



**Barwon  
Water**

## **BARWON WATER**

RESPONSE TO THE ESC'S DISCUSSION PAPER  
*ECONOMIC REGULATION OF THE VICTORIAN WATER SECTOR*  
**PERFORMANCE MONITORING AND REPORTING**

**May 2004**

## **Barwon Water: Response to the ESC's Discussion Paper *Performance Monitoring and Reporting***

### **Principles**

The Commission in its discussion paper on performance monitoring and reporting set out guiding principles underlining the suite of performance indicators to be adopted for water industry regulation.

According to these principles performance indicators need to be:

- relevant to the services provided;
- meaningful to both businesses and customers;
- consistently defined and collected;
- not overly onerous or costly to collect;
- verifiable;
- consistent with indicators already in common usage within the Australian water industry.

Barwon Water agrees with these principles.

In its response to the Commission's Consultation Paper, Barwon Water also requested that:

- indicators should be stable over time,

to facilitate collection of meaningful time-series performance data to facilitate identification of performance trends over time.

### **Performance indicator definitions**

It is a characteristic of water industry non-financial performance indicators that the numerical value of reported performance may vary appreciably between businesses for the same indicator, because of subtle but important differences in the way data for the indicator is collected.

For example, some businesses may include even the most minor leakage from the sewerage system as a spill, whereas others may have a threshold level before a spill is registered. Sewer blockages that are detected and remedied before they impact on customers may not be included in externally reported sewer blockage statistics.

Another example may be found in the measurement of performance on restoration of water supply following an interruption. Particularly in the case of a repair to a large main, the time taken to restore supply to an individual customer can vary considerably depending on where that customer is located and the time it takes to re-charge the main.

Because of the importance of consistent, meaningful and practicable performance indicator definitions, it is essential that detailed definitions for each performance indicator are published at the earliest possible time. Barwon Water would be pleased to work with the Commission to ensure that the detailed indicator definitions are the most appropriate considering the Commission's stated principles for performance indicators.

### **Need for consistency with existing industry-standard performance indicators**

Barwon Water already has a comprehensive system of performance measurement and reporting in place. This measurement regime provides performance information for benchmarking and inter-business comparison to industry bodies such as the Water Services Association of Australia and the Victorian Water Industry Association. In many cases more

detailed data behind the high level indicators is also provided to regulators such as the Environment Protection Authority, the Department of Human Services, and the Department of Treasury and Finance. This is not a time to 'reinvent the wheel', and the Commission should adopt existing indicators unless it is clear that to do so would not permit the Commission to achieve its objectives.

It is important that the industry and the public understand the reasons for particular indicators being adopted, and the relevant indicator definitions. Where an existing indicator is modified or excluded, clear reasons for changing the status quo need to be provided.

To assist the Commission and to ensure that appropriate indicators and definitions are adopted, Barwon Water requests an opportunity to formally comment on performance indicator detailed definitions prior to their final adoption by the Commission.

***Detailed Comments on Discussion Paper***

The Commission has proposed a number of performance indicators in Appendix A of the Performance Monitoring and Reporting discussion paper, entitled 'Potential Performance Indicators'. Barwon Water's comments on these performance indicators is contained in Appendix A to this paper – see additional column 'Barwon Water Comments'.

Should you wish to further discuss any of the ideas put forward in this response, please contact Damian O'Doherty, Manager Regulation and Pricing on 5226 2368.

**APPENDIX A POTENTIAL PERFORMANCE INDICATORS**

Indicator	Split	Performance Measure	ESC Comments	Barwon Water Comments
<b>Baseline Explanatory Data</b>				
Water customers	Domestic Non-Domestic	Context & normalising measure	Baseline explanatory data may need to be expanded to accurately summarise the activities of regional water businesses and Melbourne Water. For example information may need to include number of: water treatment plants, major dams, pump stations, rising mains.	The Commission needs to exercise caution before expanding the amount of baseline data collected, to ensure that data remains RELEVANT and MEANINGFUL.  Need to define 'domestic' and 'non-domestic'
Sewerage customers	Domestic Non-Domestic	Context & normalising measure		Ditto
Length of water main (km)		Context & normalising measure		Agreed
Length of sewerage main (km)		Context & normalising measure		Agreed
Volume of water received (MI)		Context & normalising measure		Need to define the point in the supply chain where water volume is measured. For compatibility with the Melbourne retailers, this should be at the outlet of the service basins.
Metered volume of water delivered to customers (MI)	Domestic Non-domestic	Average customer consumption  Unaccounted for water	May need to consider additional measure of consumption given increased emphasis in the WIRO.	Agreed.
Volume of sewage delivered (MI)	Wholesaler Treatment plants	Context & normalising measure		The only meaningful measure for Barwon Water is inflow to the treatment plants.

Indicator	Split	Performance Measure	ESC Comments	Barwon Water Comments
Volume of sewage treated (MI)	Primary treatment Secondary treatment Tertiary treatment	Context & normalising measure  % of sewage subject to primary, secondary & tertiary treatment		This indicator is no longer RELEVANT. All treatment is to a standard suitable for recycling. Treatment cost/ML is dependent on Economies of scale and treatment technology adopted (eg. lagoon treatment versus activated sludge) far more than whether primary secondary or tertiary treatment standard is achieved.
Water Quality			To be developed in conjunction with DHS.	Agreed.
<i>E.coli</i>		% of sample comply	Water quality indicators may need to be expanded to provide an overall summary of performance consistent with changed arrangements to Drinking Water Quality Regulatory Framework.	<i>E.coli</i> should remain as the industry standard primary indicator of health-related bacteriological water quality.
Total coliforms		% of sample comply	Monitoring and reporting of total coliforms should be removed consistent with proposed changes to Drinking Water Quality Regulatory Framework	Coliforms is NOT A MEANINGFUL INDICATOR of water healthiness, is currently reported against a different standard by the Melbourne water businesses. Barwon Water agrees that total coliforms SHOULD BE DELETED as an indicator of water quality.
<b>NETWORK RELIABILITY AND EFFICIENCY</b>				
Bursts and leaks	Priority 1 Priority 2	Context & normalising measure  Burst and leaks per 100km of water main	Broadly used measure of network reliability. Need to ensure definition clarifies any differences in approach between metro retailers and regional businesses re meter to main. Measure appropriate for Melbourne Water as urban businesses.	Current practice is to exclude meter-to-main bursts and leaks. Need to define 'priority1' and 'priority 2'.

Indicator	Split	Performance Measure	ESC Comments	Barwon Water Comments
Total minutes to respond to bursts and leaks	Priority 1 Priority 2	Average minutes to respond		Need to define when clock starts and stops. Need to define 'priority1' and 'priority 2' bursts.
Water supply interruptions	Planned Unplanned	Water supply interruptions per 100 customers Water supply interruptions per 100 km of water main	Measures customer impact of interruptions (not all bursts and leak result in outage). Ability for management to improve performance through a range of strategies.	The Commission needs to determine how main-to-meter failures are to be dealt with. These failures are currently excluded when reporting this indicator because, unlike failures on a water main, a main-to-meter failure affects only a single customer. Accurate determination of the number of customers affected by a burst requires computer network modelling and may be beyond the current capability of some regional businesses.
Water supply interruptions restored within 5 hours	Planned Unplanned	% of water supply interruptions restored within 5hrs	Previous suggestion by some Melbourne retailers to include interruptions restored within 3hrs. Regulators such as Ofwat and IPART include outlier measures such as customers off supply for 12 or 24hrs. This is unlikely to be a major issue in Victoria.	This indicator should continue to use the industry standard time period of 5 hrs. Comparisons between businesses is also available through the related measure 'average minutes off supply'
Water supply customer-interruptions	Planned Unplanned	Average customer interruption frequency		Once the number of customers affected by bursts is quantified, this indicator may be readily calculated.
Customer-minutes to restore water supply	Planned Unplanned	Average duration of water supply interruptions Average minutes off supply	Good measure of asset management practices and system availability.	Agreed. Need to define when clock starts and stops.

Indicator	Split	Performance Measure	ESC Comments	Barwon Water Comments
Customers receiving more than 5 water supply interruptions in year	Unplanned	Average number of customers receiving greater than five interruptions in a year as % of customers	Potentially expanded to include customers receiving 1,2,3,4 &5 interruptions per year as per WSAA and IPART benchmarking.  Some regional businesses have expressed difficulty in collecting this measure.	This would require additional programming, but is achievable.  'Average' is inappropriate for this measure, since it is already expressed as a percentage.
Total duration of general water restrictions (days)		Average days of restrictions per customer	Need to include other measure of resource security. Need to consider practicality for regional businesses where some part of an authority may be under restrictions while others are not. In Melbourne is this measure of retailer performance or Melbourne Water.	Barwon Water queries what management action the E.S.C. is intending to drive through such a measure, given that the Government is promoting adoption of 'permanent' low level restrictions. Restrictions are generally introduced consistent with drought management plans, are primarily driven by long-term system security (catchment runoff and storage volume) and climate but may also be subject to political influence. Barwon Water does not support adoption of this indicator as a performance measure.
Unaccounted water		% of unaccounted water		Barwon Water does not support use of this measure. It is difficult to obtain an accurate measure for unaccounted water because it is necessarily calculated from the (small) difference between two large numbers – bulk water volume supplied and total metered water volume- and because a percentage measure is sensitive to the base volume of water used.  WSAA is currently developing an improved methodology (the ILI or Infrastructure Leakage Index) that may be more appropriate.

Indicator	Split	Performance Measure	ESC Comments	Barwon Water Comments
<b>Sewerage network reliability and efficiency</b>				
Sewer blockages		Sewer blockages per 100 km of sewer main		Need to have a consistent approach with respect to blockages in property branches (equivalent to 'main-to-meter'). Also, need to determine whether partial blockages that are not reported by customers, and that do not impact on customers, are to be included.
Sewerage service customer-interruptions		Average customer interruption frequency		Determination of the number of customers affected by a sewer blockage is problematic, because it is not possible to accurately determine how many properties are affected by partial blockages – it depends on system topography and flows, and storage capacity within the pipes. Sewer faults don't always deny service to a customer. Needs careful thought prior to adoption as a measure.
Customers receiving more than 3 sewerage service interruptions in year		Average number of customers receiving greater than 3 sewerage service interruptions in a year as a % of customers	Potential to break down to include customers receiving 1,2 &3 blockages per years, as is used for monitoring Sydney Water.	See previous comment.
Sewerage service customer-interruptions restored within 5 hours		% of sewerage service customer-interruptions restored within 5 hrs	Current measure has been ineffectual and is not publicly reported	Agree that this measure is NOT MEANINGFUL and should be omitted.

Indicator	Split	Performance Measure	ESC Comments	Barwon Water Comments
Sewer spills from reticulation and branch sewers	Priority 1&2	Context & normalising measure		<p>Need to define 'priority 1' and 'priority 2' and the rationale behind distinguishing between priority 1 &amp; 2.</p> <p>Barwon Water does not use these classifications.</p> <p>Also need to define reticulation and branch sewers – what is defined as a retic. sewer and where does a branch sewer start and finish?</p> <p>Spills caused by wet weather infiltration should be excluded.</p>
Inflow (infiltration) to the sewerage system		Estimated %	Suggest deletion of indicator. Inflow/infiltration has proved hard to accurately measure and has not been reported for metropolitan retailers.	Agree that this indicator should be deleted for the reasons given by the E.S.C.
Sewer spills from reticulation and branch sewers fully contained within 5 hours	Priority 1 & 2	% of sewer spills contained within 5 hrs	Consider deleting measure. Current performance standard for retailers but is not a particularly meaningful measure.	Agree that this measure is NOT MEANINGFUL and should be omitted.
<b>Water conservation, reuse, recycling and environment</b>			Measure to be developed with EPA. An area of monitoring likely to be expanded consistent with increased emphasis on conservation and reuse in WIRO	

Indicator	Split	Performance Measure	ESC Comments	Barwon Water Comments
Effluent reuse	Volume produced Volume reused	Volume reused means volume of sewage effluent reused.  Volume of effluent reused means reuse undertaken in accordance with EPA published guidelines or exempted from EPA licensing on the basis of being recognised as a legitimate reuse activity.	See earlier EPA comments	The methodology of measuring 'volume produced' and 'volume used' needs to be precisely defined, addressing water loss via evaporation and seepage within the treatment facility itself.  'Legitimate re-use activities', e.g. recycling water within a water reclamation (sewage treatment) plant need to be identified to ensure consistency between businesses.
Biosolids reuse	Mass produced Mass reused Mass stored	Mass produced means the mass dry weight of sludge produced by the licensee's sewage treatment plants.  Mass reused means the mass dry weight of sludge reuse undertaken in accordance with EPA published guidelines or exempted from EPA licensing on the basis of being recognised as a legitimate reuse activity.  Mass stored means the mass dry weight of sludge stored by, or on behalf of, the licensee.	See earlier EPA comments	The term 'beneficial use' is more appropriate than 'reuse' in the case of biosolids.  'Legitimate reuse activity' needs further explanation.
Customer responsiveness and Service				
Calls to fault line		Calls received as % of customers	Need to redefine call centre definitions and measures	Agreed.

Indicator	Split	Performance Measure	ESC Comments	Barwon Water Comments
Calls to fault line put through to operator		Normalising measure	As above	Agreed
Calls to fault line answered within 30s		% of calls answered within 30 seconds	As above	Agreed
Calls to account line		Calls received as % of customers	As above	Agreed
Water quality complaints	Colour Taste & odour Other	Complaints as % of customers		Agreed
Water supply reliability complaints		Complaints as % of customers	Consider a category of pressure complaint if this is an issue in regional Victoria.	Barwon Water does not support the inclusion of pressure complaints in this measure.  If pressure complaint data is to be collected, it should not be used for inter-agency performance comparison purposes.
Sewerage service quality & reliability complaints		Complaints as % of customers		Agreed
Affordability complaints		Complaints as % of customers	Need to consider breaking category in two with one part covering billing and pricing issues, the other covering hardship and incapacity to pay	Agreed
Billing complaints		Complaint as % of customers		Agreed

Indicator	Split	Performance Measure	ESC Comments	Barwon Water Comments
Other complaints		Complaints as % of customers	May need to include complaints about sewage odours for regional business and potentially Melbourne Water.	Complaints about sewage odours should be included under 'Sewerage service quality & reliability complaints'. This should be just as applicable to Melbourne Water and retailers as to regional businesses.
Affordability			Consider expanding to include field visits to customer with payment difficulties, application for and customers assisted under hardship policies.	Rather than monitoring the number of field visits to customers with payment difficulties a better indicator may be the number of personal contacts with customers experiencing payment difficulties (ie: in person & telephone contacts).
Instalment plans	Domestic Non domestic	% of customers on instalment plans		Agreed.
Restrictions applied for non-payment of bill	Domestic Non-domestic	% of customers restricted		Agreed.
Legal action for non-payment of bill	Domestic Non-domestic	% of customers subject to legal action		Agreed.
Environmental performance			To be developed and reported in conjunction with the EPA	
Sewer spills from emergency relief structures (ERS) and pumping stations	Blockage Hydraulic Extreme wet weather System failure	Context & normalising measure		Barwon Water does not see the need for a separate indicator applying only to 'pumping stations and emergency relief structures'. A spill is a spill regardless of where it occurs.

Indicator	Split	Performance Measure	ESC Comments	Barwon Water Comments
Volume of sewage spilt from emergency relief structures (ERS) and pumping stations (MI)	Blockage Hydraulic Extreme wet weather System failure	as per EPA requirements	See earlier EPA comments	This measure is not applicable to Barwon Water because its sewerage systems are not designed to routinely overflow from constructed ERSs or pumping stations. Melbourne Water has a comparative advantage with respect to sewer spills because of its legacy of constructed overflows.
Treatment plants		To be reported via a table of performance for each treatment plant, including calculated overall performance for the licensee. Pro-forma to be provided	See earlier EPA comments	This information is already reported to the EPA as part of treatment plant licensing.  Barwon Water does not see a need for separate reporting of this information to the ESC, given the amount of information already reported on effluent standards (see next indicator).

Indicator	Split	Performance Measure	ESC Comments	Barwon Water Comments
Sewage effluent samples - compliance with effluent standards	Method of treatment Volume treated (Ml) Analyses performed (by analyte) Analyses complying (by analyte) Sampling periods Sampling periods achieving full compliance	Analyses performed means the total number of EPA licence compliance analyses performed on the treated effluent for any treatment plant. Analyses complying means the number of analyses complying with EPA licence limits for that treatment plant. Sampling periods means the number of full sample sets taken to monitor compliance with EPA licence standards. Sampling periods achieving full compliance means the number of full sample sets which fully complied with EPA licence standards.	See earlier EPA comments	Barwon Water accepts the inclusion of this indicator for reporting purposes. However, the Commission should note that it is difficult to compare % compliance of one EPA licence with another due to the ease of compliance (or risk of non-compliance) being a function of the stringency of the licence limits set by EPA which differ from plant to plant. Overall % compliance can be distorted by a licence that requires very frequent monitoring of parameters for which licence limits are easy to achieve and less frequent monitoring of parameters for which licence limits are difficult to achieve.
<b>FINANCIAL PERFORMANCE</b>				
			<b>To be developed as part of the water plan</b>	