Review of System Performance Standards in Sydney Water Corporation's Operating Licence

Issues Paper

INDEPENDENT PRICING AND REGULATORY TRIBUNAL
OF NEW SOUTH WALES

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Issues Paper

Discussion Paper DP42 December 2000

Submissions on the issues raised in this paper should be received no later than 10 February 2001.
Sydney Water Corporation is to provide a submission by 19 January 2001.

Comments or inquiries regarding this review should be directed to:
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1 INTRODUCTION

At the end of 1999, the Independent Pricing and Regulatory Tribunal (the Tribunal) recommended to government the terms and conditions of the Operating Licence for Sydney Water Corporation (Sydney Water). A new 5-year Licence commenced on 12 April 2000.

The Operating Licence includes a process for reviewing Sydney Water's system performance standards and its Customer Contract. Under clause 7.3 of the Licence, the Minister for Energy is required to nominate an independent person to review the system performance standards by 11 April 2001. Under clause 5.1, Sydney Water must initiate an independent review of the Customer Contract.

The Minister for Energy has requested that the Tribunal conduct a review of Sydney Water's system performance standards and report on whether the standards should be amended and, if so, the nature of the amendments. The Tribunal has also been asked to conduct the review of the Customer Contract by 25 October 2001. Attachment 1 provides the Terms of Reference for both these reviews.

This issues paper forms part of the Tribunal's review of the system performance standards. A separate issues paper on the Customer Contract will be released in early 2001.

1.1 Review process

As part of its review, the Tribunal will be appointing a consultant to provide advice on appropriate system performance standards for inclusion in Sydney Water's Operating Licence, and seeking a submission on this subject from Sydney Water. In addition, the Tribunal is inviting public submissions and will conduct a workshop[1] to obtain the views of stakeholders.

The timetable for the review process is provided below.

Action	Timetable
Release of issues paper	19 December 2000
Sydney Water submission due	19 January 2001
Public submissions due	10 February 2001
Workshop	23 February 2001
Final report to Minister	11 April 2001

[1] The Tribunal will advise interested stakeholders of the format of the workshop in early February.

1.2 Key issues

Based on its Terms of Reference, the Tribunal has identified seven key issues on which it particularly seeks comment. These issues are:

1. Do the current system performance standards in Sydney Water's Operating Licence reflect customer needs and preferences? If not, how could the performance standards be modified to better reflect customer needs and preferences?
2. What supplementary means exist to ensure that Sydney Water delivers acceptable system performance for its customers?
3. Do the current system performance standards (water continuity, water pressure and sewer overflows) adequately reflect all the aspects of performance that are important to customers? If not, in what other areas are system performance standards needed?
4. What should be the relationship between system performance standards and Sydney Water's Customer Contract?
5. How could the specification, measurement and reporting of the current system performance standards be improved? Further, should a sampling and recording protocol be established?
6. Do the current system performance standards provide sufficient encouragement to Sydney Water to improve its performance? If not, how should the standards be modified?
7. What are the costs and benefits of amending Sydney Water's system performance standards?

To assist stakeholders in making their submissions, this paper discusses each of these issues and provides relevant context and background information.

1.3 How to make a submission

The Tribunal encourages interested parties to comment on the issues raised in this paper, and provide information on any additional matters relevant to this review. All submissions must be made in writing. If your submission is more than 15 pages long, it must be provided on a computer disc in word processor, PDF or spreadsheet format.

All confidential parts of submissions must be clearly marked. However, please note that confidentiality cannot be guaranteed as the *Freedom of Information Act, 1989* and section 22A of the *Independent Pricing and Regulatory Tribunal Act, 1992* provide measures for public access to documents in certain circumstances.

Submissions should be sent to:

Sydney Water Performance Standards Review (Matter No. 00/243)
Independent Pricing and Regulatory Tribunal of NSW
PO Box Q290
QVB Post Office NSW 1230

2 CURRENT SYSTEM PERFORMANCE STANDARDS

Sydney Water's Operating Licence sets out performance standards in three major areas—system performance, drinking water quality, and demand management. The Tribunal's terms of reference for this review ask it to report and make recommendations on the system performance standards only.

The Operating Licence defines 'system' as the infrastructure required for Sydney Water to provide its services. Thus the term covers the water supply system, sewerage system and stormwater drainage system. The term `system' could also be interpreted to include the administrative and customer service systems. However, the Licence sets out specific performance standards for the water supply system (drinking water continuity and drinking water pressure) and the sewerage system (sewage overflows[2]) only. These standards and how they are measured are presented in Table 1.

[2] Sewage overflows can occur when sewage flowing through the sewerage system exceeds the hydraulic capacity of the system, and when blockages within the system restrict the flow. Blockages may have a number of causes including tree root intrusion, accumulation of debris or damages to pipes. When system capacity is exceeded or blockages occur, sewage backs up and may surcharge from the system. Surcharges may occur from pumping stations, designed overflow points or domestic drains.

Table 1 Current system performance standards for Sydney Water

Levels of service	Standard	How standard is measured
Drinking Water continuity	Sydney Water must ensure that, on an annual basis, 95% of all properties connected to its Water supply system will not have that connection affected by an interruption of water supply exceeding 6 hours.	The number of interruptions exceeding 6 hours divided by total number of properties expressed as a percentage and then subtracted from 100. Where an interruption occurs again in the reporting period, each property is to be counted each time it experiences an interruption, regardless of the number of times the service is so affected. The duration of the interruption is to be measured from the time Sydney Water is advised and ends when the supply to the property is reinstated.
Drinking water pressure	Sydney Water must ensure that, on an annual basis, 98% of all properties connected to its Water supply system will have water pressure at the main tap in excess of 15 metres head except in the following low pressure areas: • Urban areas adjacent to reservoirs in the Blue Mountains • Non-urban properties in Bayview, West Camden, Llandilo, Berkshire Park, Castlereagh, North Richmond, Oakville, Riverstone, Schofields and the Blue Mountains Sydney Water must also develop standards that establish the minimum level of water pressure for these low pressure areas.	The number of instances where pressure is less than 15 metres head (excluding exemptions) divided by total number of properties expressed as a percentage and then subtracted from 100. Where pressure of less than 15 metres head occurs again in the reporting period, each property is to be counted each time, regardless of the number of times the pressure service is so affected.
Sewage Overflows	Sydney Water must ensure that, on an annual basis, 96% of all properties connected to its Sewerage system will not have their land affected by a sewage overflow on their land from, or as a result of a sewer owned or operated by Sydney Water.	Number of properties affected by a sewage overflow divided by total number of properties, expressed as a percentage and then subtracted from 100. Where a sewage overflow occurs again in the reporting period, the property is to be counted each time it experiences an overflow regardless of the number of times any property is so affected.

Source: Schedule 4 and Section 7.2 of Sydney Water Operating Licence 2000-2005.

3 CUSTOMER NEEDS AND PREFERENCES

Issue 1

Do the current system performance standards in Sydney Water's Operating Licence reflect customer needs and preferences? If not, how could the performance standards be modified to better reflect customer needs and preferences?

Under the *Sydney Water Act, 1994*,[3] Sydney Water must meet three equally important objectives in providing its water, sewerage and stormwater services. These objectives are to be a successful business, to protect the environment and to protect public health. One aspect of being a successful business is satisfying the needs and preferences of its customers.

In general, 'customer needs' refers to the minimum standards of a business' output that its customers will find acceptable. 'Preferences' are what customers expect from the output. In relation to Sydney Water's system performance, customer needs and preferences might include factors such as the reliability and continuity of water supply, water pressure, cost, impact on health (from disposing of sewage and stormwater), and environmental impact.

In a business that operates in a competitive market, there are strong incentives to satisfy customer needs and preferences, as customers are free to take their business elsewhere. In a monopoly business like Sydney Water, however, the incentives to satisfy the needs and preferences of its customers are relatively weak. This creates a risk that internal factors will be more important than the needs of customers in driving the business. For example, a business's strong engineering culture might influence it to build large capital works projects rather than maintain existing capital infrastructure, even though its customers might prefer the lower cost option.

The performance standards set out in Schedule 4 of Sydney Water's Operating Licence and the rights and obligations set out in the Customer Contract in Schedule 1 of the Licence are regulatory tools or mechanisms intended to manage this risk. For these mechanisms to be effective, however, it is critical to measure the extent to which the outputs of the business meet the needs and preferences of customers. This involves three steps:[4]

1. Defining customer needs and preferences and the relative importance of each of them.
2. Describing those needs and preferences in measurable terms.
3. Defining the way data used to measure compliance with those standards are collected and used. It is essential that compliance targets are relevant, specific, measurable, agreed and documented.

Issue 2

What supplementary means exist to ensure that Sydney Water delivers acceptable system performance for its customers?

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3 See section 21.

4 H J Harrington, *Business Process Improvement: The Breakthrough Strategy for Total Quality, Productivity, and Competitiveness*, McGraw Hill, 1991, pp 74-75.

In addition to meeting the current system performance standards, Sydney Water could be required to report on supplementary indicators of performance, as part of the audit of its Operating Licence. In general, whereas performance standards measure the key outputs of a business, supplementary indicators measure its business processes. As such, they help to show how effectively the business is delivering those outputs. An example of a supplementary indicator might be the number of water main breaks per hundred kilometres of water pipes per year.

Issue 3
Do the current system performance standards (water continuity, water pressure and sewer overflows) adequately reflect all the aspects of performance that are important to customers? If not, in what other areas are system performance standards needed?

As noted in section 2, Sydney Water's Operating Licence sets out system performance standards for its water supply system (water continuity and pressure) and sewerage system (sewer overflows) only. It may be appropriate for system performance standards to be developed in regard to all services provided by Sydney Water's systems—for example stormwater services and the supply of other grades of water (recycled or re-used water).

In addition, it may be appropriate to extend the definition of 'system' to cover not only infrastructure (such as the water distribution network) but also the computer systems for managing customer databases and billing procedures. If so, the categories of system performance standards might be expanded to include a wider set of standards that encompass interactions with customers, such as dealing with written complaints and telephone inquiries.

3.1 Some independent views

In assessing the adequacy of the current system performance standards and how they might be amended, it is useful to consider the views already expressed in other independent reviews of Sydney Water. Both Halcrow Management Services Ltd (Halcrow)[5] and the independent auditors of Sydney Water's Operating Licence have commented on these performance standards.

3.1.1 Halcrow's views

In its 1999 report to the Tribunal,[6] Halcrow argued that the total number of service standards regulated agencies are required to meet should be kept to the minimum necessary to define the interface to the satisfaction of business and regulators. These standards should drive the business and form the basis for evaluating its success. Halcrow believes secondary indicators of standards are also likely to be needed, but that these should be used to understand the business rather than drive or evaluate it.

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5 Halcrow was a consultant commissioned by the Tribunal in 1999 to analyse the projected capital expenditure and operating costs of Sydney Water Corporation, Hunter Water Corporation, Gosford City Council and Wyong Shire Council.

6 Halcrow Management Services Ltd, *New South Wales Water Agencies' Review – Summary*, December 1999, p 14.

Halcrow argued that for water companies, performance standards should include robust measures of:

- reliability of water supply in the long term (which is a function of the supply / demand balance)
- continuity of water in the short term (which relates to day-to-day interruption events)
- adequacy of the normal supply (which relates to flow and pressure at the tap)
- effectiveness in disposal of waste effluent
- other measures including the day-to-day interaction with customers such as handling of telephone calls and complaints
- quality of water supplied in relation to health and aesthetic parameters.[7]

All but the last of these standards relate to system performance.

Further, Halcrow identified significant variations in the service standards and performance targets among the NSW water agencies. They concluded that service levels appear to have been chosen to reflect the capability of the system rather customer expectations. For example, the drinking water pressure standard in Sydney Water's Operating Licence excludes a number of low pressure areas (see Table 1).

In relation to Sydney Water, Halcrow commented:

> The standards of service imposed on Sydney Water by its licence are not a comprehensive reflection of customer expectations of water services. The corollary is that it is not these standards that drive the business of delivering water services but a range of secondary indicators that are not directly regulated but are in some cases subject to audit.[8]

3.1.2 Auditor's views

In the first Audit Report of Sydney Water's Operating Licence, the auditor raised the issue of system capability versus quality of service provided to customers:

> … Sydney Water decided to use water pressure as a measure of the system's capability and continuity as a measure of the system's operational performance. This may be an appropriate approach provided that the standards are designed to adequately reflect the quality of service provided to customers and that the definitions and interpretations of the standards are compatible and do not exclude particular incidents or customers. The current definitions exclude a number of customers who may be adversely affected by an operational problem.[9]

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7 Halcrow Management Services Ltd, *New South Wales Water Agencies' Review – Summary*, December 1999, p 13.

8 Halcrow Management Services Ltd, *New South Wales Water Agencies' Review – Summary*, December 1999, p 27.

9 Report to the Minister on the 1995 *Operational Audit of the Sydney Water Corporation*, May 1996, p 33.

In addition, the auditor observed that there is no demonstrated relationship between the Operating Licence requirement for water continuity and the extent to which this is a measure of customer satisfaction. While Sydney Water has adopted continuity as a measure of system performance, this standard may not be a complete measure of system performance or customer satisfaction with the performance of the system.[10]

The auditors have also identified some limitations with the current system performance standards. These are explained in section 4.1 of this paper.

3.2 Other jurisdictions

It is also useful to compare Sydney Water's system performance standards to those of water companies in other jurisdictions.

In Victoria, the Office of the Regulator-General monitors the performance standards achieved by the three Melbourne metropolitan water companies. The standards that relate to the companies' system performance include restoration of water supply and the containment of sewer spills. These standards are described in Attachment 2.

In the United Kingdom, the Office of Water Service (OFWAT) uses a wider set of indicators to measure the level of service provided to customers by the water industry. They include:

- inadequate pressure
- supply interruptions
- restrictions on use of water
- flooding from sewers
- billing contacts
- written complaints
- bills for metered customers
- ease of telephone contact.[11]

These indicators are described in Attachment 3.

Sydney Water's Operating Licence requires it to record and report on the number and type of complaints as part of the annual audit of the Licence. It may be appropriate to consider some of the indicators measured by OFWAT for inclusion as part of the review of Sydney Water's Customer Contract.

10 Report to the Minister on the 1995 *Operational Audit of the Sydney Water Corporation*, May 1996, p 39.

11 OFWAT, *Levels of service for the water industry in England and Wales: 1999-2000 report*, July 1999, pp 37-38.

3.3 System performance standards and the Customer Contract

Issue 4

What should be the relationship between system performance standards and Sydney Water's Customer Contract?

While this issues paper focuses on the system performance standards in the Operating Licence, it is important to consider the relationship between these standards and the requirements of the Customer Contract. The Tribunal wishes to avoid overlap or inconsistencies between these regulatory instruments.

The Customer Contract in Schedule 1 of the Operating Licence, sets out the rights and obligations of customers and Sydney Water in relation to the services (water, sewerage, and stormwater) provided by Sydney Water. If Sydney Water contravenes the terms and conditions of this Contract, then a customer is entitled to redress and compensation.

Some of the system performance standards in the Operating Licence are linked to the customer redress provisions in the Customer Contract. For example, the performance standard for water continuity is that on an annual basis, 95 per cent of all properties will not have an interruption of water supply exceeding 6 hours. In the Customer Contract, a discontinuity of water supply for more than 6 hours entitles a customer to a 10 per cent rebate on the water and waste water service availability charge.

The system performance standards are currently an aggregate measure of performance: that is they measure the percentage of customers that receive a certain level of performance. Some people believe that the Customer Contract should set standards of performance for individual customers.

The UK water regulator, OFWAT, has developed a Guaranteed Standards Scheme for customers of the water companies. If a company fails to meet any of the guaranteed standards, customers are entitled to a compensation payment each time the company fails to meet the standards (normally £20 for domestic customers and £50 for business customers). There are two exceptions: sewer flooding where a rebate of charges up to a limit of £1,000[12] is payable for each incident, and low pressure where a £25 payment is made.[13] Some companies operate compensation schemes that go further than the Guaranteed Standards Scheme.

Should those customers of Sydney Water who are regularly affected by service interruptions or poor quality service (such as those identified low pressure customers) be entitled to an automatic rebate?

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12 In 1999/00 the average annual household sewerage charge was £135 for the UK water and sewerage companies. See OFWAT, *Final Determinations: Future water and sewerage charges 2000-05*, November 1999, p 18.

13 OFWAT, *The Guaranteed Standards Scheme*, Information note No. 4, revised September 2000.

4 SPECIFICATION, MEASUREMENT AND REPORTING OF SYSTEM PERFORMANCE STANDARDS

Issue 5

How could the specification, measurement and reporting of the current system performance standards be improved? Further, should a sampling and recording protocol be established?

One of the weaknesses of the original Operating Licence[14] for Sydney Water was that it did not define the terminology used to describe performance standards, nor the way the data for measuring compliance with these standards were to be collected and used. As a result, Sydney Water has defined and interpreted its performance standards itself. As part of the audit of the Operating Licence, the auditors commented on these definitions and the collection of data.[15] In summary, their key comments were:

- **Water Continuity.** A discontinuity of water supply is defined as where any property connected to a Sydney Water system receives no water. A main break or a pressure drop does not necessarily constitute a discontinuity of water supply, even though these events are likely to affect the quantity of water supplied to customers.

  The period of discontinuity is defined as the period between interruption of supply and restoration of supply. Normally this is determined from the time when valve operations are used to shut down a section of water mains (to enable repairs to proceed) to the time when valves are re-opened, restoring supply. However, in some instances customers may experience loss of water (due to a large main break) before the valves have been shut down to repair the main.

- **Water Pressure.** Sydney Water uses water pressure as a measure of the system's capability, and continuity as a measure of the system's operational performance. Low water pressure is defined as a pressure at the main tap of less than 15m head resulting from demand exceeding system/asset capability under normal working operations. Normal working operation excludes all operational problems rectified within 7 days (typically those associated with system or asset failures) and supply problems associated with private customer water service.

- **Sewage surcharge.** The term sewer surcharge was not defined under the original Operating Licence. As a result, Sydney Water has interpreted a sewage surcharge to mean any detectable flow of sewage over land (including customer properties) resulting from a failure in Sydney Water's sewerage system (private plumbing problems are excluded). In measuring performance, surcharges on Council parks or open spaces, National Parks, streets and other public areas are not included.

The auditor's comments suggest that there may be merit in modifying the definitions of the existing system performance standards. It may also be appropriate to develop a protocol to ensure that the methodology used to collect and record data is robust.

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14 This original Operating Licence was in place from 1995 to 1999.

15 See *1999 Operational Audit of the Sydney Water Corporation*, July 2000, pp 241, 342 and 349.

4.1 Limitations of current system performance standards

The current system performance standards for Sydney Water have a number of limitations. These include:

- The water pressure performance measure excludes a number of low pressure geographic areas. Note the current Operating Licence requires Sydney Water to develop a minimum level of water pressure for these areas (see Table 1).
- In measuring the number of low pressure incidents, Sydney Water excludes any incidents due to operational problems.[16] Operational problems are those associated with system of asset failures and include water main breaks, control valve faults and water pumping station failures.[17] Therefore customers with low water pressure resulting from operational problems are generally not recorded unless the problem led to a water discontinuity.
- The water pressure data can not be accurately audited, as pressure cannot be measured unless there is a gauge installed for a particular reason.
- The pressure standard should differentiate between chronic low pressure resulting from system inadequacies and acute drops caused by system failures.
- Where a service is interrupted more than once for a customer (known as repeat occurrences) the data does not distinguish the number of times that the customer has been affected. For instance, it does not distinguish whether a particular customer has been affected 5 times or 5 different customers have been each affected.
- Sewage surcharges on Council parks or open spaces, National Parks, streets and other public areas are not reported. Yet these surcharges are an indicator of system failure and a surrogate measure for environmental performance. This suggests that they should be recorded[18] and reported. Surcharges can be linked to chronic system problems, acute system failures or to storm events. Given that Sydney Water is planning a large increase in capital expenditure to address sewer overflows,[19] an indicator of the impact of overflows on public lands could be an important measure of performance.

Currently, the performance standards are specified as a percentage of customers who receive a certain level of performance. Another way of expressing this might be the number of customers that do not receive the standard. This would shift the emphasis to the areas that need improvement and facilitate analysis of the trends.

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16 As an example, an operational problem that results in low pressure to a number of customers is likely to be given a low priority if there are low risks to public health, property or asset damage. The low pressure incident may prevail for several days before the fault is repaired. If the planned water shutdown to repair the fault does not exceed six hours, there would be no customer redress and the incident would not be reported as part of the annual compliance assessment.

17 Licence Regulator, *1996 Operational Audit of the Sydney Water Corporation*, May 1997, p F4-17.

18 Sydney Water for operational purposes monitors the actual occurrence of surcharge incidents. All sewer surcharges on non-rebateable areas are recorded but not reported under the Operating Licence.

19 Independent Pricing and Regulatory Tribunal, *Sydney Water Corporation Prices of Water Supply, Sewerage and Drainage Services: Medium-term price path from 1 October 2000*, September 2000, pp 12-13 and 58.

5 INCENTIVES TO IMPROVE PERFORMANCE

Issue 6

Do the current system performance standards provide sufficient encouragement to Sydney Water to improve its performance? If not, how should the standards be modified?

Table 2 provides a five-year summary of Sydney Water's audit results of the performance standards. It shows that Sydney Water has easily achieved the licence requirement for all the performance standards in the Operating Licence. In fact, Sydney Water has consistently achieved a 'full' compliance assessment by the auditors.

Table 2 Audit results of system performance standards 1995 to 1999

	Licence requirement	1995[4]	1996[5]	1997[6]	1998[7]	1999[8]
Water pressure	98% customers >15m head at main tap –excluding low pressure areas	99.6%	99.68%	99.62%	99.67%	99.78%
	Customers affected[1]					
	• At least once	5,400	4,837	5,974	5,168	3,553
	• Repeat occurrences	2,700	na	na	na	na
Water continuity	95% customers not experience discontinuity > 6hrs	99.4%	99.46%	99.35%	99.59%	99.33%
	Customer affected[2]					
	• At least once	8,400	8,257	10,141	6,366	10,806
	• Repeat occurrences	330	326	155	101	338
Sewer surcharge	96% customers will not experience a sewer surcharge	98.8%	98.85%	98.86%	98.72%	99.06%
	Customers affected[3]					
	• At least once	17,500	16,919	17,056	19,522	14,586
	• Repeat occurrences	>1,000	2,137	2,377	2,050	1,746

1. Excludes operational and private supply problems, and customers in designated low presssure areas.
2. Any subsequent discontinuties experienced by the same customer are not counted.
3. Customers do not include Council parks or open spaces, National Parks, streets and other public areas.
4 Report to the Minister, *1995 Operational Audit of Sydney Water Corporation*, May 1996, pp 30-41.
5. *1996 Operational Audit of the Sydney Water Corporation*, May 1997, pp 3-20 to 3-29.
6. *1997 Operational Audit of the Sydney Water Corporation*, July 1998, pp 25 and 35-36.
7. *1998 Operational Audit of the Sydney Water Corporation*, July 1999, pp 29-30 and 49-50.
8. *1999 Operational Audit of the Sydney Water Corporation*, July 2000, pp 31 and 51-52.

As Sydney Water has easily achieved the system performance standards, it could be argued that these standards have not driven decision making and therefore business performance. Rather supplementary indicators, determined by Sydney Water's management, are likely to be important in current decision making.

Sydney Water is committed to a philosophy of continual improvement[20] in its business. Given this framework, should the performance standards in the Operating Licence be increased over time?

20 The Managing Director of Sydney Water stated "we strive to encourage a culture of continuous improvement in everything we do", see Transcript of Public Hearing Sydney Water Corporation Medium Term Price Path Review, 3 March 2000, p 5.

6 COSTS AND BENEFITS OF AMENDING STANDARDS

Issue 7
What are the costs and benefits of amending Sydney Water's system performance standards?

The levels of service that Sydney Water provides to its customers fundamentally drive the costs of the business. These levels of service are reflected in the performance standards in the Operating Licence (system performance standards, drinking water quality and demand management) and in the Customer Contract.

If the system performance standards in Sydney Water's Operating Licence are amended, the implications in terms of the costs and benefits need to be considered, along with how the decision making in the business will change.

There are a number of ways in which the current system performance standards could be amended:

- including a new system performance standard
- deleting an existing system performance standard
- changing the definition or measurement of an existing standard
- changing the percentage target of an existing standard.

Estimating the cost of changing the system performance standards requires an understanding of the capability of the systems from an engineering perspective. For example, if the pressure standard is increased, Sydney Water may need to install pumps in particular geographic areas.

The benefits to customers of an increase in the system performance standards are likely to be difficult to identify and quantify. Customer research is needed to understand how important these standards are to customers, and how willing they are to pay the price of raising them.

6.1 Financial implications

The financial implications of amending the system performance standards on Sydney Water's business must also be carefully considered. The Tribunal has recently determined prices for Sydney Water's water, sewerage and stormwater services until June 2003.[21] In setting future prices for Sydney Water, the Tribunal has provided for a substantial increase in capital expenditure on the sewerage system and also additional revenue for stormwater expenditure. The Tribunal will need to consider any additional costs imposed by higher standards and Sydney Water's ability to finance these costs.

[21] Independent Pricing and Regulatory Tribunal, *Sydney Water Corporation: Prices of water supply, sewerage and Drainage Services: Medium-term price path from 1 October 2000*, September 2000.

ATTACHMENT 1 TERMS OF REFERENCE

Review of Sydney Water's performance standards and Customer Contract

1. The Tribunal is requested, pursuant to section 9(1)(b) of the IPART Act 1992, to report to the Minister for Energy on the recommended terms of the system performance standards by 11 April 2001 and on recommended terms of the Customer Contract by 25 October 2001 as scheduled under clauses 7.3 and 5.1 of Sydney Water's Operating Licence.
2. The Tribunal must take into consideration the requirements of Sydney Water's Operating Licence in reviewing the system performance standards and Customer Contract.
3. In recommending amended terms for the performance standards, the Tribunal must consider whether:
    - Sydney Water's customers' preferences are adequately reflected by current system performance standards
    - the current standards should be increased or decreased based on Sydney Water's current performance levels, customer preferences and financial implications
    - alternative measures of system performance are more appropriate
    - alternative or supplementary means exist to ensure that Sydney Water delivers acceptable system performance for its customers
    - performance standards of other relevant water and wastewater service providers should be applied to Sydney Water.
4. The Tribunal's report must outline the costs and benefits of its recommendations for amending the system performance standards.
5. In developing its recommendations for amended performance standards, the Tribunal must consult with Sydney Water and other key stakeholders.
6. The Tribunal must, when recommending the terms of the Customer Contract, consider:
    - whether Sydney Water's customers' preferences are adequately reflected by the Customer Contract
    - whether additional items need to be included in the Customer Contract
    - the options for simplifying and streamlining the Customer Contract without compromising the requirements of Sydney Water's Operating Licence
    - the adequacy of Sydney Water's and customers' obligations under the Customer Contract.
7. The Tribunal must consult with Sydney Water and key stakeholders for the review of the Customer Contract.

ATTACHMENT 2 SERVICE INDICATORS USED BY THE OFFICE OF THE REGULATOR GENERAL VICTORIA

Performance standards in water and sewerage licences

The three Melbourne water companies are City West Water (CWW), South East Water (SEW), and Yarra Valley Water (YVW). Each company holds a water and sewerage licence which allows it to:

- supply water to, and collect sewage from, properties connected to its system
- operate and maintain the water and sewerage reticulation system in its area.

These licences have performance standards for drinking water quality, restoration of water supply and containment of sewer spillages.

STANDARD	CWW	SEW	YVW
Restoration of water supply % of unplanned water supply interruptions from any cause over any twelve month period which are restored within 5 hours. For the purposes of this Standard an interruption is to be regarded as having been restored within 5 hours if the time at which the water supply was shut off and the time at which the main was fully recharged after repairs is 5 hours of less.	92.5%	95%	95%
Containment of sewer spillages % of *priority 1 spills* and *priority 2 spills* in reticulation and branch sewers over any twelve month period which are fully contained within 5 hours. For the purpose of this Standard: • A sewer spill is regarded as having taken place at the time the licensee becomes aware of the spill; • A sewer spill is regarded as being fully contained when there is no longer a discharge to the environment; • Spillages from emergency relief structures and pump station spillages shall be excluded.	90%	90%	90%

Source: Schedule 1 of the water and sewerage licences issued by the Victorian Government. See the Office of Regulator-General, Victoria website at www.reggen.vic.gov.au

Priority 1 spill means any major failure to contain sewage within the sewerage system and any spill affecting many users which results in personal injury or major property damage, which poses a significant health risk, which has a major environmental impact or which results in a surcharge or overflow in dry weather, a surcharge or overflow in wet weather if caused by loss of sewer capacity, a surcharge in a building or a surcharge outside a building which poses a health risk.

Priority 2 spill means any minor failure to contain sewage within the sewerage system and any spill affecting several users which results in minor property damage or results in a surcharge outside a building which does not pose a health risk.

ATTACHMENT 3 OFWAT LEVELS OF SERVICE INDICATORS

The levels of service indicators for the water industry used by the Office of Water Services in the United Kingdom is summarised below.

Inadequate pressure

The indicator shows the number of connected properties that have received, and are likely to continue to receive, pressure below the reference level when demand for water is not abnormal.

The reference level of service is defined as ten metres head of pressure at a boundary stop tap with a flow of nine litres per minute. This should be sufficient to fill a one-gallon (4.5 litre) container in 30 seconds from a ground floor kitchen tap.

There are a number of exceptions to this, to allow for circumstances beyond a company's control. Many pressure problems, for example, are caused by a customer's own plumbing.

Since it is impractical to measure the pressure and flow at the boundary of every customer's property, companies are allowed to report against an alternative reference level of 15 metres head of pressure in the distribution main supplying the property. This is a sufficiently high pressure, even allowing for the connection from the water main to the property boundary.

Companies are expected to maintain registers which identify the properties at risk of receiving low pressure.

Supply interruptions

This indicator shows the number of properties experiencing interruptions to their supply of greater than 6 hours, 12 hours and 24 hours duration which are the responsibility of the water company, but which are not planned and not warned.

Incidents of supply interruptions are excluded if:

- they are caused by a third party; or
- they are a result of planned maintenance work and customers have been given reasonable advance warning.

Companies are required to maintain registers that identify those properties affected by supply interruptions.

Restrictions on use of water

This indicator shows the percentage of a company's population that has experienced water-usage restrictions. Water-usage restrictions can be divided into a number of categories:

- voluntary reductions, encouraged by a publicity campaign
- hosepipe restrictions
- drought Orders restricting non-essential use of water
- drought Orders imposing standpipe usage or rota cuts.

Companies are required to report the percentage of population affected by the above water usage restrictions.

Flooding from sewers

This indicator examines company performance in respect of internal sewage flooding of properties.

Companies report their assessment of the risk of flooding due to sewer capacity under two categories – more than once in 10 years, and twice in 10 years. Companies also report on sewer flooding incidents in two causal categories – overloaded sewers, and other causes (temporary problems).

Billing contacts

This indicator shows the total number of written and telephone billing contacts received and the number dealt with in 2, 5, 10, 20 and more than 20 working days.

A billing contact is any enquiry regarding a bill – for example, an account query, change of address, request for alternative payment arrangements – which is not a complaint.

Written complaints

This indicator shows the total number of written complaints received and the number dealt with in 2, 5, 10, 20 and more than 20 working days.

A written complaint is any letter, however mildly worded, that draws attention to any service provided by or action taken by the company or its representatives which falls short of the expectation of the correspondent. All complaints, including those about general levels of charging or other policy issues, and complaints which are not justified must be included.

Bills for metered customers

This indicator shows the percentage of metered customers who receive at least one bill during the year based on an actual meter reading.

Actual meter readings are classified as a reading undertaken by the water company or provided to the company by the customer (either in response to an estimated bill or as a result of a request to supply such details).

Ease of telephone contact

This indicator identifies the ease with which the customer can make telephone contact with their local water company.

This indicator monitors incoming telephone traffic on principal, advertised customer contact numbers which are linked to, for example, the customer service department or accounts section or the main switchboard. The indicator measures:

- total calls received on customer contact lines
- total calls answered
- calls answered within three time bands – within 15 seconds, 15 to 30 seconds and over 30 seconds
- average time to answer calls
- all lines busy – that is, inability to make contact with the company.