

OPINION REPORT – RETURN OF ADDITIONAL DESALINATION PAYMENTS

SEPTEMBER 2012

An appropriate citation for this paper is:

Essential Services Commission 2012, *Opinion report – Return of Additional Desalination Payments*, September.



OPINION REPORT – RETURN OF ADDITIONAL DESALINATION PAYMENTS

SEPTEMBER 2012

CONTENTS

0/	/ERVIEW	1
1	BACKGROUND	3
2	ESTIMATING DESALINATION PAYMENTS MADE BY CUSTOMERS	5
2	OPINION ON AN ADDITIONAL PETUPN IN 2012-12	15

OVERVIEW

- Our July 2012 report, 'Monitoring the return of the unrequired desalination payments', explained that in 2011-12 due to construction delays, Melbourne Water and four water retailers—City West Water, South East Water, Yarra Valley Water and Western Water—collected more payments than required from customers to cover costs relating to the Wonthaggi desalination plant.
- From 1 July 2012 the water businesses began returning unrequired desalination payments to customers through a 12 month price freeze.
- This report provides our opinion on whether it is appropriate to return additional amounts to customers in 2012-13, on top of funds that are being returned via the price freeze.
- AquaSure's recent public statements suggest that the desalination could be completed by the end of December 2012.
- Due to uncertainty associated with the timing of the completion of the desalination plant, it is not appropriate at this stage to recommend that additional funds should be returned to customers, on top of funds that are being returned via the price freeze.
- Using a number of assumptions, we have estimated that the additional amounts that might be returned to customers in 2012-13 could range from \$23 million to \$243 million, depending on the desalination plant's costs and completion date.
- It is important to note that due to uncertainty about the completion date for the desalination plant that actual amounts to be returned could vary from this estimated range significantly.
- The water businesses should continue to assess whether an additional return is possible in 2012-13. They should put systems in place now so that an additional return to customers can occur quickly when there is more certainty about desalination costs.

- Our views have been informed by information provided to us by the water businesses about desalination payments and the expected impact of the price freeze in returning funds to customers.
- We will know with more certainty the amount that must be returned to customers once the plant has been completed.
- In early 2013-14, after it is also known how much has been returned to customers through the price freeze, we will require an audit to check whether any more funds should be returned to customers. Any remaining amounts will be returned in the first bill issued by the water businesses in 2013-14.
- In our July report, we established the guiding principle that water businesses should make no financial gain as a result of collecting unrequired desalination funds from customers. This requires that interest be applied to the customer funds held, but not required, by the water businesses.
- In this paper, we also set out our views on the interest adjustments that should apply to unrequired desalination payments made by customers and held by the water businesses.
- A minimum interest rate of 7 per cent per annum should be applied
 to unrequired desalination payments made by customers and held
 by the water businesses. We estimate that the possible range of
 interest adjustments is from around \$21 million to \$30 million—the
 amount will vary depending on the completion date of the
 desalination plant and costs.

1 BACKGROUND

The revenue we approved in 2009 for Melbourne Water included a maximum component of \$684 million (in nominal or dollars of the day terms) in the period to June 2013 (\$225 million in 2011-12 and \$459 million in 2012-13) to cover costs of the desalination plant. These costs were also reflected in the prices we approved for the water retailers.

In our July 2012 report, we noted that the water businesses required substantially less—possibly around \$300 million less—than was built into maximum prices to cover costs associated with the desalination plant in the period to June 2013.

This later estimate was based on the desalination plant being completed on 28 February 2013, which follows a reliability testing period. This completion date is consistent with the timing specified in the Auditor-General's Annual Financial Report of the State of Victoria 2010-11.

In June 2012, the Victorian Government directed the water businesses to freeze their water, sewerage, trade waste and recycled water prices for 2012-13 at 2011-12 nominal levels in order to start returning unrequired desalination payments made by customers.

From 1 July 2012, the water businesses began returning funds to customers through the price freeze. The prices most customers paid for water and sewerage services would have risen by around 9 to 11 per cent in 2012-13 if not for the price freeze.

Importantly, as part of its price freeze announcement, the Victorian Government also announced that any excess funds remaining after 2012-13 would be returned to customers in the first bills issued after 1 July 2013, including adjustments for interest and inflation.

In our July report, we said we would undertake an assessment of whether it might be appropriate for the businesses to return more funds to customers in 2012-13, on top of the funds returned by the price freeze.

This paper sets out our views on any additional returns to customers. We also provide our estimates of the interest amounts that should be paid to customers.

The paper is structured in two main parts:

- Chapter 2 develops a methodology for determining the total amount of unrequired desalination payments remaining at 30 June 2013, and highlights challenges in confirming amounts until there is clarity on the desalination completion date. We also outline a methodology for estimating the amount of interest to be returned to customers.
- Chapter 3 provides our reasons for not, at this stage at least, recommending that businesses return additional amounts to customers on top of the price freeze in 2012-13. However, we also describe options for returning any additional desalination funds in the future given the situation could change.

RESPONDING TO THIS REPORT

We have expressed our opinions on whether any additional desalination payments should be returned to customers in 2012-13, and how they might be returned in the future. We have also provided our views on how interest amounts to be returned to customers should be calculated.

We now expect the water businesses to express their intentions and to give reasons if they choose to deviate from our opinion.

Water businesses should submit their intentions to the Essential Services Commission. Submissions should be sent to water@esc.vic.gov.au. We also expect businesses to publish their response publicly on their websites by 26 October 2012.

Note: all figures in this report are quoted in nominal (dollars of the day) terms unless otherwise specified.

2 ESTIMATING DESALINATION PAYMENTS MADE BY CUSTOMERS

This section develops a methodology for estimating the total amount of unrequired desalination payments remaining at 30 June 2013, and highlights challenges in confirming amounts until there is clarity on the completion date for the desalination plant. It also outlines our approach to estimating the amount of interest that should be returned to customers.

APPROACH TO ESTIMATING UNREQUIRED DESALINATION PAYMENTS

In order to assess whether any additional funds could be returned to customers in 2012-13, we have forecast the amount of unrequired desalination payments remaining at 30 June 2013 by:

- Estimating total customer payments towards the desalination plant in 2011-12 and 2012-13, taking into account the forecast impact of the price freeze and payments to special circumstances customers in 2012-13.
- Subtracting forecast desalination payments by Melbourne Water in 2012-13 (there were no desalination payments by Melbourne Water in 2011-12).
- Adjusting for interest to ensure that the water businesses do not benefit from holding unrequired desalination payments made by customers.

We have derived a possible range for the amount of additional funds that might be returned to customers in 2012-13 that vary based on completion dates for the desalination plant of the ends of December 2012 and February 2013—these dates are informed by publicly available information on the desalination plant.

ESTIMATED TOTAL CUSTOMER PAYMENTS FOR DESALINATION IN 2011-12 AND 2012-13

Customer payments towards the desalination plant can be estimated in two ways. The first is to use the 2009 estimates for customer payments towards desalination—these estimates depend on the forecasts for water use at the time. The second approach is to use updated figures that take into account actual water use.

We believe that updated water use figures should be used to estimate total customer payments for desalination in 2011-12 and 2012-13 (noting that updated forecasts are needed for 2012-13). This approach is fair to all customers and the businesses, and is also consistent with the way funds are being returned to customers through the price freeze. Given actual water use is likely to be lower than forecast in 2009, our preferred methodology will probably result in a modestly lower amount being returned to customers than if the 2009 forecasts were used.

Using actual water use for 2011-12, the water businesses estimate that total payments made by customers for desalination was \$222 million in 2011-12.

Based on updated forecasts for water use in 2012-13, total payments made by customers for desalination will be around \$289 million in 2012-13 (based on estimates provided by the water businesses), after taking into account the impact of the retail price freeze and separate payments to "special circumstances" customers—covering those who have moved out of the Melbourne area for instance, and do not benefit from the price freeze.

The businesses expect to return about \$162 million to customers through the price freeze (note that this amount will vary depending

mainly on water use in 2012-13) and around \$0.5 million to customers through special circumstances payments in 2012-13.

While the water businesses' estimate that the 2012-13 price freeze will return around \$174 million to customers in total, the actual amount returned in 2012-13 is estimated to be around \$162 million. The remainder (an estimated \$12 million) will be returned in the first bills issued in 2013-14. This reflects the lags in the billing cycle of the water businesses—customer water use is billed in arrears.

Based on the above, the estimated payments by customers for desalination in the two years 2011-12 and 2012-13 will be around \$511 million.

ESTIMATES OF MELBOURNE WATER'S DESALINATION COSTS FOR 2012-13

The amount that Melbourne Water will pay for the desalination plant in 2012-13 remains uncertain (there were no desalination payments made by Melbourne Water in 2011-12).

Key dates for signalling the progress of the desalination plant are:

- the date of commercial acceptance (the date that the plant will be capable of supplying water at the rate of 150 gigalitres per annum, the plant's planned maximum annual operating capacity).
- the completion of reliability testing, after which the project is completed.

The Department of Sustainability and Environment (DSE), the Victorian Government agency responsible for managing the desalination project, have advised that AquaSure's programmed timeframe for reaching commercial acceptance is 15 November 2012, with project completion (signalled by the completion of reliability testing) on 28 February 2013.

On 25 September 2012 DSE advised us that AquaSure is aiming to bring forward the completion of reliability testing from 28 February 2013 to the end of December 2012. This is subject to Aquasure's progress through the reliability testing process, and there remains a possibility that the plant will not be completed until the end of February 2013.

Desalination payments by Melbourne Water depend heavily on when the desalination project is completed. Prior to project completion, payments will reflect project commissioning costs. Once the project is completed, payments will reflect a prorating of the annual contract costs payable to AquaSure, based on days remaining in the year.

While the exact desalination payments by DSE and therefore Melbourne Water are subject to the terms of a private contractual agreement, advice from DSE indicates that commissioning costs were expected to be \$173 million in 2012-13, but now may be less.

For comparative purposes only, we have assumed the commissioning costs could be within a range from \$70 million to \$173 million. While not certain, advice from DSE indicates that the commissioning costs will probably be lower the earlier the desalination plant is completed.

After project completion, payments by Melbourne Water to the end of 2012-13 can be estimated by prorating the annual contract costs, which are \$654 million in 2012-13 (or \$1.8 million per day) given no desalination water was ordered for this financial year.

Contract payments by Melbourne Water will be higher the earlier the desalination plant is completed. Table 1 shows estimated contract costs (that exclude commissioning costs) based on completion dates of the ends of December 2012 and February 2013—dates we have chosen for estimation purposes (the dates are consistent with public information on the range of possible completion dates for the desalination plant).

TABLE 1 ESTIMATED DESALINATION CONTRACT COSTS 2012-13 (\$m)

Assumed completion date	Contract costs (pro-rated)
End December 2012	324
End February 2013	216

Given the uncertainty surrounding the desalination plant's commissioning phase, we have estimated Melbourne Water's desalination costs in 2012-13 by using the \$70 million to \$173 million range for commissioning costs identified above.

As shown in table 2, this results in an upper estimate of Melbourne Water's 2012-13 desalination costs of \$497 million (if the project is completed at the end of December 2012, and assuming commissioning costs of \$173 million) and a lower estimate of \$286 million (if the project is completed at the end of February 2013, and assuming commissioning costs of \$70 million).

TABLE 2 ESTIMATED DESALINATION COSTS 2012-13 (\$m)

Assumed completion date	Contract costs (pro- rated)	Commissioning costs	Estimated desalination costs
End December 2012	324	173 (high estimate)	497 (high estimate)
End February 2013	216	70 (low estimate)	286 (low estimate)

These amounts could be higher or lower than what we have estimated. This reflects uncertainty about the timing of completion for the desalination plant, and given that we are not privy to the exact payment arrangements under the contractual agreement between the State and AquaSure. We note that the range in table 2—\$286 million to \$497 million—is already large.

ESTIMATED BALANCE OF FUNDS REMAINING AT 30 JUNE 2013 (EXCLUDING INTEREST)

Using the data from the previous two sections, the balance of funds remaining to be returned to customers at 30 June 2013 could range from a low of \$14 million to a high of \$225 million, prior to adjustments for interest (table 3).

TABLE 3 ESTIMATED BALANCE OF FUNDS REMAINING AT 30 JUNE 2013 (EXCL. INTEREST) BY COMPLETION DATE (\$m)

Assumed completion date	Estimated desalination payments by customers	Estimated desalination costs	Estimated balance of funds remaining
End December 2012	511	497 (high estimate)	14 (low estimate)
End February 2013	511	286 (low estimate)	225 (high estimate)

To estimate any additional amount to be returned in 2012-13, these figures need to be adjusted down for the forecast amounts to be returned in the first bills for 2013-14 as a result of the 2012-13 price freeze which the businesses have estimated to be around \$12 million. This results in a possible range for an additional return in 2012-13 of an estimated \$2 million to \$213 million, excluding interest.

ADJUSTING FOR INTEREST

In our July report, we established the guiding principle that water businesses should make no financial gain as a result of collecting unrequired desalination funds from customers. This requires that interest be applied to the customer funds held, but not required, by the water businesses. Our discussion below is based on the application of a nominal interest rate—that is, an interest rate that comprises a real interest component as well as inflation.

To derive a nominal interest rate, we have focused on the debt costs of the water businesses. This is because the water businesses would benefit from holding unrequired desalination payments by customers mainly by paying down debt and avoiding interest payments, or reducing the need to borrow to invest in new projects, thus avoiding interest costs.

Our approach seeks to ensure that the businesses do not benefit from holding unrequired desalination payments made by customers.

THE RATE OF INTEREST THAT SHOULD APPLY

2011-12

The rate of interest applying in 2011-12 should approximate the water businesses actual cost of debt in the year.

To derive an actual cost of debt we have used the figures presented in the metropolitan water businesses 2011-12 annual reports, and adjusted these for an estimate of the additional debt raising costs paid by the businesses.

Based on the 2011-12 annual reports, we estimate that the weighted average cost of debt faced by the metropolitan businesses and Western Water in 2011-12 was around 5.7 per cent. This however, does not reflect actual borrowing costs of the water businesses as it excludes other costs of raising debt.

Other borrowing costs include the financial accommodation levy, which was payable by the water businesses to the Victorian Government at a rate of 1.1 per cent in 2011-12, and transaction costs incurred in raising debt through the Treasury Corporation of Victoria (TCV) of around 0.2 per cent (note that all water businesses must borrow through the TCV).

Adjusting the 5.7 per cent rate for these other borrowing costs (totalling 1.3 per cent) results in a nominal interest rate of 7 per cent for 2011-12.

2012-13

For 2012-13, we have adopted an approach that estimates a nominal interest rate using annual yields on longer-term Government securities. Water business borrowings are managed in accordance with Treasury Management Guidelines for Government businesses, which recommend spreading debt maturities over 10 or more years.

Estimating future interest rates based on yields on longer-term securities is therefore appropriate, and is a common approach by regulators to forecast the cost of debt for utilities.

Our recently released consultation paper on regulating the debt management powers of the water businesses proposed an approach to setting an interest rate that uses an annual yield on a 10 year Commonwealth Government Bond, and making an adjustment for a risk premium. The intention of the methodology proposed in our debt management powers consultation paper is to compensate businesses for the cash flow impacts of non-payment of bills by customers.

We considered a similar approach to derive a nominal interest rate for 2012-13 that should apply to unrequired desalination payments held by the water businesses.

The average yield on a 10 year Commonwealth Government Bond over 2012-13 so far is close to 3 per cent (calculated by averaging the daily closing balance). Adjusting this for a risk premium of 3.6 per cent (consistent with the adjustment proposed in our debt management consultation paper) to reflect the borrowing costs a private sector enterprise with a similar risk profile to a water business, results in an annual rate of 6.6 per cent.

We note that yields on Government bonds are currently near historic lows. Most private sector forecasts indicate a rise in longer-term bond yields over the next year (the National Australia Bank forecasts the yield on a 10 year Commonwealth Government Bond to reach 3.75 per cent by March 2013, which would imply an interest rate of around 7.35 per cent using a debt premium of 3.6 per cent). As such, we do not believe setting a rate of below 7 per cent for 2012-13 is appropriate.

We have concluded that the annual nominal interest rate that should apply to unrequired desalination payments held by the water businesses over 2011-12 and 2012-13 is 7 per cent.

THE METHOD OF APPLYING THE INTEREST RATE

The method of applying the interest rate to derive an amount of interest to be returned to customers should be based on an approach that uses the cash flows facing the water businesses for desalination on a monthly basis. This approach will give a reasonable estimate of the interest payments a water business might have avoided due to holding unrequired desalination payments made by customers.

We believe the following key parameters should be followed to derive an estimate of the amount to be returned to customers for interest:

- Estimates of actual cash flows for desalination—that is, the
 payments the businesses receive from customers (since July 2011)
 and the payments the businesses make for desalination—should be
 used to derive a balance from which to calculate an interest
 amount.
- Interest amounts should be calculated on a monthly basis. This is appropriate given seasonal variations in customer payments (mainly reflecting movements in water use) and the lumpy nature of expected desalination payments on a monthly basis over 2012-13.
- Monthly interest rates should be equivalent to an annual interest rate of 7 per cent, allowing for compounding. For example, a monthly effective rate for a nominal interest rate of 7 per cent per annum is given by:

Monthly Effective Rate = $[(1+0.07)^{(1/12)}-1]*100 \% = 0.57$ per cent

 The closing monthly balance (of desalination payments received from customers less desalination payments by Melbourne Water) should be used to calculate amounts for interest.

Table 4 shows the estimated interest amounts that should be returned to customers using an interest rate of 7 per cent and the method outlined above. The amounts range from \$21 million to \$30 million depending on the assumed completion date for the desalination plant.

To derive these estimates, we have assumed that funds are only returned to customers over 2012-13 through the price freeze and special circumstances payments, and there is no additional rebate.

Assuming an end December 2012 completion date for desalination and commissioning costs of \$173 million, after adjusting for interest, the estimated balance of funds remaining at 30 June 2013 is \$35 million, which is equivalent to around \$14 to \$18 per year on the average household owner-occupier bill (note that the estimated bill amounts are indicative and will vary by water retailer).

Assuming an end February 2013 completion date for desalination and commissioning costs of \$70 million, after adjusting for interest, the estimated balance of funds remaining at 30 June 2013 is \$255 million, which is equivalent to around \$101 to \$130 per year on the average household bill (depending on the water retailer).

TABLE 4 ESTIMATED BALANCE OF FUNDS REMAINING AT 30 JUNE 2013 (INCL. INTEREST) BY COMPLETION DATE

(\$m)

Assumed completion date	Estimated balance of funds remaining	Adjustment for interest	Estimated balance of funds remaining (incl. interest)
End December 2012	14 (low estimate)	21	35 (low estimate)
End February 225 (high estimate) 2013		30	255 (high estimate)

In estimating any additional amount to be returned including amounts for interest, the figures in table 4 need to be adjusted down for the forecast amounts to be returned in the first bills for 2013-14 to reflect the 2012-13 price freeze, currently forecast by the water businesses to be around \$12 million.

This implies an estimated range of \$23 million to \$243 million for any additional return to customers in 2012-13 on top of the price freeze, including adjustments for interest.

We have provided a spreadsheet calculator on our website (www.esc.vic.gov.au) that shows in more detail our method for calculating the amount of interest that should be returned to customers.

3 OPINION ON AN ADDITIONAL RETURN IN 2012-13

This section provides our view on whether an additional return to customers (over and above the price freeze) is appropriate, and the reasons for reaching our conclusions. We also describe options for returning any additional desalination funds in the future.

Given uncertainty associated with the timing of the desalination plant, it is not appropriate at this stage to recommend that an amount should be returned to customers in addition to the 2012-13 price freeze.

However, should the desalination plant be completed at the end of December 2012, and if commissioning costs are around \$70 million (at the low end of our estimated range for commissioning costs), then an additional return may be possible. This will not be known with certainty until the completion of reliability testing for the desalination plant.

Under the scenario above, the estimated balance of funds remaining at 30 June 2013 would be around \$143 million (table 5). This is higher than the \$35 million shown in table 4 mainly because of the changed assumption about commissioning costs (the estimate in table 4 assumes a commissioning cost of \$173 million).

To estimate an additional return on top of the price freeze, the \$143 million shown in table 5 needs to be reduced by the forecast amounts to be returned in the first bills for 2013-14 reflecting the 2012-13 price freeze (\$12 million). This results in an estimate of around \$131 million.

TABLE 5 ESTIMATED BALANCE OF FUNDS REMAINING AT 30 JUNE 2013 – DECEMBER 2012 COMPLETION, LOW COMMISSIONING COSTS (\$m)

Estimated desal payments by customers	Less contract costs (pro- rated)	Less commissioning costs	Plus interest	Estimated balance of funds remaining
511	324	70	26	143

Businesses should therefore continue to assess whether an additional return is possible in 2012-13. They should put systems in place now so that an additional return to customers could occur quickly when there is more certainty about desalination costs.

Once it is publicly confirmed that the desalination plant has completed reliability testing, the commissioning costs will be more certain and the remaining 2012-13 costs can be extrapolated based on a pro rata of the remaining days in the financial year.

We expect the water businesses to communicate regularly with customers about the potential for an additional return of unrequired desalination payments.

RETURNING ANY ADDITIONAL FUNDS IN 2012-13

The method chosen to return any additional funds to customers in 2012-13 should be closely aligned with how desalination costs were originally reflected in customer prices—that is, spread across water, sewerage, trade waste and some recycled water prices, and fixed and variable prices. It is important that the approach to returning funds is:

- transparent
- easy to understand
- timely

Options for returning additional funds to customers in 2012-13 include a further price reduction, a direct repayment (through for instance, sending a cheque) and a rebate applied on customer bills.

Our preference is that a rebate is applied on customer bills on the basis that it is easy to understand and timely. A rebate should facilitate a more timely and less costly return of customer's funds than any of the other options.

Given the complexity of how desalination costs were spread across multiple tariffs and returned via the price freeze, it is extremely difficult to return to each customer the exact unrequired payments they contributed towards the desalination plant.

However, it is possible to approximate a return in a sufficiently robust manner that broadly matches the rebate with individual customer's payments.

Importantly, there must be clear avenues for customers to have any disputes resolved if they feel they have been unfairly disadvantaged by the way in which a rebate has been calculated or returned.

One appropriate methodology to estimate the amount of any rebate to a particular customer might be based on applying a fixed percentage to the total of customer bills in 2011-12 and 2012-13.

This fixed percentage could be calculated by dividing each water retailer's share of the total estimated unrequired desalination payments into their annual tariff revenue in 2011-12 and 2012-13. This calculation provides an approximation of each customer's percentage share of the over-recovered amounts collected by the businesses over the two years (note that the method could be refined to cover 2011-12 and 2012-13 separately, which would be more appropriate for customers who have moved out before 2012-13, for instance).

The fixed percentage would then be applied to each customers past bills to derive a dollar amount that is then adjusted downwards for any funds returned to a customer through the price freeze.

Our estimates of the fixed percentage to apply to each customer's bills in 2011-12 and 2012-13 are provided in table 6. Estimates are presented for an end December 2012 completion date for the desalination plant and commissioning costs of \$173 million, and an end

February 2013 completion date for desalination and commissioning costs of \$70 million (after adjusting for interest).

The estimates are based on the revenue forecasts in our 2009 pricing models—the water businesses should update these for latest estimates of revenue should this approach be adopted.

TABLE 6 ESTIMATED PERCENTAGE AMOUNT TO BE APPLIED TO PAST CUSTOMER BILLS

Assumed completion date	Estimated percent to be applied to 2011-12 and 2012-13 customer bill amounts
End December 2012 (commissioning costs \$173m)	
City West Water	5.8
South East Water	5.3
Yarra Valley Water	5.4
Western Water	4.4
End February 2013 (commissioning costs \$70m)	
City West Water	12.3
South East Water	11.2
Yarra Valley Water	11.4
Western Water	9.3

In implementing any rebate, other issues that water businesses should consider include:

- How to deal with customers who move prior to any potential rebate being offered.
- Customers who have recently moved into their area.
- How to calculate rebates for large commercial customers.
- How to cater for customers who have been significantly disadvantaged by the rebate process.

As noted above, the businesses should maintain a dispute resolution process that enables customers to query and have any disputes resolved about how much and the way in which any additional funds are returned in 2012-13.

We will also audit the total of all amounts returned to customers through any rebates and the price freeze, to ensure it matches the total of the desalination over-collection.