

Water Reform Series - Event One

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Well Ian thank you very much for that introduction. I can start by confirming that unlike most of the Geelong Football Club I have been home since Saturday night and a sleep so thanks very much, it was very exciting on Saturday and I'm very pleased to have the opportunity to be the guest of the Committee for the Economic Development of Australia here today and so David to you and your team thank you for extending the invitation and can I also congratulate you on the initiative of organising a series of presentations on water, it is as Ian has outlined a critically important issue and one that all Australians, all Australian governments, all Australians from so many different backgrounds and perspectives are working to grapple with at the moment and from a Victorian Government perspective you will be pleased to know that we have in place a very comprehensive set of plans and policies to respond to the challenge and I wanted to spend some time in my presentation today outlining the thinking behind the Government's response.

I like to use this slide, two slides in fact to demonstrate the gravity of the challenge that we face at the moment. You hear a lot of talk about the water crisis, the water challenge, the low inflows into our storages and into our rivers and the talk about drought, really this slide puts it in very simple terms. This shows the inflows into Melbourne storages really over about a hundred years. You can see there the high black dotted line showing the average from 1913 to 2005, 588 gicalitres, 588 billion litres, a gicalitre being a billion litres so strong inflows. Our catchments here in Melbourne hold about 1700 gicalitres of water so you can see there on an annual basis very strong inflows. You can then see firstly the yellow dotted line showing the inflows from '96 to 2005 averaging 453 gicalitres and then the '97 to 2006 average 387 gicalitres and then last year, the red bar there last year, 2006, 165 gicalitres, not only low compared to the average for the last ten years and certainly low compared to the average over the last hundred years but the lowest we've ever had, the lowest inflows we've ever had into Melbourne storages and just to extrapolate that for the Murray system again over the same period of time you can see there that the systems inflows into the Murray averaged 11,600 gicalitres for the pre 1997 period and then you can see the averages for post 1997 5,900 gicalitres and then again that very small red bar that you can see at the end of the graph, the inflows in 2006, 2007, 925 gicalitres so again not only low compared to the hundred year average but the lowest ever so we've had a period where sustained drought, a long period of drought, low inflows and then in the last twelve months the lowest inflows ever into Melbourne storages and the lowest inflows ever into the River Murray system so a great challenge that we're responding to.

Now shortly I'll present the next stage of the Government's response to these challenges but I just wanted to put it in some context because I think there are some in the community who believe that desalination, food bowl modernisation and our efforts to increase recycling are the only things that the Government has done to respond to our water challenge and the truth is far from that. You can see here

a set of initiatives right across the state, these are funded already and substantially completed, most of them are concluded already and they represent a very diverse set of responses to the water challenge across Victoria, everything from upgrades to treatment facilities for both Werribee recycling and the eastern treatment plant upgrade, the Bendigo and Ballarat super pipe so the Bendigo leg of that already completed, the Ballarat leg well underway now, the Wimmera Mallee pipeline project, a huge project, I'll say more about that in a moment, bore projects to capture groundwater, recycling schemes in our Alpine resorts, the Gippsland water factory in the Sale area, a very diverse set of policy responses and it's important to recognise the very significant financial contribution that's been made in achieving these projects, \$1.7b out of the consolidated fund and well over \$3b from our water authorities across the state so an investment of more than \$5b in upgrading existing water infrastructure and providing new projects throughout the state.

Those projects of course build on the work that households, irrigators, industry have already done to reduce water consumption. In Melbourne's context we've already saved 100 billion litres, 100 gigalitres of water consumption already and just to put this in context in any given year Melbourne uses now with water restrictions in place a little over 400 gigalitres per annum so savings of that magnitude are very significant in the context of Melbourne's overall water use. You can see there that consumption, that's residential consumption, has decreased significantly. Per capita consumption is now 28% lower than it was in the average for the 1990's which is a great effort by households; industry significantly has reduced its water usage and recycling has increased significantly also so some very pleasing results across particularly the Melbourne area in the case of these figures which takes us now to the next stage of the Government's response, you can see the projects that we've already put in place that I outlined already but in June this year the former water Minister and the former Premier launched what it is a very significant next step in securing our water supplies, a very significant investment, \$4.9b across the state and a range of initiatives that I'll talk about shortly but the thinking behind the initiatives is firstly augmenting supplies so projects which augment our supplies in different ways, using our system more efficiently and effectively through conserving and capturing water that is otherwise lost through inefficient systems and thirdly the creation of a state wide water grid, this is very important, many of you would be aware that we are moving now to a more integrated water trading market which enables us to move water using market mechanisms to places where it will find its most efficient and effective and most productive use. In order for that to be effective we require a water grid, we require a comprehensive state wide grid for that policy framework to be effective so that's a very important part of the State Government's vision going forward.

If I could start with desalination, very significant investment, \$3.1b investment, it will be delivered by public private partnership, the Premier and I announced that a couple of weeks ago now in Wonthaggi. We've already completed a feasibility study which looked at a range of different potential locations for desalination and resolved that the open ocean site in the Wonthaggi region was the best possible site, it was close to Melbourne's water system, it could pipe the water that's created by desalination easily into our reservoirs and importantly an open ocean system or an open ocean placement means that we can deal with the environmental issues that result in terms of the saline water that is sucked in and the salty brine which is expelled back into the ocean, an open ocean environment is much better placed for that to occur than in an enclosed bay in Port Phillip, Western Port or along the surf coast so the feasibility study endorsed Wonthaggi, the Wonthaggi area just near Kilcunda as the best place for that to occur, that's just a schematic of the technology that's used, it's technology that we now know a lot about from the operation of other reverse osmosis desalination plants around the world; essentially it draws the saline water in, pushes it through a series of membranes which in turn extract the salty brine and the desalinated water is then piped into Melbourne storages so relatively simple process from a principles basis and that's the technology that we'll be using. It uses a lot of energy, about 90 megawatts per annum both in terms of the energy that's used to desalinate the water but also to pipe it into the system, about eighty kilometres of pipes are needed to get it to Cardinia and to other reservoirs so those 90 megawatts of energy that are used will be obtained through the purchase of renewable energy and that

will be in addition to the existing commitments that the Government has already made in terms of our renewable energy targets.

Moving on from desalination, that will provide 150 gigalitres of water which in terms again thinking about Melbourne's overall water use at just over 400 gigalitres of water, is a very significant augmentation to our system but most importantly it is water that is not rainfall dependent, it is water that we will get in all climatic conditions regardless of drought, regardless of inflows into our storage systems, into our river systems, we will get the water from desalination if we want it regardless of the climatic conditions.

The second component of the announcements that we made in June is the food bowl modernisation and there's been a lot said about this and I wanted to just reinforce some of the key messages today. Food bowl modernisation is quite simply one of the great regional development opportunities that this state and nation faces at the moment. We have at the moment a food bowl irrigation system that is nowhere near as efficient as it could be. It operates at about 70% efficiency which means a huge amount of water is lost at the moment through evaporation, through seepage, through inefficient water delivery systems, through a whole range of things that could operate better and the investment required to get the system to operate at its optimum, we think it can operate much closer to 85% efficiency and our experience in the McAllister irrigation district and in other irrigation districts around Australia tells us that that is not an unrealistic expectation, that we can achieve that sort of level of efficiency through a number of stages and what the Government has announced a commitment to is the first stage in this irrigation system upgrade, it's an investment of about \$1b and that investment will be financed firstly out of the consolidated fund, about \$600m contribution from taxpayers, \$300m from Melbourne water users which means all of us living in Melbourne will pay higher water bills to support this irrigation upgrade and finally about \$100m, about 10% of it, from Goulburn Murray water users themselves so irrigators themselves contributing to finance this upgrade so \$1b in new investment to capture 225 gigalitres or 225 billion litres in water savings that we know are there and can be captured from stage one. Those water savings will be divided one-third, one-third, one-third, one-third to Melbourne, one-third to irrigators and one-third to the environment so at the end of this very significant investment there will be more water available for use for irrigators in the Murray Goulburn area. There will be more water available to stressed river systems through the environment as a consequence of this billion dollar investment and there will be more water available to Melbournians, 75 gigalitres from 2010 which will be delivered through the Sugarloaf inter connector which is the dotted red line that you can see connecting the Goulburn River to the Sugarloaf reservoir there on that map.

This is a very significant investment. This is a great opportunity to improve the economic efficiency of a critically important part of the State's export base. It is a very significant project and just as the funding for this project should be shared to enable it to go ahead so too should the water savings that are derived from it. That's the thinking behind the Government's policy proposals in this area and when you as I've had the opportunity to do, you talk with protestors in the area who are concerned about the transfer of water through the Sugarload inter connector the first thing that they will say is that the savings are not there and I simply wanted to say today and to reinforce the savings are there, the food bowl modernisation steering committee which the Government has appointed which represents many of the irrigator interests in the area has now delivered its draft report just a couple of days ago, it shows clearly not only the savings are there but in fact the savings will probably exceed the Government's estimates and expectations and the argument that's now commenced is an argument about how those additional savings in addition to the 225 gigalitres will be shared so the savings are there, the investment will be shared and so too should the savings from that project be shared. It will turn antiquated infrastructure into modern infrastructure, that's a very simple representation of it but it includes a whole range of different treatments to systems which will currently capture quite staggering water losses which are occurring and if the system is to operate effectively this investment needs to go ahead. It is a massive regional development project.

I talked briefly before about the water grid and the importance of creating a state wide water grid so that we can manage our water resources more effectively. This is again just a schematic of some of that work. You can see there the very significant yellow dots in the State's north west, that's the Wimmera Mallee pipeline project, a smaller project in the south west of the State linking The Grampians with Hamilton, an inter connector which will connect the Melbourne system to the Geelong system so Geelong will be able to draw on the benefits of both the food bowl modernisation project but also the desalination project, the connections between desalination and the Melbourne reserves, the Sugarload inter connector itself as well as the Bendigo and Ballarat legs of the Goldfields super pipe, very important investments in infrastructure which will enable us to transfer water around the State and give real meaning to providing water security to stressed parts of Victoria as well as giving meaning to an effective system of water trading.

These are just some details on some of those projects. You can see there the Wimmera Mallee pipeline. It is a massive project. They are laying pipes at the moment at about twelve kilometres per day. It is a staggeringly significant project for that area and it will capture huge volumes of water in water savings. The other projects we've already described the thinking behind those. The Sugarloaf pipeline, a very important pipeline, it will provide that connection to enable Melbourne to access water savings under the food bowl modernisation project.

Just the timings of the various projects to give some context. We have the Tarago reservoir reconnection occurring in 2009. That will give Melbourne access to 15 gigalitres of extra water. In 2010 we get the 75 gigalitres out of the Sugarload inter connector. In 2011 we get the 150 gigalitres from desalination and in 2012 we get the eastern treatment plant upgrade water and I'll say more about that now, just trying to remember the order.

The eastern treatment plant upgrade is obviously an opportunity for Melbourne to access water savings from water that's currently expelled at Gunnamatta out into the ocean. The water savings that we can derive through this are significant, it's about 100 billion litres, about 100 gigalitres per annum. At the moment this water is essentially lost to us. It will be recycled water so it won't be water for drinking, for human consumption, but it can be used for one of two projects that we're investigating the feasibility of at the moment. One is to replace the water that's currently used, the potable water, that's currently used to cool our power plants in the Latrobe Valley. The second possibility is to replace potable water that's used for environmental flows into the Yarra. Both projects have their technical complexities and we're investigating both of them at the moment. It's a very significant upgrade, \$300m, and again the benefits that will flow from completing that upgrade are significant.

The Government announced last week, last Friday, that Melbourne would be staying on Stage 3A restrictions until at least the 30th of June next year. To just briefly explain the context of this, you would have been aware that in the past the process was really one based on a set of restrictions that responded to the water levels in our storages at a given point in time and the Government felt that this was not an effective policy framework. It created a great deal of speculation and uncertainty as we reached different trigger points and secondly it was a very blunt instrument, the storage levels that were the triggers didn't often reflect the real outlook for inflows going forward in the medium term and we felt that it was important to provide some certainty to Melbournians about what the level of restrictions would be. We've had enough water in our storages in recent times that we could have in fact been on Stage 2 restrictions. The Government felt that that would not have been appropriate and using the old system we would have gone from Stage 4 last year to Stage 3 then to 2 at the moment and then gradually off 2 to 3 and possibly to 4 over the summer period. It would have created complete chaos for Melbournians trying to be knowledgeable and compliant with the prevailing level of restrictions. The level of restrictions would have changed from time to time. It would have effected a range of businesses in different ways and municipal councils would have found it very challenging to manage their asset

base, their parks and gardens, in an effective way so what we've said is we provided some certainty, we'll review it come 30 June next year but it is the Government's intention to provide this level of certainty for at least the next eight or nine months regardless of the inflows into our storage systems. We have enough water in a dry inflow option and we're willing to leave Melbournians on Stage 3A for that period of time in the event of very significant rainfalls.

Just very quickly to give you a sense of how water is used, around Victoria you can see there the pie graph showing the overwhelming use of Victorian water by irrigators. Again this is not to if you like criticise or highlight one set of users as particularly high, irrigators obviously use a lot of water for the productive use they're putting it to. You can see there rural stock and domestic in Melbourne and regional urban use and then in the Melbourne area the division between residential use and non residential use which is essentially industry and you can see there the percentage that makes up of the overall use across Victoria. Just focusing in on at that non residential use in the Melbourne area it's a significant part but not the overwhelming part of Melbourne's water use. The top 200 water users, these are water users using well in excess of 10 megalitres of water per annum, have reduced their consumption substantially since 2001, 2002, 13% reduction, and they are now putting in place a series of measures which will see that reduction go even further and I simply wanted to make these points because there's been a lot of speculation in some areas amongst some sections of the public who believe that industry can be doing more, industry are in fact doing a lot to reduce their water use and the Government has introduced mandatory water maps or water management plans which now all users of 10 megalitres of water or more are required to introduce, smart metering is now being used, these are meters which track water use in real time which enables us to respond to leaks and seepage and other things in a more effective way and again we expect very significant savings going forward in relation to those 5 gegalitres per annum.

So I might stop there Ian. That just gives you an overview of the things that the Government is doing. Again I would just reiterate those core points, it's about augmenting our existing water supplies, it's about enabling us to use water more efficiently and effectively through enhanced investment in existing systems as well as encouraging recycling and reuse and finally it's about creating a water grid across the whole State which enables us to share and manage our water resources in the most effective way possible.

Thank you, best wishes and I'm happy to answer some questions.

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