

21 May 2009

Sean Crees  
Director Regulation, Water  
Essential Service Commission  
Level 2, 35 Spring Street  
Melbourne Vic 3000

Dear Sean

Please find attached Melbourne Water's response to the Essential Service Commission's (ESC's) draft decision in relation to the Metropolitan Melbourne Water Price Review 2009.

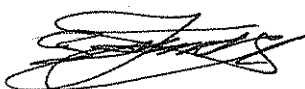
The response focuses on the key aspects of the ESC's draft decision and in particular:

- Service standards – the proposed approaches for calculating achievement of specific service standards included in the ESC's draft decision are clarified
- Operating and capital expenditures – responses are provided to the ESC's draft decisions on specific expenditures / projects and further information is provided in relation to additional expenditures that have arisen since Melbourne Water prepared its 2009 Water Plan
- The weighted average cost of capital (WACC) – Melbourne Water's views in relation to particular input parameters used to determine the WACC are outlined
- Prices – the proposed price path for bulk water and sewerage services is detailed, as well as the revised approach for more gradually increasing the inorganic total dissolved solids charge over the 2009 regulatory period
- Regulatory framework issues – Melbourne Water's views in relation to the regulatory framework that should be in place for the 2009 regulatory period are outlined.

In addition, the financial information template that details the proposed expenditures, assumed WACC and proposed prices is also attached. It is requested that this template be kept confidential.

Should you require further clarification or wish to discuss the issues raised, please contact our Pricing and Regulation Manager, Claire Preston on 9235 1496

Yours sincerely



BEN FURMAGE  
GENERAL MANAGER, STRATEGIC PLANNING

# Metropolitan Melbourne Water Price Review

Melbourne Water's response to the ESC's draft decision

May 2009



# Table of contents

Executive summary	1
Service standards	3
Approved service standards	3
Other service standards	4
Operating expenditure	6
Electricity, chemical and Tarago operating expenditures	6
Shared service savings	7
Water conservation expenditures	9
Labour expenditures	9
Land tax	10
Defined benefit superannuation contributions	10
Bushfire expenditures	11
Smart Water Fund expenditures	12
Capital expenditure	13
Sugarloaf Pipeline and pump station	13
Foodbowl modernisation payment	15
Sludge handling at Winneke Treatment Plant	16
Desalination interconnections works	17
Desalination payments to DSE	19
WTP wet weather capacity upgrade	20
Werribee aqueduct	21
M&E renewals	22
Bushfires	25
Updated estimates for 2008/09	26
Performance payments	26
Weighted average cost of capital	27
Market risk premium	27
Equity beta	28
Debt margin	30
Risk free rate	31
Prices	32

# Table of contents continued

Water and sewerage price path	32
Salt prices	33
Recycled water prices	34
<b>Regulatory framework issues</b>	<b>36</b>
RAV transfer	36
Treatment of depreciation	36
Uncertain and unforeseen events	36

# Executive summary

In April 2009, the Essential Services Commission (ESC) released its draft decision in relation to the Metropolitan Melbourne Water Price Review 2009. This submission forms Melbourne Water's response to the draft decision.

Melbourne Water's response focuses on the following key aspects of the ESC's draft decision:

- Service standards
- Operating expenditures
- Capital expenditures
- The weighted average cost of capital (WACC)
- Prices
- Regulatory framework issues.

In relation to service standards, the submission clarifies Melbourne Water's proposed approaches for calculating achievement of specific service standards included in the ESC's draft decision. This includes details around service standards included as approved service standards for water pressure, water quality, sewer spills and odour.

In terms of operating and capital expenditures, the submission responds to the ESC's draft decisions on specific expenditures and projects as well as providing further information in relation to additional expenditures that have arisen since Melbourne Water prepared its 2009 Water Plan. Relative to the ESC's draft decision, Melbourne Water is proposing, in aggregate, minor changes in its operating and capital expenditures, reflecting better, more up to date, information. The submission sets out the reasons for the proposed changes in expenditure and additional supporting information can be provided to the ESC if required.

The WACC and its input parameters are also discussed, and Melbourne Water's views in relation to particular input parameters are outlined.

The submission also sets out Melbourne Water's proposed approach in relation to various pricing issues. Importantly, this includes the proposed price path for bulk water and sewerage services over the 2009 regulatory period. Taking into account the views of Melbourne Water's customers, and Melbourne Water's proposed changes for operating and capital expenditures, as well as the WACC, an average annual price increase in 2009/10 of 21.3% is proposed and then a smoothed price path of 21.7% per year from 2009/10.

Finally, the submission sets out Melbourne Water's views in relation to the regulatory framework required for the 2009 regulatory period. A key issue in this regard is the uncertain and unforeseen events mechanism that enables businesses to apply for price adjustments either during or at the end of the regulatory period. Melbourne Water considers that within period adjustments should be limited to a small number of significant issues that are largely outside Melbourne Water's control. Further, to maintain the properties of incentive based regulation these specific changes should be considered in isolation from other changes that may occur during the 2009 regulatory period.

# Service standards

This section clarifies the proposed approaches for calculating achievement of specific service standards included in the ESC's draft decision. This includes service standards noted as approved service standards as well as other service standards.

## Approved service standards

### Water pressure

The ESC's draft decision includes aggregated water pressure compliance with bulk service arrangements at the wholesale/retail interface points as an approved service standard for Melbourne Water.

For clarity, the following outlines the proposed approach to calculating achievement of the water pressure service standard:

- Monthly compliance is calculated by the number of monitoring points performing successfully as a percentage of the total number of points operating. The indicator is passed if at least 99.6% of pressure monitoring points comply with the limits set out in the Bulk Water Supply Agreement
- Annual compliance is measured by the average value of the monthly results.

### Water quality

The ESC's draft decision includes aggregated water quality compliance with bulk service arrangements at the wholesale/retail interface points as an approved service standard for Melbourne Water. Within this, specific service standards exist for micro-biological standards, disinfection by-products, aesthetic standards (turbidity) and aesthetic standards (aluminum).

For clarity, the following sets out the proposed approach to calculating achievement of the water quality service standards:

- The annual compliance for water quality for micro-biological standards, disinfection by-products, aesthetic standards (turbidity) and aesthetic standards (aluminum) is determined based on the percentage of monitoring points which do not exceed the standards specified in the Bulk Water Supply Agreements. For example, in relation to aesthetic standards (turbidity) 91.5% of the monitoring points where water samples are taken must not exceed the specified standards.



The proposed approach detailed above of assessing performance at monitoring points (i.e. specific sites) will achieve better consistency with the Bulk Water Supply Agreements.

### Sewer spills – hydraulic deficiency

The State Environment Protection Policy (Waters of Victoria) sets out the hydraulic capacity requirements for the sewerage system. In particular, that sewers contain flows associated with up to a one-in-five year rainfall event.

Melbourne Water is implementing a program of sewage works, in particular the Northern Sewerage Project, to progressively meet the hydraulic capacity requirements. Until this program of sewage works is completed, the number of spills is dependant on weather - wet weather may result in sewer spills, including multiple spills from one wet weather event. As such, the target of zero hydraulic deficiency is unlikely to be achieved within the 2009 Water Plan period until the works are complete and the target is to progressively achieve zero spills due to storm events of a severity of up to one-in-five years. Therefore, Melbourne Water considers the end of period (2012/13) target of 0 hydraulic deficiency spills included in the ESC's draft decision is appropriate.

### Odour complaints

In the ESC's draft decision odour complaints have been included as an approved service standard. For clarity, this service standard (of 10 complaints per year) relates to odour complaints in the sewerage transfer system.

It is noted that Melbourne Water also proposed in its 2009 Water Plan that there would be no offensive odours beyond the boundaries of the Western Treatment Plant (WTP) and the Eastern Treatment Plant (ETP). The ESC has not included these as approved service standards.

## Other service standards

### Complaints to the Energy and Water Ombudsman

In its 2009 Water Plan, Melbourne Water included the number of complaints to the Energy and Water Ombudsman (Victoria) (EWOV) as a service standard. This followed inclusion of this measure as an approved service standard in the ESC's 2005 final decision.

Melbourne Water considers that complaints to EWOV is a service standard more suitable for retail water businesses than a wholesale water business, particularly as wholesale water businesses do not have direct relationships with end customers. For Melbourne Water the exception to this is in relation to waterways and drainage services, where Melbourne Water does have end customers.

As detailed in the 2009 Water Plan, if this service standard is to apply to Melbourne Water it is proposed that it should be measured on the basis of the percentage of complaints referred to EWOV that are responded to within EWOV established timelines.

# Operating expenditure

This section responds to the ESC's draft decisions in relation to specific operating expenditures and provides further information in relation to additional operating expenditures that have arisen since Melbourne Water prepared its 2009 Water Plan. In particular:

- Electricity, chemical and Tarago expenditures
- Shared service savings
- Water conservation expenditures
- Labour expenditures
- Land tax
- Defined benefit superannuation contributions
- Bushfire expenditures
- Smart Water Fund expenditures.

Additional supporting information in relation to each of these operating expenditures can be provided to the ESC.

## Electricity, chemical and Tarago operating expenditures

In its draft decision the ESC revised downwards Melbourne Water's electricity, chemicals and Tarago Water Treatment Plant expenditures (except in 2009/10 for Tarago Water Treatment Plant). These changes reflected updated estimates provided by Melbourne Water in response to further questions from the expenditure consultants and were based on lower demands proposed by the retailers reflecting revised restriction levels. They also reflected out of date volume assumptions in relation to operation of the Tarago Water Treatment Plant.

Reflecting the revised demands used by the ESC in its draft determination, as well as the correct volume assumptions for Tarago Water Treatment Plant, Melbourne Water proposes adjustments to electricity, chemical and Tarago expenditures as detailed in Table 1.

**Table 1 – Electricity, chemical and Tarago expenditures (\$M)**

	2009/10	2010/11	2011/12	2012/13
Additional expenditure	-0.4	0.5	0.6	0.6

## Shared service savings

In its draft decision, the ESC accepted the expenditure consultants' recommendations that:

- Shared services savings of \$9 million per year be achieved by the four metropolitan water businesses
- Shared service savings of 50% be achieved in 2009/10, 75% in 2010/11 and 100% in 2011/12 and 2012/13
- Shared service savings be split 60% / 40% between the retailers and Melbourne Water
- All implementation costs are to be absorbed by the business.

For the reasons detailed below, Melbourne Water considers that it will be difficult for it, and the industry as a whole, to achieve the shared service savings included in the ESC's draft decision. As a result, Melbourne Water is proposing a revised profile of savings that it considers will more closely reflect the savings achievable over the 2009 regulatory period. In the event shared service savings are not achievable by Melbourne Water, it will find these savings through internal business efficiency measures.

Following the Government's response to the Victorian Competition and Efficiency Commission review, Melbourne Water and retailers formed a working group in November 2008 to explore opportunities for savings from shared services and common procurement. The working group was lead by an independent consultant to identify areas that might provide opportunities for immediate 'quick win' savings. Sub groups were then formed for each area identified to thoroughly research the opportunity and its potential to provide savings to the businesses.

Progress to date from both the working group and sub groups indicates that in terms of the immediate 'quick wins':

- Potential savings from identified areas are likely to be limited
- Any savings are unlikely to be realised in 2009/10 mainly due to current supply contracts already in place and the time needed to finish investigations, facilitate a tender process and implement approved initiatives by the sub groups
- A number of the identified areas are not applicable to Melbourne Water, as a bulk supplier of water and sewerage services. For example, meter purchasing, meter reading, billings and collections
- For other identified areas, Melbourne Water currently incurs minimal costs and therefore the savings would not be significant. For example, in relation to the

identified area of banking services, Melbourne Water's costs are minimal and would be small compared to the retailers who have transactional banking associated with their billings and collections function. Melbourne Water also understands from discussions with the retailers that it already has the lowest procurement cost for many of the identified areas currently being investigated

- There are no quick savings identified for information technology / telecommunications which is a major cost item for businesses. This is primarily due to the time required to establish standards and to investigate alternatives and shared benefits associated with any changes. More detailed investigations will now occur to establish whether the benefits of common systems/platform outweigh the costs.

The process to investigate longer term savings and business process benchmarking recently commenced with the selection of a consultant. The report on shared savings from the consultant is due by 30 June 2009. After finalisation of the report, a more detailed review and implementation of viable projects will take at least one year to complete, resulting in savings starting at the earliest from 2010/11.

It is noted that the process to evaluate and implement projects for shared services / joint procurement can be complex and time consuming as businesses must consider both financial and non financial factors before proceeding with an identified project that may yield potential cost savings. These factors includes the quality of goods/services in question, any changes in risk, and the impact on the level of services provided on the whole of the business. In addition, businesses are unable to break current supply contracts.

In light of the above, a more achievable profile of savings over the 2009 regulatory period is 0% of savings in 2009/10 reflecting investigation / implementation time, 50% of savings in 2010/11, 75% of savings in 2011/12 and 100% of savings in 2012/13. Accepting that Melbourne Water will achieve 40% of these savings, the revised profile of savings for Melbourne Water is detailed in Table 2.<sup>1</sup>

**Table 2 - Revised profile of shared service for Melbourne Water (\$M)**

	2009/10	2010/11	2011/12	2012/13
VCEC shared savings	0	-1.8	-2.7	-3.6

<sup>1</sup> It is noted that the savings shown for 2010/11 in the various documents supporting the ESC's draft decision are inconsistent. For the purpose of revising the savings profile, it has been assumed that the shared services savings incorporated in the ESC's draft decision for 2010/11 is -\$2.7M.

## Water conservation expenditures

In its draft decision the ESC reduced Melbourne Water's water conservation expenditures in 2011/12 and 2012/13 on the basis that it is reasonable to expect these expenditure to decline as restrictions are lifted and new water supply augmentations come on line. This reflected the expenditure consultants' recommendation that expenditure for the behavioural change program and administration of restrictions, totalling \$1.5M per year, be reduced.

Melbourne Water notes that it, and the retailers, have received confirmation from the Department of Sustainability and Environment that the 'Our Water Our Future' behavioural change campaign is scheduled to run until 2015 and will be funded by the four metropolitan Melbourne water businesses, including Melbourne Water. In particular, that each year until 2015 the water businesses will be invoiced a minimum of \$1.5M to cover the cost of the campaign. These funds will be used to develop and implement communications plans for the mainstream behavioural change advertising, water restrictions advertising, Water Saver Garden Centres and Water – Learn it! Live it! Campaigns.

Reflecting the above advice from the Department of Sustainability and Environment, Melbourne Water is proposing that the expenditure for water conservation removed in the ESC's draft decision be included in its final decision. This additional expenditure is set out in Table 3.

**Table 3 – Water conservation additional expenditures (\$M)**

	2009/10	2010/11	2011/12	2012/13
Additional expenditure	0	0	0.2	0.4

## Labour expenditures

In its draft decision the ESC noted that it would further investigate labour costs between its draft and final decisions, including forecast growth in wages.

Melbourne Water considers the 4% nominal (1.5% real) increase in labour costs allowed in the ESC's draft decision is appropriate. This is supported by recent announcements in the 2009 Victorian Budget. In particular, that even with slowing economic activity, wage growth excluding bonuses is projected to be 3.75% in 2009/10, 3.25% in 2010/11 and 3.50% in 2011/12 and 2012/13. These forecasts, and allowances for bonuses and productivity improvements included under the Enterprise Agreement, support a 4% nominal increase salary costs across the 2009

regulatory period. In addition, there have been no revisions to the previous Corporate Plan assumptions received from Government.

## Land tax

In its draft decision the ESC noted that it would review the 2009 Victorian Budget to determine if further alterations to land tax are warranted and consider the latest assessments of land tax once they are received by the businesses.

At this stage, Melbourne Water has not received its land tax assessment for 2009. Once it is received, Melbourne Water will provide it to the ESC for its consideration.

## Defined benefit superannuation contributions

In its draft decision the ESC included increased expenditures, as compared to proposals in the 2009 Water Plans, for the retailers' contributions to their defined benefit superannuation schemes (as required by their fund managers).

Melbourne Water has a large number of employees that belong to a defined benefit superannuation fund. For members of that fund, retirement benefits are calculated according to length of service and salary. This is in contrast to a member of an accumulation fund whose retirement benefits reflect total contributions plus their share of earnings from the fund net of expenses and tax.

The state of the economy has changed drastically since the preparation of Melbourne Water's 2009 Water Plan. The downturn in the economy has had a material negative impact on the defined benefit superannuation fund that Melbourne Water employees belong to, due to falling asset values. Melbourne Water has recently made cash contributions to top up the defined benefit superannuation fund to avoid potential under funding.

Melbourne Water has received advice from its defined benefit superannuation fund manager advising of the required level of employer contribution for the 2009 regulatory period. In the first three years of the 2009 regulatory period the fund manager has forecast that required cash contributions will be more than double what was included in Melbourne Water's 2009 Water Plan. In the final year of the regulatory period, i.e. 2012/13, this impact will be less, with a forecast improvement in economic conditions.

Reflecting advice from its fund manager, Melbourne Water is proposing additional operating expenditure to reflect the forecast cash contributions that will now be required. The additional expenditure required is detailed in Table 4 below. It is noted that these costs exclude those relating to Melbourne Water's waterways and drainage services.

**Table 4 – Defined benefit superannuation fund additional expenditures (\$M)**

	2009/10	2010/11	2011/12	2012/13
Additional expenditure	1.9	1.9	2.0	0.7

## Bushfire expenditures

In February 2009, there were major bushfires in Victoria that started on 'Black Saturday'. They were Victoria's worst bushfires since Ash Wednesday and fires burnt on several fronts including in the state's north, southeast and west, northwest of Melbourne. Despite having comprehensive measures in place for bushfire protection in water catchments, some water catchment areas were partially burnt and property owned by Melbourne Water sustained damaged.

The major impacts on Melbourne Water arising from the bushfires include:

- Involvement in the prevention, detection and suppression of bushfires
- Remedial action within water supply catchments to protect water quality including:
  - Installing over 100 silt traps around specific reservoirs
  - Reopening roads within the catchments and repairing drainage
  - Constructing and maintaining infrastructure to minimise any impacts to water quality in the catchments
  - Increasing water quality sampling
- Assessing damage caused by the bushfires. As roads into the water catchment areas have only recently opened, assessment of damage to property, water quality and yield, as well as biodiversity are not yet finalised. Further research will be needed to measure the full effect from the bushfires
- Developing and implementing a recovery program which includes:
  - Replacing and/or repairing and/or maintaining Melbourne Water infrastructure based on the completed assessment of assets
  - Encouraging natural regeneration of native species in catchment areas
  - Developing a monitoring program for the most appropriate long term ecological response.

Melbourne Water's 2009 Water Plan included proposed operating expenditure to minimise the potential impact of any bushfires on the water supply catchments.



However, the actual occurrence of the bushfires means expenditures are higher than planned. Melbourne Water is now proposing additional expenditures arising from the 'Black Saturday' bushfires as detailed in Table 5. It is noted that these costs exclude those relating to Melbourne Water's waterways and drainage services and any Government funding received.

**Table 5 – Bushfire additional expenditures (\$M)**

	2008/09	2009/10	2010/11	2011/12	2012/1
Additional expenditure	3.1	1.1	1.3	0	0

## Smart Water Fund expenditures

The four metropolitan water businesses, City West Water, South East Water, Yarra Valley Water and Melbourne Water, together with the Government, established and have jointly operated the Smart Water Fund since 2002. The objective of the Smart Water Fund is to encourage and support innovative development of water, biosolids recycling and water saving projects within the community.

At the time when the 2009 Water Plan was prepared, submissions for round 6 were being progressed but continuation of the fund was being reviewed. As the future of the fund was uncertain, Melbourne Water only included funding up to round 6.

Melbourne Water is now certain the Smart Water Fund will be continued and funding commitments are in the process of being finalised. As a result, Melbourne Water is proposing additional funding of \$1 million per year, as detailed in Table 6, to cover a new round of submissions each year, in line with past experience.

**Table 6 – Smart Water Fund additional expenditures**

	2009/10	2010/11	2011/12	2012/13
Additional expenditure	1.0	1.0	1.0	1.0

# Capital expenditure

This section responds to the ESC's draft decisions in relation to specific capital expenditures and provides further information in relation to specific expenditures that have arisen since Melbourne Water prepared its 2009 Water Plan. In particular:

- Sugarloaf Pipeline
- Foodbowl modernisation payments
- Sludge handling at Winneke Treatment Plant
- Desalination interconnection works
- Desalination payments to DSE
- WTP wet weather capacity upgrade
- Werribee Aqueduct
- M&E renewals
- Bushfires
- Updated estimates for 2008/09
- Performance payments.

Additional supporting information in relation to each of the capital expenditures detailed below can be provided to the ESC.

## Sugarloaf Pipeline and pump station

In its draft decision the ESC recommended a reduction in the expenditures for the Sugarloaf Pipeline and pump station project of \$26M. This lower capital expenditure estimate was based on a revised project estimate provided by Melbourne Water to the ESC's expenditure consultants in February 2009. The progress report indicated that the Sugarloaf pipeline project was estimated to be delivered for \$601.5M, which was \$26.3M less than the 2009 Water Plan forecast of \$627.8M.

Since then, and as the project has progressed, Melbourne Water has been able to refine these estimates further to take into account all the remaining project risks and associated costs. The 2008/09 third quarter estimate indicates that the project costs are now forecast to be \$618.1M. That is, the project forecast is now expected to decrease by \$9.7M relative to the 2009 Water Plan, rather than the \$26.3M previously advised.

The main reasons for the cost reductions relative to the 2009 Water Plan are:

- Major procurement costs reduced (-\$15.3M) due to better than expected negotiated cost outcomes with suppliers of mechanical and electrical equipment and a reduction in pipe and manhole quantities in the final design alignment
- Pipe laying costs for the project have been lower than forecast due to favourable ground conditions, access to a local quarry for soil disposal and more competitive subcontractor pricing than forecast (-\$9.4M).

Offsetting the cost reductions, the project has experienced the following cost increases:

- Concrete structure costs are higher than expected (+\$8M) due principally to unfavourable ground conditions at the Goulburn River interface site resulting in increased design scope and change in work methods and general tender pricing higher than forecast
- Increased costs associated with traffic management, pipe handling due to early procurement, and the need to store then transport the pipes, and compliance with extremely rigorous environmental controls imposed by Federal and State Governments (+\$7M combined impact). The environmental controls particularly relate to strict bio-security requirements to minimise risk of transmission of plant and animal diseases.

Melbourne Water notes that construction of the Sugarloaf Pipeline project is approximately one third complete. Project risks that are still active include:

- Latent conditions in the tunnel under the Toolangi forest (work on the tunnel is just approaching 50% completion)
- Provision of power to the sites has not been completed by SPAusnet.

A summary of the proposed expenditures in the 2009 Water Plan, the ESC's draft decision and the revised estimates now being proposed in response the draft decision is provided in Table 7. It is important to note these estimates relate to capital expenditure and not operating expenditure.

**Table 7: Sugarloaf Pipeline and pump station (\$M)**

	2008/09	2009/10	2010/11	2011/12	2012/13	Water Plan Expenditure	Total Project Expenditure
2009 Water Plan	357.25	229.09				229.09	627.8
Draft decision	362.8	197.2				197.2	601.5
MW response	359.9	216.7				216.7	618.1
<b>Difference</b>	<b>-2.9</b>	<b>19.5</b>				<b>19.5</b>	<b>16.6</b>

## Foodbowl modernisation payment

In its 2009 Water Plan, Melbourne Water included \$300M for Foodbowl modernisation payments. This reflected the Government's commitments in Our Water Our Future: The Next Stage of the Government's Water Plan to invest \$1B to upgrade irrigation infrastructure in northern Victorian, in order to save an estimated 225GL annually, of which metropolitan Melbourne would receive a third share.

In order to ensure clear alignment between the capital payment for the infrastructure improvements in northern Victoria and asset ownership associated with the resultant water entitlements, Melbourne Water, the retailers and the Department of Sustainability and Environment have agreed that the \$300M payment be included in retailers' Water Plans, rather than Melbourne Water's.

In line with the above, it is proposed to reduce Melbourne Water's capital expenditure by \$300M, as detailed in Table 8.

**Table 8: Foodbowl modernisation payment (\$M)**

	2008/09	2009/10	2010/11	2011/12	2012/13	Water Plan Expenditure	Total Project Expenditure
2009 Water Plan	85	85	80	20	20	205	300
Draft decision	85	85	80	20	20	205	300
MW response	0	0	0	0	0	0	0
<b>Difference</b>	<b>-85</b>	<b>-85</b>	<b>-80</b>	<b>-20</b>	<b>-20</b>	<b>-205</b>	<b>-300</b>

## Sludge handling at Winneke Treatment Plant

In its draft decision the ESC made \$9M reduction in expenditure for the sludge handling project at the Winneke Treatment Plant.

The capital expenditure estimate for the sludge handling project included in the 2009 Water Plan, of \$27M, was based on preliminary estimates with a +/- 40% degree of accuracy. In addition, the project was forecast to be completed by 2011/12. It was proposed that the by-products from the treatment of the Sugarloaf Pipeline flows would be transferred and treated in the short term, before completion of the sludge handling project, at ETP. Since then, further work has been undertaken and revised capital expenditure and timing estimates have been developed for the project.

In January 2009, following further options review, a Business Need Identifier (the first stage of Melbourne Water's capital approval process) was internally approved for the project. This included a base cost concept design of \$13.4M and a cost of \$0.9M for relocation of centrifuges close to, but not at, Winneke. A detailed risk assessment via Melbourne Water's risk adjusted nominal estimate (RANE) process had not been undertaken for the project at that time and therefore in advising the ESC's expenditure consultants of the revised cost, a 30% contingency was added. This resulted in a total project cost of \$18.6M.

The ESC's expenditure consultants did not receive substantiation of the \$0.9M relocation cost and felt that it would be inappropriate to include a contingency allowance without formal project approval. Therefore, the ESC's draft decision only approved \$13.4M for inclusion in the 2009 regulatory period.

Since the draft decision the project has progressed to the Implementation Approval stage following completion of the functional design and a RANE analysis. On 15 May 2009 the Board approved an expenditure amount of \$22.8M.

The increase in the project estimate reflects the improvement in the forecasting accuracy from the Business Need Identifier to the Implementation Approval stage of the project's development. In particular, the completion of a RANE analysis ensures that the likelihood and consequences of all significant project risks have been identified.

In addition to revised capital expenditure estimates, the completion date for the project has also been brought forward to July 2010 to avoid projected capacity constraints at ETP associated with continued transfer of sludge from Winneke to ETP.

To meet the July 2010 target, preliminary identification of long lead items has been undertaken with procurement of the centrifuges commencing following the Board approval.

A summary of the proposed expenditures in the 2009 Water Plan, the ESC's draft decision and the revised estimates now being proposed in response the draft decision is provided in Table 9.

**Table 9: Sludge handling project at Winneke Treatment Plant (\$M)**

	2008/09	2009/10	2010/11	2011/12	2012/13	Water Plan Expenditure	Total Project Expenditure
2009 Water Plan	1	3	17	6		26	27
Draft decision	0.34	13.1				13.1	13.44
MW response	0.5	20.1	2.17			22.3	22.8
<b>Difference</b>	<b>0.2</b>	<b>7.0</b>	<b>2.2</b>			<b>9.2</b>	<b>9.3</b>

## Desalination interconnections works

In its draft decision the ESC agreed with the expenditure consultants' recommendation to include the capital expenditure estimates for the desalination interconnection works (not included in the 2009 Water Plan) but to further review the proposed costs between its final and draft decisions.

The desalination interconnection works are designed to connect the Victorian Desalination Plant to the Melbourne Water's system. In particular, to use the available storage capacity in the existing Cardinia – Pearcedale pipeline to transfer desalinated water from the desalination pipeline delivery point to the Cardinia reservoir.

Melbourne Water provided the ESC's expenditure consultants with a Preliminary Business Case expenditure estimate for this project of \$79.9M, developed using Melbourne Water's RANE methodology. The cost estimate, approved internally in February 2009, consists of the following major works components:

- A new water main and fittings at Berwick to enable connection of the desalination plant delivery main to the Cardinia – Pearcedale pipeline

- Upgrade of valves and fittings on the existing Cardinia – Pearcedale main
- A new inlet water main and chute to transfer water from the main into Cardinia Reservoir and a new Pumping Station at Cardinia to transfer water to Silvan Reservoir.

The ESC's expenditure consultants were specifically concerned that the pipe supply and laying rates for the Cardinia Inlet pipeline may have been overstated. The expenditure consultants also queried allowances for escalation in a number of risk items and an allowance for project overheads.

Melbourne Water notes that the capital cost estimates for the desalination interconnection works were developed by an independent engineering consultancy in late February 2009. Further, two independent constructors reviewed the rates as part of the RANE analysis. This benchmarking undertaken by the independent constructors involved analysis of relevant sections of the Sugarloaf Pipeline Total Outturn Cost as it is a recent project involving similar pipeline construction. The capital expenditure estimates also take into account the higher risks of working around critical existing assets (e.g. risk of damage to the Cardinia outlet mains).

Regarding the inclusion of escalation allowances in a number of risk items, Melbourne Water notes that the cost estimate of \$79.9M was developed using the probabilistic RANE approach. In using a P50 RANE estimate, on a probability basis, only a proportion of the escalation costs would be included in the final project cost estimate. Further, in relation to specific escalation allowances queried by the ESC's expenditure consultants, Melbourne Water considers that:

- For the cost of imported goods, assuming a falling Australian dollar would appear reasonable in the current economic climate
- For the cost increases for engaging sub-contractors, the effect of the State and Federal Government infrastructure spending would also appear reasonable in the current economic climate.

It is also noted that the estimates were developed by the independent engineering consultancy in late February 2009, at which time the downturn in the economy had occurred and issues such as the fall in steel prices would have been factored into their estimation.

The allowance for project overheads is principally made up alliance set up costs. Specifically, project overheads costs include an allowance for items that are required prior to and during the delivery of the project and in most cases are not site specific. These costs include such items as: insurance, information technology,

accommodation, administration support staff, quality assurance set up and monitoring, sustainability and environmental initiatives, preliminary investigation and approval costs.

On 17 April 2009, the Implementation Approval for the project was approved by the Board for \$79.2M (there were no further significant cost revisions following review of the RANE analysis). The Total Outturn Cost is to be determined via a competitive tender process involving two alliances and it will be independently assessed. The Total Outturn Cost will be provided to the Board once it is known (this is anticipated to be between October 2009 and February 2010).

Table 10 below outlines Melbourne Water's proposed estimates that are slightly below those allowed in the ESC's draft decision.

**Table 10: Desalination interconnection works (\$M)**

	2008/09	2009/10	2010/11	2011/12	2012/13	Water Plan Expenditure	Total Project Expenditure
2009 Water Plan	0	0	0			0	0
Draft decision	0.8	38.1	41.0			79.1	79.9
MW response	0.4	37.0	41.8			78.8	79.2
<b>Difference</b>	<b>-0.4</b>	<b>-1.1</b>	<b>0.8</b>			<b>-0.3</b>	<b>-0.7</b>

## Desalination payments to DSE

Melbourne Water has received advice from the Department of Sustainability and Environment in relation to the Government's decision that it must meet the development costs for the Victorian Desalination Project. In particular, that the Government has determined that Melbourne Water will make a \$279.7M contribution towards these project development costs. Table 11 sets out the contributions required.



**Table 11: Payments for the Victorian Desalination Project (\$M)**

	2008/09	2009/10	2010/11	2011/12	2012/13	Water Plan Expenditure	Total Project Expenditure
2009 Water Plan	0	0	0	0		0	0
Draft decision	0	0	0	0		0	0
MW response	117.4	85.7	52.4	24.2		162.3	279.7
<b>Difference</b>	<b>117.4</b>	<b>85.7</b>	<b>52.4</b>	<b>24.2</b>		<b>162.3</b>	<b>279.7</b>

## WTP wet weather capacity upgrade

Driven by growth and compliance, this project involves upgrading the hydraulic capacity of WTP to accommodate increases in wet weather volumes following the completion of the Northern Sewerage Project in 2011/12.

Key works components include upgrading the Main Southern Carrier and inlets into the 55 East and 25 West lagoons, and the 15 East Outlet Drain and Flow Measurement Structure.

The 2009 Water Plan included a project cost estimate of \$46.7M. This was based on a Preliminary Business Case estimate pending the preparation of functional design.

In addition, the expectation was that the wet weather upgrade works would commence at the end of March 2009. However, given delays during the design phase of the project this date was revised to May 2009. The ESC's expenditure consultants therefore re-phased the project expenditure profile by reducing 2008/09 expenditure from \$3.5M to \$1.2M and shifting the expenditure reduction amount to 2009/10.

The project has now advanced to the Implementation Approval stage, with the Board of Melbourne Water approving a revised total expenditure amount of \$56.6M on 15 May 2009.

The increase in the project estimate of \$9.9M reflects more accurate project costing obtained during the detailed design process using Melbourne Water's RANE methodology. The major risks identified for this project are construction within a live treatment plant, minimising impact on the coastal marine environment and managing a major flood event.

Construction for the project will now commence in July 2009 with completion scheduled for August 2011 in accordance with the timeline for completion of the Northern Sewerage Project.

A summary of the proposed expenditures in the 2009 Water Plan, the ESC's draft decision and the revised estimates now being proposed in response the draft decision is provided in Table 12. The increase in the forecast for 2008/09 expenditure relates to design work.

**Table 12: WTP wet weather capacity upgrade (\$M)**

	2008/09	2009/10	2010/11	2011/12	2012/13	Water Plan Expenditure	Total Project Expenditure
2009 Water Plan	3.54	35.44	7.4			42.84	46.7
Draft decision	1.2	37.8	7.4			45.2	46.7
MW response	2.1	39.1	15.1			54.2	56.6
<b>Difference</b>	<b>0.9</b>	<b>1.3</b>	<b>7.7</b>			<b>9.0</b>	<b>9.9</b>

## Werribee aqueduct

The ESC's consultants' report noted Melbourne Water's advice that the forecast cost of the Werribee Aqueduct Replacement Project increased from \$13.4M in the 2009 Water Plan to the revised estimate of \$22.7M.

The revision arose as the initial cost estimate included in the 2009 Water Plan was submitted to the Board earlier than would usually be the case, without significant constructor review or market testing. This arose as it was felt it would be advantageous to ensure the newly created Pipelines Alliance was not delayed by making a joint Board / DSE / DTF submission to remove the approvals process from the critical project delivery path. However, this approach contributed to developing an estimate without the proper engineering, market testing, risk assessment and construction methodology reviews.

To ensure that the issues encountered with the Werribee aqueduct project do not occur again Melbourne Water has implemented a communication and training program to ensure that sufficient time is allowed for the development phase of projects and

provide guidance on effective methods of risk probability assessment. Associated procedural manuals have been updated and peer review processes put in place to support the changed practices.

The appropriate engineering reviews, market testing and construction methodology reviews have now been undertaken. In addition, a RANE estimate has been developed for the project which reflects the revised estimates included in Table 13. The Board approved this revised estimate in November 2008.

**Table 13: Werribee aqueduct replacement (\$M)**

	2008/09	2009/10	2010/11	2011/12	2012/13	Water Plan Expenditure	Total Project Expenditure
Water Plan	10.4	2.6				2.6	13.4
Draft decision	8.0	5.0				5.0	13.4
MW response	5.3	17.0				17.0	22.7
<b>Difference</b>	<b>-2.7</b>	<b>12.0</b>				<b>12.0</b>	<b>9.3</b>

## M&E renewals

Since the commencement of the 2005 regulatory period Melbourne Water has experienced an increase in its Mechanical and Electrical (M&E) renewals program expenditure above plan. In developing its estimates for the 2009 Water Plan, Melbourne Water was concerned its previous M&E renewal models was under estimating the expenditure required. Therefore, Melbourne Water developed predictive models based on international best practice to forecast the expected increase in the risk of failure of various classes of assets over time as they reach the end of their service lives and the required expenditure to manage this risk.

The models predict a significant increase in M&E expenditure over the 2009 regulatory period, which reflects the reality of ageing infrastructure, particularly at the ETP and in the sewerage transfer network.

The ESC's expenditure consultants endorsed the methodological construct of the models and the proposed ongoing process of continuous improvement for the models through progressive updates as new cost and asset life information becomes available.

However, based on advice from the expenditure consultants the ESC has set aside the predictive output of the renewals models. Instead, a linear trend line, forecast based on the average of the actual spend and prediction of actual spend using the models for the three historical years commencing 2005, has been used to determine appropriate renewals expenditure. While this translates to an average \$27.1M per annum increase over the 2009 regulatory period, it is still a significant 25% less than the renewals expenditure as predicted by the models.

The ESC, based on advice from its expenditure consultants, notes the following reasons for not endorsing the output of the M&E renewals models:

- As the models are in the early stage of development and due to be recalibrated in 2009, with more recent renewal costs and asset life data, there is a degree of uncertainty around the accuracy of the forecast estimates
- The renewals models did not accurately predict the M&E expenditure during the 2005 Water Plan period
- Further work needs to be done to improve data capture of asset lives and cost information, as deferral of replacement of significant cost items to the next regulatory period would make for considerable savings.

Melbourne Water does not agree with the ESC's conclusions and notes that:

- All predictive models are necessarily backward looking in terms of reliance on historical data to predict the future. A linear trend based on 2005 – 2008 actuals is no better calibrated to predict 2009 expenditure than Melbourne Water's renewals models
- The renewals models under predicted the actual expenditure and therefore should be considered as a conservative forecasting tool, rather than one that runs the risk of over forecasting required M&E expenditure
- The renewals models are designed to work best at an aggregate level for large numbers of relatively low value assets that have similar characteristic. The models do not predict the replacement dates of large individual assets, but rather the likelihood of replacement being required for low value assets with similar characteristics.

Melbourne Water also notes that the proposed expenditure reductions will increase its risk profile of asset failure. For example, the draft decision would reduce proposed expenditure at ETP by 25% and for the years 2008/09 to 2009/10 this would equate to \$5.13M. A review of projects identified for delivery within this period has been undertaken with an initial prioritisation review performed to identify projects that may

need to be deferred. The following provides examples of the projects and risks likely to arise from the proposed expenditure reductions:

- 3W system (plant process water supply) pipe renewal project

Increased likelihood of outages at parts of the plant due to connections failing or perforation. Resultant consequences of failure could relate to:

- Dissolved Air Floatation System – decreased efficiency of the sewage treatment process
- Power station failure – reducing renewable energy availability
- Increased risk of digester failure

- Minor Capital works

Various projects - increased likelihood of not meeting level of service for extended power outage or wet weather flows

- Low Pressure Sludge Gas compressors

Increased likelihood of long term outage of mixing on digesters reducing gas output and process

This increased risk profile(s) would be considered 'high risk' as assessed under Melbourne Water's Risk Management System / Policy requirements.

For these reasons, Melbourne Water believes that the renewals models represent a major step forward in forecasting asset replacement (as recognised by the ESC and its expenditure consultants). It is therefore considered that the model estimates are the appropriate basis for determination of expenditures over the 2009 regulatory period, as set out in Table 14.

**Table 14: M&E renewals (\$M)**

	2008/09	2009/10	2010/11	2011/12	2012/13	Water Plan
--	---------	---------	---------	---------	---------	------------

						Expenditure
Water Plan	168.5	178.9	167.0	116.3	111.3	573.5
Draft decision	161.4	170.8	157.6	106.3	101.4	536.1
MW response	168.5	178.9	167.0	116.3	111.3	573.5
<b>Difference</b>	<b>7.1</b>	<b>8.1</b>	<b>9.4</b>	<b>10.0</b>	<b>9.9</b>	<b>37.4</b>

## Bushfires

The 'Black Saturday' bushfires in February 2009 resulted in additional capital expenditure to Melbourne Water (refer to operating expenditure section for background information).

Melbourne Water is proposing additional capital expenditures arising from the 'Black Saturday' bushfires as detailed in Table 14. This additional capital expenditure relates to 2008/09 and 2009/10 and include costs associated with the impact of the bushfires on the Sugarloaf Pipeline, as well as works required to protect and maintain ongoing water quality such as:

- Silt fencing and make safe works
- Catchment security (minor repairs), including fencing works
- Equipment for algae scanning
- Installation of curtains
- Reinstatement of the Wallaby water supply system.

The expenditures in Table 15 do not include capital expenditures associated with the impacts of bushfires on waterways and drainage services.

**Table 15 – Bushfire additional expenditures (\$M)**

	2008/09	2009/10	2010/11	2011/12	2012/13	Water Plan Expenditure
Water Plan	0	0	0	0	0	0
Draft decision	0	0	0	0	0	0
MW response	3.0	1.3	0	0	0	1.3
<b>Difference</b>	<b>3.0</b>	<b>1.3</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>1.3</b>

## Updated estimates for 2008/09

In its draft decision the ESC noted it had reviewed updated capital expenditure estimates for the first half of 2008/09 and that it would be seeking further updated capital expenditure information from Melbourne Water for 2008/09.

As at the end of the third quarter of 2008/09, Melbourne Water's revised forecast for capital expenditure is \$912.4M, as compared to the 2009 Water Plan forecast of \$1016.0. That is, as a result of reprofiling and delays, capital expenditure in 2008/09 at the end of the third quarter was forecast to be \$103.6M less than in the 2009 Water Plan. This expenditure is forecast to occur in 2009/10 and it is anticipated that any delays will be made up in 2009/10 to ensure that all projects are delivered on time.

## Performance payments

In its draft decision the ESC accepted the expenditure consultants' recommendations and removed a proportion of performance payments for the following projects:

- Sugarloaf Pipeline
- Northern Sewerage Project
- Melbourne Main Sewer.

The construction contract for the Sugarloaf Pipeline project uses the Alliance model, while the contracts for the other two projects are based on the Cost Reimbursable Performance Incentive model. The estimated performance fees for these projects that were included in the 2009 Water Plan reflect the amount that Melbourne Water expects to pay, via its contractual arrangements, for these projects, rather than an upper bound. Under more traditional arrangements these costs would have been included in the contracts as a legitimate project cost and would not have been 'at risk'. The removal of performance fees by the ESC essentially penalises Melbourne Water for using innovative contract structures.

# Weighted average cost of capital

This section sets out Melbourne Water's in principle views in relation to particular input parameters used to determine the WACC. While Melbourne Water considers these issues are important, it notes that the impact of changing parameters must be balanced against the resulting price impact on customers. This is particularly given the Government's commitment that the water consumer's average bill will approximately double. Therefore, while Melbourne Water's in principle views are set out below, for the purpose of determining its revenue requirement and price increases, it is proposing that an increase in the market risk premium be incorporated into the ESC's final decision, as well as the relevant market movements in the risk free rate.

## Market risk premium

In its draft decision the ESC has proposed to adopt a market risk premium of 6%. Whilst this value is consistent with previous values adopted by the ESC in other regulatory decisions, Melbourne Water notes that the Australian Energy Regulator (AER) in its recent final decision on the WACC parameters for electricity transmission and distribution businesses, decided to adopt a value of 6.5%.

In reaching this decision, the AER took into account the following factors:

- The most recent long term historical average excess returns, adjusted for imputation credits – using a range of estimated periods (1883-2008, 1937-2008 and 1958-2008) and estimated by reference to the 10 year Commonwealth Government Securities – fall close to 6%. However, the effect of concluding the estimation period in 2007 rather than 2008 would lead to market risk premium estimates in the range of 6.6% to 7.2%. The AER noted that this impact demonstrates that historical averages should not be mechanically applied
- The significant decline in equity markets throughout 2008 may have resulted in the market's expectation of lower future cash flows, and hence higher discount rates, possibly accompanied by a higher view of the long term market risk premium
- Whilst the AER considered that primary weight should be given to long term historical estimates of the market risk premium, cash flow based measures could also be considered. These measures currently indicate that the forward-looking market risk premium has changed from well below 6% to well above 6%
- Current market conditions suggest that the prevailing market risk premium is above its long term historical average levels. However, it remains to be seen



whether such conditions will revert to long term historical levels or whether there has in fact been a structural break in the market premium.

Review of the AER's final decision indicates that the last of the above factors was given significant weight by the AER:

*"Whilst it cannot be known which of these scenarios explain current financial conditions, both are possible, and both suggest a market risk premium above 6 per cent at this time may be reasonable. However, having regard to the desirability of regulatory certainty and stability, the AER does not suggest that the weight of evidence suggests a market risk premium significantly above 6 per cent should be set. Accordingly, the AER considers that a market risk premium of 6.5 per cent is reasonable, at this time, and is an estimate of a forward looking long term market risk premium commensurate with the conditions in the market for funds that are likely to prevail ..."*<sup>2</sup>

Melbourne Water supports the AER's reasoning for selecting a higher value for the market risk premium. Current market evidence (outlined in submissions to the AER's draft decision) demonstrates that businesses which are raising capital at the current time are having to offer investors returns that are much higher than they have been in the past.<sup>3</sup>

Melbourne Water notes that in the draft decision, the ESC has acknowledged the current financial market volatility and has attempted to base the WACC on an assessment of current information. Melbourne Water considers that the information considered by the AER in its final WACC decision should form a part of the ESC's final decision. Given that the market risk premium is a market-wide parameter (i.e. not business or sector specific), it would seem there is considerable merit in adopting a value which is consistent with the AER's decision.

## Equity beta

In its draft decision the ESC has proposed to adopt an equity beta value of 0.65 for the metropolitan water businesses for the 2009 period. Melbourne Water understands that this value, which was also previously adopted in the 2008 Water Price Review, was established by reference to the Gas Access Arrangements Review in 2007, which demonstrated that the appropriate equity beta for gas distribution businesses was 0.70. A value of 0.65 was adopted for the metropolitan water businesses on the view

---

<sup>2</sup> AER, Final Decision, Electricity transmission and distribution network service providers, Review of weighted average cost of capital (WACC) parameters, May 2009, page 238.

<sup>3</sup> Refer submission by the Financial Investor Group, Submission to the AER's WACC Parameter Review, The Investor's Perspective, January 2009, page 38.

that the level of non-diversifiable risk experienced by water businesses is lower than that for energy businesses.

Melbourne Water is concerned that the equity beta value proposed by the ESC understates the level of non-diversifiable risk of water businesses generally. While there is limited direct market evidence available on the equity beta appropriate for Australian water businesses, the value employed by the ESC lies below the value adopted in other regulatory decisions for the water sector. This is illustrated in Table 16.

**Table 16: Regulatory precedents for equity beta**

Regulator	Decision & Date	Equity Beta	Debt Beta	D/V
ESC	Water Price Review (June 2008)	0.65	0	60%
ESC	Urban Water Price Review (June 2005)	0.75	0	60%
IPART	Sydney Water – water, sewerage, stormwater and other services (June 2008)	0.8-1.0	0	60%
IPART	Bulk Water (August 2006)	0.8 – 1.0	0	60%
IPART	Metropolitan water businesses (August 2005)	0.8-1.0	0	60%
QCA	Gladstone Area Water Board (March 2005)	0.65*	0.11	50%
ICRC	Water and wastewater price review (June 2008)	0.9		60%
ICRC	Water and wastewater price review (March 2004)	0.9	0.06	60%
ERA	Inquiry in urban water and wastewater pricing (November 2005)	0.8	0.19	60%

\* Derived from an asset beta of 0.40.

It can be observed from Table 15 that where a lower equity beta has been applied in other regulatory decisions, this has generally been because a higher value has been adopted for the debt beta. The only exception to this involves those decisions by the ESC.

Further, Melbourne Water notes the report prepared by SFG Consulting for the Melbourne metropolitan water businesses in May 2007. The analysis conducted by SFG using data on 109 utilities listed in Australia, the USA and the UK, indicated that the re-gearred equity betas of those utilities classified as water utilities, were not statistically significantly different from those of other utilities (being electricity, gas distribution and multi-utilities). In particular, using a zero debt beta, the re-gearred equity beta for water utilities in the sample was 0.79 (range of 0.60 to 0.98), compared with 0.82 for electricity utilities, 0.82 for gas distribution utilities and 0.68

for multi-utilities. That is, there is no statistical evidence that water utilities are in fact lower risk than electricity and/or gas distribution businesses.

It is also noted that the AER's recent final decision on WACC parameters for electricity transmission and distribution businesses adopts a value of 0.8 for the equity beta.

## Debt margin

In its draft decision the ESC has proposed to adopt a debt margin based on the water industry average Treasury of Corporation Victoria margins as opposed to an efficient private sector business benchmark.

Melbourne Water notes that the debt margin, which is added to the risk free rate to arrive at the cost of debt, should:

- Be based on benchmark assumptions in relation to the credit rating of the business
- Be consistent with the benchmark financing assumptions
- Reflect prevailing market evidence on the borrowing costs (including debt establishment costs) likely to be incurred by the benchmark entity.

As the ESC indicates in its draft decision, benchmarks are used as opposed to actual borrowing costs as they provide greater incentives to pursue efficient financing arrangements. The benchmarks previously adopted by the ESC reflect a BBB+ rated entity, a 10 year term to maturity, and a margin for establishment costs. It is also relevant to note that the ESC's financing structure is based on actual observed gearing levels of comparable listed utility businesses which suggest that 60 per cent is the appropriate benchmark for an efficient private sector business.

In summary, Melbourne Water considers that the benchmark debt margin should be estimated by reference to:

- The prevailing yields on 10 year BBB+ rated private sector corporate bonds, measured as a spread to the 10 year Commonwealth Government Bond yield; and
- Data obtained from CBA Spectrum.

## Risk free rate

In its draft decision the ESC adopted a range for the risk free rate of 1.508 – 1.755% and used the upper end of the range in establishing a WACC of 4.8%. It noted that the range reflected current financial market conditions and that it would update the range for the final decision.

Melbourne Water notes that the latest financial market conditions suggest an increase in the risk free rate, based on the latest average yield on nominal Commonwealth Government Securities over the 40 day trading period, adjusted for CPI. It anticipates that the risk free rate will increase in the ESC's final decision relative to the draft decision.

# Prices

This section sets out Melbourne Water's proposed approach in relation to various pricing issues raised by the ESC in its draft decision. In particular:

- The appropriate price path for water and sewerage prices
- The appropriate transitory arrangements for salt prices
- The agreed recycled water prices for the Werribee Irrigation District.

## Water and sewerage price path

In its draft decision the ESC notes that it proposes to approve a price path that more closely matches Melbourne Water's revenue requirement for each year. This is to address its concern that the difference between the revenue collected and the revenue required to recover costs in each year would be too large in 2010/11 and 2012/13.

Melbourne Water notes that the price path it proposed in the 2009 Water Plan, of 21.9% per year from 2009/10, was designed to 'smooth' the price changes for the retailers in each year of the regulatory period. That is, instead of having prices increasing by more or less in subsequent years they would increase by a constant rate. This was seen to be advantageous as it avoided price volatility for the retailers (e.g. as proposed by the ESC with prices increasing by 11.3% in 2010/11 and then 30.7% in 2011/12).

In examining the options for responding to the ESC's draft decision, and the possibility of having prices increasing by more or less in subsequent years, the retailers advised Melbourne Water that they preferred a smoothed price path. This is because it enables them to better manage the financial impacts on their business and achieve more consistent financial outcomes over the 2009 regulatory period. Prices increasing by more or less in subsequent years introduces variability in profits and financial indicators such as interest cover and gearing.

Taking into account the views of Melbourne Water's customers and the proposed changes outlined above to its operating and capital expenditures, as well as the WACC, a price increase in 2009/10 of 21.3% is proposed and then a smoothed price path of 21.7% per year from 2009/10. While this will result in some differences between the revenue collected and the revenue required to recover costs in each year, these differences are less than 5% of costs, except in 2010/11 when the difference is approximately 10%.

Melbourne Water considers that its proposed price path ensures its usage and service prices are largely cost reflective while enabling customer impacts to be managed. Important in this regard is that its usage prices are based on long run marginal costs, with service prices being established by the difference between the total revenue being collected and the variable revenue. Therefore, the above minor differences in revenue collected and the revenue required to recover costs only impact the fixed service prices.

## Salt prices

In its draft decision the ESC notes that it proposes to approve the change in Melbourne Water's trade waste parameter for salt from total dissolved solids to inorganic total dissolved solids. It also endorsed a long term price signal to industry to reduce salt discharges in order to meet EPA requirements, but noted that there are some practical difficulties in implementing this strategy in the short to medium term. In particular:

- The inconsistency in pricing between Melbourne Water and the retailers
- The fact that a significant level of salt comes from residential sewage and inflow and infiltration, as well as trade waste customers, and that there may be a disproportionate impact on industry from charging trade waste customers
- Adverse customer impacts if higher charges are introduced too quickly.

In relation to the first of these issues, Melbourne Water notes that the ESC has proposed to require the retailers to review and amend their trade waste tariffs during the 2009 regulatory period, including charges for salt. This should help to bring consistency to wholesale and retail trade waste pricing, including for salt charges. Melbourne Water understands that the retailers will work towards implementing revised trade waste tariffs, possibly from 2010/11.

Melbourne Water has an explicit salt charge for major trade waste customers. This reflects the fact that the proportion of total salt load from trade waste customers is more readily measurable than from other sources and that the trade waste prices is likely to be more elastic. While salt does come from various sources, trade waste customers individually send significant salt discharges to the treatment plants, particularly when compared to individual residential customers. The salt charge provides the retailers with incentives to use price and non-price measures to reduce the salt loads of trade waste customers. That said, Melbourne Water does pass on the salt charge to residential customers through its volumetric charge at each treatment plant. Previously this occurred through the non-major trade waste load volume charge.

In response to the ESC's draft decision, Melbourne Water has examined the possible options for more gradually increasing the inorganic total dissolved solids charge over the 2009 regulatory period. It is noted that the proposed 2009/10 price of \$24, and the price path of 21.9%, included in the 2009 Water Plan were based on transitioning towards a cost reflective price over two regulatory periods. A higher price path was assumed in the 2009 regulatory period and lower price path in the 2013 regulatory period.

Melbourne Water considers that the approach of transitioning over two regulatory periods remains valid and that to transition more gradually over three or four regulatory periods would undermine the intent of introducing a cost reflective signal. In this regard, it proposes an inorganic total dissolved solids charge for 2009/10 of \$18 and a price path of 18% in subsequent years until the end of the 2013 regulatory period (2017/18). This halves the previously proposed increase in 2009/10 and lowers the price path by approximately 4% in subsequent years of the 2009 regulatory period.

Melbourne Water has examined the potential impact of the proposed prices on the top 10 trade waste customers, as at September 2008, sending salt loads to both the WTP and ETP. It considers these impacts are not excessive for large industrial customers.

## Recycled water prices

In its draft decision the ESC noted Melbourne Water's proposed approach in relation to recycled water prices for the Werribee Irrigation District and that for above contract volumes it was proposed to charge cost recovery prices.

Since advising the ESC of this approach for above contract volumes, Melbourne Water has agreed in principle<sup>4</sup> with Southern Rural Water to charge the same variable price for above contract volumes as for within contract volumes. That is, all recycled water supplied to Southern Rural Water for the Werribee Irrigation District will be at the bulk supply contract price until mid 2011.

This decision is consistent with pricing principles proposed in Melbourne Water's 2009 Water Plan and was undertaken after consideration of the current circumstances of the Werribee Irrigation District customers with the continuing drought and lack of river and ground water. Melbourne Water will consult with Southern Rural Water, its

---

<sup>4</sup> The extension of the bulk supply agreement is in the process of being formalised.

customers and the ESC to determine more cost reflective bulk recycled water prices for the period post mid 2011.



# Regulatory framework issues

This section sets out Melbourne Water's views in relation to specific issues relevant to the regulatory framework that is in place for the 2009 regulatory period. In particular:

- Regulatory asset value transfers
- The treatment of regulatory depreciation
- The treatment of uncertain and unforeseen events.

## RAV transfer

Melbourne Water supports the ESC's view in the draft decision that the regulatory asset value transfers (from Melbourne Water to South East Water and Yarra Valley Water) are no longer required to achieve the Government's pricing objectives. A permanent change to regulatory asset values should not be used to address temporary, short term issues associated with price increases.

## Treatment of depreciation

In its draft decision the ESC notes that given the significant reduction in the WACC it does not consider it is necessary to defer depreciation on existing assets to achieve the Government's pricing objectives. That said, it considers that regulatory depreciation on new assets valued at greater than \$10M, and taking more than one year to construct, should be deferred until the year the project is planned to come into operation.

Melbourne Water considers that the \$10M threshold set by the ESC is too low for its business given the size of its forward capital program. Rather, the \$40M threshold proposed for major assets in the ESC's September 2008 Supplementary Guidance on Water Plans is seen to be more appropriate. This threshold would capture Melbourne Water's top 10 capital projects for the 2009 regulatory period and result in the deferral of \$35M in regulatory depreciation. Lowering the threshold to \$10M would almost double the number of projects and only result in the deferral of a further \$6M in depreciation.

## Uncertain and unforeseen events

In its draft decision the ESC notes that it proposes to approve an uncertain and unforeseen events mechanism that sets out a process for applying for a price

adjustment, either during or at the end of the regulatory period, to take account of events that were uncertain or unforeseen at the time of the price review process. Such events include major capital projects that were uncertain in timing or cost, significant differences between actual and forecast demand levels, changes in legislative and other Government imposed obligations and catastrophic events (such as fire, earthquake or act of terrorism). Reviews under the uncertain and unforeseen events mechanism could be requested by the businesses or the ESC.

Melbourne Water also notes that the ESC's does not propose to set a threshold for applying for a price adjustment under the uncertain and unforeseen events mechanism. To assist businesses in deciding whether and when to make an application under the mechanism, the ESC has noted that businesses should consider:

- The net impact on costs or revenue of all changes that have occurred during the period under consideration and whether the net effect is significant
- Whether offsetting changes in costs or demands in later years of the regulatory period are possible and if so the likelihood of such changes.

As detailed in Melbourne Water's 2009 Water Plan, it considers that within period price adjustments should be limited to a small number of potentially significant issues.

In the 2009 Water Plan, Melbourne Water proposed that a within period review and pass through mechanism should apply to specified major projects which had preliminary estimates that were subject to uncertainties not controllable by the business. Melbourne Water considers that the following specified major projects, as listed in the 2009 Water Plan, should be subject to the uncertain and unforeseen events mechanism proposed by the ESC:

- The Victorian Desalination Project
- The ETP advanced effluent treatment project or the outfall extension
- The biosolids energy recovery project at WTP
- Drought contingency expenditures.

These major projects will have both capital and operating expenditure implications, with some projects such as the Victorian Desalination Project, and biosolids energy recovery project at WTP, being likely to have mostly operating expenditure impacts.

The ESC's draft decision for Melbourne Water, as well as the final decisions for the regional and rural water businesses in 2008, include changes in the timing or scope of expenditure on major capital projects as an event that could be taken into account under the uncertain and unforeseen events mechanism. Melbourne Water considers

that limiting the scope of events to major capital projects is too narrow and proposes that rather, the mechanism should include reference to major projects. This would mean that changes in the timing or scope of expenditure for the Victorian Desalination Project, or the biosolids energy recovery project at WTP, would be able to be considered under the mechanism.

A further potentially significant issue for Melbourne Water that it considers may require within period review is the introduction of a national emission trading scheme, or other schemes relating to the reduction of greenhouse gas emissions. Melbourne Water is among the top 15 electricity users in Victoria. The impact from an emissions trading scheme could, therefore, be significant for Melbourne Water as both an electricity user and an emitter. Melbourne Water therefore welcomes the clause under the uncertain and unforeseen events mechanism in the ESC's draft decision that includes the introduction of a national emissions trading scheme.<sup>5</sup>

The remaining potentially significant uncertainty for Melbourne Water over the 2009 regulatory period that may require within period review is demand. As previously noted, the demand outcomes over the 2005 regulatory period were significantly lower than reflected in the ESC's 2005 price decision. This translated into revenues being approximately 8.5% lower than allowed for. Melbourne Water is concerned to manage this revenue risk in the 2009 regulatory period and again welcomes inclusion of demand in the uncertain and unforeseen events mechanism in the ESC's draft decision.

Melbourne Water is of the view that the above issues should be considered under the unforeseen and uncertain events mechanism in isolation from other changes that may occur during the 2009 regulatory period. In order to maintain the properties of incentive based regulation, including risk sharing as determined by the ESC's final decision, the scope of any within period review should be limited to a small number of uncontrollable, significant items. If a within period review is broader than these items it reduces businesses' incentives to outperform the benchmark expenditures determined by the ESC.

---

<sup>5</sup> In the event that Melbourne Water seeks a price adjustment within the period, it considers this should be relative to the electricity price estimates as submitted in its 2009 Water Plan. The ESC's expenditure consultants have shown electricity costs in the Expenditure Review Report (Table 6.16, page 70). However, it is unclear to Melbourne Water how these costs have been calculated and it does not consider these appropriately reflect the prices included in Melbourne Water's 2009 Water Plan.