



APPENDIX 3: SEWERAGE CHARGING – OTHER OPTIONS

*Draft Inquiry Report: Inquiry into Reform Options for
SA Water's Drinking Water and Sewerage Prices*

July 2014



REQUEST FOR SUBMISSIONS

The Essential Services Commission of SA (**the Commission**) invites written submissions from all members of the community on this paper. Written comments should be provided by **10 September 2014**. It is highly desirable for an electronic copy of the submission to accompany any written submission.

It is the Commission's policy to make all submissions publicly available via its website (www.escosa.sa.gov.au), except where a submission either wholly or partly contains confidential or commercially sensitive information provided on a confidential basis and appropriate prior notice has been given.

The Commission may also exercise its discretion not to publish any submission based on length or content (for example, if it contains material that is defamatory, offensive or in breach of any law).

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The Essential Services Commission of South Australia is the independent economic regulator of the electricity, gas, ports, rail and water industries in South Australia. The Commission's primary objective is the *protection of the long-term interests of South Australian consumers with respect to the price, quality and reliability of essential services*. For more information, please visit www.escosa.sa.gov.au.

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GLOSSARY OF TERMS

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|----------------------------|---|
| Commission | Essential Services Commission of South Australia |
| ESCV | Essential Services Commission, Victoria |
| Inquiry | Inquiry into Drinking Water and Sewerage Retail Services Pricing Reform, 2014 |
| LRMC | Long Run Marginal Cost |
| Sapere | Sapere Research Group |
| SCCA | Shopping Centre Council of Australia |
| Uniting Communities | A social justice agency of the Uniting Church |

1. OTHER OPTIONS FOR PRICING SEWERAGE SERVICES

The Commission's report *Inquiry into the reform of SA Water's Drinking Water and Sewerage Prices* presents its proposed recommendations for pricing drinking water and sewerage services.

In arriving at the conclusions presented in that report, the Commission examined a number of other options. This report presents a summary of the other options for pricing sewerage services that do *not* represent the preferred position of the Commission at this time. These options are based on those presented in the Commission's Issues Paper¹ which it released in August 2013.

1.1 *Retain the current property-value based arrangements (status quo)*

The current approach sets sewerage charges based on property values.

1.1.1 *Commission's consideration*

A number of submissions from stakeholders provided feedback on the continuation of this approach.

SA Water stated that the sewerage system benefits the community as a whole in terms of environmental and public health benefits, and that the costs should be shared across the community in a manner that is affordable. It therefore considered that property-based charging was a valid basis for applying charges that take account of the ability to pay.

Uniting Communities stated that it believes sewerage charges based on property values remain the best of the proposed options because property value remains a good proxy for capacity to pay.²

The Commission notes the "equity" argument as a basis for continuing with the current approach. However, as stated in Chapter 2 of the draft Inquiry report, it is the Commission's view that its role is to seek to maximise economic efficiency. It believes that social equity matters, to the extent that they are separate from economic matters, are best considered by Government, because it has the ability to address these issues via a number of levers across the taxation and benefits systems.

An opposing view was presented in the submission from Woolworths Limited, which stated that linking charges to the improved capital value of property discourages investment within

¹ Refer to http://www.escosa.sa.gov.au/library/130829-WaterPricingInquiry-IssuesPaper_3-SewerageTrade-WastePropertyBasedCharging_0.pdf.

² Uniting Communities submission, p.7, available at: <http://www.escosa.sa.gov.au/library/140107-WaterPricingInquiry-IssuesPaperSubmission-UnitingCommunities.pdf>.

the State. Its belief is that charges should be based on the recovery of efficient costs, rather than the value of buildings and commercial operations.³

The Commission recognises that the current approach has the benefits of acceptance and familiarity in the community, and that continuing with it would avoid any costs associated with change (e.g. to information systems).

However, the Commission's guiding principles are based on maximising economic efficiency, which occurs when prices are based on the costs of the services provided. Clearly, with the current approach, the prices charged are likely to bear little relation to the actual cost of providing sewerage services to a property.

As a result, property-based charges may not be efficient or reflect true costs, and may be discouraging investment and stifling competition⁴.

The Commission has also recommended, as part of this Inquiry, that end users of water/sewerage services, rather than the owner of the land/premises (as currently occurs), should become SA Water's customer for those retail services.⁵ This reform, which breaks the link of sewerage costs being considered as a land-holding cost, further weakens the case for continuing with property-based charging.

Further, as part of this Inquiry, the Commission engaged Sapere Research Group (**Sapere**) to provide advice on the appropriateness of using Long Run Marginal Cost (**LRMC**) pricing for sewerage services. Sapere concluded there appears to be no rationale, based on efficiency, for the current basis for setting sewerage connection charges based on property values.

As previously discussed in section 4.1.4 of the draft Inquiry report, property-based costs may also distort decisions on where to live and the level of capital improvement to undertake on a property.

For the above reasons, the Commission does not support retention of the current property-based pricing arrangements at this time.

1.2 Price according to a fixed charge (flat rate)

This option proposed that either all customers would pay the same fixed charge, or a group of different fixed rates would be set between groups of residential and commercial customers.

³ Woolworths submission to the Commission's Inquiry into SA Water's drinking water and sewerage services, p.2, available at: <http://www.escosa.sa.gov.au/library/131118-WaterPricingInquiry-IssuesPaperSubmission-WoolworthsLimited.pdf>.

⁴ For example, refer to:
<http://tigger.uic.edu/cuppa/gci/publications/workingpaperseries/pdfs/Property%20Taxes.pdf>.
⁵ Woolworths Limited, *Submission to the 2013 Inquiry into Drinking Water and Sewerage Retail Services Pricing Reform*, 6 November 2013, page 2 of unnumbered document; available at:
<http://www.escosa.sa.gov.au/projects/189/inquiry-into-drinking-water-and-sewerage-retail-services-pricing-reform.aspx>.

1.2.1 Commission's consideration

Two of the submissions from stakeholders provided feedback on this approach.

SA Water stated that, based on preliminary analysis, it would see prices rise for around 80 per cent of customers, and queried how such a change would improve economic efficiency.⁶

Uniting Communities stated that it was strongly against fixed charge pricing, describing such an approach as '*highly regressive*'⁷).

In addition, one of the internet respondents favoured this option.

The Commission notes that in New South Wales, both Sydney Water and Hunter Water residential customers pay a single fixed sewerage charge, whilst non-residential customers pay a sewerage service charge which varies with the size of connection, and a further sewerage usage charge.

As part of this review, the Commission received sewerage costing information from SA Water which identified that, in the short run, costs were approximately 97 per cent fixed, with only 3 per cent of costs variable with volumes of sewage. Further, approximately two-thirds of the variable costs are attributable to infiltration and stormwater, rather than directly linked to volumes of customer-produced sewage.

A flat rate fixed charge for all customers would, therefore, be broadly cost-reflective, and consistent with the principles of maximising economic efficiency.

Additionally, the Commission notes that a fixed charge has the advantages of being cheap and easy to administer.

However, a single fixed charge does not take account of the differing levels of potential load, and hence capacity requirements, that are required at sewerage treatment plants to serve different customer loads.

While there is merit in this option, the Commission's preferred option is more cost-reflective, and economically efficient, as it takes account of potential capacity requirements on the sewerage network.

1.3 Price according to an estimated amount of sewerage discharged into the network (consumption-based charge)

This option proposed that variable charges be levied based on estimated discharge volumes into the sewerage network. As metering of discharges into the sewerage system is impractical for small customers, it was proposed that volume of water supplied be used as a proxy for the volume of water discharged.

⁶ SA Water submission, p.18, available at: <http://www.escosa.sa.gov.au/library/131118-WaterPricingInquiry-IssuesPaperSubmission-SAWater.pdf>.

⁷ Uniting Communities submission, p.7.

1.3.1 Commission's consideration

A number of submissions from stakeholders provided feedback on this approach.

The District Council of Ceduna commented that consumption-based charging would encourage conservation and investment in water catchment and reuse⁸.

The Hon. Sandra Kanck MP favoured moving to a consumption-based sewerage charge, stating that the use of water provides a good indication of the use of the sewerage system. She suggested that customers would respond to the introduction of a financial incentive to be less profligate in their use of water, thus improving water security⁹.

Alano Water considered this option by comparing it to a similar charging mechanism operating in Victoria. It noted that there are potential equity issues for lower value property owners in moving to this approach, and stated that the Victorian system seems unnecessarily complicated¹⁰.

The Conservation Council favoured this option, stating that it provides an extension to the impact of water pricing to conserve water and would help make water conservation, stormwater recovery and recycling projects viable¹¹.

The Shopping Centre Council of Australia (**SCCA**)¹² and two internet respondents also favoured moving to a variable charging approach.

The Commission recognises that, on principle, this option has strong merit, as it appears to be consistent with user pays pricing principles. Pricing based on level of use aligns well with the pricing of water supplied, and with the pricing of other utilities, such as electricity and gas.

However, for reasons of cost, it is impractical to meter sewerage discharge volumes, other than for a very limited number of large industrial users¹³. The only practical option, therefore, would be to use a proxy to estimate discharge levels.

A proxy system, using the volume of water supplied to a property, is currently used by some Victorian water providers. However, the volume of water supplied is not always a good indicator of the volume of sewage produced. As noted by SA Water, there are issues with

⁸ District Council of Ceduna submission, p.4, available at: <http://www.escosa.sa.gov.au/library/131118-WaterPricingInquiry-IssuesPaperSubmission-CedunaCouncil.pdf>.

⁹ Submission to the Inquiry into SA Water's drinking water and sewerage services by Hon. Sandra Kanck, p.2, available at: <http://www.escosa.sa.gov.au/library/131118-WaterPricingInquiry-IssuesPaperSubmission-HonSandraKanck.pdf>.

¹⁰ Alano Water submission, p. 2, available at: <http://www.escosa.sa.gov.au/library/131118-WaterPricingInquiry-IssuesPaperSubmission-AlanoWater.pdf>.

¹¹ Conservation Council of SA submission, p. 5, available at: <http://www.escosa.sa.gov.au/library/131118-WaterPricingInquiry-IssuesPaperSubmission-ConservationCouncilSA.pdf>

¹² Shopping Centre Council of Australia submission, p. 1, available at: <http://www.escosa.sa.gov.au/library/131118-WaterPricingInquiry-IssuesPaperSubmission-ShoppingCentreCouncilAust.pdf>.

¹³ See, for example, the Productivity Commission at <http://pc.gov.au/projects/inquiry/urban-water>, p.142 and the Essential Services Commission of SA at http://www.escosa.sa.gov.au/library/101031-PotableWaterSeweragePricingProcessesInquiry_2010-11-FinalReport.pdf, p.59.

customers that have high levels of water supplied but little discharge (e.g. garden centres and sports fields) and, conversely, customers with little water supplied but comparatively high sewage discharge (e.g. customers with rainwater tanks or bore water). These inequities are addressed in Victoria by using a series of discharge factors, together with a seasonal component, to more accurately estimate the volume of sewerage produced. This is also complemented by a process for reviewing discharge factors on a case-by-case basis, where a customer lodges an objection, or proposes a review.

The Essential Services Commission of Victoria (ESCV) has stated its preference for moving away from this methodology to a single fixed charge, citing the difficulties in measuring sewage volumes and noting that such a charge would be less distortionary¹⁴. To date, however, this change has not been effected.

Additionally, Sapere concluded that water usage is not an accurate measure of sewage flows and any benefits from applying a volumetric charge are likely to be small.

Further, given that the costs of dealing with sewage discharges are 97 per cent fixed, and only 3 per cent variable with volume, this option would not result in cost-reflective charges for many customers. This is inconsistent with the Commission's stated aim of maximising economic efficiency by ensuring that customers bear the true costs of the services provided. In its submission to the Inquiry, SA Water highlighted¹⁵ a number of inequities that may be introduced with such a pricing methodology, citing examples of customers who use large quantities of supplied water outdoors and, conversely, customers with bores or rainwater tanks, where the volume of water supplied may not be a reasonable proxy for the amount of water discharged.

The Commission agrees that volume of water supplied is not always a good indicator of the volume of sewage produced. It also notes the attempt to correct for this through discharge factors and a review/exemption regime. However, the Commission is of the view that this is administratively complex, due to the requirement for ongoing reviews (to ensure discharge factors remain accurate overall, or where a customer lodges an objection), and potentially confusing for customers¹⁶.

For these reasons, the Commission does not support this option at this time.

1.4 Price according to a combination of consumption-based (variable) and fixed charging

Under this option, customers would be charged both a fixed charge and a volumetric charge, based on the volume of water supplied.

¹⁴ ESC Victoria, personal communication 11 Dec 2013.

¹⁵ SA Water submission, p.16.

¹⁶ ESC Victoria, personal communication 11 Dec 2013.

1.4.1 Commission's consideration

Only SA Water provided feedback on this approach, querying whether it would provide appropriate incentives to customers to reduce overall costs¹⁷.

The Commission notes that this option aligns with the way charges are levied for water supplied and with the pricing structure of other utilities, such as electricity and gas.

However, as it would be partly based on a variable charge linked to discharge volumes, this option attracts all of the same issues as described in 1.3.

Further, as sewerage costs are 97 per cent fixed, a cost reflective sewage discharge based bill would have a 97 per cent fixed charge, with only the remaining 3 per cent of the bill (estimated at approximately \$16 per annum) varying with discharge volumes.

The Commission considers it very unlikely that this small variable cost element would, in any way, drive customer behaviour. As previously noted, experience interstate where a usage component for sewerage has been introduced suggests that customers have very little ability to control their behaviour in relation to sewage discharge volumes. Therefore, the costs of setting up a volume proxy system and providing a split fixed/variable sewerage bill would almost certainly outweigh any benefits.

For these reasons, the Commission does not support this option at this time.

1.5 Price according to some other method

Under this option, sewerage charges could be levied according to the number of people in a household or business, or according to the number of toilets or other appliances that have an impact on the sewerage system.

1.5.1 Commission's consideration

A number of submissions from stakeholders provided feedback on this approach.

SA Water stated that no database of occupancy or number of appliances currently exists, and that maintenance of such a database would introduce a number of administrative complexities¹⁸.

The Commission notes that, for domestic premises, both the level of occupancy, or for example, the number of bathrooms/pedestals, could provide a reasonable proxy for the volume of sewage discharged.

However, as identified by SA Water, no database of such information exists, and the establishment and ongoing maintenance of such a database has the potential to be both expensive and administratively complex. It would also be open to the potential for 'gaming', with customers incentivised to under-declare the number of occupants or bathrooms/pedestals on their property to minimise their sewerage bill. Such gaming

¹⁷ SA Water submission, p.18.

¹⁸ SA Water submission, p.19.

occurred in the UK from 1696 to 1850 in response to the window tax, where building owners boarded up windows in order to avoid the tax.¹⁹

Further, given that the costs of dealing with sewage discharges are 97 per cent fixed, and only 3 per cent variable with volume, this option would not result in cost-reflective charges for many customers. This is inconsistent with the Commission's stated aim of maximising economic efficiency by ensuring that customers bear the true costs of the services provided.

For these reasons, the Commission does not support this option at this time.

¹⁹ See Parliament UK, <http://www.parliament.uk/about/living-heritage/transformingsociety/towncountry/towns/tyne-and-wear-case-study/about-the-group/housing/window-tax/>.



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