



WATER UNDER PRESSURE

AUSTRALIA'S MAN-MADE WATER SCARCITY AND HOW TO FIX IT



Contents





KEY MESSAGE	i
EXECUTIVE SUMMARY	ii
.....	
1. OVERVIEW: AUSTRALIA'S MAN-MADE WATER SCARCITY AND HOW TO FIX IT	2
2. WHY WATER IS CRITICAL TO AUSTRALIA'S FUTURE PROSPERITY	8
3. ENDING WATER SCARCITY IN AUSTRALIA'S CITIES	19
3.1 Replace water restrictions with water markets	19
3.2 Introduce more competition into the delivery of water supplies	22
3.3 Introduce consistent regulation for urban water delivery and use	25
3.4 Disaggregate the major city water utilities to ensure clear roles and responsibilities	25
3.5 Remove barriers to water trading between rural and urban areas	27
3.6 Remove barriers to water recycling	30
3.7 Avoid 'picking winners'	31
3.8 Undertake a national review of urban water pricing	35
3.9 Examine how well our urban water authorities work	37
4. MAKING WATER PAY FOR AUSTRALIA'S RURAL AREAS	38
4.1 Agree to national standards for water markets	41
4.2 Commit to clear timetables for reform	43
4.3 Remove all barriers to water trading	45
4.4 Remove barriers to new private sector investment	48
4.5 Provide structural adjustment support through fund re-allocation	50
4.6 Conduct a national review of rural water pricing	51
4.7 Ensure sufficient environmental flows for our rivers and catchments	51
5. AN ACTION PLAN FOR ENDING WATER SCARCITY	53
5.1 Expand the National Water Initiative to equally cover urban water	53
5.2 Make water planning and decisions a priority agenda item for the Council of Australian Governments	54
5.3 Establish clear action milestones and outcomes	54
5.4 Tie incentive payments directly to milestones and outcomes	55
6. ACTIONS AND TIMELINES TO FIX AUSTRALIA'S MAN-MADE WATER SCARCITY	57

KEY MESSAGE

Water is not only fundamental to our quality of life but to our economic growth, now and in the future. Without an adequate supply of water, population growth and productive output is restricted and business investment curtailed.

Most Australians believe the nation's water resources are in scarce supply.

Eighty per cent of Australians who live in our cities are now subjected to long-term water restrictions. Poor water access or declining rainfall in some areas of Australia have also reinforced a perception of water's growing scarcity.

Unavoidable water scarcity is one of Australia's great myths. This myth has enabled Governments to avoid or neglect practical solutions to the problem.

Australia's water problems are a direct result of a poorly planned and managed water system that has conspired to turn a sufficient supply of water at the source to scarcity for end-users.

Australia's water system can and should be significantly improved and better managed so a lot more of our water resources can be made available to where they are needed most.

Water management practices have turned sufficiency into scarcity in a number of ways, including:

- * Poor Government planning for future needs.
- * Lack of proper water markets to ensure water flows to its highest value and those that need it most.
- * Barriers to investment in new water infrastructure.
- * Barriers to water re-use.
- * Ageing and leaking infrastructure.

Australian Governments and their water authorities have many options available to fix these problems. The steps to improve rural water systems have been agreed by all Governments. The challenge is to implement them with a sense of urgency. In the case of urban water there is a broad understanding of what needs to happen, but what is missing is the political will. If Australia's water system is reformed to make the most of its water resources, we can have:

- * Sufficient water to our cities on a sustainable basis.
- * Healthy rivers and groundwater systems, sustained by adequate environmental releases.
- * A vibrant irrigated agricultural sector contributing more to Australia's productive output than it does now.

This paper outlines the extent of the problem, identifies how and where our water system turns sufficiency into scarcity, and proposes a range of realistic solutions to fix the problem.

As with any outdated and inefficient system requiring a major overhaul, reforming Australia's water system to end man-made scarcity raises difficult adjustment challenges.

But it is vital for Australia's economic and social future that these challenges are tackled now.

EXECUTIVE SUMMARY

We know water is fundamental to our quality of life and our economic future but that rainfall has in recent years become increasingly unreliable, causing serious drought in parts of the country. But these self-evident truths have blinded us to the range of opportunities and options Australia has available to deliver water to where it is most needed. Contrary to perceptions, access to water can be improved and it can be provided in sufficient quantity to many areas where supplies are currently unreliable. Nevertheless, Governments have allowed myths about unavoidable water scarcity to hide not only the pressing need for our water supply system to be fixed, but the many options available to address the problem. Governments have been slow to consider the range of options to improve supply and instead have relied on consumers' efforts to reduce demand.

Fundamental water reform is now one of the most urgent tasks facing Australian Governments. This is because the benefits of fundamental water reform are large. Fundamental water reform could boost Australia's GDP directly by around 1% (see Section 2), or \$9 billion. While this is very large by the usual sectoral reform standards, there are also a number of crucial wider benefits.

By continuing to view the problem in terms of unavoidable scarcity of water at the source, instead of a problem with our water supply system that can be fixed with practical solutions, Australia's water supply, and in turn its growth and productive output, will increasingly be constrained. For example, Brisbane's dam levels are below 30 per cent. Without systemic change to Queensland's water system and expanding the range of options for additional water supplies, increasing water restrictions will inevitably extend from residential to business users, creating a direct constraint on the economy of south-east Queensland – one of Australia's fastest growing regions.

While there has been no shortage of rhetoric around the seriousness of the issue, past efforts by Governments and other authorities to fix the problem have been inconsistent. In 1994 the Council of Australian Governments (COAG) agreed to a strategic framework for water resource policy and reform. In essence, COAG '... agreed to implement sustainable water management arrangements that account for all uses of water (agriculture, industry, household and the environment).'¹

This objective has not been achieved. Indeed, in some respects Australia can be seen as being further away from 'sustainable water management arrangements' than it was 12 years ago. As the National Water Commission (NWC) has said: 'If anything, the risks to Australia's water resources are increasing – especially in the form of growing demand and reducing reliability of supply.'²

At the same time, improvements have been made in some key areas where Australia could be said to lead the world in water reform.

Temporary trading has increased dramatically to make better use of our rural water; rural water planning has markedly improved in many areas (albeit from a very low base); and the key steps for permanent water trading and protection of the environment and river and groundwater health are now well accepted, at least in general terms.

A quick glance, however, at current water outcomes, and the pace at which Australia could grow over the coming decades, illustrates the pressing need for fundamental reform and the extent of the task still to be completed.

Australia's surface and groundwater systems remain under considerable stress. The impacts are significant, not only on the health of our rivers but on the reliability of water supply, productivity of the agricultural sector and the recreational amenity of the environment.

Essentially, all of Australia's major cities are likely to grow in the coming years but are already facing water usage restrictions that are fuelling calls for curbs on economic growth. The problem with urban water is not so much to do with unreliable rainfall as it is to do with the inability of our water supply system to keep pace with our growth.

To quote the Water Services Association of Australia, the peak body of the Australian urban water industry, '... over the last 20 years, with the exception of Perth, no new water sources have been developed for our cities. At the same time, the urban population has increased dramatically.'³ This is despite a range of well-recognised new supply sources for each of our cities.

For the past 20 years our major water utilities and the relevant politicians took the 'easy' way out and focused purely on managing demand.

Restricted water use and other demand management practices have become a proud boast. In fact this situation should have been seen as a failure in public policy. This one-sided approach is unsustainable if there is to be economic growth and adequate standards of living.

As the National Water Commission's Chairman, Ken Matthews, has said: 'For too long, water has been the forgotten cousin of infrastructure.'⁴ Water reform has lagged behind the reforms undertaken over the last twenty years in energy, road, rail and Australia's ports.

There is much to be learned from the reforms in the energy market. Both water and electricity are essential services. Both have been subject to public ownership, a lack of competition and no interstate trading. In the 1980s it was believed fundamental reform could not occur in either sector for a range of political and technical reasons. Yet one sector – the electricity sector – did embark on a fundamental reform journey. Whilst the reforms are still being progressed there has been major change – increasing competition, opening up trading between states and changing ownership arrangements. The water sector now needs to actively embrace a similar reform agenda.

Australia can improve its water supply system to make better use of its water resources so that it can continue to grow and increase its productive capacity. The solutions are clear, and can be readily implemented over time.

FIXING WATER SCARCITY IN AUSTRALIA'S CITIES

As Malcolm Turnbull, the Prime Minister's Parliamentary Secretary responsible for water reform, has said: '... there is absolutely no excuse for our cities, especially those on the coast, not being drought proof.'⁵

In the case of urban water, therefore, Governments must move away from the myth of water scarcity and focus on the measures required to rebalance demand and supply. The impediments to new water supply need to be addressed, supply competition needs to be introduced, and prices need to reflect the cost of these new supply sources. The key steps that need to be taken are summarised overleaf.

By working together, Australia's Governments can fix our urban water supply system to ensure the sustainability of our water supplies into the future.

STEPS REQUIRED FOR REFORM OF URBAN WATER

KEY STEP	EXPLANATION
End the myth of water 'scarcity' – replace physical water restrictions with properly functioning urban water markets.	We need to remove the arbitrary impediments (as distinct from appropriate environmental limits) to the many new sources of supply. Water pricing should then result from the costs of the new sources of supply. Equity measures should be available where appropriate.
Introduce competition into water supply, and develop effective access regimes to water pipes and other relevant monopoly infrastructure.	There is no logical reason why urban water supply should remain a monopoly, just as there was no justification for an electricity supply monopoly.
Introduce national regulation of water.	Currently there are a number of different regulation regimes. A national regime will be more efficient and be less subject to political interference.
Disaggregate water utilities into their monopoly (pipes) and competitive (supply and retail) segments and consider greater private ownership.	Disaggregation will provide the basis for effective competition and provide opportunities for private sector investment.
Allow temporary and permanent water trading between rural and urban areas, and provide adjustment assistance where required.	Such trading will provide a cost-effective source of supply in some areas and at the same time provide an economic return to the farmer and farmer groups who would be able to participate in the water trading system. Farmer groups would be able to compete against existing water authorities and so control their own destiny.
Remove the various impediments to water recycling.	Impediments range from providing access to sewerage and stormwater to low urban water pricing. Removal of such impediments will allow for availability and appropriate pricing.
Do not seek to 'pick' new supply 'winners', e.g. there are no logical reasons not to embrace desalination if it is the most economical option and meets relevant environmental criteria.	'Picking winners' is very costly. It is essential to allow the market to operate in a way that allows for the consideration of all possible sources.
Conduct a national review of water pricing in our cities and towns.	There is significant price variation for water and not always a link to costs and quality. What is the logic for the price differences between our capital cities and many regional centres and towns? What are the impacts of 'postage stamp' pricing?
Examine the efficiency and effectiveness of the institutional structure of urban water authorities.	Across Australia there is a range of different organisations managing urban water. Which is the most effective and efficient model? For example, are there compelling economies of scale or other logical arguments to have fewer and/or larger authorities rather than the hundreds that exist in some states now?

IMPROVING RURAL WATER SYSTEMS

In the case of rural water, we need to put the water we have available to the best use. The steps to achieve this are well understood. The key challenge is to now implement these steps with a sense of urgency. The essential building blocks for effective water trading must be put in place, barriers to trade removed, environmental allocations increased and adjustment assistance provided. The key steps that need to be taken are summarised below.

STEPS REQUIRED FOR REFORM OF RURAL WATER

KEY STEP	EXPLANATION
Agree to national standards for the key market building blocks of water accounting, metering and measurement, and registers of all water access entitlements and trades; and agree to an immediate timetable for meeting them within every Australian jurisdiction.	The National Water Initiative (NWI) includes references to these key building blocks. However the NWI refers only to 'compatible' registers and arrangements. This is open to wide interpretation. Many people close to these issues believe we will see 'compatible' but different standards, which will frustrate water flowing to its highest value use.
Boost resources in the relevant state institutions responsible for the development of these 'building blocks' and for water planning so as to speed up progress.	It is crucial that this work is done properly, yet there seem to be too few resources devoted to it.
Remove all barriers to trade, for example: <ul style="list-style-type: none"> * exit fees * fixed trading limits * local catchment structures/rules. 	There are many direct barriers to trade that were long ago removed in other infrastructure and industry sectors.
Remove the barriers to new private sector investment.	This will create more high-value options for agriculture.
Where assistance is required for structural adjustment, use more of the available Government funding to address this need. This could be through improving efficiency or compensation.	Major structural reform in other sectors has been supported by such financial assistance. One example is the structural adjustment payments that accompanied tariff reductions. Government water funds are being allocated to projects that allow for publicity opportunities but do not advance fundamental reform in the key areas where it is needed.
Conduct a national review of rural water pricing.	More transparency in price setting is required, in particular to reduce wastage.
Ensure surface and groundwater health by taking advantage of efficiency gains or purchasing water for environmental use.	We can reduce the current stress on our rural water systems using market mechanisms.

IMPROVING THE MANAGEMENT OF WATER

To achieve fundamental reform, governance changes are needed. These go to the heart of the way our federal system operates, as water markets do not respect state boundaries and the focus by Governments is usually on 'process' over 'outcomes'. The key changes required are summarised below.

STEPS REQUIRED TO IMPROVE WATER REFORM GOVERNANCE

KEY STEP	EXPLANATION
Expand the National Water Initiative to cover urban water issues in the same depth as rural.	The NWI currently has little focus on urban issues but our analysis suggests they are as important as rural issues.
Make the consideration of rural and urban water issues and progress a standard agenda item at regular COAG meetings.	At the ministerial level (federal and state), responsibility for water policy is diffuse, leading to complexity in policy development and implementation. For this reason, COAG (made up of the Prime Minister, Premiers and Chief Ministers) should ensure water policy reform occurs. COAG needs to meet more frequently and regularly, and needs to increase its focus on water to ensure progress is being made and any impediments are being removed.
Establish explicit action milestones and clear outcomes, both of which can be independently assessed and monitored by COAG or the COAG Reform Council. Action milestones can, for example, include common rural water metering and registration standards, removing trading impediments and the introduction of effective urban water access regimes. Outcomes can, for example, relate to reducing stress on rural water systems and achieving urban water supplies that can meet future needs.	Water reform requires much clearer action milestones and undertakings. It demands a strong focus on outcomes – not just on process.
Tie incentive payments to the achievement of the agreed milestones and outcomes.	The National Competition Policy payments have now ceased, yet they had demonstrably important effects on behaviour that we cannot afford to lose.

With water reform the policy concepts are clear enough. Virtually all water policy experts agree that we can have:

- * Sufficient water to our cities on a sustainable basis.
 - * Healthy rivers and groundwater systems, sustained by adequate environmental releases.
 - * A vibrant irrigated agricultural sector contributing more to Australia's productive output than it does now.
-

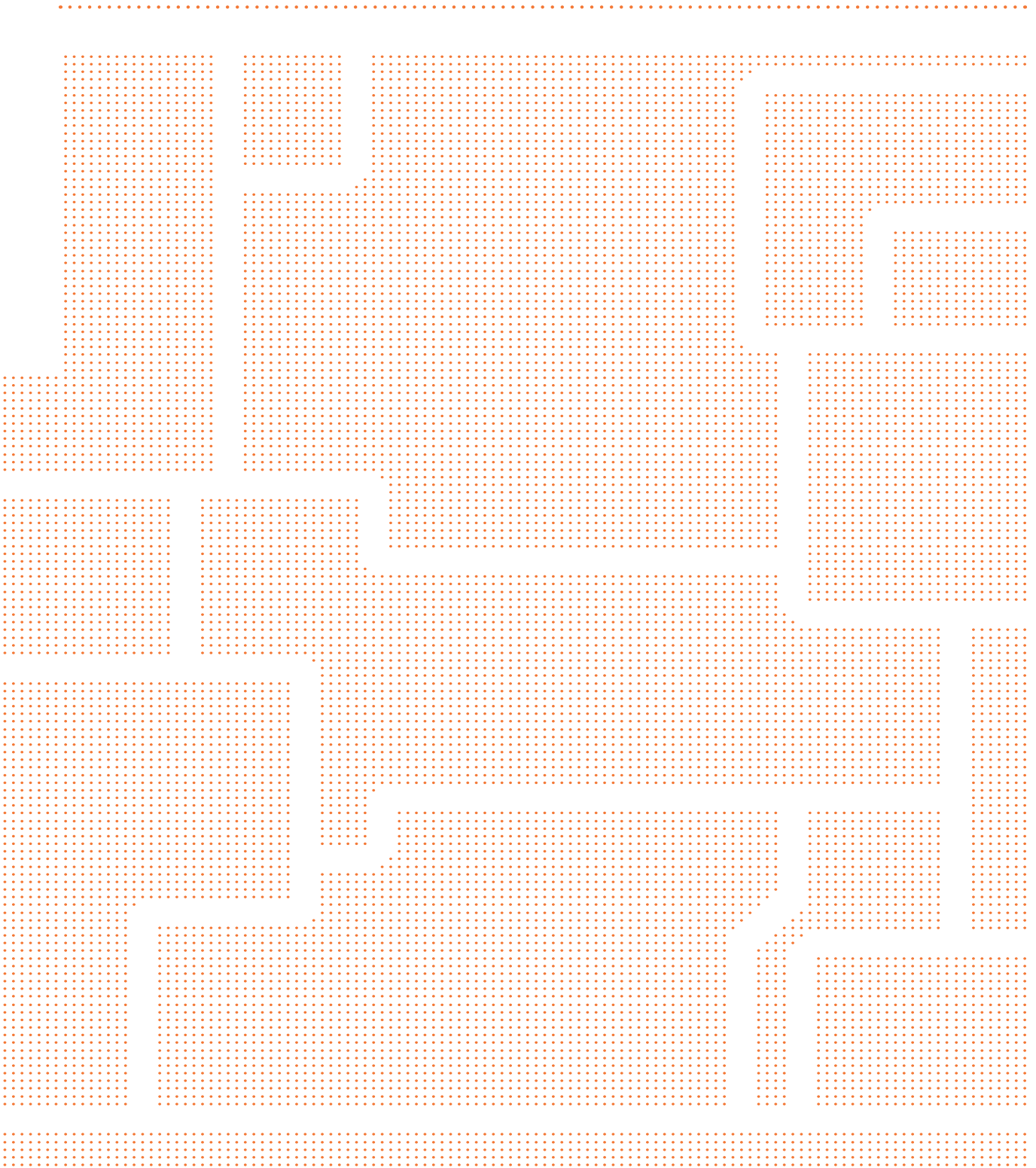
While Australia does have an unreliable rainfall and receives much of its rain in areas well away from urban and agricultural development, it is possible to manage the water supply system more effectively.

The problem lies in the politics of water. For too long myths have substituted for fact-based analysis. The public now needs to be heavily engaged in assessing the available options, and they need to have the facts made available to them. All policy changes require public acceptance. The tariff reductions of the late 1980s, for example, were only possible because the public became well versed in the issues. Facilitating well-informed debate by the public is now the responsibility of politicians and relevant organisations in relation to water reform.

In some ways water policy reform should be easier than other reforms. The adjustment costs should be small in the case of the urban water reforms, and water trading should be seen as providing farmers with more options, not fewer.

Whatever process is followed a key lesson from other reform areas is that the more reform is delayed, the greater the eventual adjustment burden. Australia must approach water reform as a matter of urgency.

Through this paper the Business Council of Australia is contributing to reform in this crucial area.



Overview: Australia's man-made water scarcity and how to fix it

We know that water is fundamental to life, that the amount that falls from the sky is limited and unreliable, and that some parts of Australia are facing their worst drought on record. These self-evident truths, however, often appear to blind the community to the steps required to make water available where it is most needed. In the water sector the public debate appears to substitute myths for analysis and policies based on fact.

Fundamental urban water reform, and faster and more effective implementation of the agreed rural water reforms, are two of the most pressing tasks facing Australian Governments. This is because the benefits of water reform are large and, in an important way, not capable of measurement.

While water reform could boost GDP directly by around 1% or \$9 billion (see Section 2), which is very large by the usual sectoral reform standards, there are crucial wider benefits. A widely perceived and artificially inflated shortage of water is holding Australia back, and will increasingly do so in the future.

In 1994 the Council of Australian Governments (COAG) agreed on a strategic framework for water resource policy and reform. In essence, COAG '... agreed to implement sustainable water management arrangements that account for all uses of water (agriculture, industry, household and the environment).'¹⁶

This objective has not been achieved. Indeed, in some respects Australia can be seen as being further away from 'sustainable water management arrangements' than it was 12 years ago. As the National Water Commission has said: 'If anything, the risks to Australia's water resources are increasing – especially in the form of growing demand and reducing reliability of supply.'¹⁷

It is important to stress that the last 12 years have seen major progress in some key areas where Australia could be considered as leading the world in water reform. Temporary trading has increased dramatically to make better use of our rural water; rural water planning has markedly improved in many areas (albeit from a very low base); and the key steps required for permanent water trading and protection of the environment and river and groundwater health are now well accepted, at least in general terms.

A quick glance, however, at current water outcomes illustrates the extent of the future journey and the pressing need for fundamental reform.

The impacts are significant, not only on the health of our rivers but on the reliability of water supply, productivity of the agricultural sector and the recreational amenity of the environment.

Essentially, all of Australia's major cities are facing water usage restrictions, which in turn is fuelling calls for curbs on our economic growth. To quote the Water Services Association of Australia, the peak body of the Australian urban water industry, '... over the last 20 years, with the exception of Perth, no new water sources have been developed for our cities. At the same time, the urban population has increased dramatically.'¹⁸ This is despite a range of well-recognised new supply sources for each of our cities.

For the past 20 years our major water utilities and the relevant politicians under strong pressure from various groups have focused purely on managing demand. Restricting water use was seen as the only saleable option but it simply disguised a deeper policy failure.

As the National Water Commission's Chairman, Ken Matthews, has said: 'For too long, water has been the forgotten cousin of infrastructure.'⁹ Water reform has lagged behind the reforms undertaken over the last twenty years in energy, road, rail and Australia's ports.

There is much to be learned from the reforms in the energy market. Both water and electricity are essential services. Both have been subject to public ownership, a lack of competition and no interstate trading. In the 1980s it was believed fundamental reform could not occur in either sector for a range of political and technical reasons. Yet one sector – the electricity sector – did embark on a fundamental reform journey. Whilst the reforms are still being progressed there has been major change – increasing competition, opening up trading between states and new ownership arrangements. The water sector now needs to actively embrace a similar reform agenda.

The solutions are clear, and while difficult and challenging, can be implemented over time.

In the case of urban water, Governments must replace physical water restrictions with properly functioning urban water markets. The impediments to new water supply need to be addressed; supply competition needs to be introduced; and prices need to reflect the cost of these new supply sources. The key steps that need to be taken are summarised in Exhibit 1.

EXHIBIT 1

STEPS REQUIRED FOR REFORM OF URBAN WATER

KEY STEP	EXPLANATION
End the myth of water 'scarcity' – replace physical water restrictions with properly functioning urban water markets.	We need to remove the arbitrary impediments (as distinct from appropriate environmental limits) to the many new sources of supply. Water pricing should then result from the costs of the new sources of supply. Equity measures should be available where appropriate.
Introduce competition into water supply, and develop effective access regimes to water pipes and other relevant monopoly infrastructure.	There is no logical reason why urban water supply should remain a monopoly, just as there was no justification for an electricity supply monopoly.
Introduce national regulation of water.	Currently there are a number of different regulation regimes. A national regime will be more efficient and be less subject to political interference.
Disaggregate water utilities into their monopoly (pipes) and competitive (supply and retail) segments and consider greater private ownership.	Disaggregation will provide the basis for effective competition and provide opportunities for private sector investment.
Allow temporary and permanent water trading between rural and urban areas, and provide adjustment assistance where required.	Such trading will provide a cost-effective source of supply in some areas and at the same time provide an economic return to the farmer and farmer groups who would be able to participate in the water trading system. Farmer groups would be able to compete against existing water authorities and so control their own destiny.
Remove the various impediments to water recycling.	Impediments range from providing access to sewerage and stormwater to low urban water pricing. Removal of such impediments will allow for availability and appropriate pricing.
Do not seek to 'pick' new supply 'winners', e.g. there are no logical reasons not to embrace desalination if it is the most economical option and meets relevant environmental criteria.	'Picking winners' is very costly. It is essential to allow the market to operate in a way that allows for the consideration of all possible sources.
Conduct a national review of water pricing in our cities and towns.	There is significant price variation for water and not always a link to costs and quality. What is the logic for the price differences between our capital cities and many regional centres and towns? What are the impacts of 'postage stamp' pricing?
Examine the efficiency and effectiveness of the institutional structure of urban water authorities.	Across Australia there is a range of different organisations managing urban water. Which is the most effective and efficient model? For example, are there compelling economies of scale or other logical arguments to have fewer and/or larger authorities rather than the hundreds that exist in some states now?

IMPROVING RURAL WATER SYSTEMS

In the case of rural water, we need to put the water we have available to the best use. To meet this objective, the essential building blocks for effective water trading must be put in place, barriers to trade removed, environmental allocations increased and adjustment assistance provided. The key steps that need to be taken are summarised in Exhibit 2.

EXHIBIT 2

STEPS REQUIRED FOR REFORM OF RURAL WATER

KEY STEP	EXPLANATION
Agree to national standards for the key market building blocks of water accounting, metering and measurement, and registers of all water access entitlements and trades; and agree to an immediate timetable for meeting them within every Australian jurisdiction.	The National Water Initiative (NWI) includes references to these key building blocks. However the NWI refers only to 'compatible' registers and arrangements. This is open to wide interpretation. Many people close to these issues believe we will see 'compatible' but different standards, which will frustrate water flowing to its highest value use.
Boost resources in the relevant state institutions responsible for the development of these 'building blocks' and for water planning so as to speed up progress.	It is crucial that this work is done properly, yet there seem to be too few resources devoted to it.
Remove all barriers to trade, for example: <ul style="list-style-type: none"> * exit fees * fixed trading limits * local catchment structures/rules. 	There are many direct barriers to trade that were long ago removed in other infrastructure and industry sectors.
Remove the barriers to new private sector investment.	This will create more high-value options for agriculture.
Where assistance is required for structural adjustment, use more of the available Government funding to address this need. This could be through improving efficiency or compensation.	Major structural reform in other sectors has been supported by such financial assistance. One example is the structural adjustment payments that accompanied tariff reductions. Government water funds are being allocated to projects that allow for publicity opportunities but do not advance fundamental reform in the key areas where it is needed.
Conduct a national review of rural water pricing.	More transparency in price setting is required, in particular to reduce wastage.
Ensure surface and groundwater health by taking advantage of efficiency gains or purchasing water for environmental use.	We can reduce the current stress on our rural water systems using market mechanisms.

IMPROVING THE MANAGEMENT OF WATER

To achieve water reform governance changes are needed. These go to the heart of the way our federal system operates, as water markets do not respect state boundaries and the focus by Governments is usually on 'process' over 'outcomes'. The key changes required are summarised in Exhibit 3.

EXHIBIT 3

STEPS REQUIRED TO IMPROVE WATER REFORM GOVERNANCE

KEY STEP	EXPLANATION
Expand the National Water Initiative to cover urban water issues in the same depth as rural.	The NWI currently has little focus on urban issues but our analysis suggests they are as important as rural issues.
Make the consideration of rural and urban water issues and progress a standard agenda item at regular COAG meetings.	At the ministerial level (federal and state), responsibility for water policy is diffuse, leading to complexity in policy development and implementation. For this reason, COAG (made up of the Prime Minister, Premiers and Chief Ministers) should ensure water policy reform occurs. COAG needs to meet more frequently and regularly, and needs to increase its focus on water to ensure progress is being made and any impediments are being removed.
Establish explicit action milestones and clear outcomes, both of which can be independently assessed and monitored by COAG or the COAG Reform Council. Action milestones can, for example, include common rural water metering and registration standards, removing trading impediments and the introduction of effective urban water access regimes. Outcomes can, for example, relate to reducing stress on rural water systems and achieving urban water supplies that can meet future needs.	Water reform requires much clearer action milestones and undertakings. It demands a strong focus on outcomes – not just on process.
Tie incentive payments to the achievement of the agreed milestones and outcomes.	The National Competition Policy payments have now ceased, yet they had demonstrably important effects on behaviour that we cannot afford to lose.

With water reform, as the above exhibits illustrate, the policy concepts are clear enough. Virtually all water policy experts agree that we can have:

- * Sufficient urban water to our cities on a sustainable basis.
- * A vibrant irrigated agricultural sector contributing more to Australia's productive output than it does now.
- * Healthy rivers and groundwater systems sustained by adequate environmental release.

While Australia does have an unreliable rainfall and receives much of its rain in areas well away from urban and agricultural development, it is possible to manage the water supply system more effectively.

The problem lies in the politics of water. With rural water issues the politics have frustrated implementation of agreed policies, while in urban water myths have been allowed to substitute for fact-based analysis. The public now needs to be heavily engaged in assessing the available options, and they need to have the facts made available to them. All policy changes require public acceptance. The tariff reductions of the late 1980s and early 1990s, for example, were only possible because the public became well versed in the issues. Facilitating well-informed debate is now the responsibility of politicians and relevant organisations in relation to water reform.

In some ways water policy reform should be easier than other reforms. The adjustment costs should be small in the case of the urban water reforms, and water trading can provide more attractive options for our farmers.

Whatever process is followed a key lesson from other reform areas is that the longer reform is delayed, the greater the eventual adjustment burden. Australia must now approach water reform as a matter of urgency.

Why water is critical to Australia's future prosperity

In March 2005 the Business Council of Australia (BCA) launched its *Infrastructure Action Plan for Future Prosperity*. The action plan, which incorporated research prepared by Rod Sims of Port Jackson Partners Limited (PJPL), demonstrated that Australia needed to embark on a major infrastructure reform agenda, covering energy, transport, and rural and urban water reform.

The BCA's focus on this area helped to prompt a national debate which saw many prominent individuals join the discussion. This debate eventually led to a strong policy response from the Council of Australian Governments (COAG).

COAG met in February 2006. The communiqué resulting from this meeting responded to the issues raised by the BCA, particularly in the areas of energy and transport. A large number of reviews were launched, and concrete policy announcements were made in some areas.

In the BCA's response to the February COAG agenda it noted that no announcements were made in relation to water. Governments seemed content to rely on the 2004 National Water Initiative, which focused essentially on rural water issues and sought to provide impetus to the original 1994 water reform agenda, which had been marked by modest progress.

Reform of urban water infrastructure appears to have separated from other infrastructure reforms. While as the BCA has pointed out (and COAG has acknowledged) that much more needs to be done in the electricity and transport sectors, the nature and extent of reform seen there is not evident in urban water.

Given the importance of water to Australia's future prosperity, this relative neglect of urban water reform and the lack of urgency in implementing agreed rural water reforms is puzzling.

There is an active debate about how much has been achieved under the water reforms that have been pursued since 1994. Some observers point to significant steps that have been taken in relation to rural water, some of which are considered world-leading in their scope. Other commentators point to the huge array of problems still facing both our urban and rural water sectors. An important perspective on this was recently provided by the National Water Commission, as shown in Exhibit 4.

EXHIBIT 4

NATIONAL WATER COMMISSION ASSESSMENT OF PROGRESS ON WATER REFORM

ON THE ONE HAND ...

- * Real reform progress is being made in a way that would not be occurring in the absence of the National Water Initiative. This includes progress in areas such as water trading, national water accounting standards, and nationally compatible registers for water access entitlements and the further alignment of state/territory water management with NWI principles.
- * Since its signing, significant momentum has been created in implementing the NWI, including through the substantial effort by states and territories as they continue to reform their water management arrangements.
- * For the reasons noted above, the Commission considers that perceptions of inadequate progress on the NWI are not, on the whole, justified.

... AND ON THE OTHER

- * At the same time, many of the conditions facing Australia's water resources which existed when the National Water Initiative was first signed in June 2004 still exist:
 - There is a considerable distance still to go to achieve sustainability of water management in practice.
 - Water markets are still in their infancy.
 - Significant knowledge gaps persist about the availability and nature of the water resource in many surface and groundwater systems.
- * In short, the Commission considers that the risks to Australia's water resources are increasing, especially in the form of reduced reliability due to long-term changes in climate, and growing demand from agriculture mining, industrial and residential consumption. Therefore, the need to put in place the arrangements for better understanding and managing our resources to meet these challenges is becoming more urgent, not less.
- * As a result, the Commission considers that there is a need for governments to increase their commitment to the National Water Initiative reforms in order to deliver the improvements in water management sought by the Agreement.

Source: National Water Commission, *Progress on the National Water Initiative: A Report to the Council of Australian Governments*, National Water Commission, Canberra, June 2006.

The key point is that it matters not whether the 'glass is half full, or half empty'. No one would argue that Australia has in place rational or sustainable water management arrangements. For the driest inhabited continent on earth, this is a major problem, for at least two reasons.

First, Australia's productive capacity is considerably less than it should be. This is because our available water is not being put to its best use, and because the water rationing that is currently being adopted in both urban and rural areas is an extremely inefficient method to match the available water supply with demand.

A recent study involving the CSIRO quoted Australian Bureau of Statistics data to indicate that Australia's population could increase by 25% to 25 million by 2032.¹⁰ The paper also speculated that, by then, Australia could have 15% less water in the eastern states and South Australia due to the possible effects of climate change.

This study estimated the impact of effective intra-regional and rural-urban water trading at 0.6% of GDP. That is, with this policy change the combination of higher population and less water would increase GDP by 0.6%.

This study did not estimate the benefits of new sources of supply to meet the higher demand for water but the benefits would be significant. Indeed, with the new supply sources, which the CSIRO felt would be from desalination, we could extrapolate the CSIRO findings and suggest a benefit from water reform of at least 1% of GDP.

Second, however, the largest gains are likely in areas where the benefits of water reform are difficult to measure. The current water shortages fuel concerns and provoke calls to limit growth so that Australia can live within its (apparently dwindling) available water supply. Indeed, in 2004 the NSW Government observed that: 'Critically, the use and management of water could be a key limiting factor on Sydney's future growth and prosperity.'¹¹

Such views reflect an unsophisticated view of our water sector and the likelihood of policy reform. They seem based on a 'no-policy-change' view of the world.

A better view is that there is no long-term shortage of water in Australia, just as there is no shortage of any other good or service that we consume. Instead, the perceived shortages are due to artificial limits on supply to our cities, and an inability to allocate water to its highest value use in rural areas.

If we allocated appropriate water for environmental purposes (e.g. to restore river health), and allowed market pricing and the laws of demand and supply to operate as they do in every other market, there would be no talk of shortages or the need to curb economic growth.

This paper seeks to integrate water into the mainstream of infrastructure issues. Indeed, when examining the water sector with knowledge of reforms in other infrastructure sectors, some useful policy lessons become apparent.

Before focusing on these lessons, and the nature of the policy reforms that are needed, it is important to gain a better understanding of the challenges facing Australia in both the urban and rural water sectors.

URBAN WATER CHALLENGES

Our urban water challenges are readily apparent. Our dam levels are below desired levels in virtually all urban areas, and major urban centres face significant water restrictions.

The extent of the problem varies. Sydney is currently consuming water at a rate greater than it can sustainably supply; Brisbane's dam levels are at less than 30% capacity, and towns such as Goulburn, Toowoomba, Gosford and Wyong are said to face a water 'crisis'.

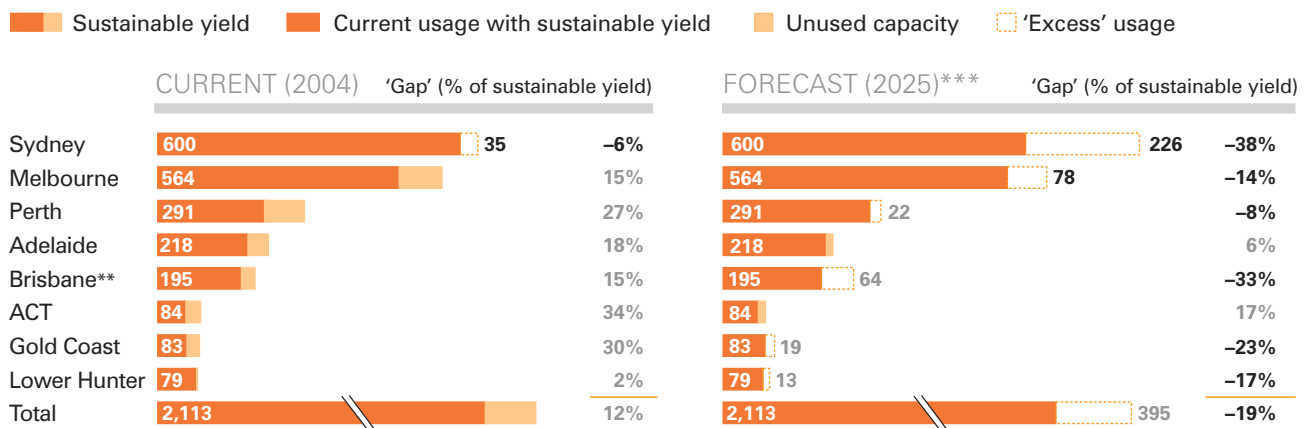
Indeed, most of Australia's cities could face future water shortages if policies do not change. Exhibit 5 provides a forecast of the extent to which water demand may be above sustainable supply levels in 2025 if:

- * Australia's population reaches 26 million;
- * per person usage stays as it is now (when we already have water restrictions in place); and
- * no new water supply sources are available.

While this last assumption (no new water supply sources) may seem extreme, until quite recently it was indicative of the thinking of many Governments and water authorities.

EXHIBIT 5

URBAN WATER SUPPLY CAPACITY VERSUS DEMAND* GIGALITRES PER ANNUM



* Figures include industrial water use in urban areas.

** Brisbane includes only those people serviced by Brisbane Water (Brisbane City Council).

*** Boston Consulting Group (BCG) forecasts adjusted to assume no increase in per capita consumption by 2025
Source: Water Services Association of Australia data adapted to BCA growth forecasts by BCG.

The current perception of water shortages can be traced back to the obvious causes: a lack of new supply, and very low pricing.

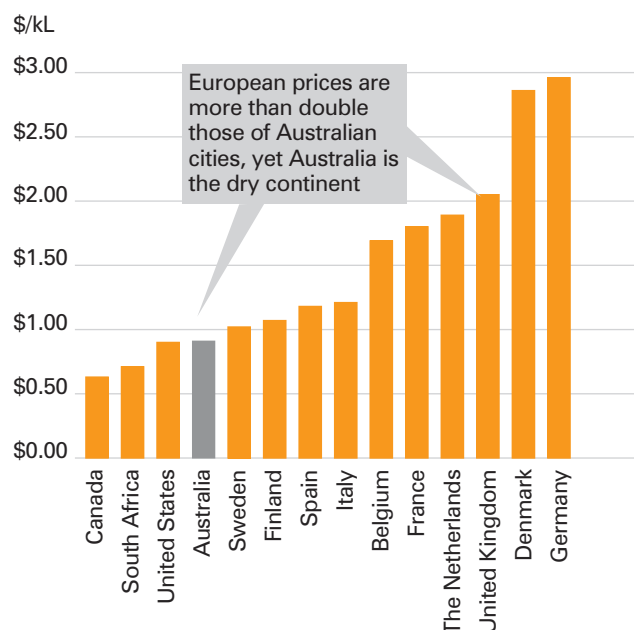
Over the past 20 years the primary policy used to address water shortages has been to reduce demand for water. But demand management only addresses part of the challenge. The overall solution must address the demand and supply of water and the pricing of water. It would appear politicians have been reticent to consider alternative supplies of water or different pricing mechanisms – largely in response to a range of pressure groups.

Many of the demand management initiatives previously introduced did not focus on the key instrument to influence demand: price. While pricing has improved, in particular becoming much more linked to usage and cost recovery, it still largely treats the 'scarce' water as free, presumably since it falls from the sky.

In fact, while Australia is the driest inhabited continent in the world, it has some of the world's lowest water prices. This can be seen in Exhibit 6. Importantly, the Australian prices used in the comparison in Exhibit 6 are average capital city prices – the prices in many regional towns are much lower still.

EXHIBIT 6

COMPARISON OF URBAN WATER PRICES INTERNATIONAL PRICES – 2002



Source: Farmhand Foundation, *Talking Water*, Farmhand Foundation, 2004.

While water is in short supply, Australians pay generally 1 to 1.5 cents for every 10 litres of high-quality drinking water delivered to the home 24 hours a day, seven days a week. Put another way, Australians, on average, pay four times more for their electricity than for their water.

The key point is that Australia's urban water shortages reflect a failure of policy and planning. There is nothing 'natural' about it.

Perhaps the final word on urban water can be left to the Prime Minister. 'I believe we need nothing short of a revolution in thinking about Australia's urban water challenges'.¹²

The extensive reforms the BCA considers are required to bring about such a revolution are detailed in Section 3.

RURAL WATER CHALLENGES

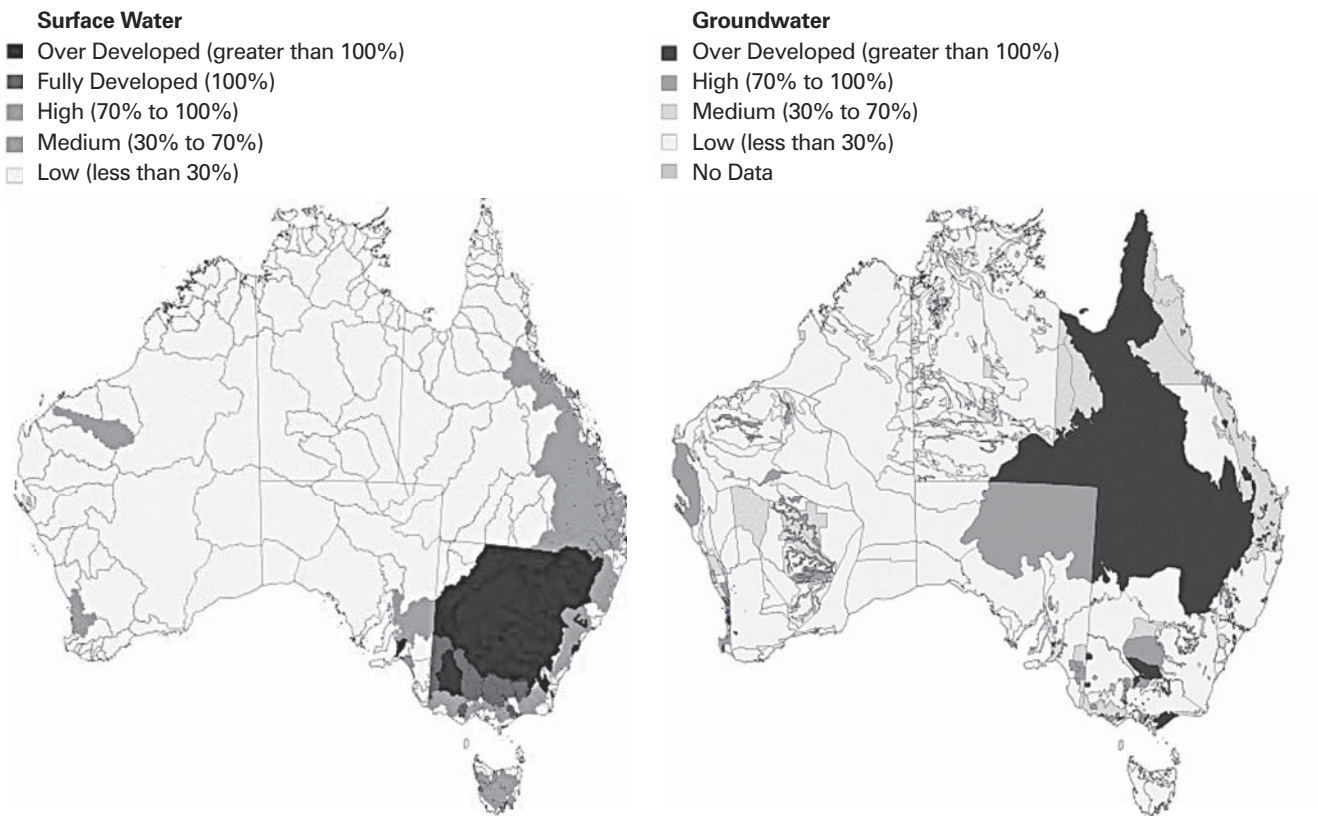
Our rural water challenges are also readily apparent.

Of 325 surface water basins 84 are close to or are being over-used. Most of these are in the eastern states, with the Murray–Darling Basin the main problem area, as shown in Exhibit 7.

Of 538 groundwater management units, 168 are close to or are over-allocated. The most affected areas are inland Queensland, the Murray–Darling Basin and the south-west of Western Australia.

EXHIBIT 7**SURFACE AND GROUNDWATER WATER DEVELOPMENT STATUS – 2000**

PERCENTAGE OF SUSTAINABLE FLOW DIVERTED, OR OF SUSTAINABLE YIELD USED

Source: National Land and Water Resources Audit, <http://audit.ea.gov.au/ANRA/>

The Murray–Darling Basin is the largest agricultural area in Australia. It accounts for \$9 billion per annum in agricultural production and provides a source of water that is shared by four eastern states and the Australian Capital Territory. This is shown in Exhibit 8.

The key fact to understand is that water from such areas as Goondiwindi in south-east Queensland flows through to the Murray River mouth near Adelaide. That is, there are many alternative geographical locations where the water can be used. Water that is allowed to flow through one area can often be used in another.

It is important to understand that 12% of our irrigation water produces 50% of our agricultural value (see Exhibit 9). This does not mean we should exit the low-value-added sectors. Much depends, for example, on the alternative use of the water. What it does mean is that we should let the market decide how our water is used.

EXHIBIT 8

MURRAY–DARLING BASIN



Key facts about the Murray–Darling Basin

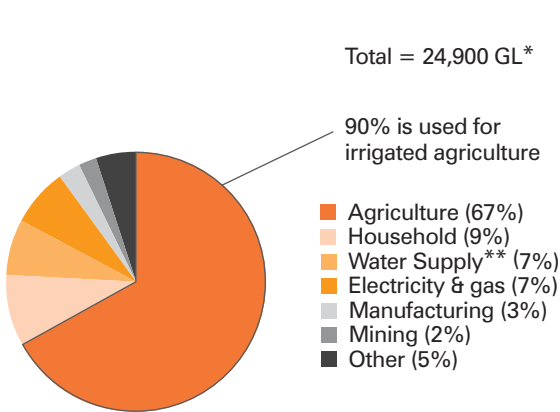
- * The Murray–Darling Basin extends over three-quarters of NSW, more than half of Victoria, the ACT and significant proportions of Queensland and South Australia.
- * Around 70% of all agricultural water used in Australia is used for irrigation in the basin.
- * Water from the Murray–Darling Basin is used by all four states, with water from areas such as Goondiwindi on the MacIntyre River in south-east Queensland flowing through to the Murray River mouth near Adelaide.

Source: Murray–Darling Basin Commission; Department of Agriculture, Fisheries and Forestry.

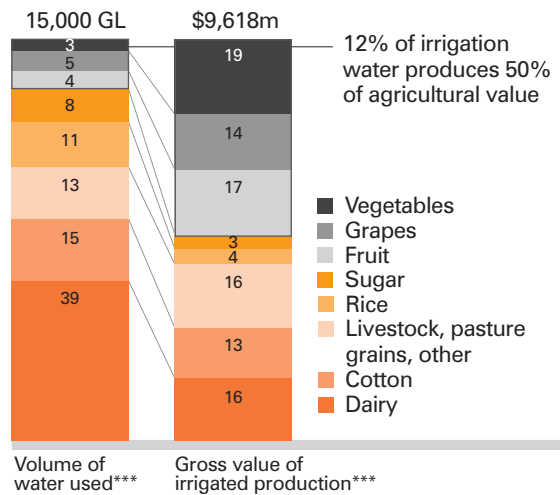
EXHIBIT 9

WATER USE IN AUSTRALIA 2000–01

ALL WATER BY END USE (%)



WATER USE BY AGRICULTURAL INDUSTRY (%)



* Includes mains water, self-extracted water (river and groundwater) and re-use water; excludes direct rainfall unless captured for later use.

** Includes losses from seepage and evapotranspiration as well as water used by the water supply, sewerage and drainage services industry.

*** The volumes of irrigated water come from 1996–97 data, the gross value of irrigated production from 2000–01 data. The exact proportions may have changed between the two time periods, but it seems clear from other sources that a small proportion of water produces a large proportion of the value.

Source: ABS Water Account Australia 2000–01, 4610.0; Natural Heritage Trust, *Australia's Natural Resources 1997–2002 and Beyond*.

It has been estimated that over one-third of Australia’s irrigation water is lost or unaccounted for before the water gets to the farm gate. Some examples, and likely solutions that would require business case justification on a case-by-case basis, are provided in Exhibit 10.

EXHIBIT 10

EXAMPLES OF WATER USE INEFFICIENCY

‘Over one-third of irrigation water goes lost or unaccounted for before it reaches the farm gate.’*

EXAMPLE	PROBLEM	SUGGESTION
Metering and measurement inaccuracies.	Inaccuracies in, or lack of, measurement of river flows and irrigation usage results in poor management of flows and unaccounted-for water losses.	The Pratt Water Murrumbidgee Project estimates an investment of \$150m is required in improved river monitoring and metering systems on farms in that area.
Inefficient irrigation practices.	Many irrigators use water much less efficiently than best practice.	For example, efficiency can be increased from 60% to 90% by switching from surface to trickle irrigation.
Uncapped bores.	~900 uncapped bores in the Great Artesian Basin (Qld, NSW, SA).	Invest an estimated \$286m in capping bores to control flow rates, and lining bore drains to reduce seepage and overflows.
Irrigation channel evaporation, seepage and leakage.	Over 70,000 km of open water conduits result in losses of 30 to 50% of all water supplied.	Line channels with concrete or plastic to reduce seepage and leakage.
Storage evaporation.	Dams and storages on or near farms are often very shallow with large surface areas leading to high rates of evaporation.	The Pratt Water Murrumbidgee Project has identified 20–30 GL per year of water savings in the Murrumbidgee Irrigation Limited area through capital works at Barren Box Swamp at a cost of \$30m, or ~\$50/ML over 20 years.

Source: Farmhand Foundation, *Truth in Water Entitlements*, Farmhand Foundation, 2004; Farmhand Foundation, *Talking Water*, Farmhand Foundation, 2004; Pratt Water, *The Business of Saving Water: The Report of the Murrumbidgee Valley Water Efficiency Feasibility Project*, Pratt Water, December 2004.

*Farmhand Foundation, *Truth in Water Entitlements*, Farmhand Foundation, 2004, p. 5.

The key point to note from all of the above is that the problems identified are not new. They have been known about for a long period, but little progress has been made in addressing them. This was well described in a recent article in *The Australian Financial Review*:

'On water, there was a report card on the National Water Initiative, which looked pretty good in terms of commitments to developing tradeable water rights, and water use planning and best practice.

Pretty good, that is, until you compare the detail of what the Prime Minister released with what COAG agreed to at its February 1994 meeting, which outlined agreement to adopt, among other things, the establishment of "trading arrangements in water allocations or entitlements once the entitlement arrangements have been settled".

Churlish as always, but it doesn't seem like much has happened in John Howard's miracle decade of co-operative federalism.¹³

These thoughts were echoed by Malcolm Turnbull, the Prime Minister's Parliamentary Secretary responsible for water, in a recent assessment:

'There is already water trading in Australia, but it is severely constrained: most irrigation districts limit the amount of water that can permanently be traded out of the district; water trading between states is hampered by a lack of uniformity in the way water rights are characterised or exchanged from one type (e.g. different levels of reliability) to another; trades between urban and rural areas are seen by some sectors of the community as a no-go area; and purchasing water for the environment is viewed as a threat to stability in markets.'¹⁴

We will return to these issues in Section 4.



Ending water scarcity in Australia's cities

The Prime Minister has called for a 'revolution in thinking' about Australia's urban water challenges. Given the importance of water to our cities, it is essential that we address these challenges. The policy changes now required represent a fundamental reversal of how Governments have pursued these issues in the past.

In formulating the policy recommendations described below we have borrowed heavily from the reforms pursued by other infrastructure sectors. The essence of the recommended changes, however, involve treating water like any other product.

3.1 REPLACE WATER RESTRICTIONS WITH WATER MARKETS

Past urban water policies have led to our current water shortages. These policies have gone against the principles that guide every other market.

Past urban water policies have:

- * kept water supply broadly constant;
- * catered for rising demand (largely driven by a rising population) through physical water restrictions; and
- * not allowed prices to rise to the levels they need to so that the market is cleared.

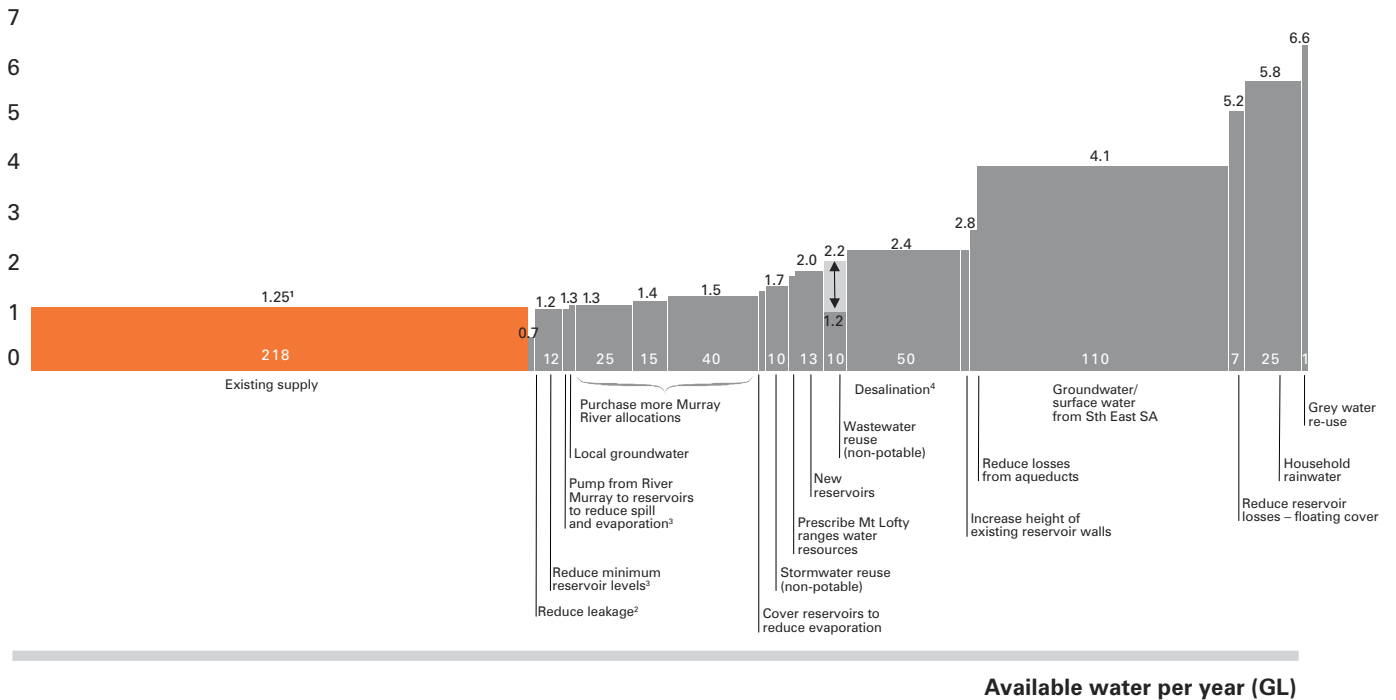
For every city or town in Australia there exists a supply curve for water. Such a curve shows the increasing cost of each extra supply option. Exhibit 11 shows the supply curve for Adelaide.

EXHIBIT 11

CURRENT PRICE OF ADELAIDE WATER COMPARED TO ALTERNATIVE SOURCES OF SUPPLY

COST TO ADELAIDE CONSUMERS
\$/kL

■ Options raised by the South Australian Government
■ Current sustainable supply



1. Based on usage of 250 kL p.a. and the 2003–04 price of \$0.42/kL up to 125 kL, \$1.00/kL > 125 kL and a fixed fee of \$135 p.a.
2. A preliminary estimate suggested 3 GL of leakage reduction is possible at ~\$0.7/kL, further reductions may be possible, but at a higher cost.
3. These options would decrease the security of supply from reservoirs.
4. Costing of desalination based on 50 GL, potential available water may be unlimited.

Source: Adaptation from BCG research using additional information from *Water Proofing Adelaide: Exploring the issues – a discussion paper*, South Australian Government, 2004; *WSAA facts 2003*, Water Services Association of Australia.

The available options cover purchasing allocations from the Murray River, desalination, recycling, new reservoirs and reducing losses. They are not exhaustive; they do not include, for example, re-using water for potable (drinking) use.

Most water experts would agree that, by the time current water prices are increased by 50 to 100%, a range of new supply options become economically viable. That is, at over \$2 a kilolitre (kL), desalination, sewerage recycling, re-use of stormwater and the greater ability to fix leaking pipes all become economically feasible.

As Malcolm Turnbull has stated: '... water is not a finite resource in the way minerals are ... we can have as much water as we are prepared to pay for ... We can make as much and more water than we need from recycling ... or ... desalination.'¹⁵

The second part of the past policies was to respond to rising demand with physical water restrictions. While such measures may have made some sense and helped to educate consumers (e.g. banning watering gardens in the heat of the day), most are inappropriate, particularly on a continuing basis. They will not provide sufficient water to meet the demands of an increasing population and economic growth.

Why do Australian consumers accept water restrictions, when they would not tolerate restrictions in similar essential services such as electricity or gas? Australian consumers appear to have been educated to believe a myth: that water is in a state of permanent shortage rather than a resource that is poorly allocated and managed.

The third part of the past policies is that prices have not been allowed to rise to clear the market. This is also curious. Again it is worth quoting Malcolm Turnbull: 'The ABS estimates that in 2003–04, Australian households paid an average \$311 for water, and \$1,200 a year for electricity, gas and other substitutes. Fresh water and energy are both vital necessities of life, and yet there's an enormous gap between what we pay for them.'

The starting point for water pricing that we see today is somewhat arbitrary. It reflects the historical cost of building dams and laying pipes. It does not reflect the cost of equating supply (from new sources) with demand (at whatever level it would settle when prices reflect the additional cost of supply).

It is important to emphasise that we are not advocating that Governments must use the many alternative supply sources to meet demand at current prices. We are also not saying that rising prices should be used to choke off demand.

Instead, we are simply calling for Governments to let water markets work like they do for all other products, including for other essentials like electricity and food. Let prices settle where they will once consumers decide how much they wish to consume at prices that bring forward various increments of new supply.

It is also important to stress that there should be few equity concerns here. First, Governments generally do not specifically subsidise food for low-income earners, instead preferring to rely on general income distribution mechanisms (such as social security). Second, Governments do choose to provide rent subsidies for low-income earners, but they do so in ways that no longer distort the operation of markets (previous attempts to control rents had disastrous consequences). Either of these precedents can be followed with water.

The following sections will deal with how we can make the water market work better. In doing so they will provide further confidence that the water market can operate as other markets do.

3.2 INTRODUCE MORE COMPETITION INTO THE DELIVERY OF WATER SUPPLIES

The fundamental step to ensure that water markets work effectively is to introduce effective competition. This is a key requirement for three reasons.

First, the incentive facing monopolies is to restrict supply. In competitive markets supply will be forthcoming until the incremental cost of supply is matched by the extra price consumers will pay. For monopolies, however, the highest return on assets will come from a lower level of supply and a larger gap between the price charged and the cost of supply.

Second, it is not as simple as this. Through many private conversations the BCA is aware of a range of proposals over many years to increase supply in our major cities that were rejected by Governments for political reasons. The problem is that, as owner, regulator, environment protector and in all their other roles Governments are seen as responsible for all water outcomes.

We consider a better result would come from a greater separation of roles. If water supply was open to competition, the ideas for new supply would at least come to the surface for the community to debate.

The third reason is that the more entities that are able to supply water, the more likely we are to see innovative proposals. Competition forces new thinking, while monopolies tend to be insular.

Increased competition would produce many benefits. It can effectively unlock the barriers to change. For example, it is easy to understand why farmers and rural communities would not wish to see their water taken to supply urban areas. They lose control of how much water will be taken and the financial effect such a move would have on them.

Consider their response, however, if these same farmers could supply urban areas directly themselves. They could not only benefit from rural–urban water price differences, but they could control whether they supply the urban areas via temporary or permanent trades of their water.

PREREQUISITES FOR INCREASED COMPETITION

Allowing for increased competition for water supply is no more complicated than for electricity. There are two key steps.

First, there must be an effective regime in place to allow access to water pipes. Just as with electricity distribution wires it makes no sense to duplicate the pipes be they for potable water, sewerage or stormwater.

Such an access regime is no more difficult (technically or for any other reason) to put in place for water than it was for electricity. Indeed, the framework and the institutions are in place – they simply need to be extended to water.

The second key step relates to selling the water. Having a source of supply, and being able to pipe it, matters little if there are not mechanisms that allow the sale to consumers.

Changing legislation to allow this is relatively straightforward, and there is much guidance to be had from the electricity sector. The legislation needs to cover issues such as standards, connection and disconnection and the ‘supplier of last resort’. While there are issues that can be debated, as they have been in electricity, they are not ‘showstoppers’.

The biggest issue is how new competitors can exist alongside the current regulated pricing regime. In electricity this was dealt with by gradually deregulating prices for users starting with the largest users and working down over many years to residential customers as the extent of competition was increased. In electricity, consumers have, overall, seen price reductions from this process, although not universally.

For water, there is a range of alternative options which will need review (see Section 3.8). The following examples seek only to show that this issue is also not a 'showstopper'.

*** The centrally planned approach.**

A regulator could determine the need for new supply and invite tenders to meet this. The successful tenderer would receive their bid price, but the regulator could blend this price with existing ones and so not provide a windfall gain to the current (presumably lower-cost) providers.

*** The electricity or 'consenting adults' model.**

Larger users would be allowed to reach agreements with whoever they like to meet their needs. (Larger users could also become sellers if they had more water than they needed at any time). This may be backed by a minimum supply and price guarantee to households with usage and prices above that minimum not being guaranteed. People might reach an agreement with a new supplier to:

- * guarantee long-run supply, albeit at a higher price than may be currently on offer; or
- * achieve a cheaper source of supply if they face regulated prices that increase sharply with usage.

While the issues are all solvable, introducing competition will not be straightforward. For example, Sydney Water and the New South Wales Government have fought hard to prevent a private entity, Services Sydney, from gaining access to Sydney Water's sewerage pipes to compete in the market for recycled water. While the New South Wales Government has subsequently released a discussion paper contemplating allowing access to Sydney Water's pipes, and has recently foreshadowed legislation, this apparently will only allow access to the sewerage pipes and not to the pipes carrying potable water.

In going down a path to increased competition it will be important to establish nationally consistent approaches to areas such as the access and regulatory frameworks.

3.3 INTRODUCE CONSISTENT REGULATION FOR URBAN WATER DELIVERY AND USE

This should be a straightforward issue.

Over recent years there has been strong debate over the national regulation of the electricity sector, which has recently led to the formation of the Australian Energy Regulator (AER). The arguments for this were centred around various considerations:

- * Differing state rules were very costly for national players.
- * Perceptions of conflict of interest when government was an asset owner, regulator and policy setter.
- * An ability to benchmark different entities when assessing performance.

We should move quickly to establish an Australian water regulator, just as we have with the AER. This new regulator should regulate access, arbitrate access prices and could also set a range of technical standards such as the quality of drinking water (there are no Australia-wide standards for this).

We also believe such a step should be preceded by a Productivity Commission inquiry to determine the nature of the access regime, technical standards and other rules. We must avoid each state taking this step separately.

3.4 DISAGGREGATE THE MAJOR CITY WATER UTILITIES TO ENSURE CLEAR ROLES AND RESPONSIBILITIES

We also believe that other steps would be very helpful. This draws on the experience of rail in particular.

If we disaggregate our major water utilities to separate the bulk supply (which mostly already occurs) from the pipes, and then from retail activity, we remove incentives to block competition. For example, Pacific National has found it is much easier to gain track access from the independent Australian Rail Track Corporation (ARTC) than it is from Queensland Rail, which is both a track owner as well as a direct competitor.

An access provider with a conflict of interest can prevent or delay access in ways that a regulator will find hard to prevent.

Disaggregation also makes commercial sense, just as it has done in electricity. First, retail and network businesses are very different. Second, investors prefer 'pure plays'. It is highly likely, for example, that the numerous dedicated infrastructure trusts would find a water pipes business extremely attractive.

There may also be benefit in horizontal disaggregation, that is, establishing the sources of bulk water to our cities as distinct businesses. This could allow a competitive market to develop for water.

The parallel with electricity could again be strong. Victoria, for example, established each of the baseload generation units of the former State Electricity Commission of Victoria (SECV) as separate businesses and achieved a very competitive electricity market, to the benefit of consumers.

Australia needs to consider the same step with water.

It also follows from what has been said already that there is merit in considering greater private involvement in our current water utilities.

This can come from more 'build own operate transfer' (BOOT) schemes, or from the sale of existing assets.

There are clearly advantages in BOOT schemes. They bring necessary 'on time, on budget' discipline and operating efficiencies as can be demonstrated from most (but not all) such schemes in every other infrastructure sector. Some of this discipline is evident in water management in New South Wales, Victoria and South Australia, but to a small extent.

Of more interest, however, may be the privatisation of any or all of the bulk water supply, pipes and water retailers, as has occurred in electricity. The arguments for privatisation are threefold:

- * First, it separates policy and regulation from ownership, as discussed above. This is an important benefit.
- * Second, if we were to disaggregate bulk supply, we would avoid having one body owning all competitors.
- * Third, it brings private sector efficiency. This occurs through the private sector's single focus, versus the many and confusing objectives that Government-owned entities must pursue.

Church groups were among those advocating against such a change. In an article in *The Age* in 1998, the 'image of water in scripture' was cited as one reason for the Uniting Church's objections to water privatisation.¹⁶ However, it is an appropriate time to consider this issue and the benefits it can achieve.

There is nothing new about private ownership of water utilities. Professor Paul Kerin of the Melbourne Business School writes that: 'All water users in England and Wales are served by 26 private water companies. In France, private companies serve 80% of customers, and in the US 15%. In 1990, private companies served only 50 million customers globally; they now serve more than 300 million.'¹⁷ Indeed, water and waste water services in the ACT are managed through a joint venture between the ACT Government and a private operator to form ACTEW AGL.

Professor Kerin goes on to say that: 'It is striking that although Australia has embraced private enterprise involvement in many infrastructure sectors (energy, telecommunications, rail, toll roads), it has dawdled on the most important one: water. The gains from serious reform are too great to ignore.'

3.5 REMOVE BARRIERS TO WATER TRADING BETWEEN RURAL AND URBAN AREAS

The issue of allowing water trading between rural and urban areas is possibly the most frustrating issue in the entire water debate. This is because the logic for it is overwhelming, but so is the opposition.

First, the facts. As Ross Young, the Executive Director of the Water Services Association of Australia (WSAA) has said: 'What is often forgotten is that with the exception of Sydney, all the other capital cities share water supplies with agriculture users which enable water to be transferred without the need for any new infrastructure. In the long term, the prospect of Sydney being connected to the Snowy Mountains scheme should not be completely ruled out. Melbourne already shares water with irrigation from the Thomson dam and only a short pipeline is required to connect Melbourne to the Goulburn system to open many trading opportunities across Victoria.'¹⁸

It is clear that Adelaide, Melbourne, Perth and Hobart already have ready access to rural water. Brisbane can also gain easy access, although expensive pumping would be required rather than relying on gravity. This is shown in Exhibit 12.

It is not just our coastal cities that have this option. Our inland cities have greater opportunities to use rural water. 'The ACT water utility, ACTEW, states that the ACT has enough water for a million people, after meeting environmental requirements, and is only using (after recycling) about one-sixth

of the amount of water available for human use. ACTEW states that some 94% of ACT water goes downstream free of charge to New South Wales which sells much of it for irrigation use.'¹⁹

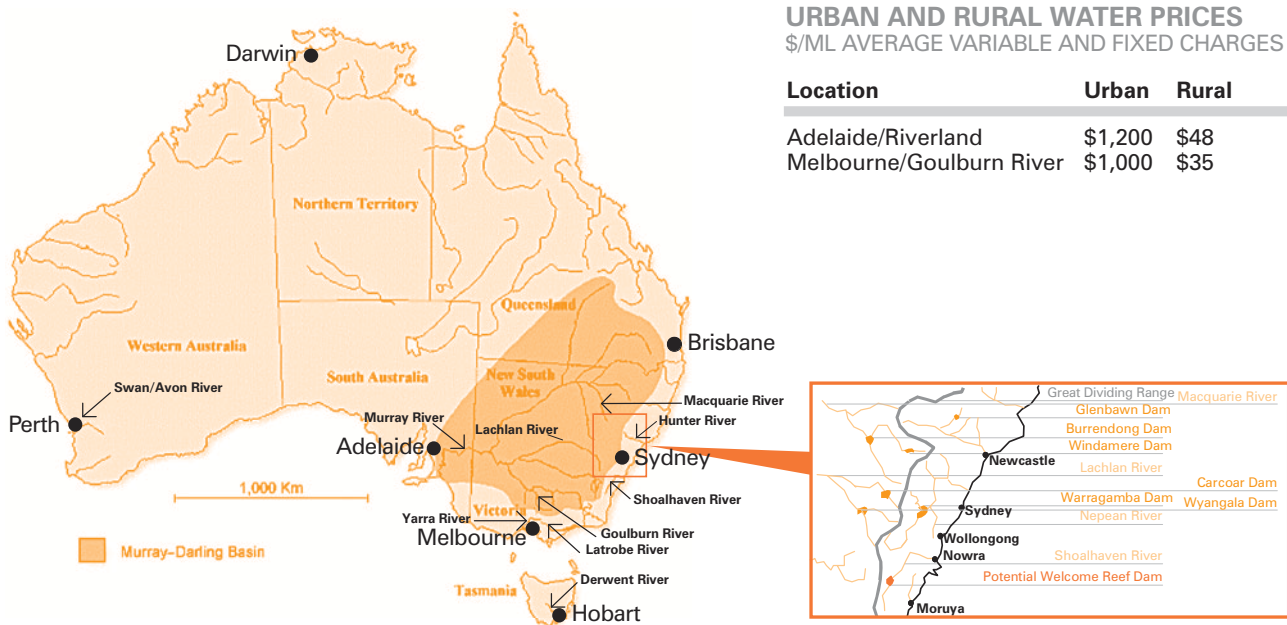
Cities such as Perth, Adelaide and Shepparton in Victoria already buy rural water for city use. In the case of Adelaide a small number of dairy farms were purchased to gain their water rights in a way that provided a great exit strategy for their owners.

Why shouldn't we allow, for example, a group of farmers to pool their water and gain access to the metropolitan pipe distribution system, and sell their water either via temporary or permanent trade? With urban water already around 10 times or more the cost of rural water this could provide a great option for our farmers.

The opposition comes from those representing or living in rural areas who are concerned that the loss of their water will damage their current way of life. The arguments used can become very emotive. To provide some science around this issue it is worth quoting a recent study from the CSIRO in conjunction with Monash University's Centre of Policy Studies (CoPS).²⁰

EXHIBIT 12

LOCATION OF AUSTRALIAN CITIES AND MAJOR WATER RESERVES



Source: State Water Annual Report 2002–03; Australian Bureau of Agricultural and Resource Economics, *Water charges and interregional trade in the southern Murray–Darling Basin*, ABARE, Conference Paper 04.14, August 2004.

THE CSIRO/CoPS STUDY

This study modelled the effects of a 25% increase in Australia's population by 2032 (an Australian Bureau of Statistics prediction), 15% less water likely due to climate change (as the authors say Perth has experienced) and a continuing increase in water use efficiency of 22% and 34% in urban and rural areas respectively (their view of the best result from current trends).

The study notes that, with no rural–urban trading, and no other supply sources (desalination, large-scale recycling) that the prices needed to match supply with demand (given their view of the responsiveness of water demand to price) would need to increase substantially. This is shown in Exhibit 13.

EXHIBIT 13

EFFECT OF NEW SUPPLY SOURCES ON WATER PRICES

2005 \$; \$/kL

	CURRENT WATER PRICE	WITH NO NEW SUPPLY SOURCES	WITH RURAL–URBAN TRADING ALONE
Sydney	1.36	7.56	2.84
Melbourne	1.17	5.58	1.6
Brisbane/Moreton	1.27	9.78	2.06
Adelaide	1.30	1.41	1.73
Perth	1.12	10.59	4.41
ACT	1.11	3.06	1.54

Source: MD Young, W Proctor, E Qureshi & G Wittwer, *Without water: The economics of supplying water to 5 million more Australians*, Water for a Healthy Country Flagship report, CSIRO and the Monash University Centre of Policy Studies (CoPS), May 2006.

If, however, urban water utilities are allowed to purchase water from irrigators, the extent of the needed price rise falls substantially. This can also be seen from Exhibit 13.

The study goes on to point out that: 'The volumes of water transferred from rural areas to urban areas are relatively small but have a significant influence on the shadow (market clearing) price. Across the nation, 61 GL (gigalitre) is transferred to households and 171 GL to commercial and industrial users. Collectively this represents 1.1% of the 21,800 GL of water in use across Australia. While there are some significant regional impacts, the move (rural to urban water trading) ... increases aggregate consumption 1% and GDP 0.6%.'

The political opposition arises from these 'significant regional impacts'. Such opposition cannot be ignored, and adjustment assistance may be required (see Section 4). The political opposition could also be reduced if farmers could sell their water direct to urban buyers via permanent or temporary trading. As we have discussed, if they could gain the current high urban prices rather than the current much lower rural prices, they could remain in control of their own destiny as discussed in Section 3.2. This represents another major reason for introducing competition into our urban water supply.

Water is not in any sense scarce – we just need to get it to its highest value use, like with all other products.

3.6 REMOVE BARRIERS TO WATER RECYCLING

With recycling it is important to distinguish two approaches. First, there is the recycling of stormwater or sewerage for non-potable purposes. Around half of the water being used for industrial and domestic purposes does not need to be of drinking quality.

Second, there is recycling to create potable or drinking water. This option was put to residents of Toowoomba in a recent referendum. Residents voted against the proposal, with many commentators attributing the result to the influence of the so-called 'yuk' factor.

While many rural communities unknowingly use recycled water (as recycled sewerage is discharged upstream of them), it is clearly difficult for people to knowingly embrace the practice.

There is an obvious impediment to the widespread use of recycled water for non-potable uses: the high cost of the pipes needed to separate potable from non-potable water. In particular, recycled non-potable water can generally only be considered in two circumstances:

- * new urban estates, where dual pipes can be installed as part of the foundation infrastructure; and
- * larger industrial, commercial, or recreational users close to the source of the recycled water.

ACIL Tasman recently undertook a study for the Commonwealth Government on the impediments to recycling for non-potable uses.²¹ They listed the key impediments as follows.

- * 'The allocation of clearly specified and secure access has largely been focused on 'first use' water. The same principles have been slower to emerge for recycled water, and there is no legislation in Australia that specifically governs the supply or use of reclaimed water.'
- * 'Regulatory responsibility for recycled water traverses a number of different government agencies ... the complex coordination of both policies and regulations that govern water recycling act as an impediment to recycled water schemes.'
- * 'Public sector ownership of the water supply industry', with the potential conflict between the government's role as policy setter and owner of the monopoly provider that could see its profits eroded from losing business. We have already mentioned the NSW Government's rejection of the access application by Services Sydney that would have sold recycled water in competition with Sydney Water.'
- * 'It may be that the demand for recycled water is being inhibited by artificially low or subsidised prices for alternative sources of water.'

Despite these impediments there are many current recycling schemes. Some are undertaken by Government, often at subsidised low prices; others are undertaken by the private sector and are economically viable. The important point is that the hurdles to such schemes are much larger than they need to be.

Of course, the last concern quoted above may not be real. It could simply reflect the fact that recycled water is often not economic in comparison with other supply sources. The next section sheds further light on this issue.

3.7 AVOID 'PICKING WINNERS'

The water debate is an emotive one. It frequently leads to emotional rather than logical views on the correct way forward. In particular, it leads to people expressing preferences for one technology over another. As we have shown earlier (see Exhibit 11) there is a wide range of supply choices.

The NWC has said that it is important '... to ensure that all feasible water supply options are on the table; where certain options are ruled out even before evaluation there cannot be a transparent debate about the alternatives, and communities may be saddled with less cost effective options ... The Commission considers that rural-urban trade needs to be squarely on the table to ... avoid potentially poor infrastructure investment decisions.'²²

DESALINATION

Recent statements by the Federal Government and Opposition would appear to be placing an emphasis on recycling without a clear analysis of all options.²³

Desalination is one such option. Sydney Water, for example, recently compared the cost of desalination and recycling to create potable water.²⁴ The study found that both the capital and operating costs of desalination are lower than those of recycling, as shown in Exhibit 14. This finding is important given that: 'The desalination project includes provision to offset fully the plant's greenhouse gas emissions.'

EXHIBIT 14**COST COMPARISON OF INDIRECT POTABLE RECYCLING AND DESALINATION FOR SYDNEY**

'Sydney Water has undertaken studies of the costs of a 500 ML/day Indirect Potable Recycling Project (PR) and a 500 ML/day Desalination Project.'

'The higher cost of the IPR project arises from the need to upgrade wastewater treatment to a secondary level at the coastal sewerage treatment plants ... and by the transfer of the recycled water through tunnels and pipelines for injection to the drinking water storages.'

\$m

DESALINATION

Reverse osmosis desalination (including seawater intakes, outlets, land acquisition)	1,450
Transfer, connection to water grid	350
Cost escalation, risk, capitalised interest	710
Total capital cost	2,510
Operating cost, including \$25m p.a. for 'greenhouse gas offsets'	165 p.a.

POTABLE RECYCLING

Treatment plant, movement of sewerage	1,770
Transfer of recycled water to Warragamba	1,320
Cost escalation, risk, capitalised interest	755
Total capital cost	3,845
Operating cost	175 p.a.

'Total annual operating costs are somewhat higher for indirect potable recycling. Although desalination has a higher treatment cost, this is more than offset by the higher infrastructure maintenance costs and pumping costs of the IPR project. The desalination project includes provision to offset fully the plant's greenhouse gas emissions.'

Source: Sydney Water, *Indirect potable recycling and desalination – a cost comparison*, Sydney Water, March 2006.

While this result may seem strange, the fact is recycling requires considerable pumping to get the recycled water back up to the water reservoirs which are a long way from the sewerage treatment plants. Such pumping also uses considerable electricity.

The emotive argument often used against desalination is that it represents 'bottled electricity'.

In its study mentioned earlier, CSIRO/CoPS modelled desalination as the most likely source of new supply. They felt it to be the most economically possible at between \$1 and \$1.50 kL, which could be justified even at today's water prices. Even a doubling of the cost of electricity to it (i.e. a 100% carbon tax) may not have a large effect on its relative attractiveness.

Desalination, of course, needs to overcome other environmental issues. For example, its saline water discharge needs to be sufficiently out to sea to be near fast-moving currents.

We are not arguing for one technology over another. Instead, we are arguing that logic rather than emotion should prevail.

TOOWOOMBA AND GOULBURN

It is worth, in that context, briefly looking at the water supply situations in Toowoomba and Goulburn. These towns have captured the headlines as facing severe water shortages.

The Toowoomba Council recently lost a referendum on using recycled water for drinking purposes. While Toowoomba did examine some alternative options, there was concern at their expense, and the range of options examined was limited, as shown in Exhibit 15. This lack of review of the full range of options has been cited by Peter Cullen, a member of the Wentworth Group of Concerned Scientists, as a reason for the referendum's defeat.²⁵

EXHIBIT 15**TOOWOOMBA WATER OPTIONS**

OPTION	COST \$/kL	COMMENT
1. Recycling water for potable use.	1.68	Required community acceptance.
2. Import water from Oakey Creek Groundwater Management Area and replace with recycled water.	2.64	Unclear on sustainability of resources, especially given other user needs.
3. Import water from Condamine Groundwater Management Area and replace with recycled water.	3.31	Already excess demand for this resource.
4. Source water from by-product water extracted from coal seam gas production.	3.81	Insufficient knowledge of water sustainability.

Source: Based on a study by Parsons Brinckerhoff, July 2006.

A limited number of options appear to have been considered:

- * Options 2 and 3 required swap with recycled water.
- * No option for straight rural–urban trade including from sources further away; no option to pipe water from coast.

Goulburn is another city facing significant challenges with regard to water supply, and it is currently considering what to do next. There would be great benefit in Goulburn being able to consider all options. As Exhibit 16 shows, Goulburn has a number of alternatives that can be investigated.

It may be that Toowoomba and Goulburn need to turn to high-cost alternatives. But unless all options are considered the community will not know whether it is selecting the best option.

The point is that water should not be seen as scarce if the full range of options is compared logically, rather than emotionally.

3.8 UNDERTAKE A NATIONAL REVIEW OF URBAN WATER PRICING

Urban water pricing is currently a complicated issue. This is because prices are sometimes set by regulators working within a combination of monopoly pricing principles and equity and water conservation considerations. In other cases, in our regional towns, prices are set by local councils and are subject to continuing political pressure.

A recent NSW Independent Pricing and Regulatory Tribunal (IPART) decision illustrates recent capital city pricing trends.²⁶ For example, households in Sydney will pay \$1.20 per kilolitre (kL or 1,000 litres) up to 100 kL usage, and \$1.48 kL above that. In 2008–09 these prices will be \$1.31 and \$1.85 per kL. In releasing its decision IPART said that it was ‘... confirming a new two-tier pricing structure and significant price increases [8.7% including inflation] for average residential customers to promote water conservation. The tribunal noted in its decision that: ‘Pricing can be used to send signals about the cost of water and the need to conserve it.’

EXHIBIT 16

GOULBURN WATER ISSUES

SITUATION

- * Main Goulburn dam almost empty.
- * Top-level water restrictions introduced two years ago. Some of the town’s playing fields shut due to hard surfaces.

HOPED-FOR RESPONSE

- * Six-month consultation process to consider recycling for potable use against other alternatives, including:
 - piping water from Burrinjuck Dam, 100km away
 - piping water from Canberra/Snowy
 - build new dam/dig existing dams deeper.

In contrast, water prices in many regional towns are set at less than half these levels. Bendigo water usage prices, for example, are 62 cents per kL and Shepparton prices are 40 cents per kL.²⁷

In addition, very low prices are usually charged for recycled water. Recycled water, for example, is priced below water from traditional sources, but the cost to supply it is higher.

The NWC is currently reviewing water pricing with the states. We believe, however, that moves to create properly functioning urban water markets need to be accompanied by a more transparent Productivity Commission review of urban water pricing. There are a number of issues that could be addressed.

First, there is the issue discussed in Section 3.2. That is, which is the appropriate pricing mechanism to facilitate effective competition for urban water supply? In section 3.2 we discussed both the 'centrally planned' and 'consenting adults' models, but others will no doubt surface. While these issues are solvable, this topic needs careful study.

Second, the way prices are set in both cities and regional towns needs review. Would it, for example, be better if regulators rather than local councils set all urban water prices?

Third, how should recycled water be priced? To what extent should it reflect the perceived lower quality, rather than the cost of supply?

Fourth, current 'postage stamp' pricing must be reviewed. This sees one price set for a wide area (say, all of Sydney, or most of Western Australia). Such pricing contrasts with more nodally based or site-specific charging, and involves often significant cross-subsidies.

In a competitive market a broad 'postage stamp' can cause problems. For example, an alternative supply option in a more remote location may well be economic if the full cost of piping the water was recognised in the price paid, but uneconomic if the cost of piping was averaged with a large number of inner-city lower-cost areas. Some non-potable recycling options may, for example, only be uneconomical because of postage stamp pricing in some of the new Sydney growth corridors.

Finally, there is a range of other issues that would benefit from review:

- * What other subsidies are implicit in current public sector pricing that would frustrate effective market operation?
- * How should various 'externalities' be reflected in water prices to ensure the wrong behaviour is not encouraged? For example, should a higher 'carbon reflective' price be used when assessing desalination, and how should the need for sufficient environmental flows be reflected?
- * What are the merits of different charging levels for different levels of usage?

Such a review must be conducted as a matter of urgency. It should be conducted alongside, or with, the review recommended in Section 3.3 into the nature of the appropriate regime for access to water pipes.

3.9 EXAMINE HOW WELL OUR URBAN WATER AUTHORITIES WORK

The final issue worthy of further consideration concerns the institutional structure of our urban water authorities.

Traditionally, water authorities were run by local councils in most of Australia, and in many places this is still the case. While there is only one major water utility in Western Australia and South Australia, and while Victoria now sees an aggregated number of larger providers, in New South Wales there are over 120 service providers, while in Queensland 125 local Governments supply water in urban areas.

The issue is not as relevant to the capital city water authorities. While the authority supplying Brisbane is owned and run by the Brisbane City Council, it presumably has the size and technical expertise to cope.

The issue is whether the hundreds of small, council-run entities outside the capital cities in NSW and Queensland are appropriate. There are at least two issues.

First, do they have the technical and commercial skills and financial capacity to deal with the increasingly complex issues associated with adequate water supply for their communities? There will, for example, be differences in the skill levels attracted to small versus large entities. Amalgamated water authorities would necessarily have access to greater central skills and financial resources.

Second, many councils share a source of bulk water supply. This can make decision making complex. For example, the Gosford City and Wyong Shire Council share a dam standing at less than 20% capacity. The councils have opposing views on desalination which makes it difficult to resolve future supply issues.

Moves to further amalgamation may be now occurring. The Queensland Government has recently created a Water Commission '... which will manage water supply ... in south-east Queensland (and) help rectify the ad hoc response to the drought. Previously, 19 water assets were controlled by 12 entities supplying water to 18 local councils. Now they will be controlled by one body.'²⁸

The establishment of a water pipeline grid in south-east Queensland, as proposed by the Queensland Government, could be an interesting idea in more ways. It will link current and proposed dams with new desalination and recycling schemes via a bulk water supply grid. It may be that such a grid can see an electricity-style (National Electricity Market Management Company, or NEMMCO) trading market for retailers, suppliers and large users. However, to be effective, the recommendations in Sections 3.2 and 3.4 would need to be implemented.

For a range of reasons, therefore, we believe relevant state Governments should actively consider further amalgamations of their water supply entities.

Making water pay for Australia's rural areas

Rural water challenges are different to those of urban water. Meeting our urban water challenges requires new thinking and new approaches.

To meet our rural water challenges we need more timely and complete implementation of what was agreed by Governments in both 1994 and 2004.

The essential changes needed in relation to rural water concern water allocation. We need to establish a well-functioning water trading market with no barriers to trade, and to ensure environmentally sustainable levels of extraction for all water systems. The benefits of water trading are that:

- * Our scarce water resources are put to their best use, rather than some historical usage pattern. As already stated, 12% of our irrigation water produces 50% of our irrigation value.
- * It provides a win-win outcome in that low-value water users can exit by trading out for significant financial gain.
- * Most importantly, while rural water is priced at very low levels, encouraging inefficient use, putting the appropriate value on water will provide the incentives to use water in the most effective way.
- * Finally, permanent water trading of well-defined and secure entitlements will significantly improve the bankability of agricultural investment.

In 1994 the Council of Australian Governments (COAG) agreed to pursue a wide range of reforms to pricing, water property rights, allocating water to the environment and facilitating water trading, among others. In particular, the 1994 COAG Agreement said '... that trading arrangements in water allocations or entitlements be instituted ... no later than 1998.' This deadline was missed, although the precise set of actions that had to be undertaken was not then as well-defined as it is now.

The National Competition Council noted in its 2004 Assessment of Governments' progress in implementing the National Competition Policy and related reforms: 'Because COAG expected water reform to involve extensive change it considered that implementation should occur over 5–7 years with the program essentially complete by 2001. In 2001, however, COAG extended to 2005 the time to 'substantially complete' the allocation and trading arrangements in rivers and groundwater systems.'

In 2004 the National Water Initiative (NWI) was agreed. This recognised that: 'The current variation in progress with water reforms between regions and jurisdictions ... creates an opportunity to complement and extend the reform agenda to more fully realise the benefits intended by COAG in 1994.' That is, the 2004 NWI was aimed at securing changes originally agreed in 1994. The 2004 NWI was, however, a much more comprehensive document, based on all that had been learnt by jurisdictions over the preceding 10 years.

The 2004 NWI, among other things, sought the following outcomes:

- * 'clear and nationally compatible characteristics for secure water access entitlements'
- * 'transparent, statutory-based water planning'
- * 'the return of all currently over allocated or overused systems to environmentally sustainable levels of extraction'
- * 'progressive removal of barriers to trade in water ... with an open trading market to be in place'
- * 'water accounting which is able to meet the information needs of different water systems in respect to ... trading ...'

The problem with the NWI, as with the 1994 COAG Agreement, is that it is vague in relation to many aspects of implementation. The NWI does not establish the outcomes it was seeking to achieve in terms that could be monitored effectively. In addition, some early benchmarks have not been met. These points are illustrated in Exhibit 17.

EXHIBIT 17

EXAMPLES OF POORLY DEFINED OUTCOMES AND MISSED BENCHMARKS OF THE NATIONAL WATER INITIATIVE

UNDERTAKING	COMMENT
'The parties will make substantial progress towards implementation of this Agreement by 2010'.	'Substantial' will be hard to define.
'The States and Territories are responsible for implementing this Agreement within their respective jurisdictions, consistent with their implementation plans.'	Ultimately, NWI progress is up to each state and territory to determine.
'The relevant State or Territory will determine whether a plan is prepared, ... the level of detail required, its duration ... '	Effective water plans for each catchment area are fundamental to the success of the NWI yet progress with these is at the continuing discretion of each jurisdiction.
' ... substantially complete plans to address any existing over allocations ... by 2005'.	Not all plans are in place.
' ... substantial progress will be made by 2010 towards adjusting all over-allocated ... systems ... '	'Substantial' will be hard to define.
' ... full implementation by 2006 of compatible, publically-accessible and reliable water registers of all water access entitlements and trades ... ' 'The States and Territories agree to establish by 2007 compatible institutional and regulatory arrangements that facilitate intra and interstate trade ... '	'Compatible' will be hard to define and likely will not be sufficient.
' ...move to full and open trade by 2014 at the latest ... '	A long way away; also could be hard to define.
'In regard to the Southern Murray–Darling Basin ... take all steps necessary ... to enable exchange rates and/or tagging of water access entitlements (to allow trade) ... by June 2005'.	Deadline was missed in 2005. The 2006 agreement in relation to this issue still has many hurdles to be met by the end of 2006.

What is needed is clearer and earlier action in a number of key areas. This point was made recently by the NWC in its first review of progress under the NWI.²⁹

- * '... the Commission will be working with jurisdictions to deliver on the actions laid out in the NWI ... There is no doubt that this will require continued and concerted national effort – greater cooperation between governments than has been seen to date ...'
- * '... the Commission found that more needs to be done to establish and promote effective water trading.'
- * 'The Commission also found that further improvements in water planning needs to be made ... This is essential to sustainably secure the water used by agriculture and industry, the water consumed and enjoyed in our cities and towns, and the water on which Australia's ecosystems depend for their health and survival.'

It is to these issues that we now turn.

4.1 AGREE TO NATIONAL STANDARDS FOR WATER MARKETS

While much work is underway in this area, more needs to be achieved. Water cannot be traded unless what is being sold means the same to the buyer and the seller.

The NWI places considerable emphasis on these building blocks:

- * '... the outcome of water resource accounting is to ensure that adequate measurement, monitoring and reporting systems are in place in all jurisdictions, to support public and investor confidence in the amount of water being traded, extracted for consumptive use, and recovered ... for environmental ... outcomes.'
- * 'Recognising that robust water accounting will protect the integrity of the access entitlement system, the parties agree to develop and implement by 2006 ... water resource accounts that can be reconciled annually and aggregated to produce a national water balance ...'
- * 'The parties agree that generally metering should be undertaken on a consistent basis ... where water entitlements are traded ...'³⁰

An insight into the problems in this area comes from a 2005 report released by the Murray–Darling Basin Commission.³¹ In 1995 Governments agreed to cap diversions in the Murray–Darling Basin on a valley-by-valley basis. The objective was to compare the annual diversions in each valley against an annual diversion target. The problem has been that the quality of the data in relation to, for example, inter-valley water trade measurement and reporting systems was poor and inconsistent. The same problems that confront cap monitoring will apply to water trading.

The 2005 report found that:

- * 'States have followed their own protocols and procedures on trade which complicates the reporting of interstate and inter-valley trade'
- * 'Some of the larger measurement devices are possibly among the most inaccurate ... in some cases measurement errors at bulk off-takes and large pump sites appear to be +/- 20% and possibly much larger'
- * 'There are no national or basin-wide standards specifying maximum allowable levels of error for water flow measurement equipment ...'
- * 'The States and the Commission have experienced problems with incomplete or missing data on interstate permanent and temporary trades ...'
- * 'From the perspective of the Murray–Darling Basin as a whole, these reporting systems tend to be state and area focused with no comprehensive, consistent or integrated approach ...'

On the one hand it could be said that the water resource accounting standards that will be produced by jurisdictions this year will address this problem. On the other hand jurisdictions are only aiming at 'accounts that can be reconciled'.

For effective trading 'reconciliation' may not be enough. If you live in catchment area A and buy water permanently from catchment area B you may not want the local authorities in area B using their own standard measurement devices and judgement to determine that the water you will receive complies with what you purchased. Given the inevitable bias to keep water local there will be a concern also about conflicts of interest to add to the general state of uncertainty surrounding such a transaction.

Australia has centrally determined standards in many areas and is moving towards them in others. It is recognised that it is inefficient to have different standards where products or services cross state boundaries.

The NWC has expressed concerns about a key NWI milestone in this area. 'In particular, the Commission notes that decision points will be reached in the second half of 2006 in a number of areas which will test governments' commitment to the NWI reforms. These areas include: adoption by state and territory governments of nationally consistent water accounting systems and standards; steps to improve the compatibility of water entitlement registers between jurisdictions ... Each of these areas will carry a 'cost' in terms of changing current state and territory water management arrangements, and/or further investment to achieve NWI outcomes'.³²

Australia needs nationally set and mandatory water accounting standards as soon as possible.

4.2 COMMIT TO CLEAR TIMETABLES FOR REFORM

Fundamental to the success of water trading, environmental flows and irrigation flow reliability are effective water allocation plans. This is clearly recognised in the NWI. 'The consumptive use of water will require a water access entitlement, separate from land, to be described as a perpetual or open-ended share of the consumptive pool of a specified water resource, as determined by the relevant water plan ...'

The key point is that water trading will only work where there is wide trust in the integrity and reliability of the water entitlements. This will only be achieved with accurate modelling that takes account of the 'take point' of the water and the 'all-of-system' flows. The point is well illustrated by example in Exhibit 13, which is taken from the Port Jackson Partners Limited report 'Reforming and Restoring Australia's Infrastructure' (March 2005). The example is taken from the MacIntyre Brook Irrigation area in south-east Queensland.

EXHIBIT 18

WHY WATER TRADING REQUIRES CLEAR 'CURRENCY' DEFINITION

KEY REQUIREMENT

As an example, irrigators along the east coast and throughout South Australia need to be confident in and trust the calculations that:

- * determine the reliable allowable annual water take from each Irrigation Area
- * discount for losses when water is sold out of the immediate irrigation area
- * take account of 'all-of-system' flows, not just dam release.

'Implicit in the definition of water entitlement is the necessary information that allows conversion factors ... for the end-user rights of different river valleys ... there are (currently) major differences in the legislative and specification of water rights in different states ... Extensive water trading will be difficult and fraught with unknown social and environmental impacts until a common security of title is applied to a defining water at the wholesale level'***

EXAMPLE PROBLEMS*

The MacIntyre Brook Irrigation Area is based on the Coolmunda Dam which was built to allocate 23,000 ML p.a. to a local area.

- * 6,000 ML of this was sold by the Government to Goondiwindi farmers but there is, say, 30% loss to get it there through seepage and evaporation. That is, 9,000 ML must be released to allow 6,000 ML to be taken downstream. Such a release undermines the system reliability.
- * For example, the Dumaresq River now has ~30% reliability compared to a previous ~80% due to water being sold outside of its area.

Assessments must be based on an 'all-of-system' basis, not dam release, e.g. a recent 2,500 ML dam release hit a naturally flowing stream and took an additional 2,000 ML from the MacIntyre Brook system.

* These largely come from the Darling River area, the top of the Murray–Darling Basin. They in part draw on discussions with an irrigator from the MacIntyre Brook Irrigation Area.

** Farmhand Foundation, *Truth in Water Entitlements*, Farmhand Foundation, 2004, p. 15.

In the example it can be seen that when trading water outside an irrigation area it is vital to calculate the 'currency conversion' accurately that reflects the different 'take points' for the water. Not to do so can destroy the integrity of an irrigation scheme. Farmers are very aware of this. They will naturally oppose water trading outside the local area if this issue is not dealt with appropriately and transparently. Indeed, in defining the level of water availability, and the 'currency conversion' factors for the 'take points', it is vital that time is taken to bring communities along with the calculations and processes.

We have already shown that the NWI states: 'The relevant State or Territory will determine whether a plan is prepared ... the level of detail required, its duration ... and the amount of resources devoted to its preparation ...' We believe that this process is inadequate for such a key step. The commitments should be tighter.

Another issue is the view expressed to us on many occasions that in some states insufficient resources are being devoted to the preparation of these fundamentally important plans. This slows overall progress with the NWI. As the NWC has stated: 'A lack of budgetary resources and/or expertise as a constraint to delivering the National Water Initiative is evident in all jurisdictions. Governments will need to further target their resources in order to deliver the fundamental National Water Initiative reforms.'³³

All jurisdictions should establish a clear timetable for water plans in all catchment areas to be completed according to set criteria established by the NWC. The NWC should also have sufficient internal and technically capable resources to assist the states and territories to ensure this timetable is met.

4.3 REMOVE ALL BARRIERS TO WATER TRADING

There are numerous direct and indirect barriers to the permanent and temporary trade in water allocations.

- * The NWI itself says that trade should only be allowed to occur ' ... up to an annual threshold limit of 4% of the total water entitlement of that area, subject to a review by 2009 with a move to full and open trade by 2014 at the latest ... '
- * Exit fees are imposed on water leaving an irrigation district.
- * Trading restrictions exist in the structure of local irrigation companies and/or the rules attaching to particular local catchment water plans.
- * There is also a range of difficulties associated with how to recognise water products in different districts in terms of water flow reliability:
 - Some states, for example, wish to use 'exchange rates' (fix the conversion rates that convert water from one area to the equivalent of that from another), while others wish to use 'tagging' (whereby water retains its original source reliability characteristics).

These barriers have been very effective. The Productivity Commission recently observed that: 'Despite the ability to trade more widely, the volume of permanent water trading has remained relatively insignificant ... '³⁴

To illustrate the third barrier listed above it is probably best to look at NSW arrangements. Most of the catchment water in NSW is owned by irrigation companies, in which the local landowners have shares. It is these companies which control the movement of water, rather than the individual through private property rights to the water.

These company structures are an impediment to achieving the NWI objectives. Not only does this situation affect the ability to meet the NWI objectives in NSW, it also makes it difficult to use water as security for lending to enhance agricultural development.

All of these barriers led the NWC in 2005 to determine a '... failure to meet specific COAG commitments to open up interstate trade in permanent water entitlements in the southern Murray–Darling Basin where penalties are recommended for NSW, Victoria and South Australia ...'

To illustrate the depth of these issues the three Governments agreed in May 2006 to allow trade in response to the abovementioned NWC penalty. In announcing this, however, the Governments put extensive qualifications on the agreement.

Before trade can occur a number of issues need to be settled:

- * 'Competitively neutral and fair exit fees and institutional arrangements across jurisdictions
- * Agreements to allow effective trade between all three states.
- * Finalising process, administrative and technical arrangements including achieving sufficient consistency in measures for dealing with salinity impacts.

Once these matters are agreed ... government(s) will consult with stakeholders to ensure that the proposed market arrangements are practical and commercial ... The final arrangements will then be subject to government approval in each jurisdiction'.

Clearly there are significant obstacles to permanent trading, both within and between states. They seem to occur for two reasons:

- * a concern that if water entitlements are traded out of an area that the irrigation assets (weirs, delivery and drainage channels, pipes, pumps) will need to be paid for by a diminishing number of irrigators who will face higher costs (the so-called 'stranded assets' issue); and
- * a concern that if water entitlements are sold there will be less economic activity in an area, which will affect the lifestyle of those in the community.

The first issue will be addressed in this section; the second will be dealt with in Section 4.5.

The NWI states that: 'Recognising the need to manage the impacts of assets potentially stranded by trade out of serviced areas, the Parties agree to ensure that support mechanisms used for this purpose, such as access and exit fees and retail tagging, do not become an institutional barrier to trade.' While this is the objective, it is not being achieved.

Productivity Commission staff have undertaken a significant study of the stranded assets issue.³⁵ They conclude that:

- * 'Current proposals to manage the adverse financial impact of stranded assets – such as the ongoing payment of annual access fees, 'tagging' and 'exit' fees – will reduce the economic gains potentially available from entitlement trading ...'
- * '... it is not certain that proposals under the NWI to relax restrictions on permanent water trading will necessarily result in widespread stranded (under-utilised) irrigation assets.'

The Commission staff considered that, contrary to the agreement reached in the NWI, these issues were a serious barrier to trade. They also believed their importance was being over-emphasised. Perhaps of more importance the Commission staff put forward proposals for dealing with this issue in a more efficient way than the current approaches being used. In essence, their proposals involved the need to: 'Write down the value of stranded assets in accordance with efficient pricing practice and so reduce the need to increase charges on remaining entitlement holders'.

The Commission staff's view was that: 'All economic activity is subject to changing market circumstances, which affects the value of assets. In some cases, assets are reduced in value to such an extent that they are abandoned, especially if they are sunk assets with no alternative use.' Water assets should not be treated differently.

There are, of course, two broad types of assets, trunk or common assets, and more isolated or sole use assets.

The Commission staff's views would seem able to address the problem with isolated assets. If they are 'stranded' after trading those with remaining water entitlements need not pay more. In addition, the Commission staff agreed that irrigation users should be charged on a more cost-reflective basis so that those with land further away from the water source will pay more. This will give them more incentive to trade their water rights, which could remove the more costly assets from the system and so lower charges to the remaining irrigators relative to current levels.

For the common assets it was stated that '... it would not be rational to increase charges above existing levels ... in areas where assets are under-utilised or stranded and irrigators are unable to afford the increase ... as long as (charges) are sufficient to cover the costs that would be avoided by withdrawing the service.' The Commission staff also stated that '... concerns about the impact on communities ... could be addressed ... through structural adjustment programs.' While we will return to this issue in Section 4.5, Government funds could be used to buy and hold some assets which could be resold if new users came to the affected area.

The work by the Productivity Commission staff indicates that solutions are available to these issues so that they do not become a barrier to trade. Governments need to be more active in removing these barriers to trade in general.

It must be acknowledged that the barriers to water trading are but one of many kinds of barriers to undertaking higher value activities in much of Australia's agriculture. Constraints on land usage (the size of leases and number of leases that can be held in one name) and the difficulties associated with achieving simultaneous approvals from land, water and environmental approval entities all make change difficult. Lowering the barriers to water trading, therefore, could be an important catalyst for the general changes that are required to allow more innovation in our agricultural sector.

4.4 REMOVE BARRIERS TO NEW PRIVATE SECTOR INVESTMENT

There are at least two different types of barriers to increased private sector investment in rural water. The first relates to who can trade in water, the second relates to issues of title to water from water efficiency savings.

There is a range of prohibitions on who can trade in water. Victoria, for example, has the so-called 10% rule, which says that 90% of water must be held by Victorian rural landowners. Similar provisions apply in many catchment areas of NSW as discussed earlier, where rules state that you must be a member of the local irrigation companies to participate in trade.

A key aspect of this issue was mentioned recently by a prominent politician. Bill Heffernan, Senator for New South Wales, was quoted in *The Sunday Age* as saying that: 'Water trading ought to occur only between legitimate users of water, and not by financial speculators who have no thought or care as to how their actions are affecting farmers.'³⁶

The alternative view has recently been put by the Productivity Commission. It is these same 'financial speculators' that make for effective markets elsewhere. If 'middlemen' were not involved in our electricity market, for example, it would be significantly less efficient. Such people put the effort into finding the most willing seller and linking them to the most willing buyer.³⁷

The second issue relates to the role the private sector can play in making more efficient use of water. The private sector could, for instance, invest in pipes to save water lost through evaporation.

Such investments are currently funded either by Government or the irrigation authorities. We are aware of some projects that have seen open channels replaced by pipes. These are summarised in Exhibit 19. These three projects alone saved well over 150 GL of water or over one-quarter of Sydney's annual consumption.

If Governments were, however, able to create a 'saved water title', such investments could be funded by a much wider range of people. They would, of course, still require the approval of local irrigation authorities or companies. In addition, improvements in metering and water accounting would need to occur as already discussed.

An alternative view is that such a title would not be necessary if we had an effective trading market. In addition, a separate title could complicate water titles, and could be difficult to define given the impact 'saved' water has on return flows.

Whichever route is taken to address this problem it is important that sensible proposals are not inhibited.

EXHIBIT 19

SAMPLE PIPELINE PROJECTS

PROJECT	LENGTH OF PIPE (km)	COST (\$m)	WATER SAVINGS (GL)
* Wimmera Mallee	8,850	420	103
* Darling Anabranh	322	30	47
* Tungamah domestic and stock scheme	353	15	4.8
		Total	154.8 GL p.a.

Sydney consumes
~ 600 GL p.a.

4.5 PROVIDE STRUCTURAL ADJUSTMENT SUPPORT THROUGH FUND RE-ALLOCATION

Under the NWI the Governments created a \$2b Australian Government Water Fund. There are sound arguments for diverting significant amounts of this funding for structural adjustment assistance.

With virtually every other major reform initiative structural adjustment funding has been available. For example, this has occurred in the motor vehicle, textile and clothing and sugar sectors.

Reform initiatives generally do not suffer from a lack of investment for profitable activities. Rather, they fail because of resistance from those who are disadvantaged.

Such resistance is totally understandable. People have made investments on the basis of one set of rules, only to now find them changed. This can affect them economically, and it can be seen to threaten the communities in which they live. Further, the issues do not stop at the stranded water assets we have already discussed. Cotton areas, for example, have significant investments in gins and ancillary services that may serve fewer people. Governments would seem to have an obligation to compensate in these circumstances.

The Australian Government Water Fund was established to facilitate water reform in a number of ways. Perhaps the best use of these funds would be to deal with the concerns of communities and irrigators affected by the reforms. The funds could be used, for example, to:

- * Purchase particular unused entitlements that may cause overuse if activated by trading.
- * Buy stranded assets.
- * Assist communities that might see significant levels of water traded out of their areas.

Such is the importance of these water reforms that we would urge a strong commitment to using these funds to drive reform.

4.6 CONDUCT A NATIONAL REVIEW OF RURAL WATER PRICING

In Section 3.8 we called for a national review of urban water pricing. It is important that the same review also include rural water pricing. There are at least two reasons for such a review.

In some areas the value of water cannot be set by trading because the water is not reliably transferable. In these areas prices need to be set at levels that provide for cost recovery and take account of the various alternative uses and externalities. It is also important that rural water pricing structures have a common national underpinning so that resources are not allocated purely because of different state approaches to pricing. Getting pricing right in these ways will also send the appropriate signals to avoid wastage.

In Section 4.3 we referred to the stranded assets issue and the advantages of more cost reflective irrigation pricing. It would be very helpful to have these issues reviewed in detail.

Given their past work the Productivity Commission would seem best placed to undertake this review, as stated in Section 3.8.

4.7 ENSURE SUFFICIENT ENVIRONMENTAL FLOWS FOR OUR RIVERS AND CATCHMENTS

It is critical that our rivers and groundwater systems are returned to health. Our future environment, recreational amenity and the ability of irrigators to rely on their annual water allocations depend on it.

As part of the Australian Government Water Fund, funding of \$1.6 billion over five years was allocated to the Water Smart Australia Program, part of which was to be spent on buying back water entitlements to ensure sufficient environmental releases. In addition, significant additional funds are available under the Living Murray initiative for this purpose. A Water Tender Proposal is being prepared to buy back entitlements.

While some buybacks have occurred, the Commonwealth's intentions have been challenged by a range of people representing agricultural interests. They argue that increased environmental flows should not come at the expense of the productive capacity of farming communities.

Such views seem to have forced a Commonwealth Government policy review. Plans to buy water from irrigators may now only be possible if such water has been 'freed up' by efficiency gains either on farm or in water distribution systems (e.g. through replacing open channels with pipes to reduce evaporation and seepage losses).

The argument that Governments should not enter the market to buy water for environmental release (i.e. should not adhere to the original policy) seems inappropriate for a number of reasons.

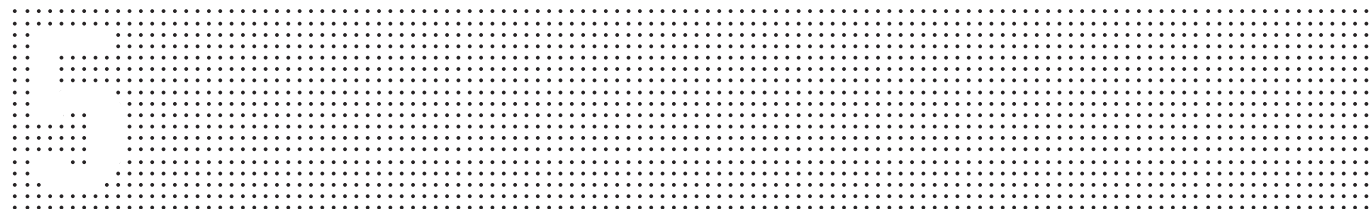
First, if water trading is accepted, so that water can flow to its highest value use, then this logic should extend to the environment as a high-value use.

Second, by one calculation,³⁸ the 500 gigalitres targeted for recovery represents 6% of entitlements which, while significant, would not appear to lead to the major reduction in agricultural capacity that is being claimed. Indeed, effective water trading on a large scale should increase agricultural capacity to offset the effects of the environmental releases.

Third, increased environmental flows can improve the reliability of agricultural allocations, which can support higher-value crops.

Finally, the cost of efficiency improvements may now be exceeding the cost of buying the water. This point is supported by a recent Productivity Commission Study.³⁹ 'Studies show that the costs of saving water sourced from engineering projects escalates quickly ... In many instances, the costs incurred are higher than the cost of buying water in the market. Moreover, claimed water savings can be illusory ...'

The key point is that there should not be artificial constraints on returning our rivers and agricultural systems to health. The least expensive and most effective mechanisms should be used to achieve this important goal.



An action plan for ending water scarcity

The reforms proposed in this paper are urgently needed, although some of them will be difficult to implement.

The implementation difficulties flow not so much from technical aspects, although estimating likely water flows can be complex, but from past political characterisations of the problem and the resulting community attitudes. These issues require high-level, well-coordinated handling.

At first glance, the NWI has appropriate mechanisms for monitoring and review. These provisions of the NWI allow for, among other things:

- * Assessment of implementation plans to determine if they are achieving the objectives of the agreement.
- * The development of a comprehensive set of performance indicators.
- * Annual reports to COAG.

While heading in the right direction, there are shortcomings in terms of the extent and nature of these measures. The measures need to be built upon.

The BCA has identified four ingredients for successful implementation, as described below.

5.1 EXPAND THE NATIONAL WATER INITIATIVE TO EQUALLY COVER URBAN WATER

The NWI is essentially focused on rural issues. While it purports to focus on urban water issues generally, over 95% of the text deals with rural issues. The small urban water section is largely focused on demand management.

There are two reasons why urban water issues must rank at least equally with rural water issues.

- * First, in terms of their economic effects urban water issues are also important. Australia's economic growth could be significantly affected if artificial limits are placed on the growth of our cities and the economic activity that occurs in them.
- * Second, urban and rural water issues are closely linked, in particular through possible rural–urban water trading.

Indeed, if we are to have 'sustainable water management arrangements' in Australia (as envisaged in the 1994 COAG objective) then urban water must be included high on Australia's water reform agenda.

We believe COAG needs to adopt an active urban water reform agenda based around the reforms proposed in Section 3. The very nature of these reforms requires a COAG or national focus. COAG can lead the change in national community attitudes (e.g. on recycling, desalination, rural–urban trading) and, for example, there is also the need for national regulation in terms of access.

5.2 MAKE WATER PLANNING AND DECISIONS A PRIORITY AGENDA ITEM FOR THE COUNCIL OF AUSTRALIAN GOVERNMENTS

Currently under the NWI COAG receives regular reports for information. Such reports do not require discussion.

The NWI gives the National Resource Management Ministerial Council (NRMMC) responsibility for NWI monitoring and review. The problem is that no one ministerial council covers all the relevant water issues. Indeed, there would be 2 or 3 Ministers attending from every jurisdiction if all water issues were to be addressed at such meetings.

In addition, when reforms are of this importance, it is only the Prime Minister and Premiers that can drive them appropriately. Without leadership at this level, there will be too many opportunities for local interests to prevail over the national interest.

We would urge that COAG be the entity responsible for the NWI and the chief authority to drive change. At least twice a year COAG could receive reports that require discussion and decision.

5.3 ESTABLISH CLEAR ACTION MILESTONES AND OUTCOMES

COAG needs to establish an action plan for rural and urban water reform in sufficient detail that it can be easily monitored. Such a plan would cover objectives such as:

- * In urban water, when access regimes will be agreed and in place, when competition will be allowed, and when particular barriers to reform will be addressed.
- * In rural water, when the national standards on metering and water accounting need to be in place and met, when particular water plans will be complete and when particular barriers to trade will be removed.

COAG also needs to monitor outcomes. These could include:

- * In urban water, regular assessments of sustainable yields versus current and projected consumption, and the extent of physical water restrictions.
- * In rural water, the extent of trading and market liquidity, irrigation reliability, and the extent that water systems are under stress.

Finally, COAG needs to consider independent reports on progress against these milestones and outcomes. COAG currently receives reports from the NWC that are made public. These reports could also address progress against these milestones and outcomes on a semi-annual basis. The regular infrastructure audits that the BCA advocated in its 2006 report *Benchmarking the Progress of Infrastructure Reform* to be undertaken by the Productivity Commission should also report progress – but in greater detail.

5.4 TIE INCENTIVE PAYMENTS DIRECTLY TO MILESTONES AND OUTCOMES

Incentive payments provoke a strong conceptual debate. Would the Commonwealth be paying again for reforms it has already paid for? Should states be paid for doing what they should do already? While interesting, these debates ignore the practical reality.

State Premiers and Ministers will understandably find these charges hard to sell to some communities. The political pain will be keenly felt. In this context incentives can provide:

- * funding to assist the change process;
- * a more immediate incentive for change; and
- * most importantly, a more easily comprehensible argument for change.

The power of such incentives was clear throughout the life of the National Competition Policy (NCP) payments. It has also been very clear within the NWI.

In its final NCP assessment the NWC imposed penalties on NSW, Victoria and South Australia for not meeting undertakings in relation to interstate trading in the southern Murray–Darling Basin. As previously highlighted, these penalties saw an immediate response from the relevant Governments. However, there are no further NCP assessments under the NWI. What will now drive change?

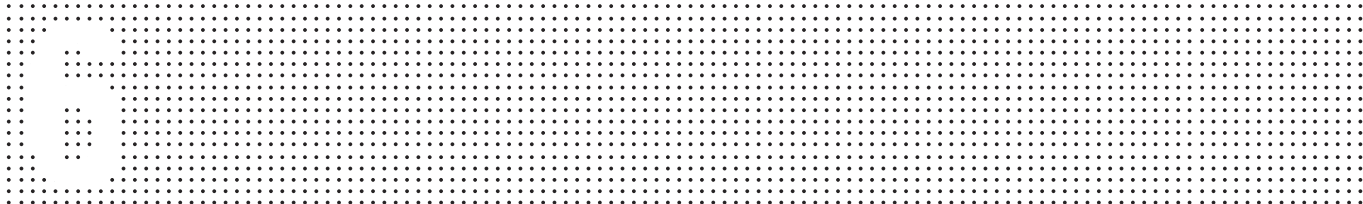
We propose that the available Commonwealth funding be directed to, and dependent on, progress with water reform. That is, it should be available to fund, for instance, work on water accounting, the installation of improved measurement devices, specific channels that can connect areas and so promote trade and structural adjustment assistance. Continuing payments would be dependent on progress against the agreed milestones and outcomes.

It would seem that the states would welcome this. Queensland Premier Peter Beattie has said: 'National water reform is essential but at the moment it is piecemeal ... We need a shared water plan which is jointly-funded and has long-term certainty'.⁴⁰

Likewise, the Victorian Minister for Water, John Thwaites, has said: 'The reform that communities around Australia are expecting is simply not happening under the current arrangements ... By connecting Commonwealth investment to NWI implementation plans, States and Territories will be more accountable for delivering the commitments they have made'.⁴¹

The formula is clear: a national water plan agreed by COAG with clearly defined milestones and outcomes, and significant Commonwealth funding (as well, of course, as state funding) that would be tied to making reform happen and dependent on progress towards this goal.

This should provide a significant return for taxpayers.



Actions and timelines to fix Australia's man-made water scarcity

It is not the role of this paper to outline a detailed reform timetable. Nevertheless, there is merit in indicating what reasonable reform expectations would look like. These are indicated in Exhibit 20. In the case of each step there is a cross-reference to where in this paper each step is described.

The Business Council of Australia sees water reform as a national imperative. The proposed timetable can be achieved if all Governments view water reform in the same way.

In its March 2006 report, *Benchmarking the Progress of Infrastructure Reform*, the BCA outlined a high-level reform timetable for energy and transport reforms and highlighted that concrete progress was much more important than good intentions. The BCA expressed concern about any slowing in progress with critical reform initiatives. The water reform timetable can now sit beside the BCA's previously published energy and transport reform timetable.

As stated at the start of this paper, fundamental urban water reform, and faster and more effective implementation of the current rural water reforms, are among the most pressing tasks facing Australian Governments. The BCA believes that the proposals outlined in this paper can provide Governments with an appropriate roadmap forward.

As the Premier of Victoria said in launching the Victorian Government White Paper *Securing our Water Future Together*: 'As a nation we are facing one of the biggest challenges of our time: to maintain and sustain water supplies for tomorrow's Australia. In Victoria, water is at the top of our agenda.'⁴²

Reforming Australia's water system to end man-made scarcity must be at the top of the agenda for all Australian Governments (COAG), as these reforms are vital to Australia's economic and social future.

EXHIBIT 20

ACTIONS AND TIMELINES TO FIX AUSTRALIA'S MAN-MADE WATER SCARCITY

	2006	2007	2008	2009
URBAN ISSUES				
Create effective COAG urban water agenda. (Section 3)				
Establish evaluation framework for new water supply options. (Sections 3.1, 3.7)				
Complete Productivity Commission review of access and pricing structures. (Sections 3.3, 3.8, 3.9)				
Provide framework for effective water supply competition. (Section 3.2)				
Assess appropriate water supply enterprises. (Sections 3.4, 3.9)				
Remove impediments to key supply options. (Sections 3.5, 3.6)				
Achieve path to sustainable urban water supply throughout Australia. (Section 3)				
RURAL ISSUES				
Agree to national standards and timetable for the key market building blocks. (Section 4.1)				
Establish precise timetable for catchment water plans against set criteria. (Section 4.2)				
Establish effective mechanisms for sustainable environmental flows. (Section 4.7)				
Remove all barriers to trade. (Sections 4.3, 4.4, 4.5)				
Review rural water pricing. (Section 4.6)				
Put in place clear actions to remove stress from surface and groundwater systems. (Section 4)				
Achieve liquid trading market. (Section 4)				
GOVERNANCE				
Expand the NWI to cover urban issues (Section 5.1)				
Have COAG drive water reform (Section 5.2)				
Establish independently assessed milestones and/or actions and tie incentives to their achievement. (Sections 5.3, 5.4)				

Notes

- 1 National Water Commission, *2005 National Competition Policy Assessment of Water Reform Progress*, National Water Commission, Canberra, April 2006, p. 1.
- 2 National Water Commission, *Progress on the National Water Initiative: A Report to the Council of Australian Governments*, National Water Commission, Canberra, June 2006.
- 3 Water Services Association of Australia, *Testing the Water*, WSAA Position Paper No. 01, Water Services Association of Australia, Melbourne, October 2005.
- 4 F Carruthers, 'Politics muddies \$13bn water reform plan', *The Australian Financial Review*, 19 May 2006, p. 1.
- 5 M Turnbull, 'Why should our cities be short of water? Is urban water a finite resource?' Speech to the Committee for Economic Development of Australia, 8 June 2006.
- 6 National Water Commission, *2005 National Competition Policy Assessment of Water Reform Progress*, National Water Commission, Canberra, April 2006, p. 1.
- 7 National Water Commission, *Progress on the National Water Initiative: A Report to the Council of Australian Governments*, National Water Commission, Canberra, June 2006.
- 8 Water Services Association of Australia, *Testing the Water*, WSAA Position Paper No. 01, Water Services Association of Australia, Melbourne, October 2005.
- 9 F Carruthers, 'Politics muddies \$13bn water reform plan', *The Australian Financial Review*, 19 May 2006, p. 1.
- 10 MD Young, W Proctor, E Qureshi & G Wittwer, *Without water: The economics of supplying water to 5 million more Australians*. Water for a Healthy Country Flagship report, CSIRO and the Monash University Centre of Policy Studies (CoPS), May 2006.
- 11 NSW Department of Infrastructure, Planning and Natural Resources, *Meeting the Challenges – Securing Sydney's water future*, NSW Department of Infrastructure, Sydney, October 2004, p. 4.
- 12 J Howard, 'Australia's National Challenges: Energy and Water', speech to the Committee for Economic Development of Australia, 17 July 2006.
- 13 L Tingle, 'High-energy Howard calling the shots', *The Australian Financial Review*, 21 July 2006, p. 83.
- 14 M Turnbull, 'Don't water down this initiative', speech to the Centre for Independent Studies, reproduced in CIS Executive Highlights No. 342, Sydney, 22 February 2006.
- 15 M Turnbull, 'Why should our cities be short of water? Is urban water a finite resource?' Speech to the Committee for Economic Development of Australia, 8 June 2006.
- 16 P Heinrichs, 'Church Prepares for Kennett Water Battle', *The Age*, 22 September 1998, p. 6.
- 17 P Kerin, 'Stop the drip', *BRW*, 6 July 2006, p. 24.
- 18 R Young, 'Water Markets – Let the Water Begin to Flow', *Water*, Water Services Association of Australia, November 2005.
- 19 TM Dwyer, *Urban Myths in the Economics of Water Supply*, Australian National University, 2006, p. 12.
- 20 MD Young, W Proctor, E Qureshi & G Wittwer, *Without water: The economics of supplying water to 5 million more Australians*, Water for a Healthy Country Flagship report, CSIRO and the Monash University Centre of Policy Studies (CoPS), May 2006.
- 21 ACIL Tasman, *Research into access to recycled water and impediments to recycled water investment*, ACIL Tasman, June 2005.
- 22 National Water Commission, *Progress on the National Water Initiative: A Report to the Council of Australian Governments*, National Water Commission, Canberra, June 2006, pp. 12–13.
- 23 J Howard, 'Australia's National Challenges: Energy and Water', speech to the Committee for Economic Development of Australia, Sydney, 17 July 2006, p. 7. Note the Opposition's environment spokesman, Anthony Albanese, recently committed a future Labor Government to a national target of 30% of waste water being recycled per annum by 2015. See 'Australia's water crisis: planning for future sustainability', speech to the AFR National Infrastructure Summit, 23 August 2006.
- 24 Sydney Water, *Indirect potable recycling and desalination – a cost comparison*, Sydney Water, Sydney, March 2006.
- 25 S Mitchell & A Wahlquist, 'Call for last drinks', *The Australian*, 7 August 2006, p. 8.
- 26 Independent Pricing and Regulatory Tribunal of New South Wales, *IPART releases final Sydney water prices determination*, press release, 2 September 2006.
- 27 Water Services Association of Australia, *WSAA facts 2005*, Water Services Association of Australia, Melbourne, 2005.
- 28 M Ludlow, 'Qld treads water on grid', *The Australian Financial Review*, 23 June 2006, p. 24.
- 29 National Water Commission, *2005 National Competition Policy Assessment of Water Reform Progress*, National Water Commission, Canberra, April 2006.
- 30 Intergovernmental Agreement on a National Water Initiative between the Commonwealth of Australia and the Governments of New South Wales, Victoria, Queensland, South Australia, the Australian Capital Territory and the Northern Territory, 25 June 2004. pp. 17–18.
- 31 Marsden Jacob Associates, *Audit of Murray–Darling Basin Cap Data Management Systems*, Murray–Darling Basin Commission, Canberra, 2005.

- 32 National Water Commission, *Progress on the National Water Initiative: A Report to the Council of Australian Governments*, Canberra, June 2006, pp. 9–10.
- 33 National Water Commission, *Progress on the National Water Initiative: A Report to the Council of Australian Governments*, National Water Commission, Canberra, June 2006, p. 3.
- 34 H Roper, C Sayers & A Smith, *Stranded Irrigation Assets*, Productivity Commission Staff Working Paper, Productivity Commission, Melbourne, June 2006, p. 39.
- 35 H Roper, C Sayers & A Smith, *Stranded Irrigation Assets*, Productivity Commission Staff Working Paper, Productivity Commission, Melbourne, June 2006.
- 36 C Egan & J Koutsoukis, 'Water rebels urge farmers to fight back', *The Sunday Age*, 25 June 2006, p. 1.
- 37 Productivity Commission, *Rural Water Use and the Environment: The Role of Market Mechanisms*, Discussion Draft, Productivity Commission, Melbourne, June 2006.
- 38 P Cosier, 'Let market set the water mark', *The Australian Financial Review*, 20 June 2006, p. 63.
- 39 Productivity Commission, *Rural Water Use and the Environment: The Role of Market Mechanisms*, Discussion Draft, June 2006, p. xxxii.
- 40 Premier of Queensland, *Premier Beattie Ready to Work with PM to Find Solutions*, press release, Brisbane, 12 July 2006.
- 41 Victorian Government Minister for Water, *Victoria Calls for Urgent Reform of Water Funding*, press release, Melbourne, 13 July 2006.
- 42 Department of Sustainability and Environment, *Securing Our Water Future Together – Our Water Our Future White Paper*, Victorian Government, Melbourne, June 2004, p. 3.

BUSINESS COUNCIL OF AUSTRALIA
42/120 COLLINS STREET MELBOURNE 3000
T 03 8664 2664 F 03 8664 2666
www.bca.com.au

© Copyright September 2006 Business Council of Australia
ABN 75 008 483 216

All rights reserved. No part of this publication may be reproduced or used in any way without acknowledgement to the Business Council of Australia.

The Business Council of Australia has taken reasonable care in publishing the information contained in this publication but does not guarantee that the information is complete, accurate or current.

In particular, the BCA is not responsible for the accuracy of information that has been provided by other parties. The information in this publication is not intended to be used as the basis for making any investment decision and must not be relied upon as investment advice. To the maximum extent permitted by law, the BCA disclaims all liability (including liability in negligence) to any person arising out of use or reliance on the information contained in this publication including for loss or damage which you or anyone else might suffer as a result of that use or reliance.

