IPART
New South Wales

Independent Pricing and Regulatory Tribunal

Draft System Performance Standards for Hunter Water Corporation

Water — Consultation Paper
July 2009

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Invitation for submissions

IPART invites written comment from interested parties on the GHD report commissioned by IPART as part of its review into System Performance Standards for Sydney Water Corporation and Hunter Water Corporation as well as targets proposed by Hunter Water Corporation for these system performance standards.

Submissions are due by 12 August 2009.

We would prefer to receive them by email <compliance@ipart.nsw.gov.au>.

You can also send comments by fax to (02) 9290 2061, or by mail to:

System Performance Standard Review
Independent Pricing and Regulatory Tribunal
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Our normal practice is to make submissions publicly available on our website <www.ipart.nsw.gov.au>. If you wish to view copies of submissions but do not have access to the website, you can make alternative arrangements by telephoning the staff member listed on the previous page.

We may choose not to publish a submission—for example, if it contains confidential or commercially sensitive information. If your submission contains information that you do not wish to be publicly disclosed, please indicate this clearly at the time of making the submission. IPART will then make every effort to protect that information, but it could be subject to appeal under freedom of information legislation.

If you would like further information on making a submission, IPART's submission policy is available on our website.

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1 Introduction

Hunter Water Corporation (Hunter Water) is a State-owned Corporation providing water and wastewater services for over half a million people in the lower Hunter region. Hunter Water's operations are governed by the *Hunter Water Act 1991* (the Act) and an Operating Licence (the licence) which is specified in the Act and is administered by IPART.

The Act stipulates that the licence granted to Hunter Water must include terms and conditions to ensure that Hunter Water meets specific performance standards[1]. These standards are known as System Performance Standards (SPS).

The licence specifies three SPS which relate to water pressure, water continuity and sewage overflows on private property. The licence also requires that at least once during the 5-year term of the licence, IPART must consult with the utility and other stakeholders and report to the Minister on whether these SPS should be amended, and if so the nature of the amendments.

The Sydney Water licence includes a similar requirement, requiring that IPART review SPS for Sydney Water. IPART contracted GHD Pty Ltd to review the SPS for both Sydney Water and Hunter Water in 2006. Hunter Water has developed targets for the SPS proposed by GHD. These are presented in this document. IPART now seeks comment on Hunter Water's proposed SPS targets. When comments have been received, IPART will then consider its recommendation to the Minister on any amendments to Hunter Water's SPS. The Sydney Water SPS are being considered separately as part of the end of term licence review for that utility.

2 The GHD Report and recommendations

The 2006 GHD report reviewed the SPS through a transparent and consultative process which sought to develop a set of standards from first principles. (The underlined title "GHD report" provides a link to the full GHD report).

GHD aimed to develop a suite of SPS that directly addressed:

- Agency responsibility and accountability
- Net benefit to the community
- Management of regulatory burden
- Customer value
- Consistency in approach
- IPART's regulatory responsibility

In total, GHD investigated 13 water continuity measures, 2 water pressure measures and 5 sewage service measures. A summary of the report's recommended standards are set out in Table 1.

1 Clause 13, *Hunter Water Act 1991*

Table 1 Existing and Proposed System Performance Standards for Sydney Water (SWC) and Hunter Water (HWC)

Existing Standard - SWC	Existing Standard – HWC	Proposed Standard
Water Pressure The number of properties in a financial year experiencing water pressure below the reference level (For SWC - less than 15 metres for more than 15 minutes).	*Water Pressure* The number of properties in a financial year experiencing water pressure below the reference level (For HWC - less than 20 metres for more than 30 minutes).	*Water Pressure* The number of properties in a financial year experiencing water pressure below the reference level. (This is unchanged)
Planned Interruption The number of properties in a financial year experiencing a planned water interruption exceeding 5 hours. *Unplanned Interruption* The number of properties in a financial year experiencing an unplanned water interruption exceeding 5 hours.	*Planned & unplanned interruption* The number of properties in a financial year experiencing one or more planned or unplanned water interruptions which taken together have a cumulative duration exceeding 5 hours.	*Unplanned Interruption* The number of properties in a financial year experiencing an unplanned water interruption exceeding 5 hours. (This is identical to the existing SWC standard) *Multiple unplanned interruption* The number of properties in a financial year experiencing 3 or more unplanned interruptions. (This is a new standard)
Sewer Overflow The number of private properties in a financial year experiencing an uncontrolled sewage overflow in dry weather.	*Sewer Overflow* The number of uncontrolled sewage overflow events on private land in dry weather in a financial year.	*Sewer Overflow* The number of private properties in a financial year experiencing an uncontrolled sewage overflow in dry weather. (This is identical to the existing SWC standard) *Multiple Sewer Overflows* The number of private properties in a financial year experiencing 3 or more sewage overflows in dry weather (This is a new standard)

GHD recommended that the utilities gather system performance data over a 2-year period. At the completion of this period, the utilities should return to IPART with proposals for targets for these SPS.

Water Continuity standards

While the water pressure and sewer overflows SPS are similar in the Sydney Water and Hunter Water licences, the water continuity SPS are quite different. The GHD report recommended that the continuity SPS be rationalised and focussed on unplanned interruptions.

The Sydney Water licence has two continuity SPS, namely:

- the number of properties in a financial year experiencing a planned water interruption exceeding 5 hours (planned interruptions), and
- the number of properties in a financial year experiencing an unplanned water interruption exceeding 5 hours (unplanned interruptions).

The Hunter Water continuity SPS is the number of properties in a financial year experiencing one or more planned or unplanned water interruptions which taken together have a cumulative duration exceeding 5 hours.

The GHD report does not favour an SPS for planned interruptions. It notes that the management of planned interruptions is wholly within the control of the utility. Where extended work is required, an SPS on the number of properties experiencing a planned interruption exceeding the time threshold provides an incentive for a utility to replace a single interruption with multiple interruptions, each lasting less than the time threshold. Clearly, such multiple interruptions do not improve customer value.

In regard to the Hunter water supply continuity SPS, the report noted that different customer values and expectations apply to planned and unplanned interruptions. The report suggests that these two regulatory objectives be separated.

Standards for multiple events in the GHD Report

The GHD Report cited research that showed customers were reasonably tolerant of a single supply interruption event, especially if they are notified, but are increasingly dissatisfied with repeat events. To incorporate these views, GHD recommended new standards for repeat supply interruption and sewer overflow events.

Further, performance against SPS dealing with repeat events is, in most cases, entirely within the control of the utility and addresses important customer needs. Once an initial problem has become evident management of that problem is entirely within the utility's control. IPART recognises that repeat events may be unrelated. However, in many cases, repeat events are problems that have not been adequately addressed by the utility in the first place.

IPART seeks comments on the following

1 The GHD Report, particularly on the SPS proposed in the report.

3 Hunter Water proposals for SPS targets

In 2008, Hunter Water prepared a response to the GHD report, setting out targets associated with the recommended SPS for sewage overflow, water pressure and water continuity. Hunter's response was predicated on the premise that new targets should be cost-neutral, that is, they should not involve Hunter Water in any additional expenditure.

In recommending any amendments to the targets, IPART believes that the following two general principles should apply.

- the amended SPS should not provide for any diminution of standards but should provide an incentive for utilities to retain a strong focus on the efficiency and effectiveness of operations
- the targets should provide a buffer against unforeseen adverse events, so-called "headroom", above the levels of sustained recent performance.

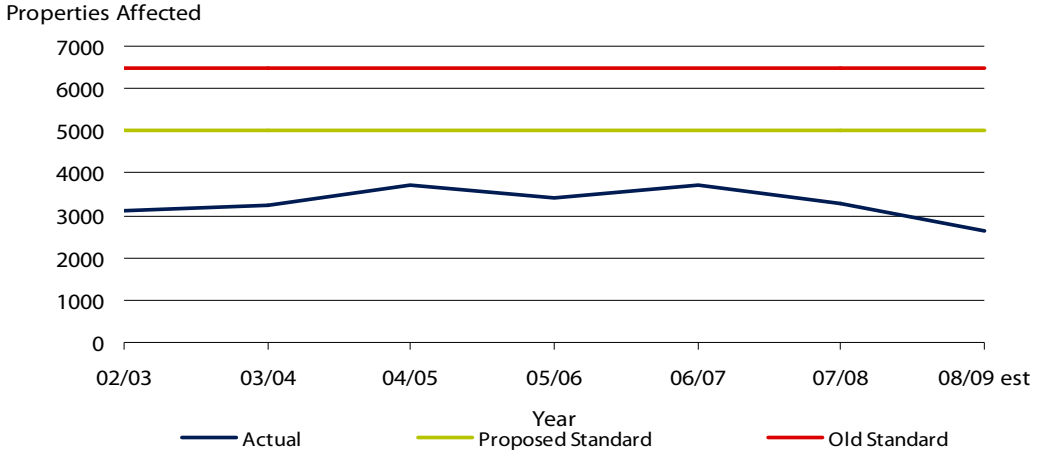
In order to maintain cost neutrality, IPART suggests that, as a general rule, targets should remain unchanged, subject to a case-by-case examination against the above two principles.

4 Sewage Overflow Standards

Number of properties - Historical Performance

Graph 1 shows the performance of Hunter Water against the requirements of the sewer overflow standard in the Operating Licence and the target that the number of uncontrolled sewer overflows in a financial year does not exceed 6,500. The data in Graph 1 reflects the GHD definition of the number of properties.

Graph 1 HWC Sewer Overflow– Number of properties (2002/03 – est 2008/09)



The data shows that Hunter Water has comfortably met the existing sewer overflow SPS requirement. Hunter Water has had an active sewer strategy in place for nearly ten years. The 2007/08 IPART audit report notes Hunter Water's critical sewer program for built-up areas which targets repeat events with CCTV inspections and includes systems to monitor problem areas. Estimated performance for 2008/09 indicates that Hunter Water expects better sewage overflow performance in future.

Number of properties – Proposed target

Hunter Water has proposed that the target for the SPS for sewage overflow be set at 5,000 properties per year. This target is derived from an analysis of data for the period 1996 – 2007. The target is more stringent than the existing SPS, since it is based on the number of properties affected, rather than the number of events.

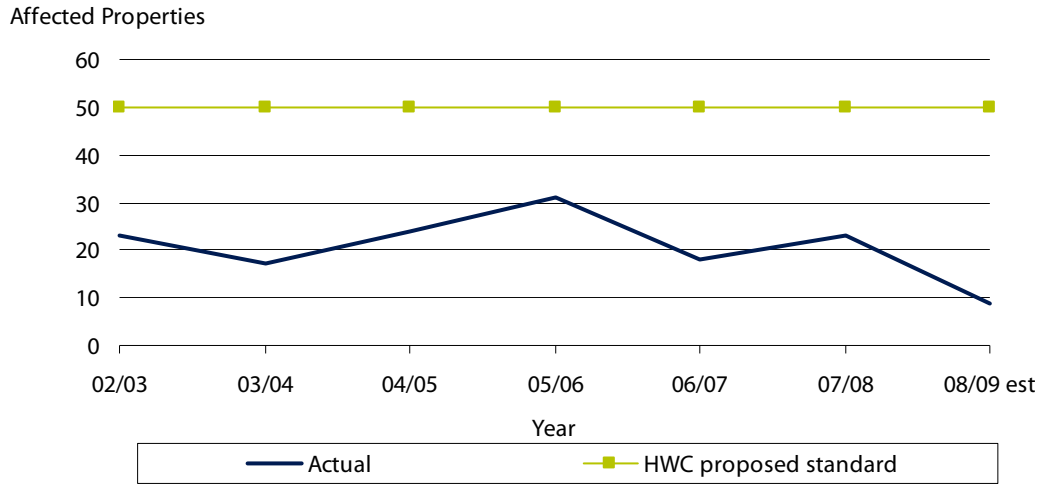
The Hunter Water proposal represents no additional cost to government for compliance costs involving data collection, monitoring and audit. The cost of meeting this compliance target is also low, since Hunter Water would need to maintain the capital and operational programs that are already in place.

The Hunter Water proposal provides benefits to the wider community and direct customers through reduced overflows. A lower target for sewage overflows by Hunter Water will also provide benefits to the environment.

Multiple events - Historical Performance

A multiple event sewage overflows SPS is new. GHD propose that a ceiling be set for the number of properties that experience 3 or more sewage overflows in a year without it being deemed a licence breach. Hunter Water data is shown in Graph 2.

Graph 2 HWC Sewer Overflow– Multiple events (2005/06 – est 2008/09)



Graph 2 shows the number of properties that have experienced sewage overflow on 3 or more occasions. The low number of properties that have experienced 3 or more repeat sewage overflow events in a financial year is consistent with Hunter Water's capital program and focus on operational processes and procedures.

Multiple events – Proposed target

Hunter Water suggests that the target for the SPS for multiple sewage overflows be set at 45 properties per year. This target is derived from an analysis of data for the period 2002 – 2008/9 and takes account of the revised SPS which counts properties rather than events.

There is no additional cost for regulatory compliance of the Hunter Water proposal compared to the status quo. The same costs would be incurred for data collection, monitoring and audit. There is also no additional compliance cost to Hunter Water, since Hunter Water would need to maintain its existing capital programs, operational practices and processes.

The Hunter Water proposal provides benefits to direct customers and the wider community since it requires tighter control over overflows compared to the status quo. Fewer sewage overflows will also provide a benefit to the environment.

IPART seeks comments on the following

2 The sewage overflow standards proposed by GHD or the sewage overflow targets proposed by Hunter Water?

5 Pressure Standard

Water pressure serves some important functions. Most obviously, the water pressure of the system needs to be sufficiently high to ensure an adequate flow rate for all consumers. Water pressure is influenced by the height of the consumer's supply point. Intrinsic system pressure (without booster pumps) will be greater in low lying areas than in areas of higher ground. Pressure also serves the less obvious but equally important function of excluding contamination from the water supply, ensuring that the water remains safe to drink.

The Hunter Water licence provides for the exclusion of fire fighting, supply interruptions and "operational problems that are temporary and short term in nature" to be excluded when calculating the number of properties experiencing low pressure.

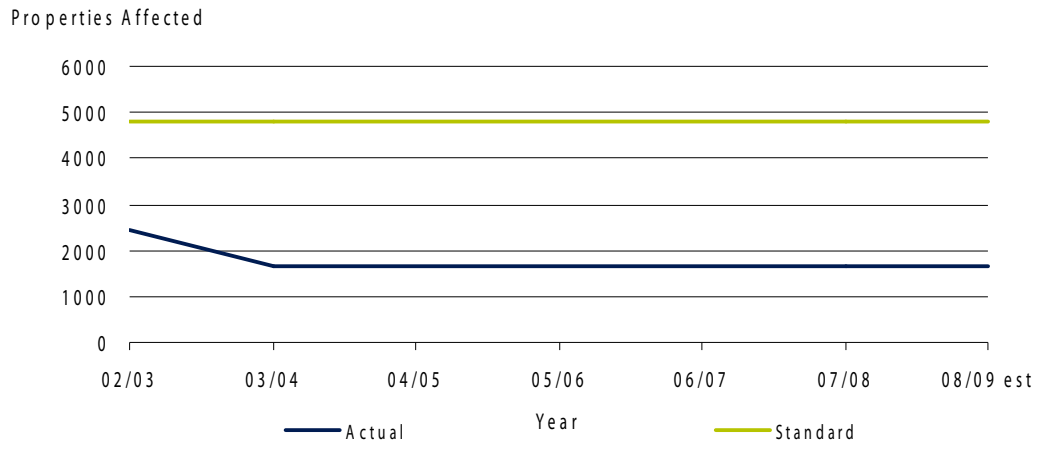
Number of properties –Historical Performance

The 2007/08 Audit Report found improved performance due to improved asset management, operations and maintenance processes and practices. Further, several audits have commented that Hunter Water has systems and processes in place that will allow it to continue the current level of pressure performance.

Graph 3 shows the performance of Hunter Water against the requirements of the pressure standard in its Operating Licence and the target that the number of properties affected by low pressure should be less than 4,800. The data for Graph 3 is derived from annual audits.

Since 2003/04, Hunter Water's pressure performance has been quite consistent at about 1,650 properties affected.

Figure 5.1 HWC Pressure – Number of properties (2002/03 – est 2008/09)



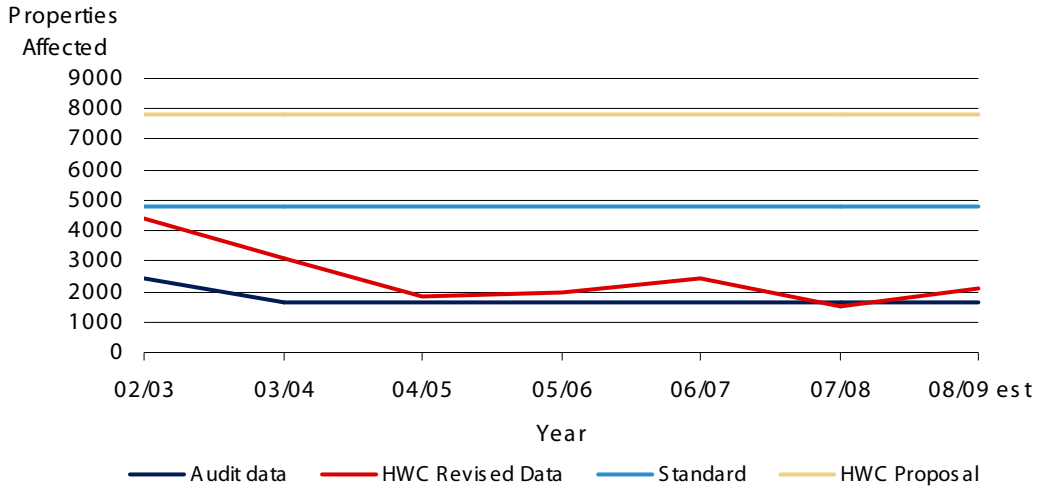
Number of properties –Proposed target

The existing SPS for Hunter Water is that no more than 4,800 properties should be affected by low pressure. GHD have proposed that this SPS remains unchanged.

Hunter Water has proposed that the target be set at 7,800 properties per year. This target is illustrated in Graph 4 and is derived from Hunter Water's analysis of audited data for the period 1999 – 2007/08, revised to reflect better monitoring and modelling.

The audited data reveals very consistent performance against the pressure standard since 2003/04. Even the unaudited reworked data (solid red line in graph 4 below) shows very consistent performance over this same period.

Graph 4 HWC Pressure – Actual and revised data v existing and proposed targets



There is no change in the cost to government of regulatory compliance compared to the status quo because the cost of audits and compliance is unrelated to the target. IPART believes that Hunter Water's proposed target of 7,800 represents a relaxed focus on system pressure.

Any relaxation of attention to low pressure could increase the risk of water contamination. This would reduce the benefit to the wider community and direct customers, especially in the low pressure areas. Adoption of the new pressure target will have no impact on the environment.

IPART seeks comments on the following

3 The water pressure standard proposed by GHD or the water pressure target proposed by Hunter Water?

6 Water Supply Continuity Standards

Most customers perceive minor interruptions to the supply of clean water as an inconvenience. As the period of supply interruption increases, the inconvenience increases. The continuity of water supply, however, may be critical for customers requiring such essential uses as dialysis.

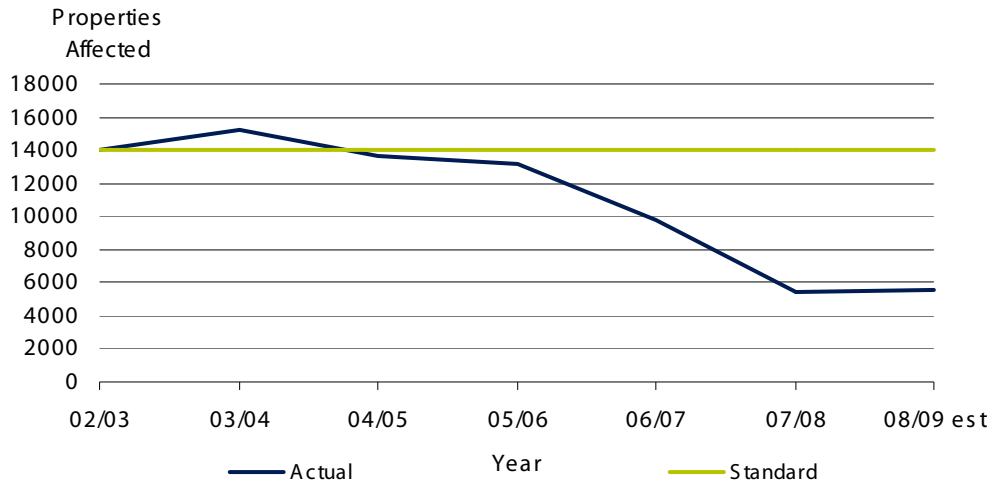
Hunter Water's single existing continuity standard sets a limit on combined (planned and unplanned) interruptions. Planned interruptions refer to scheduled maintenance work associated with asset replacement, proactive maintenance and connection of developer works, whereas unplanned interruptions are reactive in nature and relate to remedying leaks or bursts in the delivery system.

Repeat events are minimised by correct assessment of the work to be done and the effective execution of this work. Since the operating cost of attending the work and the capital cost of repair/upgrade/renewal has already been taken up in the number of properties SPS, it may be argued that the major input required to meet a repeat event SPS target is careful and effective work practices. A repeat event SPS provides the incentive for the utility to optimise its maintenance – to get the work done correctly and efficiently at the first attempt.

Number of properties - Historical Performance

Graph 5 shows the performance of Hunter Water against the requirements of the existing water supply continuity standard in the Operating Licence and the target that no more than 14,000 properties should experience either a planned or an unplanned interruption which taken together have a cumulative duration exceeding 5 hours.

Graph 5 HWC Continuity – Actual v Standard (2002/03 – estimated 2008/09)



Hunter Water has a number of relatively large trunk water mains that travel some distance to feed small to medium sized communities. Failure of these trunk mains is relatively rare, but has a high consequence for the continuity standard. Not only are many properties affected (often an entire community), but the trunk mains often traverse relatively inaccessible areas (such as national parks) making locating and repairing the break both difficult and time-consuming.

Hunter Water had difficulties meeting this SPS between 2002/03 and 2005/06. The data shown for 2006/07 (9,835 properties affected) has been corrected from the raw data (15,392 properties affected) to take account of a particularly intense storm in June 2007. During the 2006/07 audit, after careful analysis, IPART concluded that the continuity results should be discounted to remove the impact of this severe storm.

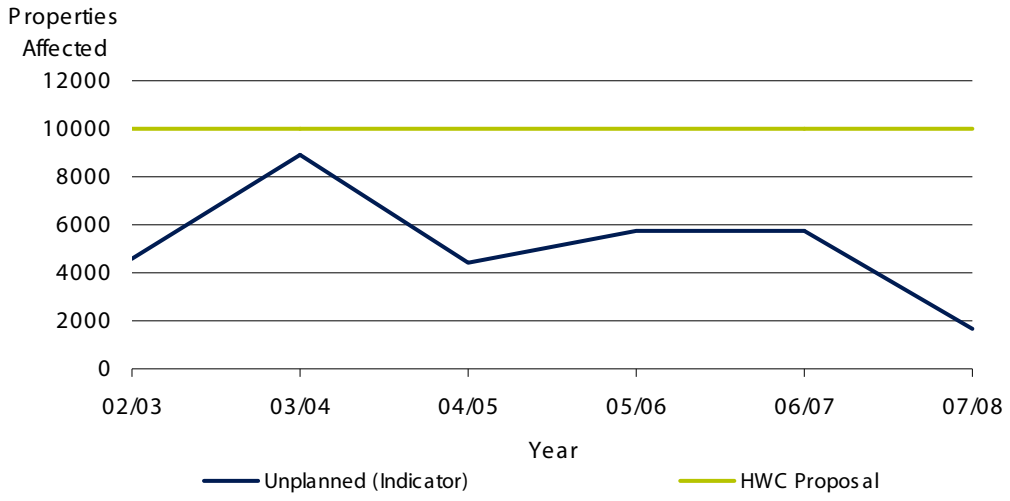
Since 2006/07, Hunter Water has made a significant effort to improve its continuity performance. Hunter Water has advised IPART that it has already started programs to address two high priority reticulation areas and six trunk main management projects. Estimated performance for 2008/09 indicates that Hunter Water's efforts directed at better water continuity are continuing.

Number of Properties – Proposed target

The existing target for Hunter Water is that no more than 14,000 properties should experience either a planned or an unplanned interruption. GHD have proposed that this SPS should be changed to measure only unplanned interruptions.

Hunter Water has proposed that the target be set at 10,000 properties per year. This target is derived from an analysis of data for the period 1999 – 2007/08. The targets proposed by Hunter Water are illustrated in Graph 6.

Graph 6 HWC Unplanned Interruptions – Actual data v proposed targets

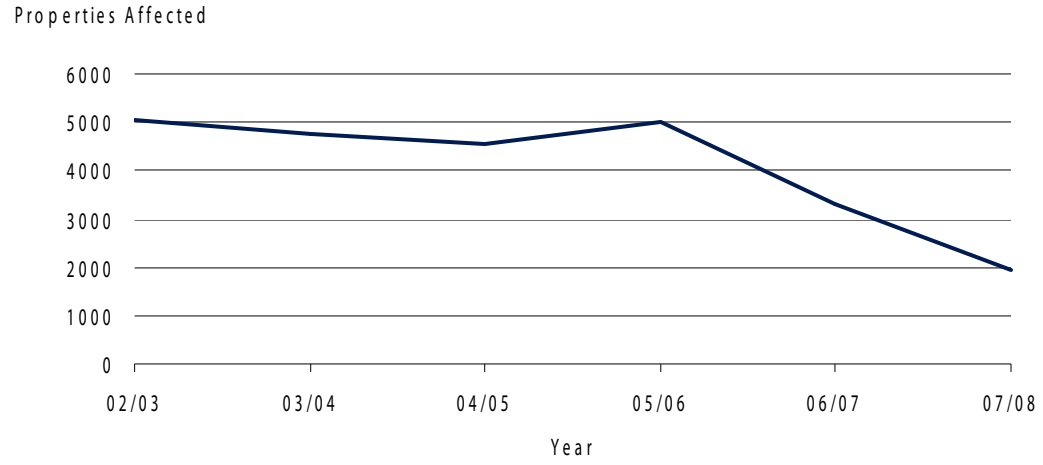


The SPS covering only unplanned interruptions does not involve monitoring, data collection, reporting and auditing planned interruptions. For this reason, an unplanned interruption SPS involves less cost, both from a regulatory governance and utility point of view, than the existing SPS covering both planned and unplanned interruptions. There is a benefit to the community and Hunter Water's customers in focussing on unplanned interruptions. Neither of these SPS have an impact on the environment.

Multiple events - Historical Performance

Data on the number of properties that experience three or more continuity events, both planned and unplanned, in a financial year has been collected as a system performance indicator since 2002/03. Graph 7 illustrates this data, which includes multiple planned discontinuity events.

Graph 7 HWC Continuity – 3 or more events per year, both planned and unplanned (2005/06 –2007/08)



Data for multiple planned events were separated from unplanned events in 2007/08. Of 1,964 properties that experienced 3 or more continuity events, 26 properties experienced planned discontinuity on three or more occasions, whereas 1,938 properties experienced three unplanned discontinuity events. This suggests that the data for 3 or more unplanned events would follow a similar trend to that illustrated in Graph 5 above. Graphs 5, 6 and 7 suggest that Hunter Water is pursuing strategies to improve the quality and reliability of its maintenance work in the water system.

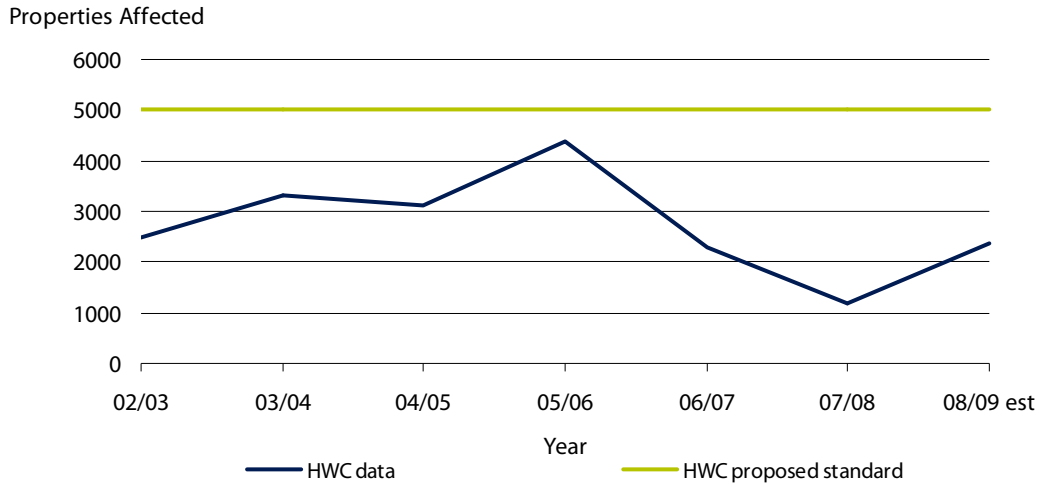
Multiple events – Proposed target

A multiple event SPS for unplanned interruptions is a new SPS. GHD proposed that this SPS regulate the number of properties in a financial year that experience 3 or more unplanned interruptions.

Hunter Water has proposed that the target for the SPS for multiple unplanned interruptions be set at 5,000 properties per year. This target is derived from an analysis of data for the period 1999 – 2007/08.

The target proposed by Hunter Water is illustrated in Graph 8. This graph incorporates unaudited data supplied by HWC.

Graph 8 HWC Multiple Unplanned Interruptions – Actual data v proposed targets



The cost of the Hunter Water proposal to government in the form of regulatory compliance is low compared to the status quo (no repeat standard). This reflects the marginally increased audit costs compared to collection of the data for preparation of performance indicators. Reflecting the increased convenience of fewer multiple interruptions, some benefits flow to the wider community while more substantial benefits apply to direct customers compared to the status quo. A multiple interruption target has no impact on the environment.

IPART seeks comments on the following

4 The continuity standards proposed by GHD or the continuity targets proposed by Hunter Water?

7 Next steps

At the completion of the consultation period (after 12 August), IPART will collect and analyse the comments that it receives on this paper. It will then formulate its recommendations to the Minister. IPART expects to report to the Minister by early September 2009.