing some good, some excellent jobs at what they were doing, have disappeared over the last couple of years. We're losing important capacity and essentially being forced towards buying our water from a single entity rather than actively encouraging households to take a role in managing their own water use and consumption. We obviously are resource constrained. Many of the bigger players in the industry have fallen over, over the last 18 months to two years.

DR CRAIK: Are these sort of - who are these people who have disappeared? What are these businesses that have disappeared?

MR WILSON (WS): Many of the water tank retailers who also provided a stock place where in the future people could have gone in to buy alternative water-saving

products have disappeared. I have heard of two or three medium tank manufacturers collapsing over the last few months. One of our main competitors with an excellent product has gone. So the industry did make up an important component which provided large consumption households with a viable alternative or a viable way of looking at how they use water on their own property, so to speak.

DR MUNDY: What you have just described sounds very similar to me about the arguments advanced by small-scale solar voltaic manufacturers, that somehow general consumption has to be burdened with large amounts of conservation costs. I take your point about Nylex, but I think Nylex collapsed for a whole pile of reasons - - -

MR WILSON (WS): Absolutely, yes.

DR MUNDY: - - - which had nothing to do with their business in Australia. So I think that's perhaps not a relevant concern to this inquiry. I guess what your proposition is is that the government should be subsidising a certain set of businesses to go and help people reduce their consumption because they don't understand the costs that their consumption is imposing upon the community widely.

That would suggest to me that water is being mispriced, because if water was being priced properly then there would be a natural demand for the services of that industry that you're suggesting should be supported. I would have thought with the rising costs of water as a result of desal plants, as we have seen in South Australia and elsewhere - although that's going on the fixed component of the bill, and we could have a discussion about whether that's appropriate or not - that actually things are looking better for your industry.

MR WILSON (WS): Absolutely. We agree with you. One of the comments that we hear is that water is too cheap. The primary concern that we have in this area is the cost burden. We saw, for example, when the price of water went up in California substantially in the 80s that poor households cut their water use by 50 per cent, wealthy household cut their water use by 10 per cent. So what we're arguing here is that water is an essential to life, and I won't ramble on on that subject, but the cost burden should be that the more you use the more you pay, with obviously some sort of household size taken into account on that.

DR CRAIK: Do you think then that one way to deal with that is offering different service offerings and different prices to different customers? Is that the way to do it? So people who only want to use a small amount might get it for a lower price, but if people use more they have to pay a whole lot more. If they want to use an unlimited amount of water, they pay more.

MR WILSON (WS): This all comes down to the social side of it. Certainly that

would be for some people a great option. Alternatively, though, water is shared resource. It's something that should be put on the table. I think Yarra Valley Water did that very well, in as far putting it out there as an option. But is that equitable in the long term? Is it okay to say, "You're rich, you can have a lot of water."

DR CRAIK: But a petrol head goes and buys a lot of petrol. I'm not. So, you know, they're allowed to; that doesn't bother me.

DR MUNDY: This is a perverse notion of equity. I know I have used this example before, but take a poor working class family living in the outer western suburbs or Melbourne or Sydney who can't afford airconditioning, their only option on a 42-degree day might be to put the kids under the sprinkler, and the multi-million-dollar banker who lives down in Docklands who affords airconditioning and has very low water use. So this notion that water use is immediately correlated to income is clearly not the case.

We know of examples of significantly distressed elderly people where, because of outdoor water restrictions, their five fruit trees which they have nurtured for 25 years in the backyard have died. It seems to me that it's the wealthy who often have the resources to put up the capital to buy themselves out of water restrictions, precisely because they can do that. People should be able to access the amount of water that they want to use. Now, whether they're using it efficiently or not is a different question, but to say that some people because they're wealthy or poor or not getting the water use I think is a very difficult proposition to establish in fact.

MR WILSON (WS): Thanks, Warren. Yes, I agree with Wendy's point, you know, about if you're a rev head. We have had an enormous amount of rain, our dams are at 54, 55 per cent, which they were in 2002, 2003. The level of detachment felt in water is not healthy for our community; there's no involvement in the water process. So when you rev your V12 Aston Martin and drive it up the road - sorry, Wendy, it might be Warren's V12 Aston Martin - you have got to go to the petrol station and fill it up; so as you push the accelerator there's a repercussion of that.

Certainly we take a very long-term view on this water issue and there are some real concerns that there may be inequities arise. There's no basic human right in South Africa, for example, a family or person gets 60 litres of water a day as their basic human right, anything over and above that they need to pay for. I have read reports that families are often spending 35 per cent of their available income on that additional water. In terms of the little old lady with her four fruit trees, she would traditionally be a low water user. With the exception of Brisbane, there has been no total outdoor water bans in Australia.

But when we look at the information that Sydney Water was producing where they're saying in 2006 that some 20 per cent of Sydney gardens use as much as

500,000 litres per year on their garden; the top water consumers use 918,000 litres per dwelling per year, with the majority of this water directed to gardens; and generally homes with a land value of over $800,000 use over 418,000 litres per year per dwelling. There's numerous examples of this type of thing. Like, right now we have the capacity with desalination, so - well, with the exception of Perth, the Gnangara Mound dropped by 500 mil last year I think - on the east coast we have got a little bit of time up our sleeves, but populations are continuing to grow and droughts do happen in Australia.

What are we saying here, that we will just continue to build additional desalination capacity or build dams that are enormously unpopular? In terms of water use at home, it is a very political area, people don't like to feel overly restricted. So is there a way that in this whole process we can look at, "All right, what can we do at home to manage our water?" and not demean people for taking actions. Like, one of our customers here in Melbourne four years ago spent $3000 with us on a greywater system which was just hooked up to the washing machine, and they saved more than that on their water bill in the first year. So there is a payback involved with these, and as the price of water goes up that payback will accelerate.

We feel that there should be additional resources put into educating the community, building awareness. The Waterwise team at the moment in WA are going out into areas and literally communicating at a grass roots level in an effort to drive down water consumption. The big problem is that the high water users tend to be very difficult to contact or to engage with, for various reasons. But we have these water efficiency teams. Is there an opportunity in this to maybe separate them out from the water business and still have them reporting into the overall management of say Yarra Valley Water or Water Corporation but separating them out, giving them resources.

DR CRAIK: But who should pay for them?

MR WILSON (WS): Well, exactly.

DR MUNDY: Because you've just said - you said that the pay back period on a greywater system is about 12 months, in this example?

MR WILSON (WS): For a high - this is an extreme water user.

DR MUNDY: No, that's fine. That the system has got a life of 10, 15 years?

MR WILSON (WS): Well, we've been installing them for more than 10 years and the systems that we put in - - -

DR MUNDY: But it's something like that?

MR WILSON (WS): We would hope 30 years.

DR CRAIK: Okay, that's even better.

DR MUNDY: Well, even better.

MR WILSON (WS): Yes.

DR MUNDY: It seems then that what you're saying - on the one hand you're saying that these things are cost effective and they've got pay back periods of less than - even if they've got a 10-year life you're paying a 10-year asset back in a year which means that the internal rate of return is huge and you should just go and borrow the money off your mortgage and do it. So what you're saying is there's an information problem which at the end of the day if the pay back is that quick then it's a marketing issue that businesses should be able to fund. It's not clear to me how supporting that sort of activity which of itself seems to be profitable in the hands of the businesses is going to solve this other problem that you've identified from the Sydney Water data that we've got all these people who are very wealthy who are just using water. It's not clear to me that whatever we do in assisting the sort of activities that you're talking about is going to deal with that - how is it going to deal with that problem?

MR WILSON (WS): Okay. Just to correct one point. We did run a - just in terms of payback period, because that one instance I pointed out is not the typical period.

DR CRAIK: But it was really good, was it?

MR WILSON (WS): Yes. Well, that's unusual.

DR CRAIK: Yes.

MR WILSON (WS): But we did some analysis of the payback period on an average system using 2008's price of water in Sydney was running out at 14 years on a study we conducted of 58 homes.

DR CRAIK: Okay.

MR WILSON (WS): Again, it was a low price. Now, thanks to the Water Savings Fund from New South Wales government we were able to actually analyse - I wouldn't call it scientific but we can certainly say auditable outcomes. So we went in. The consumer spent between 3600 and 6000 dollars and we produced an average water saving per dwelling of 2125 litres per week over the course of a year. So this

is monitored over three years. The highest water saving on a single site was 624,000 litres per year over the course of the three years. Now, obviously it was - it's much easier to market this to the green market, but they're typically lower water users.

What we're saying is look, we've developed a whole new method of irrigation. In these instances we're often using - we're only hooking up the front-loading washing machine and we were saving that average with 8000 to 16,000 litres of water passing through it over the course of a year, yet at the end of the three year study the saving had been 110,000 litres per year. The people were saying their gardens were looking as good as what they were previously. So we do need - we're not resource rich. We've invested millions and millions of dollars to get here along with others in this water space. There isn't - due to the GFC and various others reasons. You could say maybe we're not the best business people in the world because we're passionate about what we do but what we are doing is effectively reducing demand on water and also effectively reducing the amount of sewage which is flowing through the system which requires an enormous amount of pumping. Even here in Melbourne we're largely on a gravity feed system for supply.

DR CRAIK: Well, these water efficiency teams you talk about, who do you think should pay for them?

MR WILSON (WS): Well, I think that there are substantial dividends which are made by the water providers to government. At the moment I believe, and I'm not a hundred per cent sure, but Waterwise in WA is running at, I think, and I'm not sure, about a $3 million a year budget. They're really punching above the capital being expanded. But certainly when we're talking, you know, could 5 per cent of the increased revenues that the water providers are producing due to the higher cost of water be put into the water efficiency teams? Could there be some sort of federal funding?

DR CRAIK: Would your businesses subsidise it, your businesses that get the business. Would you guys subsidise it?

MR WILSON (WS): Well, we could.

DR CRAIK: Yes.

MR WILSON (WS): Yes, we could, but only from revenue. I mean capital at the moment is just - you know, we're - the market's died out. We're continuing to spend on R and D and delivering service to customers. There's certainly, I don't believe, one profitable business in Australia at the moment in this water conservation area. So certainly from revenues we could, some assistance in providing long-term financing along the lines of what one of the American solar companies has done where they've done 10 year lease-back agreement, payment through water savings in

increased - which we discussed previously with South East Water. These things can be done but it's a question of resources and again, are we, in 10 years or 15 years time going to be adding additional capacity at Wonthaggi and Kurnell and Bunbury just simply because we didn't look to manage the water? Waterwise over in WA is saying that still 33 per cent of all the water supplied to the city is being consumed on gardens. Now, surely with a little bit of assistance any product that's literally proven itself to be effective at conserving water does deserve some support, given the billions that have been invested in desalination and the ongoing costs associated with that.

DR CRAIK: Okay, good. Okay, that's great. Thanks very much, Peter.

MR WILSON (WS): Thanks.

DR CRAIK: Thanks very much for coming along. Thanks for your submission.

MR WILSON (WS): Thank you.

DR CRAIK: If you guys could introduce yourselves and then if you'd like to make a brief opening statement, that would be great.

MR KELLY (YVW): Thanks, Wendy. Tony Kelly, managing director of Yarra Valley Water.

MR McCAFFERTY (YVW): Pat McCafferty, general manager of strategy and communications at Yarra Valley Water.

MR MATHESON (YVW): Brett Matheson, regulation and planning manager at Yarra Valley Water.

DR CRAIK: Would you like to make any brief opening statement?

MR KELLY (YVW): Yes, we would Wendy. First of all I'd like to congratulate the commission on producing what I think is an excellent report, mainly because it challenges the status quo and it makes industry think, and that's very constructive. I think though the proposal in the report feels like a bridge too far. It feels like a real challenge, certainly for the water industry, for government and for regulators. Whilst we love the way it goes together and there's a number of key elements in the model and they do exist well together, it's difficult to see how we're going to transition from where we are to the new model.

We would like the commission to do some work on developing something of a road map to help us transition, if you like, or to provide some advice on how we could transition from where we are to where the model proposes we get. We're a little bit one out at Yarra Valley Water. I think there's a lot of people in the industry who don't like the model because it does feel a bit too difficult, but Melbourne is very well positioned.

Melbourne has already got a separation of wholesale and retail; we have got an independent price regulator; we have got a ministerial advisory council looking at long-term water policy and integrated water management; we have got a supply-demand strategy being undertaken at the moment, which includes real options; and we're reviewing our water restrictions framework with the intention of making restrictions a lower priority rather than a first priority. So there's a lot of good things happening. We are a bit parochial here in Melbourne, we know, but we think we're doing a reasonably good job. Certainly on a comparative basis the water industry in Melbourne can hold its head up high.

We agree with a number of the key conclusions in the report, around supply augmentations. A little bit critical in the report about the desal plants, we understand that. We understand that the desal plants are imposing high costs on the community.

I also think that the report doesn't make any attempt to address the cost of running out of water. In 2006 many communities were faced with the real prospect of running out of water. The economic cost of doing so is virtually unthinkable. So whilst desal plants have imposed additional costs, there's no doubt, we believe that they were the right choice at that time. We were faced with the prospect of waiting for rain or doing something, and I think every capital city in Australia had to do something at that time.

The report is quite critical about the role of restrictions, and, to be honest with you, I'm a little bit confused. I can really recall in the 70s and 80s, the Board of Works then, which was the water authority in Melbourne, and the State Electricity Commission were both vehemently criticised for not embracing demand management and for building ahead of demand. I guess we have learnt a lot since those times and now we are trying to establish a balance between supply and demand.

We have produced in Victoria some what I believe world-class planning documents in the sustainable water strategies that have been produced for each region of Victoria. Each one of those is cognisant of the environmental impact, allocates an amount of water to the environment to protect the environmental values. The water that is available for consumptive use then is allocated, and then if there are shortfalls there's augmentations undertaken. Underpinning all that is a certain level of demand, moving forward. We have chosen to strike a certain level of demand which we think is efficient.

In contrast, if I look at what is happening in energy, there has been completely unconstrained demand there. People have rushed out and bought airconditioners to keep their houses cool for five days in the summer, but they leave the airconditioners on all summer. There is no demand management in that field. As a consequence the energy prices are rising at a rate that make water prices look modest. To be honest, I really struggle with this whole issue about where is the appropriate level of demand and what should we be targeting.

At the moment we have made an assessment of that, we're targeting what we believe is an efficient level of consumption and we're planning to put communication programs around that, and on that basis we believe we are striking the right balance between supply and demand. In terms of independent price setting, I was amazed that the Productivity Commission were suggesting that we didn't need independent price regulators. That is not what we expect from a bunch of regulators; that's not what we have come to expect. But it made us think really hard, and that's a good thing.

DR CRAIK: I can't help but interject to say that we don't see ourselves as a bunch of regulators.

MR KELLY (YVW): No.

DR MUNDY: Sadly, of course, Dr Craik once was a regulator. I, however, am pure.

MR KELLY (YVW): A pure economist, whatever that might be. Look, I think the independent economic regime here in Victoria has delivered significant benefits. I can recall a much worse time, when prices were set under a political umbrella. Now at least we have some semblance of cost based pricing. We have public water business plans, if you like, which are put on the Internet for all the world to see. We have to present to our customers our costs and our forward looks and the prices, and that is independently assessed. There's some issues about the degree of independence, but certainly I think that's a natural evolution; we're learning how to do that, and I think that that system will get better.

I do though worry about the economic regulators being a bit one-dimensional and focused on the economic dogma, at the expense of customers' choice in particular. But that is an issue that we're working through with our local regulator here, and I'm confident that we'll get a better result. One of the key things in our response to the draft report is that we really do like the idea of an independent procurement planning manager. Supplies in Victoria are becoming more integrated, there's no doubt, and we know very clearly that the price of water is dictated more by the cost of wholesale water than anything else.

So it is important now, I think, that somebody sits over the top of the water supply system statewide and takes a state perspective. This procurement manager would have a number of very important tasks, we believe. One will be to introduce more competitive pressure, and the one thing that I want as a retailer is the choice of wholesaler more than anything else. This entity would undertake long-term planning. It would monitor supply and demand, assess options, all the options on a consistent basis. It would establish transfer rules for moving water between users. It would be responsible for a level of security in the system, flag augmentation needs and would monitor environmental flows.

I understand some people throw their hands up and say, "Not another authority," but I'm convinced that this would be a lower cost option by far. It would mean that a lot of the utilities wouldn't have to be doing this on a parochial basis. This would be done in an overarching way for the overall benefit of the state and that all those resources and utilities either migrate to this new manager or wouldn't be required any more.

We strongly support the commission's view about establishment of a clear set of objectives for the industry. I think that would take us to a better place, no doubt. I

think Ron Ben-David in some of his work - he's the chairman of the Essential Services Commission here in Victoria - has identified something in the order of 25 federal and state agencies and regulators who have their fingers in the water industry pie. That creates a lot of confusion, there's no doubt about that. As a consequence of that you end up with the utilities making the trade-offs between social economic and environment outcomes. Whilst that creates a very exciting business - and I love running my business - your proposal is likely to dumb utilities down, I think. But if I put my Australian hat on it's probably going to produce a better outcome.

In terms of governance arrangements, I think one of the key things is that in my view governments are not well equipped to be a shareholder, and they don't have the structures to enable that to happen. But we are aware of two very good structures globally; there's one in the UK which is a shareholders' executive, and there's another one in New Zealand called the Crown Company Monitoring Advisory Unit. A unit of this type I think could make a significant difference to the way the water industry is managed. Essentially it would encourage innovation, it would monitor utilities outcomes compared to government objectives. It would ensure that utilities implemented government policies.

More importantly, it would undertake serious benchmarking. It would be looking at balance sheets, for instance, to ensure that the subsidy companies - the utilities if you like - are managing in a consistent way. That certainly hasn't been the case. They would undertake rigorous cost comparison; review of capital efficiency and encouragement of innovations and the promotion of effective competition between the utilities for everybody's benefit. I think an effective shareholder representative has the potential to be more effective than an independent price regulator.

One other thing I want to touch on is Corporations Law. Yarra Valley Water operates under Corporations Law. We believe it's a strong foundation for good governance and provides a clear framework, including direct accountabilities and reporting disciplines. Essentially the organisation is compelled to abide by the same structures as any other business, and that's a good thing. Our own consulting group reported that Corporations Law sets the scene for efficiency and good service and stated that Corporations Law is most likely to drive efficiency in GBEs and strong financial returns for governments as shareholder. It is the form most amenable to incentive regulation and it is the form most likely to support good performance in service delivery.

I would strongly support that, and for state governments to establish alternative governance structures seems to me to be a complete waste of money, and given that governments are not skilled in corporate governance I really can't see the value in doing that. They're the key points we wanted to both reinforce and support the

commission in a sense.

DR CRAIK: Thanks very much, Tony, and thanks for your submission which has lots of useful information. I'm particularly interested in your view. In our draft report we propose that the utility - the retail and distributing utility, so in your case it would be you - took responsibility for supply augmentation, identifying that it was needed for your customers and then actually going through the process, some kind of contestable process, and arranging that. I guess we would have seen that there's some other body - like the department or something - that does the kind of statewide planning and does the divvy-up between environmental and consumptive flows around the place.

MR KELLY (YVW): Yes.

DR CRAIK: But you're proposing some kind of independent procurement model which would take over - as I understand, from what you say - the supply augmentation role.

MR KELLY (YVW): Let me put it in the sense of a roadmap. I see the establishment of procurement agencies an interim step. Our ideal model certainly is that we would have an autonomous bulk water entitlement that we could then buy and sell water on a market. A market already exists in Victoria and works very effectively, as I understand it. We don't have access to that market. Longer term I think that the utilities and all their users would participate in something of that ilk. That again feels like a bridge too far and particularly for a number of stakeholders that feels very threatening.

As an interim measure - and I'm thinking sort of 10 years here - establish an independent procurement agency that could come in and manage a system like that and act as a broker, if you like.

DR CRAIK: So you still identify when you think you're going to need more - - -

MR KELLY (YVW): Yes, I still put a hand up and say we've got a shortfall. We go to the procurement agency, and the procurement agency says, "Well, there's a number of options," maybe already established transparent rules for transfer and pricing as well, and would enable us to - we might submission to the procurement agency our ideal supply plan, they might have to rationalise that across all of the utilities and come up with a best fit. But in doing that I think what happens is the industry and the regulators learn how to play this game, and over time potentially withdraw and then allow the participants to manage with more autonomy.

DR CRAIK: I guess we certainly were keen to try and align the incentive, the kind of risks and rewards by - you're the ones who are closest to your customers, so you're

the ones who essentially will bear the greatest risk if you don't meet the supply.

MR KELLY (YVW): Absolutely. We accept that risk. I think that's the right way for us to manage.

DR MUNDY: Can I get clarification on this Corps Law question. Are you a director of - - -

MR KELLY (YVW): I am, I'm managing director.

DR MUNDY: Okay. Are you subject to the normal sections of directors under the Corporations Act?

MR KELLY (YVW): Yes.

DR MUNDY: So if you commit a breach of duty you can in principle be prosecuted - - -

MR KELLY (YVW): We do not have the protection of the Crown.

DR MUNDY: So presumably any person - ASIC - could bring suit against you?

MR KELLY (YVW): Yes.

DR MUNDY: I just wanted to make - - -

MR KELLY (YVW): That's a discipline which I think is very constructive.

DR MUNDY: I absolutely agree with you. It also can be sometimes comforting when Spring Street knocks on the door. You made some observations about demand management and I think IPART has recently opined that the reason why electricity prices are going up in New South Wales is neglect of network and green schemes. It wasn't so much an issue about management. My question is that you've said that you've arrived at an optimal and an efficient level of demand.

MR KELLY (YVW): Yes.

DR MUNDY: Now, it seems to me that that must have been informed somehow by a view of what people's consumer preferences were.

MR KELLY (YVW): Yes.

DR MUNDY: How did you get at that?

MR KELLY (YVW): Well, I think that at Yarra Valley Water we've got very rigorous demand assessment measures, so we've done a lot of end use modelling. We've got a very good handle on how our customers use their water. We've got a very good handle on how customers have used water throughout the drought. We're the first utility, I believe, to give our customers detailed comparisons of how their consumption compares to other like households. That's all been very useful, of course, and it has also given us a view about what is very efficient consumption, what is unconstrained consumption and what might be deemed efficient and effective, if you like. That's how we've pitched that balance between the supply and the demand.

DR MUNDY: Okay. I'm just trying to get at this notion of efficiency because it seems to be that you're forming a view about the amount of water that individuals should have.

MR KELLY (YVW): I understand that's dangerous but I guess what we're saying is, yes, that's true.

DR MUNDY: I absolutely accept for normal business planning you've got to form a view - and I presume you work on the basis that some people use more than others.

MR KELLY (YVW): Certainly.

DR MUNDY: But this notion of someone - how much they should have seems to be a different notion.

MR KELLY (YVW): It is. It's a characteristic of the water industry, I guess. Listening to you talk to the previous speaker, we tread on dangerous ground, dictating what people should or shouldn't use. But I think all of the analysis that I've undertaken demonstrates that lower consumption leads to lower prices. You've got that on one side of the equation; on the other side of the equation is, "Well, let's not manage demand at all and just service the demand." We don't take that view. That might be the wrong view, and we stand out compared to nearly every other product in the marketplace in that regard. I understand that.

DR CRAIK: If appropriate information about the costs and benefits of water use was provided to people, shouldn't they be entitled to make their own choices about those things? I mean, information like, "Lower consumption leads to lower prices," so people actually make a free choice.

MR KELLY (YVW): I agree, Wendy.

DR CRAIK: I mean, in this day and age no-one would conceive of rationing electricity. It just wouldn't be countenanced these days.

MR KELLY (YVW): I'm not sure about that. It's another view of the world, isn't it, that we're running out of resources and we're inevitably heading towards rationing. Maybe water got there first.

DR CRAIK: I don't know that we are running out of water. I mean, if people are informed about the costs and benefits of doing things, and the most efficient way to water their garden if they want to have this kind of a garden, and so all the information is provided, I don't know that it would be unreasonable to suggest in the last decade or so that the majority of the information that's been put out to the community has been, "Using less water is good," full stop - even if it's a lot more costly than using a bit more water or using a lot more water.

MR KELLY (YVW): The only information we can put out there is the costs as we see it. The value the customers perceive is something completely different. If you've got a beautiful rose garden - or as Warren was saying before, someone has got 10 beautiful fruit trees they want to sustain, then the value they assign to the water is completely different.

DR CRAIK: That's correct.

MR KELLY (YVW): It's not my job to try and quantify that value on behalf of individuals. I'm not stopping people from watering their precious trees, but I think there is a balance there somewhere between sustaining a livable city and an attractive lifestyle, and wasting a resource that's going to just keep pumping the prices up.

DR CRAIK: I'm not suggesting wasting, but sensible measures and letting people choose.

DR MUNDY: Coming back to my favourite example, the little old lady with the fruit trees: you touched on some issues around pricing options and resistance, the issues that regulators have got about it, and part 1 of the things that we've suggested is that people like yourselves should actually be able to offer a range of tariff offerings and one of those might be, in times of restriction, a high security but small volume which would look after half a dozen fruit trees in the backyard which have been there for decades. What do you see the obstructions to that sort of activity to be?

MR KELLY (YVW): I'll kick that off and then I'll ask Brett and Pat to respond. Look, we love those ideas and we've been canvassing those ideas more than anybody, I think, but we've done a lot of market research around this and customers don't want complication. They want choice but they don't want a water bill that looks like a mobile phone contract either, so there's a balance there. Also this is a very complex area. Whenever you play with prices there are winners and losers.

The transition from where you are to where you want to get to has to be gradual. We've been on a 25-year journey in Melbourne, moving from rates based to user pays, and we haven't completed that journey yet.

MR McCAFFERTY (YVW): I'll pass over to Brett in a second, but just to comment on one of the barriers that comes up is this notion of tariffs being cost reflective, for instance. When you start looking at choice and what customers may prefer in terms of their tariff options or the way water is priced, you come up against that all the time in the water industry because of the fixed cost nature of what we do. That's a bit of a tricky one. As Tony said, our market research is suggesting that by and large customers do value choice but they don't want to be overwhelmed, and there are issues coming out from the market research around fairness and equity, and aspects about people still have this tendency to favour water restrictions.

My hypothesis around that is that we haven't really engaged as effectively as we could in explaining the broader impacts of water restrictions. When they take that view about favourability to restrictions, it's not fully informed in terms of the overall impacts of restrictions on society. That's a personal hypothesis but I think we need to keep exploring that as well.

MR MATHIESON (YVW): Firstly, if I can go back to the question you asked before, Wendy, that if you signal the cost of water then people use it and that's fair and they pay for it et cetera. One of the things that concerns me is how effectively we signal that. All the arguments about signalling variable costs or long-run marginal costs or even scarcity pricing. I'm not sure customers react to that. What we understand is customers open their bill and they look at it and say, "Is that reasonable? Is it what I expected? Yes, I'll pay it," end of story. "That's more than what I expected. Why?" and they might look at their usage and if it's really a concern they'll look at the back and see all the charges and they'll ring us.

So how much react to the signal, and then in the end if we price this signal, even based on the scarcity pricing, and they continue to use it, the reality then is - and all sorts of other factors, we build in other augmentation. Then they go, "Hang on, I didn't realise that when you sent me that signal a year ago and I didn't react to it, that you were going to build an augmentation which actually increased my price double." So it's very difficult I think in reality to signal, whilst you do it for a variable charge in theory, people actually realise that in the end, unless you react to that, your actual bill is going to go up even more. That's one difficulty that we face in signalling it to customers.

In relation to the choice question, this concept of an unrestricted usage, it's what Pat says, whether the community is ready for it because they have been used to water conservation. But the other issue at the moment is if we offer this tariff and 10 per cent of customers take it up, whatever percentage takes it up, and we are

planning as an industry to no longer have restrictions to be only used really in an emergency situation. When that occurs, will these customers who currently have gone, in terms of water conservation, well beyond any restrictions - so they have changed their behaviours well beyond the restriction measures - will they go, "I'm not going to do that any more. These people next door to me have bought their way out, why should I make a community effort."

So in my view there's this conflict between the choice and the benefits of that, and the loss that the industry and overall the community may get by people reacting to the fact that other people have bought their way out. Now, you can say quite legitimately, "Well, people are currently buying their way out now. In the south-east of Melbourne there's options to sink boreholes. People have done expensive options of installing rainwater tanks which is a way to certainly alleviate restrictions. It's there but I think what I'm saying is it's not black and white. But certainly in our research there was interest from customers to actually buy their way out.

The other issue is, as I said, if we actually plan that basically we're not going to have restrictions unless there's a catastrophic event like in Melbourne a bushfire in the catchments or something, then is this option of an unrestricted tariff a realistic option to offer customers. How much more of an option am I offering than the current base service. They're the sort of things we're facing at the moment in considering offering this choice.

DR CRAIK: Are you going to run a pilot or anything?

MR McCAFFERTY (YVW): We're doing the market research, we've got to go some more modelling and more testing with stakeholders. But there are other things that we think we can do that will increase customer satisfaction around billing and the way the tariffs are currently structured. Clearly the message from people is, "I want more control," so how do we achieve that without having, as Tony said, all those unintended consequences around that. We want to keep exploring because anything that can improve customer satisfaction we're interested in.

DR MUNDY: Tony set out a range of things about transparency which you attributed to the presence of the regulator, and I think you make a very good point in your submission that what might have been appropriate at the start of the process might not be appropriate down the way. What we were trying to do in the reforms that we were setting out is that a lot of that transparency stuff can be acquired. All the information that you make available to the regulator you could make available to your customers.

I guess what we're looking at is - to use your language - mature sectors which perhaps yours is more mature than, say, South-East Queensland, that the need for the regulator to be making business decisions and ticking off business decisions prior to

you implementing them may be less than 20 years ago. What we're trying to tease out is - and we know, for example, in Sydney that IPART sets 66 different prices. The question we're looking at is, is there a time where an industry has progressed to the point where the regulatory - and I don't think we actually talked about getting rid of independent price regulation, I think what we talked about was getting rid of regulatory price-setting and the language was particularly chosen for that. Do they still set your individual prices?

MR KELLY (YVW): Yes.

DR MUNDY: Perhaps you could move on to a revenue cap or a tariff basket or have a backward-looking arrangement - - -

MR KELLY (YVW): Yes, yes.

DR MUNDY: I think, to be fair, some regulators have sought to misrepresent - there's no doubt because they were just confused - - -

MR KELLY (YVW): We do support that one and we've been abrogating that type of arrangement for quite a while. I think the reality that we're living in though is that we're still owned by the state government of Victoria who is in the front line in dealing with a lot of water issues, and the prospect of each utility setting independent tariff structures can scare the horses. The argument always is, you know, you can have one person on one side of the street with a completely different tariff structure from the other side, if the boundary between the utilities goes down the street. To counter that - - -

DR MUNDY: Which is what happens with electricity now, particularly if I choose my own retailer.

MR KELLY (YVW): Well, I was going to say, to counter that there's electricity, and also councils in Melbourne have exactly the same thing. Again it comes down to this bridge too far argument. This is so different from where the water industry is at the moment that I think all the stakeholders need a little bit more time to contemplate the consequences of this and the benefits as well.

DR CRAIK: Do you think a gradual transition then is possible, like moving first to revenue caps and then keep on - - -

MR KELLY (YVW): Absolutely. What I would expect is, yes, but then there would be some constraint over the degree of freedom that we would have in setting tariffs and that would be fine.

DR MUNDY: You could argue that if you had some sort of a revenue cap then why

would you not set - what would be the incentive not to - - -

MR KELLY (YVW): Exactly right. Our customer base, Warren, is very different from others. Sydney West has a dominant industrial base. Ours is dominant domestic. We would have a different approach, for sure, and quite rightly so, I think.

DR CRAIK: I was going to ask, is there much difference between what you propose to the regulator and from what the regulator decides in terms of your prices?

MR MATHIESON (YVW): I think the answer is yes.

DR MUNDY: Okay. The next obvious question is why?

DR CRAIK: Don't you know your business better than the regulators?

MR MATHIESON (YVW): We'd like to think so. The honest answer I think is that the regulator will always - the trump card that they've got in their pocket is something called long-run marginal cost, and we all know how difficult that is to estimate, but they will always play that as, "This price is above long-run marginal cost." There's a very simple example where we have in Melbourne a sewage disposal charge which is a volumetric charge for sewage disposal based on the water in, adjusted for seasonal, adjusted for discharge factors, applied to the average customer which is one in Melbourne, I'm guessing, and everybody else is around that sort of mean. It's not very accurate. So we have this concept of simply combining the water and the sewage charge into one, calling it a volumetric charge, not changing the mix of volumetric and fixed, and they came up with, "It will be above long-run marginal cost." The fact that the current tariffs were already above long-run marginal cost and stayed as they are is irrelevant. That's our experience with it.

MR McCAFFERTY (YVW): I think the point to add to that is the reason we wanted to do it is that no-one understood the sewage disposal charge. There was no signal at all. It was achieving nothing other than confusion.

MR MATHIESON (YVW): Yes. To add to the comment about the revenue cap concept that we've promoted in the past, one of the arguments against that is, "Well, one year you'll have a shortfall so you prices will go up dramatically and then you'll have this sort of up and down." Our proposal would be you would simply cap the movement in price as a result of the shortfall or the overrun each year. In the end, if you were concerned about this sort of price happening, you could basically say, "Look, every bit of shortfall or overrun can be given back to the customers or increase the price to the customers over five years or 10 years." It doesn't have to be the immediate one, which is often the case for why revenue caps - - -

DR MUNDY: So the revenue cap was an aggregate revenue over a period rather

than - so there was some sense of unders and overs. There was a reconciling cap, so unders and overs were given back.

MR MATHIESON (YVW): Yes.

DR MUNDY: Then presumably at some next reset they would come and whack you on the back of the head or give you a gold stamp or something.

MR MATHIESON (YVW): Yes.

DR MUNDY: Has the regulator done any work in undertaking a cost-benefit analysis of his current preferred arrangements as opposed to alternative arrangements?

MR KELLY (YVW): You should ask him that.

DR MUNDY: I'll rephrase it. Are you aware - - -

MR KELLY (YVW): We're not aware.

DR MUNDY: So if the regulator has done this, he hasn't done it in a transparent way? You don't have to answer that question.

DR CRAIK: If you go to your community costing models - we don't have too much more time - we think that section is very interesting and we'll have a close look at it. One of the things that we've proposed really is that the utility should operate within the environmental policies and framework that's set by the government and you should actually respond to them rather than weighing them up yourselves.

MR KELLY (YVW): We could do that, Wendy, I think. That's a very simple approach to the world. Regulators are not leaders. Regulators lag. They lag with community views in my experience and generally they produce lowest common denominator outcomes because, in the case of the water industry, that's what the water industry can bear. What we're trying to do with that work is to establish what are the true costs that we're imposing on the community and making choices around that.

Now, in that work we've identified that our traditional approach is imposing more cost on the community. In your model it would be, "Well, who cares? That's somebody else's job to work that out." That would work if someone else was working that out, but nobody else is working that out. We don't see that as a long-term way of us operating, what we're doing is we're trying to establish a different way of assessing costs, hoping that the policy-makers and the regulators will pick them up and build them into the processes, because one of the key factors

when you do that work is you work out - to deliver this project, Yarra Valley Water has to spend maybe two or three million dollars more than it otherwise would have had to do.

We've done that on a couple of occasions to make the point. In the scheme of things that's not a material amount of money; in the longer term that could be. The question becomes, "Who should pay? Who should pay?"

DR CRAIK: Our view is probably the utility.

MR KELLY (YVW): We've got a number of options. One obvious way is that we take that additional cost back to our customers and say that we could deliver a better outcome for the community, including environmental and social impacts, if we do these things but it will cost a bit more, or we could hand it over to the government to fund that through the tax regime or some other means. But what we're recognising I think is that there are better ways of doing stuff.

DR MUNDY: I think what we were trying to get at was that the utilities really shouldn't be in the business of answering the "what" questions, they should be intimately involved - - -

DR CRAIK: And providing advice too.

DR MUNDY: - - - in the "what" questions. Then their real responsibility was to deal with the "hows".

MR KELLY (YVW): That's the dumbing down that I talked about before.

DR CRAIK: Yes, you're right. It would take that fun away from you.

MR KELLY (YVW): Absolutely, but I wouldn't be able to attract all these very smart people to work for me.

DR MUNDY: The other point, Tony, this comment about regulators seeking the lowest common denominator, does it follow from that, that it's your view that they're stifling innovation?

MR KELLY (YVW): Yes, clearly.

MR McCAFFERTY (YVW): We've got an example in Melbourne, when we first went to regulation, and comparative reports included a feature on innovation. Those innovations were independently audited and then the regulator would then publicly report on innovations. As far as we're concerned that was a real spur to do things differently, to look for efficiencies and service improvements. When the regulator

moved to regulating non-metro water utilities, maybe for reasons of complexity or whatever, they dropped reporting the innovations.

We're monopolies, geographic monopolies, we need those external spurs. Human nature is that when you compare you're going to want to look good. So we thought that comparing innovations and then reporting on them would be a way of bringing up the whole performance of the water industry. There's no reason why if South East does a great innovation and it's there for us to look at, and it's independently audited as something that's well worthy doing, we wouldn't want to copy it, and so forth. Just taking that away was this point about when we're all together and we try to get something that everyone can live with, these sorts of things disappear.

DR MUNDY: Was any reason ever given for that?

MR McCAFFERTY (YVW): I think it was given that it was all a bit too much, taking on board the regionals, as well as the metros, and having that additional requirement to report the innovations.

DR CRAIK: Was it in the legislation?

MR McCAFFERTY (YVW): No.

DR MUNDY: But you were already doing it.

MR MATHIESON (YVW): I think the other reason was they found it a bit difficult in the order process, and to be fair we'd look at an innovation that another company had done and go, "Hang on, we did that last year." The regionals coming on board, as well it was difficult to do, was a good reason to let it drop.

DR CRAIK: For comparative competition you think the notion of performance reporting on innovations is actually useful?

MR MATHIESON (YVW): Absolutely.

MR McCAFFERTY (YVW): If not done by the regulator - you know, Tony talked about a shareholder representative that's looking for those things and holding the businesses to account.

MR KELLY (YVW): Also environmental and health regulators are very conservative.

DR MUNDY: Yes, they particularly opaque. Tony, this is a question to you as a director, so if you feel it's inappropriate please say so. When you and your

colleagues sit down around the board table, are you consciously aware of the performance of the other two utilities in metropolitan Melbourne, and are you cognisant of the performance in other jurisdictions as well?

MR KELLY (YVW): There's not a day goes by that I'm not wondering what South East and City West are doing, and whether I'm doing it better or they're doing it better. The comparative competition, sometimes people outside the industry say, "That's not real competition." But I can absolutely give you my assurance, on a professional basis it has a big impact. No-one wants to be second. No-one wants to be perceived as second.

DR CRAIK: It's interesting in Tasmania with the three new local council owned water corporations where they have combined all the local council utilities, 50 per cent of the board members are common to all three. The chair is common to all three utilities, and I think about 50 per cent of the board members are common to all three utilities. What would your view be compared with your own situation - - -

MR KELLY (YVW): My view on that is that's a sensible way to start in Tasmania. It's not a sensible way to finish.

DR CRAIK: Okay.

MR McCAFFERTY (YVW): This other point is what gets measured gets done. So if innovation is not being looked at or reported upon, the chances of it being done - and we've even had debates in the water industry - to be fair, Tony - around the value of comparative competition, and that's because we believe it hasn't been leveraged or strengthened to the extent it could be.

DR CRAIK: Okay.

DR MUNDY: Can I ask one final question, Tony. Accepting that you're the managing director and therefore in a professional labour market for your services elsewhere, do you get the sense that that comparative competition issue is motivating and engaging for the non-executive directors and brings them to do their job and that they're incentivised by the presence of that comparative stuff?

MR KELLY (YVW): To a lesser degree but it's still very visible.

DR MUNDY: So that's what incentivises them and the generous fees - - -

MR KELLY (YVW): It is an incentive, there's no doubt. When we sit around the board table discussing our strategy, we want to have the best strategy.

MR MATHIESON (YVW): Can I just give a very brief example of community

cost that might bring home the issue. One of the things that happens is that Melbourne Water is in charge of drainage and they send a signal to developers on nitrogen going to the bay. There has been work done on how much nitrogen goes to the bay. They need to treat the nitrogen and make sure the bay doesn't overturn. They send a signal to developers, simply, "If you put a normal discharge of nitrogen into the bay you're going to pay X thousands of dollars in developers' charge. But if you demonstrate to us that this development is going to produce less, you'll get a reduced charge." But that's only in the greenfields.

We had a situation where with an infill development that the nitrogen would end up in the bay. So in our community costing model we took into account that price signal - albeit that we weren't facing, and the developer in this particular area wasn't facing - to actually work out what was the key input as to what the best solution was. In the absence of transfer pricing or rules, for us to step back and go, "Actually, we should ignore that because we're not facing that cost signal," is the dilemma that you're putting to us and saying, "Well, even though you're not paying for it you should ignore it." But we know that because of market failure or signal failure that it's real, but we're just not getting the signal. I thought it was a useful example.

DR CRAIK: It is. Thanks for that. Thanks very much for coming today and answering the questions, and thank you for your submission. It's very helpful.

MR KELLY (YVW): Pleasure. Thank you.

DR CRAIK: Next we go to the South Australian Department of Health. David, if you could say who you are and who you represent, and if you'd like to make a brief statement that would be great, thank you.

DR CUNLIFFE (SAH): I'm Dr David Cunliffe. I'm the principal water quality adviser with SA Health. I'm one of those opaque health regulators that was just referred to.

DR CRAIK: You're quite transparent here today.

DR CUNLIFFE (SAH): I should start by noting - and it's in my submission - that I deal specifically with issues relating to public health, and not with issues of structural or economic reform.

DR CRAIK: Sure.

DR CUNLIFFE (SAH): You might expect that with my background I view protection of and support of public health through provision of safe water supplies as the most important responsibility of the urban water sector. Australia has been well served in the past by generally sound performance in delivering safe water. I think people take that for granted. I don't think they realise how difficult the task is and the level of vigilance, cost - both in terms of money and people - is required to maintain protection. I'm not suggesting that the urban water sector is perfect and that reform shouldn't be canvassed. However, I think great care needs to be taken to ensure that the reform doesn't come at the expense of public health. I think too this needs to be a very active and not a passive consideration. I don't think we can just assume that business as usual will continue to operate even if we change and reform.

As I said before, one of my concerns is that too often we take safe drinking water or safe water in general for granted, and this can have significant implications. There are substantial differences between delivery of water as a service and delivery of other utilities. So compared to gas and electricity, water is unique in its sensitivity to contamination and its ability to transport and transmit disease to large populations. So the largest outbreak in the developed world - occurred in Milwaukee in the 1990s - led to over 400,000 cases of illness from a single water supply. The 1998 Sydney incident led to our largest city being advised to boil all drinking water for several weeks. That just reinforces we can't take safe water for granted. All sources of water should be treated with respect. They shouldn't be regarded as being automatically benign, no matter what the source.

So against this background the reason for my written submission was the concern that while public health was raised through the draft report there seemed to be some misconceptions on important matters of detail. In particular, these relate to

the intent and application of the Australian Drinking Water Guidelines and the Australian Guidelines for Water Recycling and also to the significance of sewage discharges into water sources, which is important in terms of your choice of water: do you choose desalination, do you choose augmentation with treated sewage, for example.

So perhaps to start I'll just deal very briefly with the Australian Drinking Water Guidelines. Now, a first point is that they are guidelines. They're not standards, as cited in the report. The difference is significant both in terms of formulation and application. A second and critical point is that the focus of the guidelines is a framework for management of drinking water quality which supports development of preventive risk management plans for assuring drinking water quality before supply to consumers. These plans still include traditional customer tap monitoring but only as a mechanism for verifying the effectiveness of the plants.

Inclusion of the framework in the guidelines was a major task. It was initiated after the 1998 Sydney water incident because other cities didn't want to go through that and we thought there was a better way of managing water supplies, and there was a general concern that had been growing for some time about over-reliance on end-product monitoring as the central management tool. We generally regard end-product monitoring as too little, too late for that function. For microbial results it will perhaps take one or two days to get a result. For chemical results it can take a week or two. So if you're going to base your management on that type of testing you're going to be in a position where all you can do in terms of advice is tell people that they have been drinking contaminated water. If it's recycled water you can tell a farmer that he has been using water that was unsuitable for his lettuce, may kill his lettuce. He's probably not going to be best pleased. That isn't the way to manage drinking water or any type of water safety.

The framework has got strong support from both the water industry and the health sector and I think it's significant that we see application of the risk management approach as a consistent feature of Australian drinking water legislation and alternative mechanisms such as memoranda of understanding, codes of practice. So if you look around all of the states and territories there is a consistent approach to application of a risk management approach, consistent requirement for development of risk management plans. One of the features of the risk management approach is that it enables system-specific risks to be determined so that appropriate control measures can be identified and implemented and targeted monitoring programs can be designed. So it isn't one size fits all, as far as that's concerned.

The draft report refers to health-critical and non-health-critical elements. To be honest I wasn't sure what that meant. My feeling is that they're aligned with end-product monitoring.

DR CRAIK: We really intended to say - some things, as we understand the Water Quality Guidelines are actually about health, some are about taste or aesthetics or levels of - - -

DR MUNDY: It's been raised with us by small regional - in the context of a small regional utility, particularly in New South Wales and remote parts of Queensland, that - and you'll know this better than we do but there are some guidelines which relate to odour and to colour.

DR CRAIK: And to taste - - -

DR MUNDY: The view is that while the water is safe to drink it doesn't comply with the standard and the utility concerned is being - that with the guidelines and therefore the utility is being held up as in Ms H. Barker.

DR CUNLIFFE (SAH): Yes.

DR MUNDY: Our observations are more around the reporting frameworks for the utilities concerned.

DR CUNLIFFE (SAH): And that goes to the issue that I've just raised. I think it's more important to have a reporting framework to risk management plans which can be audited. I think you have spoken to Water Services Association of Australia who have talked about some of the auditing tools that they've developed, for example. So you can audit plans. If you look at Queensland legislation if you look at the new South Australian legislation they talk about risk management plans and the auditing thereof. Victorian legislation is the same.

DR CRAIK: So you think it would be better for even small regional utilities to actually have these risk management plans in place, audited risk management plans in place, than the sort of line we were trying to propose? I guess we were really trying to focus on what is the risk to health.

DR CUNLIFFE (SAH): Absolutely.

DR MUNDY: And what we're seeking to do is deliver accountability.

DR CRAIK: Yes.

DR CUNLIFFE (SAH): Yes.

DR MUNDY: In the same way that the occupational health and safety legislation in certain jurisdictions now brings home criminal culpability in certain cases of industrial manslaughter.

DR CUNLIFFE (SAH): Look, there is a place for the end product numbers, I mean you have to achieve safe drinking water. But the important bit is how - is assuring quality day in, day out every second of the time. So you've heard from water utilities. They spend a lot of money on 24 hour, seven day a week monitoring systems at their filtration plants to assure quality.

DR MUNDY: Yes, I understand. Our purpose was to raise the accountability issue. The method of doing so and the matrix is something which we weren't - you know.

DR CUNLIFFE (SAH): That didn't come through clearly - - -

DR MUNDY: No.

DR CUNLIFFE (SAH): - - - and that was part of the reason for my submission.

DR CRAIK: I guess small utilities don't have a lot of money and if there's absolutely - you know, if there are really things they can focus on - you don't need to provide the same level of focus on absolutely everything then - but your risk management framework, I suppose, would actually take account of that.

DR CUNLIFFE (SAH): Yes, and we've developed risk management plans for rainwater tanks.

DR CRAIK: Yes.

DR CUNLIFFE (SAH): For everything from rainwater tanks to SA Water systems. They can all have risk management plans and they are designed to be commensurate with the size and complexity and risk of the system. The other set of guidelines that we've got are the Australian Guidelines for Water Recycling, and they're relatively new. The latest version published between 2006 and 2009 and they were specifically designed to support a consistent approach to recycling across Australia. It was felt that the existing guidelines weren't comprehensive enough. They weren't broad enough in scope. They didn't, for example, deal with stormwater or greywater.

The guidelines deal with the full set of recycled water sources and end uses, and they describe how to produce fit for purpose water which is actually referred to very briefly in the report. The guidelines deal with everything from irrigation of golf courses with untreated stormwater collected in wetlands, to augmentation of drinking water supplies with treated sewage where you've got ultra-filtration, you've got reverse osmosis, advanced oxidation, high-level disinfection, so far more expensive and complex systems.

Like the drinking water guidelines, the central focus is a risk management approach, and it's modelled on the same framework that's in the drinking water guidelines. Exactly the same steps are involved but of course have been modified to reflect - the sources of water are generally but not always different.

The final issue that I touched on in my comments was that of sewage discharges which seems to have attracted a little bit of attention. In a number of places in the report it suggested that many people in Australia and around the world are drinking water derived from sources containing sewage, and that's true. In particular the report notes that the source of Adelaide's drinking water supplies includes sewage from Canberra.

DR CRAIK: And other places.

DR CUNLIFFE (SAH): Other places probably, but not in South Australia. A former minister, Susan Lenehan directed that we don't discharge sewage into the river systems.

DR MUNDY: There are relatively few places actually.

DR CUNLIFFE (SAH): Relatively few, yes, that's true.

DR MUNDY: There's no Waggas or Alburys.

DR CUNLIFFE (SAH): That's true. What bothered me, I think, that the report notes that sewage discharges into drinking water supplies does not represent a health concern.

DR CRAIK: I guess we were trying to point out what actually happens. People don't make a lot of fuss about the fact that they are drinking - - -

DR CUNLIFFE (SAH): People don't, but it says that it doesn't represent a health concern and I don't agree with that statement.

DR CRAIK: I think we were saying that to our knowledge there haven't been identified health problems as a result of that.

DR MUNDY: I think what the statement actually said is the commission was not aware or had not been presented with any evidence.

DR CUNLIFFE (SAH): No. I don't agree with the statement and I think a lack of awareness is a view I don't share.

DR CRAIK: Absence of evidence is evidence of absence.

DR CUNLIFFE (SAH): I'm surprised by it, and the reason for that is the presence of sewage discharge, together with livestock waste, are identified in the guidelines as representing significant sources of potential risk that need to be counted and can be counted. We'd all like to have protected catchments without these discharges which is the case for large parts of Melbourne or most of Melbourne. They have a protected catchment, no livestock waste, no sewage goes into it. They have a much lower level of treatment. It's based on disinfection.

In comparison, most capital cities don't have that. So Sydney, Brisbane, Adelaide need much higher levels of treatment, including filtration and, in some cases, dual disinfection. Adelaide has a number of suppliers where we have filtration, followed by UV light irradiation, followed by chlorine or chloramines. The challenge, and the reason that these discharges are a health concern, is that they can have significant consequences in terms of drinking water outbreaks which can occur if you have failure. These failures are infrequent but they have occurred in like countries to Australia, such as the United States, Canada and the United Kingdom.

I referred before to the Milwaukee outbreak. That was caused by increased contamination in source water associated with livestock and sewage, combined with a treatment failure. Later tightening of the organisms suggests that it was sewage. If you have a breakdown and you've got this type of discharge in your catchment, then you've got a high risk. Melbourne won't have the risk from the organisms involved with Milwaukee because they don't go into their catchment.

DR CRAIK: Given that South Australia take a lot of water from the Murray, what particular precautions do they put in place, and do they try to persuade the ACT, for instance, not to put their sewage back into the river?

DR CUNLIFFE (SAH): No.

DR MUNDY: Why not?

DR CUNLIFFE (SAH): I think, as I said in my submission in two or three different places, which seems to have been overlooked - not by the commission - that Canberra sewage has negligible impact on Adelaide supplies. It's too far away, too relatively small a volume. You've got massive dilution, massive detention, and the fact that it has little impact is supported by microbial monitoring in the Riverland stretch of the River Murray. The median E.coli count of Morgan is four per 100 mil. It's very low. The cryptosporidium and giardia monitoring in that stretch of the river doesn't detect much contamination at all. I mean, Canberra sewage, firstly, it's quite highly treated. It goes into the Molonglo, it goes into the Murrumbidgee, it gets extracted by lots of irrigators along the way, and then hits the Murray and more irrigators - - -

DR MUNDY: And the residents of Wagga who don't appear to be having any difficulties and are much closer, and don't have the benefit of it being filtered subsequently through the wetland system before it gets to Adelaide.

DR CUNLIFFE (SAH): No, but they treat their water supply, as does Adelaide. You can take these measures. To say it's not a health concern isn't correct. It's a health concern that we take account of and we deal with. But if we have a breakdown in supplies, as a regulator I know that causes me more anxiety and more sleepless nights.

DR CRAIK: Were you worried when the ACT had a sewage leak late last year?

DR CUNLIFFE (SAH): On the other side of Lake Burley Griffin?

DR CRAIK: Yes.

DR CUNLIFFE (SAH): No. Well, not for Adelaide. Yes, it's a concern and, no, it shouldn't happen, and they closed down Lake Burley Griffin. Yes, that happens regularly. I think the point of this is that whether you have historical discharges or whether you're contemplating intentional augmentation that there are significant risks that you have to consider, you have to deal with, and the risks will differ depending on how you augment your supply. If you're considering, for example, the difference between desalination and augmentation of a water supply with treated sewage, from a public health point of view, two completely different risk sets. I'm not arguing the economics but the public health risk.

DR MUNDY: I think what has motivated this issue and discussion in the report has been the tendency of elected officials - and to some extent non-elected officials - to implement what we call policy bans. It's just not acceptable. What you're proposing is precisely what we're proposing, is that when people consider these options, they need to consider all the costs and the risks together. What we have tried to make clear is that all options should be put on the table, and they have economic risks, they have health risks, they have environmental risks and they need to be considered together. I don't think it's a case of us saying that you should ignore the environmental health issues. But obviously we need to be more clear about that. We do accept that there must naturally be different natures of risk. That's obvious.

DR CUNLIFFE (SAH): My concern was that the potential risk from sewage, whether it's in our existing situation or whether it's intentional, was underplayed.

DR MUNDY: That's a fair point.

DR CRAIK: You're not the only one who has said that. We've had a few people

respond, and we did have Peter Collignon, for instance, and WSAA raise these issues with us at some length.

DR CUNLIFFE (SAH): Yes. I accept that these things are doable. One of my roles was I chaired the working group that contributed to the drinking water augmentation guidelines. I'm aware of the scientific basis of that. Then I guess my final point was that because public health is critical - and you do raise in the report a number of recommendations, particularly 13.5, that directly go to matters of public health. I know that there hadn't been a great deal of engagement with the public health sector, which I thought was an oversight. For example, you have a recommendation - - -

DR CRAIK: Fair enough comment.

DR CUNLIFFE (SAH): - - - for the National Health and Medical Research Council but they didn't appear - I didn't see them on - - -

DR CRAIK: We haven't talked to them, no. No, that's correct.

DR MUNDY: Yes, that's a fair point.

DR CRAIK: That's a fair comment. Can I just ask you a question on indirect potable reuse? This has come up quite a bit and of course Peter Collignon had a lot to say about it and believes it should be a last resort. Given that risk management frameworks and things - and if the treated water is put back into a dam, for instance, and it's - you know, it's put back into a dam with other water in it. Do you see that that is a reasonable possibility? Is considering indirect potable reuse in your view a reasonable alternative to consider? Not saying you'd necessary adopt it but is it - - -

DR CUNLIFFE (SAH): I was part of the working group that wrote the guidelines about how you can do this safely, so the guidelines give you that direction on how it can be done should the jurisdiction make that decision to proceed.

DR CRAIK: So you do believe it can be done safely, subject to all the right guidelines and things being done?

DR CUNLIFFE (SAH): Yes, it can.

DR CRAIK: Yes, okay.

DR CUNLIFFE (SAH): Others who comment on this, like Prof Bursill, says the same thing. He thinks that it's a last resort but if it came to that you could do it. We've got national guidelines. In fact, we're the only country that does have national guidelines for drinking water augmentation.

DR CRAIK: Okay, all right.

DR MUNDY: Just one last question. You may or may not have had the opportunity to read - the NWC recently released a report on drinking water and there was a lot of discussion in that document about institutional frameworks.

DR CUNLIFFE (SAH): Yes.

DR MUNDY: Do you have a view on what - the content of that report, is it generally a worthwhile path for jurisdictions to go down or do you think there's any obvious problems from your perspective?

DR CUNLIFFE (SAH): That's a broad question. I've read the report. I think it does make some interesting points. One of those is about the guidelines and about support for the guidelines and, "Can we do that better?" There are a range of comments about consistency, and I think to an extent they're touched on in the Productivity Commission's draft report. I think we need to be careful to tease that out a little because - I mean the previous session you were talking about regulation, but I think that was economic regulation.

DR MUNDY: It was.

DR CUNLIFFE (SAH): Then there's health regulation, there's environment regulation and there's regulation for wastewater discharges, regulation for drinking water. I think in those reports we tended to see them mixed all together. So criticism of one sector has tended to, by inference, involve the other. I think we are seeing a consistency with drinking water regulation and quite recently we did do a comparison of drinking water regulation across Australia. If you look at the states and territories it's fairly consistent, so we have evolved to a consistent point there. I think in other areas we haven't got there yet, and perhaps that's understandable. The Drinking Water Guidelines are a much older document, the risk management framework came in 2004, Recycle Guidelines 2006-2009, and there has been, over the last few years, an acceleration in use of recycled water and getting systems in place, so I don't think we're quite as mature in that area.

There is always scope to look at that but I think that drinking water - the health regulation of drinking water does actually indicate that Australians do actually look for consistency. I think the representatives from Yarra Water talked about - that they - there isn't a day goes by when they don't think about what one of their competitors is doing or one of their fellow industry people in Melbourne are doing. I think the same thing happens in the health sector. Is there room for improvement? There's always room for improvement, but are we trying to find a consistent approach? We are. I think with drinking water we've gone down a path. With

recycled water there's now a national recycled water regulators forum. It's largely a voluntary group coming together. Again, they're trying to promote consistency.

DR MUNDY: Does that go to things like if a certain process is improved in - going down the path of a certain process is improved in South Australia, therefore the Queensland will just - is that where that debate is going?

DR CUNLIFFE (SAH): Yes. That's the type of thing we're looking at because - - -

DR MUNDY: Yes, because that's what a number of people have said to us, "We get an approval to use widget X in jurisdiction Y but then we go to another jurisdiction and we've got to go through the whole - - -

DR CUNLIFFE (SAH): Yes.

DR MUNDY: That's like the bad old thing that this commission has spent a lot of time carping on about, frankly.

DR CUNLIFFE (SAH): Yes, and I've heard some of those arguments. That's was why I made the point about the drinking water regulation, is there where they've had more time they are landing on a point of relative consistency. Now, there are variations. The Victorian legislation has numbers in it, has standards. The South Australian won't.

DR MUNDY: Yes.

DR CUNLIFFE (SAH): We both have risk management plans, though. But in terms of this approval of process - - -

DR MUNDY: Systems and process - - -

DR CUNLIFFE (SAH): - - - acceptance across Australia, it makes sense for the health regulators and for the environment regulators not to duplicate. I mean we're pressed enough in terms of resources. If we can - - -

DR MUNDY: So if someone walks in with a ticket saying, "New South Wales has said this is all right," as long as you've got confidence in New South Wales's processes from your point of view that's one less thing you've got to - - -

DR CUNLIFFE (SAH): Makes sense for us to adopt that. So that's - yes, that's what - - -

DR MUNDY: So that's where you're working towards?

DR CUNLIFFE (SAH): Yes, we are.

DR MUNDY: Okay, that's - - -

DR CUNLIFFE (SAH): So the regulators forum is doing that and there's some validation projects currently under way, a national one under way at the moment, looking at that very question.

DR CRAIK: That's good.

DR MUNDY: That's good.

DR CRAIK: Thank you. Well, thanks very much David. Thanks very much for coming over from South Australia.

DR MUNDY: Yes, thanks for coming.

DR CRAIK: Thanks for your input and we've taken your point about health regulation on notice and we've actually spoken to a few health people now.

DR MUNDY: And thanks for not being an opaque health regulator.

DR CUNLIFFE (SAH): Thank you for the opportunity.

DR CRAIK: Thanks a lot, David.

DR CRAIK: Our next person, and we're running a little bit late, is Neil Nicholas. Neil, if you could take a seat and say your name and who you represent and then if you'd like to make a brief statement that would be great, thank you.

MR NICHOLAS: Thank you for the opportunity of allowing me to do so.

DR CRAIK: Pleasure.

MR NICHOLAS: My name is Neil Nicholas. I'm simply Joe Blow, citizen off the street.

DR CRAIK: Representing Neil Nicholas?

MR NICHOLAS: Representing Neil Nicholas. I have no financial commitment to this whatsoever, which I think is possibly a good thing. My name is Neil Nicholas. Basically back in the mid-90s I was the general manager of a water company called Distillation and Waste Management. We were involved in the separation of water and waste product by the means of cold vaporisation or vacuum distillation. We also manufactured and sold bottled water which was marketed under the name of Vaqua. The water contained less than .05 parts per million of total undissolved solids, yes, pure water. Water generally back then carried around about 120 parts per million of undissolved solids in Melbourne, which is about as good as you get anywhere in the world, as far as I'm aware.

The draft document is a very comprehensive step towards reform in the urban water sector. I don't think I've done that much reading since high school and I don't think I've tried to analyse as much since either.

DR CRAIK: You're probably one of the few people who's read the lot, I think.

MR NICHOLAS: I had to go back and Google things to try and work out what that meant.

DR CRAIK: Yes.

MR NICHOLAS: So yes, I've done my best anyway. I very pleased with the detail given to this document and I'm well satisfied that our future is in very good hands. If we are, however, going to reform the urban water sector I think we need to make even more changes, not only to the areas of catchment, storage, treatment, transport and quality but to the very way in which we think about water. It's a finite thing, it's not an infinite thing. Our predecessors were really wanting to get out and sell it as much as they could but somewhere along the line they've got to get it back.

For many years there was no thought required. We turned on the tap and out

came water. Indeed, if we asked mum for a drink and what was there she said there was plenty of water in the tap. Our infrastructure was well planned many years ago, which the gentleman also said, but we need to have the same forethought today. Water is essential to our lives, and that's not something which we can leave in the hands of a select few. We must begin to take responsibility for our own usages and our own future. We must continue to remind people that this is a resource that should be used wisely. This needs to be done through our schools, social media et cetera.

The federal government has largely been seen as an umpiring position, whilst allowing states and territories to regulate. Reforms are now needed to be made to this situation through regulation and legislation as well as through infrastructure. We now need to sell this resource to the consumer according to the grade or quality being provided. Water should be classed or graded into A, B, C et cetera and sold accordingly to the purpose for which it's being used. All households, in my opinion, should be offered grade A and B water for drinking or, for argument's sake, flushing and washing. A lesser grade of water could be provided for garden use and so on. A price structure difference between water grades would easily ensure that consumers would choose according to their needs and requirements. In Werribee, for argument's sake, we have three estates being provided with purple pipe water as well as drinking quality water. In Altona we have large water users being provided with purple pipe water as well. That's recycled from the Werribee situation. This is being used in industry as well as in golf courses et cetera. Purple pipe water has been recycled.

The infrastructure for this system would be largely paid for by the user. New estates and areas would be piped accordingly and costed into the sale price. This may be more difficult in older areas. In order to increase water storages we need to legislate that all houses, warehouses, factories and buildings have provision for harvesting and storing of rainwater. Above and below ground water tanks should be mandatory. This can easily be done for all buildings. A scheme can be organised through water suppliers that tanks be provided with a payment scheme attached to their regular water bill. As the water usage would be decreased - their Melbourne or their main water would be decreased - the instalment payments for tanks would be offset with little effect to the consumer's outgoing cost.

Where we are now seeing huge warehousing buildings there needs to be a requirement that these be - required that the water harvested and used properly. A taxation incentive for proper use of this water might be a way of encouraging this. We need to stop people flushing drinking quality water. If we can prevent 20 million people from flushing 10 litres per day we can save 200 million litres of this resource daily. This can easily be achieved through the purple pipe or harvested catchment. We need to properly plan our cities and our urban development whereby we legislate and regulate the areas we develop for industrial, commercial and residential

purposes. These should be developed with a view to our sustainable future. Water storage, recycling and usage should be considered. These areas should also provide environmental water areas such as lakes or similar waterways as it is essential that trees and vegetation be nurtured in all areas to encourage rainfall.

DR CRAIK: Okay, thanks very much, Neil. Thanks for your submission too. I guess in some areas we have different views from you. I mean our view would be, on mandatory tanks, that the cost of the water ends up being very much more expensive than taking water out of the regular reticulated system and that if people choose to spend that money that's fine but people shouldn't be forced to because it actually means then they're spending more money than they really need to do. So we would say that for those sorts of things that there needs to be a cost-benefit - for installing mandatory rainwater tanks or any mandatory things there ought to be a cost-benefit analysis to decide whether it's actually worth doing or not. Would you agree that that's a sensible approach?

MR NICHOLAS: I believe that if we can cut down the water usage, that's drinkable water, by preventing flushing water that we will be able to increase our population, increase our - yes, it's not a finite product. It's something that we've got to maintain and I believe that the cost of a water tank you're looking at something like $500 or so. That would be easily offset against the cost of drinking water.

DR CRAIK: Depends on the size of the tank, I suppose.

MR NICHOLAS: Well, that would be regulated by the size of the roof.

DR CRAIK: But comparisons that have been done by others, you know, proper comparisons - and when you look at the actual price of water you buy through the tap, the price that you pay for water through a tank is actually very expensive. If you choose to do it, fine, but I guess our view would be it's a very expensive way of actually - - -

MR NICHOLAS: I'm currently paying in my country property $5 of water bill for usage and $75 for it to go past the front of the house whether I use it or not.

DR CRAIK: Whether you use it or not, that's right.

MR NICHOLAS: I point out that what comes out of my tank is this colour and what comes out of the pipeline is this colour, I'm talking at a place called Watchem where we haven't had decent water in five years.

DR CRAIK: You obviously have a very good tank. We've got different colour water from ours sometimes, I can assure you. I guess your other suggestion about reducing the amount of drinking water that is flushed and washed and things like

that, if you're trying to retrofit in greenfields places it might be cost effective, but to put a third pipe in to retrofit major city areas would be a very expensive proposition.

MR NICHOLAS: We're currently putting lots and lots of new estates in or having developers come along. Our developers say, "Well look, we've picked up a farm, we've cut it up into lots of little bits and we'll sell it to you, you, you and you." Then they turn to the government and they say, "Now look, we're going to need water from you, electricity from you, we're going to need sewerage from you," and where is their input? If they were to put in a second pipe at the same time as the first one it would be a very limited cost.

DR CRAIK: Be a lot cheaper than retrofitting.

DR MUNDY: Yes, but I think Wendy's point is most people don't live in greenfields developments.

DR CRAIK: Yes.

DR MUNDY: And we've certainly - we heard, when we were in Canberra, when we had hearings in Canberra, that someone is redeveloping the old brewery on Broadway in Sydney and they're putting in third pipes, so it is possible. But it seems in new developments it depends on the circumstances, but I guess Wendy's question went more to third pipe schemes in metropolitan Carlton.

MR NICHOLAS: In metropolitan Carlton you'd be looking at using tank water, obviously.

DR CRAIK: Even if it was more expensive than water out of a tap you would think that people should be forced to install tanks. Is that what would be your suggestion?

MR NICHOLAS: I believe so, yes.

DR CRAIK: Yes.

MR NICHOLAS: Because I believe that the water would not be more expensive over a period of time.

DR CRAIK: Okay. Do you think there should be permanent water restrictions?

MR NICHOLAS: Yes.

DR CRAIK: Why do you think that?

MR NICHOLAS: Because I believe that we've got a finite resource people are

washing driveways with or washing cars with or using water very unwisely and we need to be protected from ourselves more than anything else. Unfortunately we do have inherent wallies who will waste this resource and a drought will come again. It came this time and it will happen again.

DR CRAIK: Do you think another way to manage water might be to offer people different options, you know, like - and I wouldn't suggest comparing it directly with mobile phone plans because there are so many and they're so confusing, but at least giving people a couple of options that they could agree to use - say, "I only use a small amount of water," so you might get a lower price but if you want to use a lot of water you pay and you're not subject to any restrictions.

MR NICHOLAS: Similar to electricity, yes.

DR CRAIK: Yes.

MR NICHOLAS: I agree.

DR CRAIK: Do you think that would be a way to go? Do you think it would be a better way to go than restrictions?

MR NICHOLAS: It's very difficult to monitor the number of people per household and therefore the cost of water per person.

DR CRAIK: But you could do it per household. You'd have to do it per household, wouldn't you?

MR NICHOLAS: But as I say, doing it per household there might be 15 people living in this house or two people living in that, and it's very difficult to do it per capita.

DR CRAIK: That's right, yes.

MR NICHOLAS: I understand what you're saying but you could then go back through - as the gentleman said earlier with his sewerage cost. How do we know what to charge? We don't know what you're using. Similar situation. I think that we need to look at the sewerage cost as well as something that needs to be addressed.

DR CRAIK: I think the problem with sewage is it's not metered, so it would have - that's why they always have this difficulty coming up with volumes and things, yes.

MR NICHOLAS: Yes. So that is going to be another area. I mean obviously what goes in - - -

DR CRAIK: Must come out.

MR NICHOLAS: - - - is relevant to coming out.

DR CRAIK: Yes, that's right.

MR NICHOLAS: Where you raised the question of the cost of electricity, how do you ration electricity to a person? A person uses X amount of water for their body to maintain their body but they don't use that much electricity to do so.

DR CRAIK: That's true.

MR NICHOLAS: So it's impossible to compare the two.

DR CRAIK: Okay. What would be the one thing that you might think would be the best thing to do in water? If there was one important reform that would improve water management in this country what do you think it would be?

MR NICHOLAS: My most important reform would be to legislate that water is paid for by the user and a second pipeline or second usage, second source, a graded system be charged for accordingly.

DR CRAIK: Okay, thanks. Warren?

DR MUNDY: No, very helpful.

DR CRAIK: Okay. Thanks very much, Neil.

MR NICHOLAS: Thank you.

DR CRAIK: Thanks very much for your comments, thanks for your submission, thanks for your presentation, thanks for answering the questions and thanks for coming along and your interest.

DR MUNDY: Thank you.

MR NICHOLAS: Thank you.

DR CRAIK: We've got about 15 minutes till we have a telephone hook-up with the Water Corporation in WA, so if you want to grab a cup of tea feel free and we'll resume in about 15 minutes. Thank you.

DR CRAIK: Welcome to the hearing. Lloyd, if you could state your name and the organisation for the record, and then if you'd like to make a brief opening statement that would be great. Thanks very much for agreeing to do this at this time.

MR WERNER (WC): No worries. Lloyd Werner, the Water Corporation. I'm a manager of pricing and evaluation. The Water Corporation has made a supplementary submission in response to the draft report. There were three issues that we wanted to provide some additional information on. One was the additional costs associated with developing the Southern Seawater Desalination Plant over the South-West Yarragadee. The draft report suggested that that was a benefit of the real options approach. Our position is that it's really the government's assessment in social environment values and that in fact the SSDP has a greater real options value than the South-West Yarragadee.

The difference in the costs, we're not saying it's right or wrong, we're just saying that was the government's assessment, and if we're not going to have the government make that assessment, somebody has to do it. There has to be some method in place because that decision isn't simply to go with the lowest cost option. The second point, there was a fair bit in the draft report about the excessive costs of some of the demand management and water conservation programs. We were just providing some information about water efficiency and recycling projects that are efficient and cost-effective. They're not compulsory. Without putting them together as a program, it would be unlikely that individuals would take them up of their own accord.

The third on the structural models, we support the base case structural model put forward by the Productivity Commission, the corporatised utility model. We think that's good. We support the recommendation that moving away from that model should be done on a cost-benefit basis and we support retailer/distribution entity being the purchaser of the next source. However, we think there's some issues in splitting out sources from the distribution and the driver of that being to make it clear that there's no conflict between the client being a competitor is actually one of perception and not one of practical facts. I guess also the model that separates country and metro, we already said that's probably not a good model, in our previous submission. In 25 words or less that's probably it.

DR CRAIK: Thanks, Lloyd. You start off talking about the comparison between the use of the aquifer and the desalination plant, and the government's decision which in your comment, if I understood you correctly, took on board the social environmental costs and issues. I guess the question would be, was there transparent information available in relation to that decision - publicly available information - and was there any other options that were considered at that time with transparently available information?

MR WERNER (WC): The problem that we had at the time was that with the drying climate in the late 90s, and running up to when we did the Perth Seawater Desalination Plant, all the small sources that we planned on doing had all been developed in response to the drying climate, and we got to the position that the only major sources available at the time were the Southern Seawater Desalination Plant and the South-West Yarragadee.

In terms of the other options, they were the only two major sources that were ready to go and we've done a whole bunch of the other ones, so it was a cost decision. The cost of the South-West Yarragadee was actually included as a provision in the budget the year before it was approved. I think there was $750-odd million put into the budget. The $955 million cost was announced at the time. The additional operating costs in terms of energy and stuff were known. I don't think there was any secret. It was certainly spelt out quite clearly to the government when it made the decision.

DR CRAIK: Was there quantification of the social environmental things?

MR WERNER (WC): There's a question about how you do that - - -

DR CRAIK: Sure.

MR WERNER (WC): - - - and I guess that's the point of our submission, that somebody had to make that decision. How you quantify that, I give up.

DR CRAIK: When you're saying there was none, it was just a kind of - - -

DR MUNDY: What you're saying, Lloyd, that the government had a look at the difference between South-West Yarragadee and the Southern Seawater Desalination Plant and formed the view that the cost differential that it was prepared to incur was less than - well, its well considered but non-precise evaluation of the environmental and social benefits.

MR WERNER (WC): Yes.

DR MUNDY: It did that in a way which only those members of the Carpenter government sitting in the room could possibly understand.

MR WERNER (WC): That's a reasonable summary.

DR MUNDY: It's all right, Lloyd, I used to work in the WA Treasury. I know how these things happen over there.

MR WERNER (WC): The question is, is there a better way of doing it, and I think that's the thrust of our submission that if you're going to say, "We don't want the government to do that because they're a little bit too sophisticated," then how do you actually quantify those items? They're real but how do you do that?

DR CRAIK: There are some methodologies around, Lloyd, and they have been done in other places as well. There's been a fair effort put in other places and starting to have a go at those things and making the information available to the public and others for input. Would your utility feel uncomfortable making those sorts of decisions?

MR WERNER (WC): I think the - in terms of - it's not a matter of making the decisions, it's a matter of actually agreeing on the method that we're going to use to make those decisions. Going out and doing public surveys and giving certain values to environmental factors and things like that - I mean all that can be done and that's probably a good thing to do, but building it in the process and making it recognised you actually have to agree on how that stuff is going to go forward.

DR CRAIK: That's true, but I don't see that that's an insurmountable barrier. I mean it's not as if it's never been done before.

MR WERNER (WC): I'm not saying it is. I'm saying that in the process that you're proposing it needs to be recognised. If the government is not going to do it then you need to have it quite clear how it's going to be done. I kind of get the impression that people would rather just leave it to the lowest-cost option and, "Let's get on with it." So that's the bit that I'm suggesting that - I'm not disagreeing that there's methods out there to do it but I think it needs to be explicitly put into the process.

DR CRAIK: Yes, I agree totally. I guess our view is there should be a transparent process where the steps are all clear and people know in advance what those processes are.

MR WERNER (WC): Yes.

DR CRAIK: But there should be an articulation of these things that's available in the public domain plus public consultation in the making of these decisions. That's, I guess, the point we're making.

MR WERNER (WC): Yes. I don't think we're disagreeing.

DR CRAIK: Okay.

MR WERNER (WC): I guess in terms of the text in the draft report it suggested

that it's an example of the benefits of the real options approach.

DR CRAIK: Yes.

MR WERNER (WC): I think it's fundamentally different from what you get out of the real options approach. It's another process that has to happen on top of that because you can run a real options approach and have minimum financial cost as your objective and then you'd miss that benefit out.

DR CRAIK: Yes, I agree.

MR WERNER (WC): In terms of my assessment of SSDP versus South-West Yarragadee in the real options side of things: very similar sized sources and, you know, we've lifted out some of the extra option benefits that SSDP gives. I guess in the commentary in the report if you could - those benefits should be split out of that assessment as well.

DR CRAIK: Okay.

DR MUNDY: Lloyd, just coming back to the process, what was Water Corporation's assessment - I mean you must have known that there were issues, environmental issues, around Yarragadee?

MR WERNER (WC): I guess the issues that we had were getting the environmental approval. So I mean in terms of dealing with the - were the environmental issues. We looked at where we would draw the water on the acquifer for the least impact.

DR MUNDY: Yes.

MR WERNER (WC): There was the issue of the sustainable yield, there was debates about models, all of that sort of stuff.

DR MUNDY: So you'd gone about an assessment process, you'd built in what you would, I guess, suggest were reasonable environmental assumptions about what you needed to do to get a permit from the EPA.

MR WERNER (WC): Yes.

DR MUNDY: You took up all those costs into the assessment. I guess my question again goes to, well, having done all that and accepting that you've got to worry about then how you discharge the saline water - and you've done all of that on the other option.

MR WERNER (WC): Yes.

DR MUNDY: Did government ever indicate publicly that Yarragadee was just simply an option it wasn't prepared to contemplate and therefore could have saved you and your colleagues, and I suspect therefore the water consumers of Perth, the cost of the assessment? Or did it come as a surprise?

MR WERNER (WC): I think probably when you look at where they made the decision it's probably - you could put it under the social benefits heading was where they were making the assessment.

DR MUNDY: So it was a valuation of the use of water in alternative use?

MR WERNER (WC): Yes, and there was a fairly strong campaign from the local community about keeping the water in the south-west for the future benefit of that region rather than bringing it to Perth.

DR MUNDY: Okay. It sounds a bit like a pipeline into the Sugarloaf Reservoir.

MR WERNER (WC): I'm not quite familiar with that but - - -

DR MUNDY: Yes. No, okay.

DR CRAIK: Lloyd, on the subject of supply augmentation, while we're there, we understand from ministerial statements in the media recently that indirect potable reuse via acquifer recharge and expansion of the Southern Seawater Plant are live options that are being considered at the moment. Can you update us on where things are at in relation to that?

MR WERNER (WC): The Southern Seawater Desalination Plant is being built for 50 gigalitres. There's an option in the contract to expand that to 100. All the approvals are in place to do that.

DR CRAIK: What would be the trigger to do it?

MR WERNER (WC): It doesn't rain this winter. There's a target, I think it's 76 gigalitres of inflow, for us to avoid sprinkler bans next year. There's been some water savings and things like that, so we're on our way towards actually reducing that. But the issue then is depending on what the winter is we don't recover for the next winter.

DR CRAIK: Yes.

MR WERNER (WC): You just keep bumping along the bottom. There's still

significant draws out of Gnangara Mound, much higher than what the long-run average target is. So that's the water security kind of response to meeting a new source.

DR CRAIK: What about the indirect potable reuse one?

MR WERNER (WC): So at the moment we're doing investigations of that source and working through the science of it and getting the health approvals and things like that. That's all going very well.

DR CRAIK: There appeared to be an implication in the ministerial statements that it was being sort of fast-tracked. That may or may not be fair.

MR WERNER (WC): I guess that's a possibility, and that's something that - - -

DR MUNDY: What, the source is a possibility or it's a possibility that the minister wants it fast-tracked?

MR WERNER (WC): It's possibility that the minister wants it fast-tracked. I mean I don't know what his thinking there is but the problem with that sort of thing is that unless it gets fast-tracked then it won't be available to build - to be available for the summer after next but the Southern Seawater Desalination Plant would.

DR MUNDY: So absent the minister's interest in this project from what you're saying is that it wasn't something that was under active consideration by Water Corporation?

MR WERNER (WC): No. No, we've been - I mean this trial was put in place with the idea that our next source was going to be 2018 or something.

DR MUNDY: Yes.

MR WERNER (WC): We had the winter from hell last year and everything is - the possibility of meeting an augmentation that's been brought forward. We were working through a trial process thinking that that would be a source that would go ahead of Southern Seawater Desalination Plant. But again, the option value of the Southern Seawater Desalination Plant was that all the approvals were in place and it's ready to go. I think the acquifer recharge would be preferred within the corporation over the Southern Seawater conceptually but there's a whole bunch of practical things that have to be overcome such as sorting out the groundwater entitlements, you know, the business case where if you put the water in you've got to make sure that you get it back out for yourself.

DR CRAIK: Yes.

MR WERNER (WC): There are also a couple of groundwater projects that are on the program which will go ahead in the future. They're all scheduled - one of them is corresponding with land development in the area, and there's issues of road alignments, locations of bores and stuff like that. The issue is that again if we were doing South-West Yarragadee and Southern Seawater Desalination Plant, the number of sources that are ready to go has been compressed because of the climatic conditions not because we're not planning to do other sources.

DR MUNDY: Lloyd, just coming back to the potable reuse projects, and the health approvals, we had a witness earlier on today who was the principal water quality regulator from South Australia and he indicated to us he'd been involved with the Recycled Water Guidelines which go as far as what you need to do to make potable reuse schemes, in his words, safe. Is it your understanding that if your organisation were able to develop a scheme which fully met the guidelines which were described by this gentleman from SA Health as "safe", that that would be sufficient for the health approval in Western Australia?

MR WERNER (WC): Not knowing what those guidelines were and not being that close to the actual health processes, I can't really answer that question. But the process that we're looking at is one of reverse osmosis and indirect reuse. The water gets injected, there's a number of years where it's in the groundwater before it gets to a point where it could be redrawn. So there's a lot of safeguards in place with that one.

DR MUNDY: I'm just trying to ascertain, Lloyd, the hurdle that your organisation needs to jump over on a health perspective are the national guidelines for recycled water. I appreciate you might not know. Could you perhaps ask your colleagues who are closer to it whether that's your expectation?

MR WERNER (WC): Yes, I can do that.

DR MUNDY: While you're at it, could you also ask them as to whether the WA Department of Health, who I presume is the relevant regulator in this regard, is going to be running a public process, or it's just going to do it in private?

MR WERNER (WC): There's a process running, and whether it's public or private, I guess that's a fact really.

DR MUNDY: Yes. I'd just like to know what that fact is. I presume your colleagues would know that as well.

MR WERNER (WC): Yes.

DR MUNDY: Thanks, Lloyd.

DR CRAIK: Lloyd, going back to the possible use of the aquifer, we understand the EPA, as part of that assessment, proposed a rigorous monitoring program, an adaptive environmental management plan, for the aquifer. Is the risk that the 45 gigalitres extraction limit would have been decreased in future, due to environmental concerns, is that a possibility?

MR WERNER (WC): That was one of the uncertainties about South-West Yarragadee that its actual yield was uncertain.

DR CRAIK: Does that make it difficult to include in your projection plan, the number, if it's not reliable?

MR WERNER (WC): Well, it's a risk that you put in. I mean, it would drop but it wouldn't drop to zero. Maybe you'd get 45, maybe you'd get 35. That would increase the cost proportionally.

DR CRAIK: Is it reasonable to include that sort of yield, 45, in our modelling work?

MR WERNER (WC): Nominally it's all 45, so that's fine, but there is a risk. It's like if you put in a surface water source, the risk of that would be much greater, and we're making scenario projections based on further reductions in rainfall and things like that. Whether that will unfold or not, it's one of the risks that you need to plan for.

DR CRAIK: Okay.

DR MUNDY: Lloyd, in your submission you provide some data on country water efficiency which is, looking down the places, largely in the goldfields or up in the north-west.

MR WERNER (WC): Yes.

DR MUNDY: What is the nature of the savings broadly that are being achieved there?

MR WERNER (WC): There's a column there that - - -

DR MUNDY: What sort of things are they?

MR WERNER (WC): We sign up a bunch of people who want to participate and we go in and do water audits. There's water habit-forming type behavioural change,

things that we work with them on and things like that. There's some retrofitting of shower heads and things like that. There's a range of things we do with them. But it is basically going to the households and getting them to participate in the program and then helping them be more water efficient.

DR MUNDY: I presume that the cost of augmentation in these parts of the world is well north of the cost per kilometre of these programs.

MR WERNER (WC): Yes. The Pilbara, when we were looking at the desal plant there, it was about $7.50 a kilolitre. The goldfields, it's sixish dollars.

DR MUNDY: There's a reasonable economic justification about why you'd do this.

DR CRAIK: But they're voluntary things though, aren't they, Lloyd?

MR WERNER (WC): Yes, and that was the point that we're making, that nobody is forced to do - these aren't restrictions.

DR CRAIK: Yes.

DR MUNDY: So there's no loss in consumptive demand. There's no consumer welfare lost, this is just a better way of doing things.

MR WERNER (WC): They probably feel better about it, actually.

DR CRAIK: Can I ask you about vertical disaggregation, Lloyd?

MR WERNER (WC): Yes.

DR CRAIK: You made the comment in your talk and your intro statement and I think in the submission, commenting that it would be inefficient to push demand side risk onto the owners of bulk water sources if we disaggregated the bulk water source from the actual retailer distributor.

MR WERNER (WC): Yes.

DR CRAIK: We would certainly agree with that. There would be long-term contracts and the retailer distributor would be a portfolio manager and so would call on the water sources at the times that it needed them, but it would have long-term contracts, bilateral contracts, with the bulk suppliers. It would also obviously have different service offerings for its consumers. That seems to remove some of that inefficiency from vertical disaggregation. Would that make you more comfortable, I guess?

MR WERNER (WC): What you've described is exactly what the alternative model has to be and I think we said you can privatise all the sources with contracts but leave the control with the water utility and ensure a return for the new owners. The only reason you would be doing that is to overcome the view that the person purchasing the next water source is not in competition with that source.

DR CRAIK: A bit more transparency, maybe?

MR WERNER (WC): When you look at it, we have contracts with our seawater desalination plant alliance.

DR CRAIK: Yes.

MR WERNER (WC): That doesn't actually improve the transparency of anything that's happening in that because they're commercial contracts. They're not publicly available. We've just done a PPP on a water treatment plant in Mundaring and you don't change the ownership for transparency purposes.

DR MUNDY: But the PPP process, presumably, Lloyd, was a process that was in some sense competitive.

MR WERNER (WC): Yes.

DR MUNDY: You just didn't go out and do a deal with whoever it was in the dead of night and leave it there.

MR WERNER (WC): There was a competitive process to do a PPP. There were competitive processes to do the alliances with the desal plant and the Southern Seawater Desalination Plant. They're all operated by the private sector and those selected to build and operate it was done through competitive processes.

DR MUNDY: Does the auditor-general periodically audit those sorts of processes in WA, Lloyd? I know with various other government procurements, they have.

MR WERNER (WC): We have the office that sits there and makes sure you follow all the right procedures.

DR MUNDY: The old Office of State Purchasing or whatever it was?

MR WERNER (WC): I can't quite remember the name. When we run all of these processes, we make sure there's a person there whose sole job is to make sure everyone follows the rules.

DR MUNDY: So you've got a probity auditor and adviser?

MR WERNER (WC): Absolutely. That was the word I was looking for, yes.

DR MUNDY: They presumably tick off to satisfy, okay.

MR WERNER (WC): Yes.

DR CRAIK: Is all that made public? Are their reports made public?

MR WERNER (WC): I wouldn't think so.

DR MUNDY: What happens if the probity auditor doesn't tick off?

MR WERNER (WC): Well, the probity auditor is there for the benefit of the participants in the process.

DR CRAIK: What about the taxpayer or the water consumer who pays the bills?

MR WERNER (WC): You run a competitive process. The competitive process assures that the Water Corporation is picking the right process.

DR CRAIK: Correct.

MR WERNER (WC): The probity auditor is there to make sure that there's no distortion in that competitive process.

DR CRAIK: Correct.

MR WERNER (WC): As a customer, I know that there's been a competitive process run for that piece of equipment.

DR MUNDY: What is the probity auditor blows the whistle and says, "This process isn't as robust as it should have been"?

MR WERNER (WC): I'm not sure what the process there is but it certainly would go back to the participants of the process.

DR CRAIK: But wouldn't the consumers - if there was a crook process, and I'm not suggesting there is but if there was a crook process which meant that the price of the deal was a lot higher than it should have been - - -

DR MUNDY: There's been a few examples of that in the acquisition of ticketing systems where there have been probity auditors, particularly in the state of Victoria which is legend.

MR WERNER (WC): It's not my experience with it, so I can't say what would happen. I know we've put in a lot of effort to make sure that we comply with all those probity things and stuff like that.

DR CRAIK: We're not suggesting you don't, but really is there some public revelation of at least the results of the probity audit?

MR WERNER (WC): I haven't had that experience.

DR CRAIK: Okay.

DR MUNDY: There would be nothing though, Lloyd, to stop the auditor-general from coming and doing a performance audit on the procurement if the auditor-general was so minded.

MR WERNER (WC): I'm not sure how our audit system works, but I'm sure that there would be some external audit requirement.

DR CRAIK: Okay. What do you think of our view of the utilities setting the prices as opposed to either the government - well, we were thinking more than the economic regulator.

MR WERNER (WC): Yes, I enjoyed that part of your report.

DR MUNDY: Not as much as we did.

DR CRAIK: A few of your colleagues in the regulatory business didn't.

MR WERNER (WC): I guess there's two bits to it. One is if you want to get governments to put in cost-reflective pricing, then it's probably good to have an independent body setting the prices. I know that you're saying the role of independent regulators are to protect the customer. Our regulator advises the government, and the government can go, "Well, I have confidence that the prices that are being recommended are cost reflective." The flaw in your analysis is that without economic regulation, you could necessarily have governments signing on to cost-reflective prices. In the past, we've had governments going, "Well, there's an election, so we won't put any price increases this year," kind of thing, so that's where I would see there's a drawback.

I support the idea of a revenue cap with us setting the price structures but that's in the context that we've had our price structures reviewed. We have volumetric charging . There's charges based on marginal costs. So I think the issues that we've had with the ERA in respect to our prices have been the implementability of the

tariffs, rather than the actual tariffs themselves. I think we're fairly aligned with what our tariff structures should look like.

DR CRAIK: What do you mean, the "implementability"?

MR WERNER (WC): What you can do in your billing system.

DR CRAIK: Right.

MR WERNER (WC): Also how certain structures impact customers. So, for example, we put in a cost-reflective tariff structure into our country tariff. Both ourselves and the ERA supported it, the costs behind it. The concept wasn't the issue but the structure that the ERA had five cost classes. Towns moved between cost classes. If we go in and build an expensive new source or something happens, they can move. The implication of the tariff structure that they put in was that a customer might go from paying $1 a kilolitre to $2 a kilolitre because they moved cost class, effectively doubling their water bill. So we said, "That's not going to work, you need ways to transition customers to the higher prices." We put in 15 cost classes, built rules about how towns can move between classes, got something in place that meant that customers wouldn't get more than 10 per cent a year real increase in their bill because of that change. That's one example where it's only the utility that can come up with those things and it's the utility that has the customer base and can look and go, "If you do that, that particular customer group is going to be impacted particularly adversely," or something like that. My view is if we have a revenue cap and we go off and do the tariff structure that delivers that revenue cap, that's probably a fairly efficient way of going about it.

DR MUNDY: So what you're saying, Lloyd, is that beyond that, there's a lot of toing and froing that ultimately probably doesn't add a hell of a lot of value?

MR WERNER (WC): Yes. I think the value in the first round is somebody going in and saying to the government, "Yes, you should change the structure of your charge, you just up the volumetric charge and drop the fixed charge and base the volumetric charge on long-run marginal cost," and stuff like that. I think there's a real value in government getting some independent advice rather than just the water utilities saying that that would be a good thing to do, kind of thing.

DR MUNDY: So, Lloyd, you'd have a similar view to Yarra Valley Water which is essentially, "These things might be useful at the start but once you've gone down the track, you can probably pull back from it."

MR WERNER (WC): Yes.

DR MUNDY: I guess having asked that to you, wouldn't it then be possible for the

government by way of some sort of charter or instrument, statement of expectations and intent, give direction to Water Corporation's board that this is the way they're to go about setting their prices and that would be easily ticked off against periodically by the regulator so you could just get on with the business.

MR WERNER (WC): Could do that. I see value in the regulator coming in and looking at our capital and operating processes and say, "Yes, you're being efficient in doing that."

DR CRAIK: Do they change what you propose much?

MR WERNER (WC): We have an interesting situation because we operate under a constrained capital program. We have a string of business cases that stack up a bunch of projects that get delayed in implementation because the capital program that we have isn't big enough. It's not the Water Corporation saying, "We need a billion dollars a year to do our business," and the regulator coming in and going, "I think you could do that for 950." It's more, "We've got $850 million to do our business and stuff is dropping off." That's just the constraint of working within the government's borrowing limits and things like that.

What happens is they come in and they go, "How are you doing your planning? How are you doing your prioritisation? How are you doing your procurement?" and looking at those processes to see that they're delivering efficient outcomes with the money that you've got available. It's a bit different than going in and saying, "You should cut $100 million off your program," or something like that.

DR MUNDY: Lloyd, why couldn't you be satisfied that the board of the Water Corporation is performing precisely that function?

MR WERNER (WC): It is. I think that's one of the things that isn't well understood. We have regulation, and the Water Corporation takes its efficiency target seriously. The board of the Water Corporation has taken those efficiency targets seriously ever since it was the Water Authority. You're quite right that that is the role that they have and they're very keen on doing that. I think a benefit from having independent people come in and tell you that, yes, your processes are efficient - - -

DR MUNDY: But that would be a backward-looking thing.

DR CRAIK: They would need to do it every year and every time - - -

MR WERNER (WC): They do it every three years at the moment. If they did it every five years that would be fine. It's not a project by project basis, it's just come in and have a look over how you're doing things. It's not backward-looking. We are

continuing to develop our processes and how we rank things and we get more sophisticated and stuff like that. We discuss those processes with the regulator and their consultants and say, "This is what we're doing and why." I don't think it's necessarily backward-looking.

DR MUNDY: I meant "backward-looking" in a different sense. Can I ask you one other question. The directors of the Water Corporation, are they directors under the Corporations Act or are they under some GBE legislation or under the Water Corporation Act itself?

MR WERNER (WC): I know they have exactly the same position as if they were under the Corporations Act. I can't remember whether it's taken care of in our act.

DR MUNDY: They're subject to criminal sanctions and things like that?

MR WERNER (WC): Yes.

DR MUNDY: Excellent. Thank you.

MR WERNER (WC): I'm sure they will be pleased about that.

DR MUNDY: No, it's more that sometimes it's difficult to get a definitive answer on that question.

MR WERNER (WC): Yes.

DR CRAIK: Okay. Thanks very much, Lloyd. That's been very helpful. Thank you for making yourself available.

MR WERNER (WC): Thank you.

DR CRAIK: Ladies and gentlemen, that concludes today's scheduled proceedings. For the record is there anyone else who wants to appear today before the commission? Okay. I adjourn these proceedings, and that concludes the round of post-draft hearings. Thank you very much.

AT 12.45 PM THE INQUIRY WAS ADJOURNED ACCORDINGLY