First amendment to Melbourne Water Determination – Metropolitan Melbourne Water Price Review 2016-21

This determination of the Commission is an amendment to the "Melbourne Water Determination" dated 15 June 2016 (**Principal Determination**).

The Principal Determination is amended with effect from 1 July 2017 by inserting the following into Schedule 2 between items 2.4 and 2.5:

Quiet Lakes Bore Flushing Tariff

For properties that border either Lake Legana or Lake Illawong in the 'Quiet Lakes' area of Patterson Lakes, from 2017-18 an annual tariff per property of up to $118 per annum (not subject to indexation or increase in the period to and including 2020-21).

The purpose and reasons for making this determination are set out in the document "Melbourne Water – Quiet Lakes Bore Flushing Tariff Proposal - Final Decision" dated 21 June 2017.

The Common Seal of the
Essential Services Commission
was affixed to this determination
with the authority of the
Commission

Date: 21 June 2017

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METROPOLITAN MELBOURNE WATER PRICE REVIEW 2016

MELBOURNE WATER DETERMINATION

1 JULY 2016 – 30 JUNE 2021

JUNE 2016

An appropriate citation for this paper is:

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1. General

1.1 Introduction

(a) Clause 14 of the ***WIRO*** requires the Commission to either:

(i) approve the maximum prices the ***regulated entity*** may charge for ***prescribed services***, or the manner in which the ***regulated entity's*** prices are to be calculated, determined or otherwise regulated, as proposed by the ***regulated entity*** in its ***price submission***; or

(ii) specify the maximum prices the ***regulated entity*** may charge for ***prescribed services***, or the manner in which the ***regulated entity's*** prices are to be calculated, determined or otherwise regulated.

(b) On 8 June 2016, the Commission made its decision under the ***WIRO*** in respect of:

(i) the prices which Melbourne Water Corporation (trading as Melbourne Water) (ABN 81 945 386 953) (***Melbourne Water***) may charge for ***prescribed services*** during the ***regulatory period***; and

(ii) the standards and conditions of service and supply which ***Melbourne Water*** has included in its ***price submission***.

(c) This Determination is made by the Commission under section 33 of the ***ESC Act***, pursuant to clauses 10 and 14 of the ***WIRO***.

(d) The purpose and reasons for the making of this Determination are to:

(i) give effect to the decision of the Commission referred to in clause 1.1(b)(i);

(ii) specify the maximum prices which ***Melbourne Water*** may charge for ***prescribed services*** during the ***regulatory***

period or the manner in which such prices are to be calculated, determined or otherwise regulated;

(iii) facilitate the achievement of the Commission's objectives in the ***ESC Act*** and the ***WI Act***; and

(iv) reflect the requirements in the ***WIRO***.

1.2 Application

This Determination applies to ***Melbourne Water*** and its successors and assigns in respect of the business carried on by ***Melbourne Water*** at the date of this Determination.

1.3 Effective period

(a) Term

This Determination takes effect on the later of the date on which notice of its making is published in the Government Gazette and 1 July 2016 and, subject to clause 1.3(b), has effect until the earlier of the date on which it is amended or revoked by a later determination or 30 June 2021.

(b) Next regulatory period

Subject to clause 2.3(b)(ii), if the Commission has not made a determination in respect of the prices to apply in the ***next regulatory period*** on or before 30 June 2021, the prices or the manner in which such prices are to be calculated or otherwise determined as set out in this Determination will continue to apply in respect of ***prescribed services*** provided by ***Melbourne Water*** between 1 July 2021 and the date on which the determination for the ***next regulatory period*** comes into effect.

1.4 Modification of time periods

The Commission may, by notice to ***Melbourne Water***, extend or reduce the time by which, or the period within which, ***Melbourne Water*** or the Commission must comply with an obligation under this Determination.

1.5 Summary and structure

Clause 2 of this Determination specifies the prices which will apply to ***prescribed services*** during the ***regulatory period*** and sets out the procedure and formula according to which prices may be adjusted during the ***regulatory period*** on an annual basis. Clauses 3, 4 and 5 provide for

the circumstances in which prices may be adjusted during the ***regulatory period*** otherwise than in accordance with clause 2.

1.6 Definitions and interpretation

In this Determination, unless the contrary intention appears:

(a) words and phrases in bold italics have the meanings given to them in part A of Schedule 1 (or, where only used within a clause, the meaning given upon their first use); and

(b) the rules of interpretation in part B of Schedule 1 will apply.

1.7 Annexure

(a) For convenience, annexure A to this Determination summarises:

(i) the assumptions underpinning the prices to apply to ***Melbourne Water*** during the ***regulatory period*** or the manner in which such prices are to be calculated or otherwise determined; and

(b) For the avoidance of doubt, annexure A does not form part of this Determination.

2. Price control

2.1 General principles

Subject to this Determination:

(a) Scheduled prices

Melbourne Water must not charge more than:

(i) the scheduled prices in Schedule 2, during the first ***regulatory year***, and

(ii) the amounts determined in accordance with clause 2.3, during each subsequent ***regulatory year***,

in respect of those ***prescribed services*** to which the scheduled prices in Schedule 2 relate, in accordance with Schedule 3.

(b) Application principles

The application principles in Schedule 3 will apply to the prices charged by ***Melbourne Water*** in respect of ***prescribed services*** during the ***regulatory period***.

(c) Pricing principles

During the ***regulatory period***, ***Melbourne Water*** must apply the pricing principles in Schedule 4 when determining the prices to apply to the ***prescribed services*** to which the pricing principles in Schedule 4 relate.

2.2 Operational matters

(a) Contracts

Where ***Melbourne Water*** has entered into a ***relevant contract*** which relates to the provision of ***prescribed services*** prior to 1 July 2016, ***Melbourne Water*** may charge the prices for ***prescribed services*** which are set out in that ***relevant contract*** until its expiration, termination or a periodic review of the prices set out in the contract. Once a ***relevant contract*** has expired or been terminated or the prices in a ***relevant contract*** have been subject to a periodic review, the scheduled prices in Schedule 2 (as adjusted in accordance with this Determination) or the prices determined in accordance with the pricing principles in Schedule 4 will apply for the remainder of the ***regulatory period***.

(b) Dispute Resolution

Any question as to whether a price has been set in accordance with this Determination will be determined by the Commission on the basis of the Commission's interpretation of this Determination.

(c) Publication

Melbourne Water must publish a list of its current prices and pricing principles for ***prescribed services***, and all relevant supporting information that is relied upon to apply the prices or pricing principles, on its website at all times during the ***regulatory period*** and must provide a written copy of the list to its customers on request. The schedule must clearly indicate in respect of each price, the amount determined in accordance with this Determination, the amount of GST payable and the total price (in a manner consistent with the requirements of the *Competition and Consumer Act 2010* (Cth)).

(d) GST

Melbourne Water will not be considered to be in contravention of this Determination if a price charged by it for a ***prescribed service*** exceeds the amount applying under this Determination only by reason of the levying of a charge on account of ***GST***.

2.3 Annual adjustment of prices

(a) Adjustment

Subject to Schedule 2 and (if applicable) Schedule 5, the scheduled prices in Schedule 2 will be adjusted in each subsequent ***regulatory year*** in the ***regulatory period*** in accordance with the formula in clause 2.3(b)(i) and the procedure in clause 2.3(c), and will apply to the ***prescribed services*** to which the scheduled prices in Schedule 2 relate in that ***regulatory year***.

(b) Formula

(i) Subject to Schedule 2 and (if applicable) Schedule 5, each price for the ***prescribed services*** referred to in clause 2.3(a) will be adjusted in accordance with the following formula with effect from the beginning of each subsequent ***regulatory year*** in the ***regulatory period***:

$$P_t = P_{t-1} \times \frac{CPI_t}{CPI_{t-1}} \times (1 + PPM_t)$$

where:

P_t is the price component for ***regulatory year*** t

P_{t-1} is the price component for ***regulatory year*** t-1

$\frac{CPI_t}{CPI_{t-1}}$ for the particular ***regulatory year*** is:

the Consumer Price Index: All Groups Index for the Eight Capital Cities as published by the Australian Bureau of Statistics for the March quarter immediately preceding the start of the relevant ***regulatory year***

divided by

the Consumer Price Index: All Groups Index for the Eight Capital Cities as published by the Australian Bureau of Statistics for the March quarter immediately preceding the March quarter referred to above

PPM_t is the prescribed price movement for the price component for ***regulatory year*** t determined in accordance with Schedule 2.

(ii) If the Commission has not made a determination in respect of the prices to apply in the ***next regulatory period*** on or

before 30 June 2021, PPM_t will be set equal to zero for the purpose of adjusting prices in accordance with the formula in clause 2.3(b)(i) for ***regulatory years*** commencing on or after 1 July 2021 until the date on which this determination is amended or revoked by a later determination.

(c) Adjustment procedure

(i) At least 30 ***business days*** prior to the commencement of each subsequent ***regulatory year*** in the ***regulatory period***, ***Melbourne Water*** must submit its calculation of maximum prices for the ***prescribed services*** referred to in clause 2.3(a) to apply in that subsequent ***regulatory year*** (the ***revised scheduled prices***) to the Commission for approval, together with sufficient information to enable the Commission to assess whether those maximum prices comply with this Determination.

(ii) The Commission will approve the ***revised scheduled prices*** if it considers that they have been calculated in accordance with the formula set out in clause 2.3(b)(i).

(iii) The Commission will be deemed to have approved the ***revised schedule prices*** if it has not provided notice under clause 2.3(c)(iv) to ***Melbourne Water*** within 20 ***business days*** from the date of its receipt of the submitted calculation of the ***revised scheduled prices***.

(iv) If the Commission does not approve the ***revised scheduled prices***, the Commission:

(A) will provide notice to ***Melbourne Water*** (including a statement of its reasons);

(B) may request ***Melbourne Water*** to provide any additional information specified by the Commission;

(C) will take any additional information provided by ***Melbourne Water*** into account; and

(D) will determine the ***revised scheduled prices***.

2.4 Price changes during a billing period

(a) Application of this clause

This clause 2.4 applies where ***Melbourne Water*** issues an invoice in respect of a billing period during which a change to any price for

a ***prescribed service*** comes into effect in accordance with this Determination.

(b) Method of charging

Melbourne Water must not charge the prices determined in accordance with this Determination in respect of any part of a billing period prior to the effective date of the change, but may charge for ***prescribed services*** in respect of the periods before and after the effective date of the change at the prices applicable for each of those periods on a pro-rata basis.

2.5 Reporting requirements

(a) ***Melbourne Water*** must make available to the Commission all information reasonably requested by the Commission from time to time for the purpose of enabling it to confirm that ***Melbourne Water*** is complying with this Determination.

(b) Without limiting clause 2.5(a), if, during the ***regulatory period***, ***Melbourne Water*** enters into a ***new contract*** which relates to the provision of a ***prescribed service*** to which the pricing principles in Schedule 4 relate, ***Melbourne Water*** must, within 30 ***business days*** of the date of the ***new contract***, provide the Commission with a notice specifying:

(i) details of the ***new contract***; and

(ii) information which demonstrates the way in which the prices in the ***new contract*** reflect the relevant pricing principles.

(c) Without limiting clause 2.5(a), if ***Melbourne Water*** proposes to stop providing a ***prescribed service*** or refuses to provide a ***prescribed service*** to a customer, or potential customer, during the ***regulatory period***, it must:

(i) in the case of a proposal to stop providing a ***prescribed service***, provide a notice to the Commission stating the nature of the ***prescribed service*** which it proposes to stop providing and the reason why it proposes to stop providing the ***prescribed service***. This notice must be provided at least 30 ***business days*** prior to the date upon which ***Melbourne Water*** proposes to stop providing the ***prescribed service***; and

(ii) in the case of a refusal to provide a ***prescribed service*** to a customer, or potential customer, ***Melbourne Water*** must

provide a notice to the Commission within 5 ***business days*** of the refusal, stating the nature of the ***prescribed service*** and the reason for the refusal.

3. Amendment of Schedule 2

(a) Amendment proposals

(i) ***Melbourne Water*** may apply to the Commission in accordance with this clause 3 for the amendment of the prescribed price movements and/or price components included in Schedule 2 for the following ***regulatory year*** t (the ***relevant regulatory year***) and all subsequent ***regulatory years*** remaining in the ***regulatory period*** (the ***revised tariff schedule***).

(ii) The average price movement for the ***relevant regulatory year*** and for each subsequent ***regulatory year*** in the ***regulatory period*** determined in accordance with the ***revised tariff schedule*** must not exceed the average price movement that would otherwise have applied under this Determination as calculated in accordance with the following formula.

$$\frac{\sum_{i=1}^{n}\sum_{j=1}^{m} p_t^{ij} q_{t-2}^{ij}}{\sum_{i=1}^{n}\sum_{j=1}^{m} p_{t-1}^{ij} q_{t-2}^{ij}} \geq \frac{\sum_{i=1}^{n}\sum_{j=1}^{m} ap_t^{ij} q_{t-2}^{ij}}{\sum_{i=1}^{n}\sum_{j=1}^{m} p_{t-1}^{ij} q_{t-2}^{ij}}, i = 1,...n; j = 1...m$$

where ***Melbourne Water*** has *n* tariff categories, which each have up to *m* tariff components, and where, for each ***regulatory year*** t for which the calculation is undertaken:

p_{t-1}^{ij} is the tariff charged in ***regulatory year*** t-1 for component j of tariff i

p_t^{ij} is the proposed tariff for component j of tariff i determined in accordance with Schedule 2 where the ***revised tariff schedule*** is not applied

ap_t^{ij} is the proposed tariff for component j of tariff i determined in accordance with Schedule 2 where the ***revised tariff schedule*** is applied

q_{t-2}^{ij} is the quantity of component j of tariff i that was sold in ***regulatory year*** t-2, or, if an actual quantity is not available, either an estimate of the quantity of component j of tariff i that would have been sold in ***regulatory year*** t-2 or a forecast of the quantity of component j of tariff i that is expected to be sold in ***regulatory year*** t-2

(b) Amendment procedure

(i) An application by ***Melbourne Water*** under this clause 3 must be received by the Commission at least 80 ***business days*** prior to the commencement of the ***relevant regulatory year*** and must be accompanied by the following information:

(A) (1) a clearly articulated new tariff strategy that is consistent with clause 11 of the ***WIRO*** (the ***revised tariff strategy***); or

(2) an explanation of how the ***revised tariff schedule*** is consistent with the tariff strategy for ***Melbourne Water*** approved by the Commission in connection with this Determination,

(the ***relevant tariff strategy***);

(B) a ***revised tariff schedule*** that specifies proposed prices for the ***relevant regulatory year*** and prescribed price movements for each subsequent ***regulatory year*** in the ***regulatory period*** that is consistent with the ***relevant tariff strategy***;

(C) a statement setting out evidence demonstrating that ***Melbourne Water*** has provided information to its customers explaining the ***revised tariff schedule*** and how it relates to the ***relevant tariff strategy*** and has consulted effectively with its customers on the ***revised tariff strategy*** (if

clause 3(b)(i)(A)(1) applies) and the ***revised tariff schedule***;

(D) a statement setting out the customer impacts resulting from the ***revised tariff strategy*** and actions proposed by ***Melbourne Water*** to address these customer impacts; and

(E) an explanation of the calculation of the relevant quantities "q_{t-2}^{ij}".

(ii) The Commission may approve the revised tariff schedule under this clause 3 if it is satisfied that:

(A) ***Melbourne Water*** has complied with clause 3(b)(i)(A);

(B) the average price movements calculated in accordance with the ***revised tariff schedule*** comply with the formula in clause 3(a)(ii);

(C) the ***revised tariff schedule*** is consistent with the ***relevant tariff strategy***;

(D) ***Melbourne Water*** has consulted effectively with its customers on the ***revised tariff strategy*** (if clause 3(b)(i)(A)(1) applies) and the ***revised tariff schedule***;

(E) ***Melbourne Water*** has effectively addressed customer impacts resulting from the ***revised tariff schedule***; and

(F) the basis for calculating the relevant quantities "q_{t-2}^{ij}" is reasonable.

(iii) In determining whether it will approve the ***revised tariff schedule***, the Commission may request ***Melbourne Water*** to provide any additional information specified by the Commission and/or to resubmit any of the matters in clause 3(b)(i)(A)-(E).

(iv) For the avoidance of doubt, the Commission will be deemed to have not approved a ***revised tariff schedule*** if it has not provided notice to ***Melbourne Water*** within 40 ***business days*** from the date of its receipt of ***Melbourne Water's*** application under this clause 3.

(v) An approved ***revised tariff schedule*** will be taken to amend Schedule 2 to the extent of any inconsistency.

4. Uncertain or unforeseen events

4.1 General principle

(a) ***Melbourne Water*** may apply to the Commission for the amendment of this Determination and/or the adjustment of the scheduled prices in Schedule 2 to reflect increased or decreased costs incurred by ***Melbourne Water*** and/or increased or decreased revenue received by ***Melbourne Water*** as a result of events which were uncertain or unforeseen at the time this Determination was made (an ***uncertain events application*).**

(b) Whether or not ***Melbourne Water*** makes an application under clause 4.1(a), ***Melbourne Water*** must promptly notify the Commission upon becoming aware of an event which could form part or all of the basis of an application.

(c) The Commission may take action under clause 4.3(b) in respect of an ***uncertain events application*** where the Commission is satisfied that such action is necessary or desirable to take account of events that were uncertain or unforeseen at the time of making this Determination provided that the Commission is satisfied that such action takes into account the interests of customers. Generally the matters taken into account will include positive and negative influences on revenue and expenditure. The Commission may limit an adjustment to only some events or a single event.

4.2 Consideration by the Commission

(a) Examples of uncertain and unforeseen events

The matters that may, at the discretion of the Commission, be taken into account by the Commission under this clause 4 include:

(i) actual licence fees or contributions payable by ***Melbourne Water*** during a particular ***regulatory year*** during the ***regulatory period*** under section 51 of the *Safe Drinking Water Act 2003* (Vic), section 24 of the *Environment Protection Act 1970* (Vic) and section 4H(2) of the ***WI Act*** which differ from the forecast licence fees or contributions set out in annexure A for that ***regulatory year***;

(ii) changes in the timing or scope of expenditure by ***Melbourne Water*** on major projects;

(iii) a change in or to any of the following:

(A) the ***WI Act***, the *Water Act 1989* (Vic), the *Safe Drinking Water Act 2003* (Vic), the *State Owned Enterprises Act 1992* (Vic) and the *Environment Protection Act 1970* (Vic) or regulations made under any of them;

(B) any licence issued pursuant to any of the Acts referred to in clause 4.2(a)(iii)(A);

(C) a bulk entitlement under the Water Act 1989 that is referred to as a Primary Retail Entitlement Holding that affects ***Melbourne Water***;

(D) a ***relevant tax***;

(E) the Statement of Obligations, or

(F) the introduction or cessation of a statutory carbon price or tax or a national emissions trading scheme or other scheme relating to the reduction of greenhouse gas emissions.

(b) Exclusions

In considering an ***uncertain events application***, the Commission will not take into account matters that:

(i) are or should be within ***Melbourne Water's*** control;

(ii) were or should have been known by ***Melbourne Water*** at the time the Determination was made;

(iii) could reasonably have been foreseen by ***Melbourne Water***;

(iv) should be or should have been planned for or managed by ***Melbourne Water***; and/or

(v) reflect inefficient expenditure by ***Melbourne Water***.

(c) Dispute resolution

Any question as to whether a matter should be taken into account by the Commission under this clause 4 will be determined by the Commission in its absolute discretion.

4.3 Procedure

(a) Application process

(i) An ***uncertain events application*** must be accompanied by a statement setting out:

(A) the details of the relevant uncertain or unforeseen event;

(B) the amount and timing of any increase or decrease in operating and/or capital expenditure associated with the relevant event during the ***regulatory period*** and/or the amount and timing of any increase or decrease in revenue associated with the relevant event during the ***regulatory period***;

(C) the basis for calculating the increase or decrease in operating and/or capital expenditure and/or revenue referred to in clause 4.3(a)(i)(B); and

(D) details of the proposed action to be taken by the Commission under clause 4.3(b).

(ii) The Commission may identify an event or events which it considers has had or may have a material impact on ***Melbourne Water's*** operating and/or capital expenditure and/or revenue and may decide to take action under clause 4.3(b) in the absence of an ***uncertain events application*** by ***Melbourne Water***.

(iii) The Commission may request ***Melbourne Water*** to provide any additional information specified by the Commission in connection with an ***uncertain events application***.

(b) Action by the Commission

If the Commission is satisfied about the matters set out in clause 4.1(b) in respect of an ***uncertain events application*** or an event identified by the Commission under clause 4.3(a)(ii), the Commission may, in its absolute discretion:

(i) amend this Determination or adjust the scheduled prices in Schedule 2 and/or the revenue requirements in Schedule 4 with effect from a date and in a manner decided by the Commission (in respect of one or more events) at a time decided by the Commission; or

(ii) take the ***uncertain events application*** into account in making its determination in respect of the prices which ***Melbourne Water*** may charge for ***prescribed services*** in the ***next regulatory period***.

5. Material error and unintended consequences

Where the Commission is satisfied that in any material respect

(a) the Determination or any information relied upon in the making of this Determination contains an error, deficiency or miscalculation; or

(b) any information on which this Determination was based was false or misleading or

(c) such amendment or adjustment is necessary or desirable to avoid an unintended consequence of this Determination,

the Commission may decide to amend this Determination and/or specify a price adjustment, provided that it is satisfied that such amendment and/or price adjustment takes into account the interests of customers.

Schedule 1 – Definitions and Interpretation

A. Definitions

business day means a day on which banks are open for general banking business in Melbourne, not being a Saturday or a Sunday.

diversion service has the meaning given in the ***WIRO***.

ESC Act means the *Essential Services Commission Act 2001* (Vic).

GST has the meaning given in section 195-1 of the *A New Tax System (Goods and Services) Tax Act 1999* (Cth).

miscellaneous services means services that are provided in direct connection with ***prescribed services***, prices in respect of which are either included in Schedule 2 or determined in accordance with the relevant pricing principles in Schedule 4.

new contract means any contract for ***prescribed services*** which is renewed, renegotiated or entered into during the ***regulatory period***.

next regulatory period means the period commencing on 1 July 2021 and ending on a date specified by the Commission.

prescribed services has the meaning given in the ***WIRO*** and may include ***miscellaneous services***.

price submission has the meaning given in the ***WIRO***.

regulated entity has the meaning given in the ***WIRO***.

regulatory period means the period commencing on 1 July 2016 and ending on 30 June 2021.

regulatory year means each period of twelve months commencing on 1 July and ending on 30 June.

relevant contract means a contract which relates to the provision of ***prescribed services***.

relevant tax means any tax imposed by or payable directly or indirectly to any government or public authority in the Commonwealth of Australia (including ***GST***) but excluding:

(a) the licence fees referred to in clause 4.2 of this Determination;

(b) penalties and interest for late payment of any tax; or

(c) any tax that replaces any of the taxes referred to in (a) and (b), where tax includes any rate, duty, charge or other like or analogous impost.

waterways and drainage service has the meaning given to the term 'metropolitan waterways and drainage service' in the ***WIRO***.

WI Act means the *Water Industry Act 1994* (Vic).

WIRO means the Water Industry Regulatory Order 2014 as at the date of this Determination.

B. Interpretation

Headings are for convenience only and do not affect interpretation. The following rules apply unless the context requires otherwise.

(a) The singular includes the plural, and the converse also applies.

(b) If a word or phrase is defined, its other grammatical forms have a corresponding meaning.

(c) A reference to a person includes a corporation, trust, partnership, unincorporated body or other entity, whether or not it comprises a separate legal entity.

(d) A reference to a clause or schedule is a reference to a clause of or schedule to, this document.

(e) A reference to a determination, agreement or document (including a reference to this document) is to the agreement or document as amended, supplemented, novated or replaced, except to the extent prohibited by this document or that other agreement or document.

(f) A reference to an Act, ordinance, code or other law includes regulations and other instruments under it and consolidations, amendments, re-enactments or replacements of any of them.

(g) If a period of time is specified and commences on a given day or on a day of an act or event, the period of time is to be calculated inclusive of that day.

(h) Any 'notice' to be given or matter to be 'notified' must be in writing.

(i) The symbol 'Σ' requires a summation to be performed over the range of variables specified in respect of the algebraic terms specified.

(j) All data which is utilised in calculations made under this Determination will be utilised to the accuracy, in terms of the number of decimal places, to which it is given.

(k) A fixed price, charge or fee determined in accordance with this Determination is to be rounded down and specified to two decimal places.

(l) A volumetric price, charge or fee determined in accordance with this Determination is to be rounded down and specified to four decimal places.

(m) When a calculation is required under this document:

(i) ***regulatory year*** 't' is the ***regulatory year*** in respect of which the calculation is being made;

(ii) ***regulatory year*** 't-1' is the ***regulatory year*** immediately preceding ***regulatory year*** 't';

(iii) ***regulatory year*** 't-2' is the ***regulatory year*** immediately preceding ***regulatory year*** 't-1'.

Schedule 2 – Prices for prescribed services

This schedule should be read in conjunction with Schedule 3 and Schedule 4. Variable water, wastewater, trade waste charges and non-residential waterways and drainage charges in $NAV are rounded down to 4 decimal places. All other charges are rounded down to 2 decimal places.

Water and Sewerage

Tariff and Price Component	*Price (1 July 2016)*	*PPM Year 2*	*PPM Year 3*	*PPM Year 4*	*PPM Year 5*
1.1 Storage operator and bulk water service charges - Greater Yarra System – Thompson River ($/per ML Entitlement)					
City West Water, South East Water, Yarra Valley Water, Western Water, Barwon Water, Westernport Water*	332.26	1.5%	1.0%	0.5%	0.5%
1.2 Storage operator and bulk water service charges - Victorian Desalination Project ($/per ML Entitlement)					
City West Water, South East Water, Yarra Valley Water	3 780.71	-1.5%	-0.7%	-2.1%	-6.0%
1.3 Victorian Desalination Project Water Order ($/per ML Entitlement)					
City West Water, South East Water, Yarra Valley Water	546.2370	N/A - Subject to advice			
1.4 Storage operator and bulk water service charges - North South Pipeline ($/per ML Entitlement)					
City West Water, South East Water, Yarra Valley Water	515.92	-2.4%	-2.7%	-0.8%	-2.7%
1.5 Storage operator and bulk water service charges - Transfer ($/per ML)					
City West Water, South East Water, Yarra Valley Water, Western Water, Barwon Water, Westernport Water	228.9929	1.5%	0.5%	0.5%	0.5%

Tariff and Price Component	*Price (1 July 2016)*	*PPM Year 2*	*PPM Year 3*	*PPM Year 4*	*PPM Year 5*
1.6 Gippsland Water					
Headworks ($/per ML)	344.4265	2.2%	1.3%	2.8%	1.3%
Transfer ($/per month)	1 151.45	2.2%	1.3%	2.8%	1.3%
1.7 Bulk sewerage usage charges - Treatment ($/per ML)					
Western System (City West Water, South East Water, Yarra Valley Water)	272.1674	0%	0%	0%	0%
Eastern System (South East Water, Yarra Valley Water)	73.1151	0%	0%	0%	0%
1.8 Bulk sewerage usage charges – Transfer ($/per ML)					
Western System (City West Water, South East Water, Yarra Valley Water)	37.2317	0%	0%	0%	0%
Eastern System (South East Water, Yarra Valley Water)	5.3188	0%	0%	0%	0%
1.9 Bulk sewerage usage charges – Load (per tonne)					
Biochemical oxygen demand – Eastern System	341.1698	0%	0%	0%	0%
Biochemical oxygen demand – Western System	181.1390	0%	0%	0%	0%
Suspended solids – Eastern System	560.1980	0%	0%	0%	0%
Suspended solids – Western System	105.2375	0%	0%	0%	0%
Total kjeldahl nitrogen - Eastern System	195.1887	0%	0%	0%	0%
Total kjeldahl nitrogen - Western System	250.1672	0%	0%	0%	0%
Inorganic total dissolved solids - Western System	29.6661	0%	0%	0%	0%
1.10 Bulk sewerage service charge ($/month)					
City West Water	5 236 768.67	2.0%	1.6%	1.0%	0.1%
South East Water	12 202 991.03	2.0%	1.6%	1.0%	0.1%
Yarra Valley Water	10 451 615.46	2.0%	1.6%	1.0%	0.1%

*2016 and 2017 bulk water headworks charges for Barwon Water, South Gippsland Water and Westernport Water will be recovered from 1 July 2018.

Waterways and drainage

Tariff and Price Component	*Price (1 July 2016)*	*PPM Year 2*	*PPM Year 3*	*PPM Year 4*	*PPM Year 5*
2.1 Waterways and drainage charge – All properties located within the area designated as the Urban Growth Boundary and major airports, except those indicated in 2.2					
Residential charge ($ per annum)	96.83	0%	0%	0%	0%
Non-residential charges:					
• Minimum fee ($ per annum)	117.42	5.5%	5.5%	5.5%	5.5%
• Rate in $ NAV (cents per annum)	0.8910	-25.0%	-20.0%	0.0%	0.0%
2.2 Waterways and drainage charge – All non-residential properties included in the waterway management district as a result of extending Melbourne Water's service area in November 2005 (including all properties within the Shire of Mornington Peninsula), non-residential properties located in the extension of the Urban Growth Boundary since 2010, except those indicated in 2.3					
Non-residential charge					
• Minimum fee ($ per annum)	117.42	5.5%	5.5%	5.5%	5.5%
2.3 Waterways charge – All properties located outside the area designated as the Urban Growth Boundary, except major airports and those indicated in 2.4					
• Minimum fee ($ per annum)	53.20	0%	0%	0%	0%
2.4 Special drainage area charge - All properties in the following parts of the area of the former Dandenong Valley and Western Port Authority as at 5 November 1991, which up to 1997, were subject to a special drainage and river improvement rate					
Koo Wee Rup - Longwarry Flood Protection District ($/per annum)	Continuation of the pricing reform commenced in 2013 and concluding in 2021 which will see Divisions A and B replaced with a single cost-reflective price. Unique price paths apply for all individual properties to transition to the single cost-reflective price. During this period, the cost of service will be subject to annual CPI adjustments less 1% for service efficiency targets.				
Patterson Lakes					
• Properties with access to timber jetties	1 484.00	NOM	NOM	NOM	NOM
• Properties with access to concrete jetties	1 031.00	NOM	NOM	NOM	NOM
• Jetties annual maintenance	135.56	NOM	NOM	NOM	NOM

Tariff and Price Component	*Price (1 July 2016)*	*PPM Year 2*	*PPM Year 3*	*PPM Year 4*	*PPM Year 5*
2.5 Miscellaneous services					
• Property information statements (City West Water, South East Water, Yarra Valley Water)	4.65	0.0%	0.0%	0.0%	0.0%
• Provision of flood level information	38.72	0.0%	0.0%	0.0%	0.0%
Provision of hydrological data					
Storm frequency analysis for selected storm events	133.57	0.0%	0.0%	0.0%	0.0%
• Standard fee: One type of daily data from maximum of two stations	83.07	0.0%	0.0%	0.0%	0.0%
• Standard fee: One type of hourly data from a single station	83.07	0.0%	0.0%	0.0%	0.0%
• Provision of one type of 6 minute data from a single station for a period of up to 5 years	83.07	0.0%	0.0%	0.0%	0.0%
• Other requests (per hour)	133.57	0.0%	0.0%	0.0%	0.0%
Application fee for construction over or near Melbourne Water easements or underground pipe ($)	197.72	0.0%	0.0%	0.0%	0.0%
• Inspection Fee	402.70	0.0%	0.0%	0.0%	0.0%
Storm water connections/third party works ($ per connection)					
• Application/ connection fee	146.20	0.0%	0.0%	0.0%	0.0%
• Inspection fee	402.70	0.0%	0.0%	0.0%	0.0%
• Fast track assessments	1 013.10	0.0%	0.0%	0.0%	0.0%

Tariff and Price Component	*Price (1 July 2016)*	*PPM Year 2*	*PPM Year 3*	*PPM Year 4*	*PPM Year 5*
Inspection charges					
• Water supply Inspections (per hour)	126.63	0.0%	0.0%	0.0%	0.0%
• Additional inspections ($308 for 3 inspections or $126.63 per hour)	126.63	0.0%	0.0%	0.0%	0.0%
Flood feasibility study (per half day)	779.07	0.0%	0.0%	0.0%	0.0%
Non-core miscellaneous services	Actual cost	0.0%	0.0%	0.0%	0.0%
2.6 Diversion charges unregulated waterways					
• Licence service fee- all licences ($ per annum)	271.19	0.0%	0.0%	0.0%	0.0%
• Plus fee per kilowatt power generation	21.68	0.0%	0.0%	0.0%	0.0%
• Charge $ per ML – All months	31.70	0.0%	0.0%	0.0%	0.0%
• Charge $ per ML – On–stream winter-fill	15.98	0.0%	0.0%	0.0%	0.0%
• Charge $ per ML – Off–stream winter-fill	15.98	0.0%	0.0%	0.0%	0.0%
• Charge $ per ML – Licensed farm dam	15.98	0.0%	0.0%	0.0%	0.0%
• Charge $ per ML – Non-consumptive	2.04	0.0%	0.0%	0.0%	0.0%
• Charge $ per ML – Stormwater	31.70	0.0%	0.0%	0.0%	0.0%
• Works Operating Licence – Hazardous dams ($ per annum)	92.18	0.0%	0.0%	0.0%	0.0%
• Works Operating Licence - General ($ per annum)	54.46	0.0%	0.0%	0.0%	0.0%

Tariff and Price Component	*Price (1 July 2016)*	*PPM Year 2*	*PPM Year 3*	*PPM Year 4*	*PPM Year 5*
2.7 Diversion charges regulated waterways					
• Licence service fee - all licences ($ per annum)	271.19	0.0%	0.0%	0.0%	0.0%
• Charge $ per ML – All months	66.32	0.0%	0.0%	0.0%	0.0%
• Charge $ per ML – Off-stream winter-fill	15.98	0.0%	0.0%	0.0%	0.0%
2.8 Diversion Application fees					
• Transfer - Sale of Land	306.42	0.0%	0.0%	0.0%	0.0%
• Amalgamation, subdivision (existing licences)	401.51	0.0%	0.0%	0.0%	0.0%
• Minor Amendment (e.g. add / remove parcel, party or existing entity to existing licence)	116.22	0.0%	0.0%	0.0%	0.0%
• Transfer - Downstream Trade	676.26	0.0%	0.0%	0.0%	0.0%
• Transfer - Upstream Trade	998.54	0.0%	0.0%	0.0%	0.0%
• Transfer - Repeat Trade Application	147.92	0.0%	0.0%	0.0%	0.0%
• New Licence - Stormwater	1 003.81	0.0%	0.0%	0.0%	0.0%
• New Licence - Non consumptive / Power Generation	676.26	0.0%	0.0%	0.0%	0.0%
• Additional Charge Where Irrigation & Drainage Plan required	264.14	0.0%	0.0%	0.0%	0.0%
• Works Licence - Amendment (e.g. Pump replacement)	359.25	0.0%	0.0%	0.0%	0.0%
• New Works Construction Licence - Dam / Stormwater	766.08	0.0%	0.0%	0.0%	0.0%

Tariff and Price Component	*Price (1 July 2016)*	*PPM Year 2*	*PPM Year 3*	*PPM Year 4*	*PPM Year 5*
• New Works Construction Licence - Pump Only	602.28	0.0%	0.0%	0.0%	0.0%
• Re-issue - Failure to renew – Domestic and Stock	174.33	0.0%	0.0%	0.0%	0.0%
• Re-issue - Failure to renew (all-licences)	264.14	0.0%	0.0%	0.0%	0.0%
• Reissue - Following Revocation	1 394.77	0.0%	0.0%	0.0%	0.0%
• Copy of Record	52.82	0.0%	0.0%	0.0%	0.0%
• Domestic and Stock Dam Registration	95.08	0.0%	0.0%	0.0%	0.0%
• Application to Renew	306.42	0.0%	0.0%	0.0%	0.0%
• Land Information Statement	105.64	0.0%	0.0%	0.0%	0.0%

Schedule 3 – Application of prices

3.1 Waterways and drainage charges

Waterways and drainage charges are applied to serviced properties (as defined in the Water Act 1989) located within Melbourne Water's Waterway Management District.

Residential properties located within the Urban Growth Boundary are charged a single service charge in respect of each separate occupancy, as defined in the Local Government Act 1989.

A 'residential property' includes:

- A property used or intended to be used primarily as a residence or residences
- In the case of vacant land, land zoned for residential purposes.

Non-residential properties located within the Urban Growth Boundary and major airports are charged based on 1990 property values (or its equivalent in dollar terms), subject to a minimum, except those included under tariff 2.1, Schedule 2. The relevant property value is Net Annual Value (NAV), as determined for the purposes of the Local Government Act 1989, multiplied by the valuation equalisation factor applying to the area in which the property is located. The valuation equalisation factor is determined by the Valuer General and represents the level of value prevailing in property areas as at 30 June 1990.

In the extended areas, which refers to parts of the Westernport, Werribee and Maribyrnong catchments that were included in Melbourne Water's Waterway Management District by Order-in-Council on 18 November 2005, the minimum fee will be applied to all non-residential properties in respect of each separate occupancy, as defined in the Local Government Act 1989, and included under tariff 2.2, Schedule 2. The minimum fee also applies to non-residential properties located in the Urban Growth Boundary as a result of extensions to the boundary post 2006, and any non-residential farm land properties which held an exemption as at 30 June 2013.

A minimum fee reflecting only waterway management costs will be applied to properties located outside the Urban Growth Boundary except major airports and those included under tariff 2.4, Schedule 2.

Properties located within the Koo Wee Rup – Longwarry Flood Protection District, which forms part of the former Dandenong Valley and Western Port Authority as at 5 November 1991, which up to 1997, were subject to a special drainage and river improvement rate, pay a fee per serviced property based on calculation of a 10 year transition from a rate based on 1990 property values (the relevant property value is NAV as at 30 June 1990) to a flat rate, with an adjustment factor for large properties to avoid revenue under recovery during the early years of the transition.

3.2 Miscellaneous fees and charges

Property information statements – provided consistent with section 158 of the Water Act 1989.

Provision of flood level information – provision of a flood level certificate in PDF format within 10 days of receiving a request under section 264 of the Water Act 1989.

Provision of hydrological data – stream flow, levels, storm intensity and rainfall in hardcopy or digital format within 10 days of receiving a request.

*Application fee for construction over or near **Melbourne Water** easements or underground pipes* – cost of processing development proposals that involve construction over or near ***Melbourne Water*** easements or underground pipe.

Storm water connections / third-party works – ***Melbourne Water*** requires all new stormwater connections to be made to the local council system. Where this is not possible a stormwater connection application must be made to ***Melbourne Water*** under section 145 of the Water Act 1989.Third-party works include construction of shared paths, pedestrian and road crossings, utility crossings and other type of works that may affect ***Melbourne Water*** assets/property.

Inspection charges – Hourly fees apply for water supply connections to recover the costs of inspectors' time on site and repeated visits for complicated construction works.

Flood feasibility study – ***Melbourne Water's*** assistance in determining the most appropriate drainage works that would be required to service a development.

Schedule 4 – Pricing principles

4.1 Recycled water pricing principles

Recycled water prices should be set so as to:

- have regard to the price of any substitutes and customers' willingness to pay;
- cover the full cost of providing the service (with the exception of services related to specified obligations or maintaining balance of supply and demand); and
- include a variable component.

Where ***Melbourne Water*** does not propose to fully recover the costs associated with recycled water, it must demonstrate to the Commission that:

- it has assessed the costs and benefits of pursuing the recycled water project;
- it has clearly identified the basis on which any revenue shortfall is to be recovered; and
- if the revenue shortfall is to be recovered from non-recycled water customers, either the project is required under the Statement of Obligations which applies to ***Melbourne Water*** or pursuant to other Government policies that apply to ***Melbourne Water*** or there has been consultation with the affected customers about their willingness to pay for the benefits of increased recycling.

4.2 Pricing principles where scheduled prices do not apply

Where the prices set out in Schedule 2 do not apply because the nature of the service provided to a particular customer (including, in the case of trade waste customers, the volume or load of waste treated) is unique, prices must be set as follows:

- variable prices (including, in the case of trade waste customers, load-based charges) should reflect the long run marginal cost (LRMC) of providing services (including, in the case of trade waste customers, trade waste transfer, treatment and disposal);
- the total revenue received from each customer should be greater than the cost that would be avoided from ceasing to serve that customer, and (subject to meeting avoidable cost) less than the stand alone cost of providing the service to the customer in the most efficient manner;
- the methodology used to allocate common and fixed costs to that customer should be clearly articulated and be consistent with any guidance provided by the Commission;

- prices should reflect reasonable assumptions regarding the customer's demand for services (including, in the case of trade waste customers, the volume and strength of trade waste anticipated to be produced by that customer);
- depreciation rates and rates of return used to determine prices should be consistent with those adopted by the Commission for the purposes of making this Determination;
- customers should be provided with full details of the manner in which prices have been calculated and any new, renewed or renegotiated contractual agreements with customers should indicate that the prices to apply are subject to any Determination made by the Commission;
- where applying these principles results in significant changes to prices or tariff structures, arrangements for phasing in the changes may be considered and any transitional arrangements should be clearly articulated.

4.3 Developer charges, drainage schemes

Consistent with principles for defining a drainage scheme agreed with the development industry, ***developer charges*** will be calculated by:

- identifying future capital expenditure for each year of the expected life of the scheme;
- identifying forecast developable hectares for each year using an estimate of development density;
- applying a pre-tax real discount rate (consistent with the pre-tax discount rate applicable to that ***regulatory year***) to convert future cash flows into present value terms;
- setting the ***developer charge*** such that the present value of future income equals the present value of future costs, where future income is equal to the developable hectares in each year multiplied by the ***developer charge***;
- reviewing the financial assumptions relating to each scheme on an annual basis and reviewing engineering specifications every five years.

4.4 Developer charges, stormwater quality

- The stormwater quality charges comprise a Scheme Stormwater Quality Charge and a General Stormwater Quality Charge and reflect the nitrogen discharged by the scheme relative to the minimum standard.
- The Scheme Stormwater Quality Charge is scheme-specific and recovers the cost of scheme-related stormwater quality initiatives.

- The General Stormwater Quality Charge is equal to the average cost for stormwater management as identified by Melbourne Water's regional stormwater quality improvement program.
- Both charges are applied to the mass of nitrogen discharged, relative to the required minimum standard.
- Where a development does not meet the minimum standard, stormwater quality charges will apply. Where on-site stormwater treatment is undertaken, the developer will receive an offset of up to the full amount of their Stormwater Quality Charges.
- Charges for Greenfield Schemes will be based on on-site works undertaken by the developer, the General Stormwater Quality Charge and Scheme Stormwater Quality Charges.
- Charges for non-scheme area developments will be based on on-site works and the General Stormwater Quality Charge.

4.5 Pricing principles for miscellaneous services where Schedule 2 does not apply

Prices for miscellaneous services must be set according to actual cost calculated on the basis of the aggregate of:

- direct third party or contractor invoice cost;
- direct marginal internal costs, including labour, materials and transport costs; and
- a fair contribution to overheads.

For bank dishonour, debt collection and legal fees, the third party costs must be charged directly to the customer with no contribution for internal costs or a contribution to overheads.

4.6 Guidelines

Melbourne Water must comply with any guidelines issued by the Commission from time to time which relate to the setting of prices for ***prescribed services*** to which Schedule 3 relates.

Schedule 5 – Adjustment for costs associated with the Victorian Desalination Plant and annual updates to the weighted average cost of capital (WACC)

If in any ***regulatory year*** Condition A and/or Condition B and/or Condition C apply, the formula set out in clause 2.3(b) is not applicable to the extent it relates to the prices outlined in Schedule 5A. These prices are set out in items 1.1, 1.2, 1.3, 1.4, 1.10, 2.1, 2.6 and 2.7 of Schedule 2.

Instead the prices above will be adjusted in accordance with the formulas (as applicable) provided below, with effect from the beginning of each subsequent ***regulatory year*** in the ***regulatory period***.

Melbourne Water must comply with any guidance issued by the Commission from time to time which relate to the setting of prices for prescribed services to which Schedule 2 and 4 relates.

Schedule 5A – Adjustments to prices

	Condition A (Desalination water order)	Condition B (Desalination contract cost change)	Condition C (Annual WACC update)
1.1 Storage operator and bulk water service charges Greater Yarra System – Thomson River			X
1.4 Storage operator and bulk water service charges North South Pipeline			X
1.2 Storage operator and bulk water service charges Victorian Desalination Project		X	X
1.3 Victorian Desalination Project water order	X		
1.10 Bulk sewerage service charge[1]			X
2.1 Waterways and Drainage Non-Residential Rate in the NAV price			X
2.6 – 2.7 Diversions License Service Fee price			X

1) Adjustments to the sewerage fixed price is according to the retailers' cost share as outlined in Table 3 of Annexure A.

Condition A – Water order – Desalination plant

Condition A will apply when the water order volume in any ***regulatory year*** differs from a water order of 0GL. In this case, the water order price will be adjusted in accordance with formula 6 in Schedule 5B, accounting for the additional costs associated with the water order volume.

Condition B – Contract costs – Desalination plant

Condition B will apply when the contract costs for the Victorian Desalination Plant in any ***regulatory year*** 't' differ from the contract cost schedule in that year as per Table 11 in Annexure A. The change in costs will be calculated in accordance with formula 1.

The adjusted contract cost determined in formula 1 will be used to calculate the Victorian Desalination headworks price as outlined in Schedule 5A.

Formula 1: Desalination contract cost changes

$$DCC_t^{adj} = \left(DCC_t^{for} - DCC_{t,base}^{det} \times \frac{CPI_t}{CPI_{base}}\right) + \left(DCC_{t-1}^{act} - DCC_{t-1}^{for}\right) \times \frac{CPI_t}{CPI_{t-1}} \times (1 + wacc_{t-1}^{act})$$

CPI_t	Is the Consumer Price Index: All Groups Index for the Eight Capital Cities as published by the Australian Bureau of Statistics (6401.0 - Table 8) for the March Quarter immediately preceding the start of the relevant ***regulatory year***
CPI_{base}	Is the Consumer Price Index: All Groups Index for the Eight Capital Cities as published by the Australian Bureau of Statistics (6401.0 - Table 8) for the March Quarter in year 2015 equal to 106.8
DCC_t^{adj}	Is the total change in desalination contract costs.
DCC_t^{for}	Is the forecast desalination contract costs in year t. This will be in real$ in year t
$DCC_{t,base}^{det}$	Is the desalination contract cost allowed for in the revenue requirement for year t as per Table 11 in Annexure A
DCC_{t-1}^{act}	Is the actual desalination contract costs in year (t-1). This will be in real$ year (t-1)
$wacc_{t-1}^{act}$	Is the real post tax 'vanilla' WACC in year (t-1) as per formula 5

Formula 1 calculates the total contract cost changes in two components as Melbourne Water may be advised of a change in contract costs prior to and after the commencement of the financial year.

The first component determines total changes in contract costs - allows for adjustments in forecast desalination contract costs in year t compared to was what determined adjusted for CPI as per Table 11 of Annexure A.

The second component determines total changes in contract costs - is an adjustment for changes in the contract costs between the forecast and actual from the previous year (t-1). These will be adjusted for one year of CPI and the WACC as it is a carry forward amount.

Condition C – Annual WACC update

Condition C will apply when the actual WACC in any ***regulatory year*** 't' differs from the forecast WACC, as per Table 13 of Annexure A, in that year. The actual WACC is calculated as per formula 5.

The difference in the forecast and actual WACC in any ***regulatory year*** 't' is multiplied by the average of the regulatory asset base (RAB) - $\frac{RAB_t + RAB_{t-1}}{2}$ - to determine the change in Melbourne Water's total expected return. The RAB Is set out in Table 7 of Annexure A.

The change between forecast and actual WACC will be apportioned across the tariffs listed in Schedule 5A.

Formula 2 to 5 outlines the process required to determine the actual WACC in any given year.

Formula 2: Determining cost of equity

$$CoE^{nominal} = Risk\ free\ rate + (Equity\ premium * Equity\ beta)$$

$CoE^{nominal}$	Is the total cost of equity in nominal terms for all ***regulatory years***
$Risk\ free\ rate$	Is equal to 2.92% in nominal terms
$Equity\ premium$	Is equal to 6.0%
$Equity\ beta$	Is equal to 0.65

Formula 3: Determining cost of debt

$$CoD_t^{nominal} = \sum_{i=t-10}^{t-1} \frac{CoD_i^{nominal}}{10}$$

$CoD_i^{nominal}$	Is equal to the simple average of the 10 years up to (but not inclusive of) ***regulatory year*** 't' of: - The data series outlined in Table 12 of Annexure A and - *RBA Table F3 – Non-financial corporate BBB-rated bonds – Yield – 10 year target tenor [Series ID FNFYBBB10M]* from 1 April to 31 March before the start of year t (e.g. 1 April 2015 to 31 March 2016 in relation to 2016-17)

Formula 4: Determining the Nominal WACC

$$wacc_t^{nominal} = CoE^{nominal} \times (1 - gearing) + CoD_t^{nominal} \times gearing$$

$wacc_t^{nominal}$	Is the post-tax 'vanilla' WACC in nominal terms for ***regulatory year*** 't'
$CoE^{nominal}$	Is the total cost of equity in nominal terms for all ***regulatory years***
$CoD_t^{nominal}$	Is the total cost of debt in nominal terms for ***regulatory year*** 't'
Gearing	Is equal to 60%

Formula 5: Determining the actual real WACC

$$wacc_t^{act} = \frac{\left(1 + wacc_t^{nominal}\right)}{(1 + \pi_{wacc})} - 1$$

$wacc_t^{act}$	Is the post-tax 'vanilla' WACC in real terms for year t rounded to 1 decimal place, i.e. 4.34% is rounded to 4.3%
$wacc_t^{nominal}$	Is the post-tax 'vanilla' WACC in nominal terms for ***regulatory year*** 't'
π_{wacc}	Is the inflation factor which is equal to 2.2% for all regulatory years

Formula 5 outlines the process for converting the post-tax 'vanilla' WACC from nominal to real using the Fisher equation.

Schedule 5B – Prices

Formula 6: Desalination water order cost adjustment

$$P(VDP\ order)_{j,t} = DWO_t \times Percentage_{j,t}^{DWO}$$

$P(VDP\ order)_{j,t}$	Is the desalination water order costs allocated to retail water business j in year t
DWO_t	Is the desalination water order costs invoiced to Melbourne Water by the Department of Environment, Water, Land and Planning
$Percentage_{j,t}^{DWO}$	Is the percentage of desalination water order costs allocated to retailer j, which is as defined by retailers or if not as listed in Table 1 of Annexure A

Formula 6 outlines the process for calculating the Victorian Desalination Project water order price. This price only applies when a desalination water order occurs, and in years with no order the charge is zero.

Formula 7: WACC price adjustment

$$P_t = P_{t-1} \times \frac{CPI_t}{CPI_{t-1}} \times (1 + PPM_t) + (wacc_t^{act} - wacc_t^{for}) \times RAB_t \times \frac{CPI_t}{CPI_{base}}$$

P_t	Is the price component for ***regulatory year*** 't'
CPI_t	Is the Consumer Price Index: All Groups Index for the Eight Capital Cities as published by the Australian Bureau of Statistics (6401.0 - Table 8) for the March Quarter immediately preceding the start of the relevant ***regulatory year***
CPI_{base}	Is the Consumer Price Index: All Groups Index for the Eight Capital Cities as published by the Australian Bureau of Statistics (6401.0 - Table 8) for the March Quarter in year 2015 equal to 106.8
PPM_t	Is the prescribed price movement for the price component for ***regulatory year*** 't' determined in accordance with Schedule 2
$wacc_t^{act}$	Is the actual calculated real post tax 'vanilla' WACC for year t as per formula 5
$wacc_t^{for}$	Is the forecast real post tax 'vanilla' WACC as per Table 13 of

	Annexure A
RAB_t	Is the average RAB - $\frac{RAB_t + RAB_{t-1}}{2}$ - in ***regulatory year*** 't'. The RAB is specified in Table 7 of Annexure A

Formula 7 outlines the process for annually adjusting the prices outlined in Schedule 5A to reflect the new WACC. This is done in two steps. The first step is to update the previous year's price for CPI and the PPM. The second step is to add on the adjustment for the movement in the WACC. This is done by multiplying the change in WACC by the average RAB.

The Common Seal of the **Essential Services Commission** was affixed to this Determination with the authority of the Commission.

Date: 15 June, 2016

Dr Ron Ben-David
Chairperson

Annexure A

Table 1 **Victorian Desalination Project delivery entitlement**

Victorian Desalination Project	Bulk delivery* entitlements (ML)	Retailer share
City West Water	39 595	26.4%
South East Water	53 454	35.6%
Yarra Valley Water	56 951	38.0%
Total	150 000	100.0%

* Note bulk delivery entitlements are subject to change pending ministerial advice

Table 2 **Bulk delivery entitlement shares**

Greater Yarra System – Thomson River	Bulk delivery* entitlements (ML)	Retailer share
City West Water	155 227	24.9%
South East Water	209 562	33.6%
Yarra Valley Water	223 271	35.8%
Western Water	18 250	2.9%
Westernport Water	1 000	0.2%
Barwon Water	16 000	2.6%
South Gippsland Water	1 000	0.2%
Total	624 310	100.0%
North South Pipeline		
City West Water	25 000	33.3%
South East Water	25 000	33.3%
Yarra Valley Water	25 000	33.3%
Total	75 000	100.0%

* Note bulk delivery entitlements are subject to change pending ministerial advice

Table 3 **Sewerage cost allocation shares**

Retailer	Retailers' sewerage cost allocation share
City West Water	22.7%
South East Water	40.3%
Yarra Valley Water	37.0%

Table 4 **Net Annual Value, Diversions and Patterson Lakes Quantities**

	2016/17	2017/18	2018/19	2019/20	2020/21
Non-Residential Net Annual Value	6 633 346 584	6 365 178 547	6 095 518 708	6 036 239 703	5 970 662 770
No. of Diversion Licenses	1 280	1 280	1 280	1 280	1 280

Table 5 **Benchmark revenue requirement**
$m 2015-16

	2016-17	*2017-18*	*2018-19*	*2019-20*	*2020-21*
Operating expenditure	941.3	909.0	908.7	899.3	870.6
Return on existing assets	423.8	412.1	397.0	386.4	374.8
Return on new investments	9.1	28.1	45.9	61.6	74.4
Regulatory depreciation	163.8	179.5	194.4	207.0	218.9
Tax liability	10.6	14.5	13.8	14.1	14.4
Non-prescribed offset of revenue requirement	*-2.4*	*-2.4*	*-2.4*	*-2.4*	*-2.4*
Total	1 546.2	1 540.8	1 557.3	1 566.0	1 550.8

Table 6 **Updated regulatory asset base**
$m 2015-16

	2010-11	*2011-12*	*2012-13*	*2013-14*	*2014-15*
Opening RAB	8 415.9	9 027.6	9 390.6	9 509.3	9 539.6
Plus Gross capital expenditure	846.2	594.2	354.3	256.1	363.3
Less Government contributions	0.0	0.0	0.0	0.0	0.0
Less Customer contributions	59.3	71.5	41.4	58.7	64.0
Less Proceeds from disposals	32.8	5.8	28.4	4.6	4.2
Less Regulatory depreciation	142.5	153.8	165.8	162.5	185.7
Closing RAB	9 027.6	9 390.6	9 509.3	9 539.6	9 648.9

Table 7 **Rolled forward regulatory asset base**
$m 2015-16

	2015-16	*2016-17*	*2017-18*	*2018-19*	*2019-20*	*2020-21*
Opening RAB	9 648.9	9 870.5	10 118.6	10 418.4	10 661.8	10 861.9
Plus Gross capital expenditure	535.8	493.3	551.0	510.8	483.5	417.7
Less Government contributions	0.0	0.0	0.0	0.0	0.0	0.0
Less Customer contributions	105.2	70.2	57.9	63.2	70.4	71.2
Less Proceeds from disposals	2.6	11.3	13.8	9.8	6.1	5.9
Less Regulatory depreciation	206.3	163.8	179.5	194.4	207.0	218.9
Closing RAB	9 870.5	10 118.6	10 418.4	10 661.8	10 861.9	10 983.6

Table 8 **Approved licence fee and environmental contribution assumptions**
$m 2015-16

	2016-17	*2017-18*	*2018-19*	*2019-20*	*2020-21*
Essential Services Commission licence fee	1.00	1.00	1.00	1.00	1.00
Department of Human Services licence fee	0.22	0.22	0.22	0.22	0.22
Environment Protection Authority licence fee	0.93	0.93	0.93	0.93	0.93
Environmental contribution	0.02	0.02	0.02	0.02	0.02

Table 9 **Key capital projects and programs**

Projects	*Start date**	*Expected completion date*
WTP treatment capacity increase	2011-12	2020-21
WTP 55E renewal	2010-11	2024-25
Upper Hobsons Bay sewer renewal	2011-12	2018-19
ETP sludge digester augmentation	2014-15	2022-23
WTP sludge drying capacity	2016-17	2019-20
Merri Creek to MCG main renewal	2014-15	2019-20
Maroondah aqueduct renewal	2009-10	2017-18
Winneke WTP UV system upgrade	2010-11	2021-22
St Georges Road water main renewal	2010-11	2017-18
Holden supply tank and inlet augmentation	2010-11	2019-20
Murrumbeena main drain flood mitigation	2015-16	2019-20
Alexandra Parade main drain redecking	2018-19	2021-22
Regan St Flood mitigation project	2015-16	2017-18
Mile Creek East retarding basin upgrade	2015-16	2017-18
Jacana retarding basin upgrade	2015-16	2017-18
Programs		
ETP M&E assets renewals program		Ongoing
Hobsons Bay Main Yarra crossing optimisation program		Ongoing
Sewer transfer – M&E assets renewals program		Ongoing
WTP M&E assets renewals program		Ongoing
ETP minor capital assets renewals program		Ongoing
Water quality – M&E assets renewals program		Ongoing
Aqueducts renewals program		Ongoing
Water supply tanks renewals		Ongoing
Water transfer – M&E assets renewals program		Ongoing
Maroondah aqueduct renewal of tunnel sections		Ongoing
Land development works		Ongoing
Flood mitigation works		Ongoing
Healthy waterways strategy delivery		Ongoing
Rehabilitation of existing wetlands		Ongoing
Retarding basin spillway/embankment upgrades		Ongoing

EPT = Eastern Treatment Plant; WTP = Western Treatment Plant; UV – ultraviolet; M&E = mechanical and electrical.

*Note: The start date is the date that Melbourne Water commenced investigations. Some projects have long investigative stages, or have been re-prioritised subsequently.

Table 10 **Prescribed operating expenditure**
$m 2015-16

	2016-17	*2017-18*	*2018-19*	*2019-20*	*2020-21*
Prescribed operating expenditure excluding desalination costs	354.5	357.6	360.9	363.3	366.6
Desalination security payments	589.8	581.4	577.8	566.0	534.0
less capitalisation	*(30.0)*	*(30.0)*	*(30.0)*	*(30.0)*	*(30.0)*
Desalination water order	27.0	-	-	-	-
Total prescribed operating expenditure	941.3	909.0	908.7	899.3	870.6

Table 11 **Desalination security payments**
$m 2015-16

	2016-17	*2017-18*	*2018-19*	*2019-20*	*2020-21*
Desalination security payments	589.8	581.4	577.8	566.0	534.0

Table 12 **Historical cost of debt (nominal)**

	2006-07	*2007-08*	*2008-09*	*2009-10*	*2010-11*	*2011-12*	*2012-13*	*2013-14*	*2014-15*	*2015-16*
Cost of debt	7.0%	7.4%	6.9%	7.4%	7.0%	6.3%	5.3%	7.1%	5.4%	5.3%

Table 13 **Forecast real and nominal post-tax WACC**

	2016-17	*2017-18*	*2018-19*	*2019-20*	*2020-21*
Nominal Post Tax WACC	6.6%	6.6%	6.5%	6.5%	6.4%
Inflation	2.2%	2.2%	2.2%	2.2%	2.2%
Real Post Tax WACC	4.3%	4.3%	4.2%	4.2%	4.1%