Briefing note / request

To:

Cc:

From: Denis Musaefendic

Date: 17 April 2012

Subject: **ESC - Review of Water Performance Report Indicators (Customer Responsiveness and Service)**

Background

In 2004, the ESC consulted on a performance reporting framework for regulated water businesses with industry and other stakeholders with the purpose of:

- Informing customers about levels of service
- Identify baseline performance and make comparisons between businesses
- Provide incentive for improvement over time
- Collecting data to develop regulatory standards and targets
- Inform decision making processes of regulators, businesses and government.

The ESC was conscious about the need to minimised costs associated with imposing any additional information and reporting requirements.

It was also noted that a review in the future will need to occur to ensure that indicators and definitions remain relevant given changes and developments in the water sector and regulated environments.

Purpose of the review

The ESC is proposing to undertake a review of the indicators that inform the water performance report to ensure that the data is relevant given the present water sector and regulatory environment.

The review should be undertaken in conjunction with the ESC's ongoing initiative to make performance reporting more timely and accurate.

Core Principles

Core performance monitoring framework principles to consider while undertaking the review:

- Performance indicators need to be **relevant to the nature of the services** provided by each business
- Performance indicators need to be **meaningful and relate to key issues** of concern to both businesses and their customers
- Performance indicators need to be **defined and collected on a consistent basis** across businesses to provide a valid measure of actual performance and to aid reasonable comparisons
- The **accuracy and reliability** of information provided by businesses must be verifiable.

- Identify whether there is scope for greater **national consistency in reporting and comparison**, to facilitate national assessment of relative performance
- **Costs** associated with collecting information and data need to be **balanced against the benefits of collecting that information**. That is, it will be necessary to ensure that the framework is not excessively onerous or costly to implement by focusing on a reasonable range of meaningful indicators.

Refining the Performance Categories

Removing any of the current performance indicator categories is not in the scope of this review.

Given developments in the water sector, the ESC is providing the opportunity to potentially include the following categories:

- financial and pricing
- resource security
- productivity, and
- innovation.

The review also provides the ability to include new indicators, within the existing categories, to reflect changes in technology and the regulatory environment, such as those associated with providing customer service via the internet and trade waste.

Table 1 - Current Performance Indicator Categories

Performance indicator categories
Baseline explanatory data
Drinking water quality
Water and sewerage network reliability and efficiency
Water consumption reuse and recycling
Environmental issues
Customer responsiveness and service
Usage, price trends and payment management [previously Affordability]
Drainage and waterways services*

*Not applicable to Barwon Water.

Timeframes

19 April – nomination of working group representatives

27 April – Response to this Briefing note / request due

4 May – Submissions to Staff Discussion Paper due

7 May – Working group at ESC

Recommendation / request

For stakeholders of each relevant performance indicator category to:

1. Review and comment on the ESC's *Review of Water Performance Report Indicators* staff discussion paper regarding the extract for *customer responsiveness and service* indicators in Attachment 1.
2. Responsible officers to review the current set of KPI's and definitions in Attachment 2 in light of the core principles outlined above and comment if required.
3. Note the contents of this Briefing note.

Attachments

Attachment 1 – Barwon Water response to: *Review of Water Performance Report Indicators (Staff Discussion Paper)*

Attachment 2 – Indicator Definitions

Attachment 1 – Barwon Water response to: *Review of Water Performance Report Indicators* (Staff Discussion Paper)

Below is an extract of the ESC's proposed new categories and indicators, removals, and modifications for *customer responsiveness and service* indicators.

The staff discussion paper can be accessed here.

General comments

The introduction of new KPI's should not occur until WP3 to provide businesses with a year to ensure reporting requirements are understood and frameworks in place.

Barwon Water supports potentially including other businesses GSL's as KPI indicators but that they should not be mandated GSL's for other businesses where payments must be made. Is this the intention?

Despite new technologies such as smart phones and internet, the largest percentage of customer service budget is face to face and telephone interaction. The focus on measuring and maintaining a high level of satisfaction in these communications channels should not be lost.

Proposed new categories and indicators (ESC)

CRS 1 – Website mystery shopper

The website mystery shopper technique utilises a professional customer service organisation to pose as a customer and undertake specific tasks or seek information, and record the experience of their interaction according to certain criteria.

The website mystery shopper approach provides an independent and objective view of customer interaction that is able to be assessed and compared against other organisations and industries. Customer service organisations can also provide feedback on how websites can improve.

ESC Proposed approach

We would contract a customer service organisation to assess each water businesses' website according to a range of criteria that will include parameters such as:

- General website layout and usefulness
- Time spent on website to find information on restrictions/storages and general information
- Availability of account and tariff information
- Ease of paying a bill
- Reporting of faults
- Customer feedback channels.
- This assessment process may be undertaken on a two- or three-yearly basis.
- What are the strengths and weaknesses associated with this approach?
- Is there and alternative approach that can measure the information sought?
- Are these criteria the ones a customer values most?

Barwon Water Comment

While the website mystery shopper does have some merit in gaining insights and potential improvements into customer useability issues, website visits still account for a small percentage of overall customer contact.

Most customers prefer phone contact and this type if customer interaction continues to grow across most industries.

An alternative may be to use water businesses existing statistics captured by their websites that record customer experience.

CRS 2 – First call resolution

First call resolution (FCR) measures the business's ability to actively manage customer queries/complaints on first contact, rather than simple measures associated with the number of complaints received or time to answer the phone.

FCR requires the provision of a level of customer service quality such that an issue is resolved, minimising the number of repeat calls made by the customer on the same issue. Achieving a high level of FCR usually improves the level of customer satisfaction reported, and if achieved reduces call centre call volumes and associated costs.

At present, no regulator in Australia measures first call resolution in the water or energy sector. This may be due to the difficulty associated with defining 'resolution'. A common definition of a FCR performance indicator is 'the percentage of calls that are resolved during the first conversation'.

Call centre best practice defines the customer as the judge of whether FCR has been achieved. There are a number of ways to measure FCR, although not all of these methods allow the customer to determine if their issue was resolved on the first call:

- Quality assurance monitoring—call centre assessors determine if the issue was resolved
- Interactive Voice Response (IVR) surveys—customer completes an IVR survey to gauge if their issue was resolved
- Call backs—measures FCR based on whether the customer calls back within a specified number of days
- Script—call centre operator asks the customer if their issue was resolved
- Telephone survey—customer is surveyed within one to three days of the call and asked if their issue was resolved.

ESC Proposed approach

We are proposing to incorporate FCR as a performance measure, and are seeking feedback regarding the most appropriate method to measure FCR, given the variety of call centre systems and processes utilised by each of the water businesses.

Barwon Water Comment

FCR is a solid customer satisfaction performance measure.

Most customers if asked would prefer FCR. Measurement and performance targets regarding FCR need to be realistic, as not all queries can be resolved on the first call.

CRS 3 – Net promoter score (NPS) or Customer effort score (CES)

The net promoter score (NPS) is a measure of customers' loyalty which is obtained through a customer survey question asking how likely the customer is to recommend the business to a friend or colleague on a 0 to 10 rating scale.

The customer effort score (CES) measures the customer's experience with the business regarding how much effort was required by the customer to initiate and resolve a service request.

Data in respect to either method is easy to collect and calculate, and can be compared across business units, industries and over time. However, the relevance of NPS to water businesses can be questioned as—due to their monopoly status—the likelihood that customers will promote the business is low. In contrast, data associated with CES appears to be more relevant as a measure of customer satisfaction.

ESC Proposed approach

We are proposing one of these measures of customer satisfaction in the performance indicator data set, and are seeking feedback regarding the most appropriate method.

Barwon Water Comment

Barwon Water believes the NPS is not relevant to essential services such as water businesses. The CES score may be difficult to explain and measure. Overall customer satisfaction measurement is more relevant.

CRS 4 – Customer satisfaction survey

The measurement of customer service has in the past focused on customer dissatisfaction, typically through the recording of complaints. However there are a number of drawbacks associated with this approach: it is a one-dimensional in that it does not accommodate a scale—or level— of dissatisfaction, nor does it measure positive interactions.

There is opportunity to develop customer satisfaction surveys which provide a relative performance score. This may provide incentives for water businesses to—among other things—focus on improving broader customer experiences rather than focusing on minimising complaints.

ESC Proposed approach

Given that water businesses currently utilise surveys to measure customer satisfaction, we are proposing a common set of questions that could be used to compare customer satisfaction across the sector.

Barwon Water Comment

Barwon Water undertakes regular customer satisfaction research. We have been using similar questions to compare our improvements to performance. Any additional questions would add value to this research. However given the sensitivity and time required from customers to complete the surveys, any additional questions would come at the cost of our existing framework.

Proposed indicator for removal

CRS 12 – Property development agreements

CRS 13 – Information statements turned around in 5 days

When these indicators were first developed in the 1990s the performance standards of all water businesses were low. Turnaround time that property developers experienced for planned- and non-planned works was high, as was the turnaround time associated with information statements.

However, with the development of processes and IT solutions, the turnaround time for property development agreements and information statements has greatly improved. Currently, the results for these indicators are all near 100 per cent and therefore not useful for comparison.

Further each business works to different standards for property development agreement and considerable differences in practices have been discovered during audits of this indicator. This makes comparison between businesses problematic.

On this basis we propose to remove CRS 12 and CRS 13 as the indicator focuses on a narrow area of service provision it is not considered useful to a majority of customers. We do not currently publish the results of this indicator in the Annual Performance Report or other publications, or use the results for any internal calculations.

ESC Proposed approach

- Remove CRS 12
- Remove CRS 13.

Barwon Water Comment

There seem to be no apparent business impacts with removing these two indocators.

Proposed indicator modification

CRS 7 – Affordability complaints

CRS 8 – Billing complaints

At the inception of the performance monitoring framework we distinguished between complaint types—affordability and billing—primarily to isolate issues associated with affordability from those associated with billing infrastructure.

Over time it has emerged that differentiating between billing and affordability does not appear to add value to the reporting.

ESC Proposed approach

- We propose to combine CRS 7 with CRS 8
- Changes are proposed to the ‘Performance indicator’ and the ‘Definition’ to reflect the combination.

Barwon Water Comment

Barwon Water believes that important information for the business could be lost by combining the two indicators, especially given the focus on affordability.

Attachment 2 – Indicator Definitions

Customer responsiveness and service (CRS)

Indicator reference	Performance indicator	Split	Performance measure	Definition (Responsible officer modify definition if needed)
CRS 1	Call connect time to operator (Sec)	Account line Fault line	Average time taken for call to be connected to operator	The average time taken for a caller to be connected to an operator should they elect to, or be required to do so. Average time spent in getting through to an operator on the account / fault line. Measured from time the call is answered by "auto attendant" (IVR) It does not include calls that are resolved by an automated system, or hang ups. Businesses with one contact point should report the figure against the account line
CRS 2	Calls connected to operator within 30 sec	Account line Fault line	% of calls connected to operator within 30 seconds	The time in which a call connected to operator begins when the call is connected to the customer service operators' phone system. Calls to account / fault line answered within 30 seconds (beginning when the call is put through to customer service operator's phone system) It does not include calls that are resolved by an automated system, or hang ups. Businesses with one contact point should report the figure against the account line.
CRS 3	Total complaints		Complaints per 100 customers	A complaint is a written or verbal expression of dissatisfaction about an action, proposed action or failure to act by the water business, its employees or contractors. Australian Standards define a complaint as an "expression of dissatisfaction made to an organization, related to its products, or the complaints-handling process itself, where a response or resolution is explicitly or implicitly expected." (AS ISO 10002-2006) Complaints from separate customers arising from the same cause count as separate complaints. Includes complaints received by the water utility in person, by mail, fax, phone, email or text messaging.
CRS 4	Water quality complaints	Colour Taste and odour	Complaints per 100 customers	The total number of complaints received by the water business that relate to water quality, including water quality complaints resulting from operational practices. Includes any complaints with respect to water quality, this is any complaint regarding discolouration, taste, odour, stained washing, illness, or cloudy water (e.g. caused by oxygenation).

		Blue water Other		
CRS 5	Water supply reliability complaints		Complaints per 100 customers	Includes all complaints concerning bursts, leaks, and service interruptions. When a customer reports a service interruption, this is not counted as a complaint unless the customer expresses dissatisfaction about the interruption.
CRS 6	Sewerage service quality and reliability complaints		Complaints per 100 customers	Includes all complaints concerning sewer blockages and spills. Complaints about trade waste services are not included in this category. When a customer reports a blockage or spill, this is not counted as a complaint unless the customer expresses dissatisfaction about the interruption.
CRS 7	*Affordability complaints*		*Complaints per 100 customers*	*Includes all complaints concerning: financial hardship, instalment plans and capacity to pay, prices and tariffs.*
CRS 8	*Billing complaints*		*Complaints per 100 customers*	*Includes all complaints concerning: account payment, financial loss or overcharging, billing errors.*
CRS 9	Pressure complaints		Complaints per 100 customers	Includes all complaints relating to pressure and/or flow rates. When a customer reports a pressure or flow rate issue, this is not counted as a complaint unless the customer expresses dissatisfaction.
CRS 10	Sewage odours complaints		Complaints per 100 customers	Includes all complaints concerning sewage odours emanating from the business's system.
CRS 11	Other complaints		Complaints per 100 customers	Includes complaints of quality and timeliness of other services, e.g. - connections, account confidentiality, responding to correspondence, and staff behaviour. Complaints about trade waste services are included in this category.
~~CRS 12~~	~~Property development agreements~~	~~Prepared works~~ ~~Non-prepared works~~	~~% of prepared works turned around in 45 business days~~ ~~% non-prepared works agreements turned around in 12 business days~~	~~Prepared works means an agreement between the water business and an owner for the provision of water and sewerage facilities to a proposed development requiring the construction by the water business of reticulation assets.~~ ~~Non-prepared works means an agreement between the water business and an owner for the provision of water and sewerage facilities to a proposed development not requiring the construction by the water business of reticulation assets.~~

Comment [lincolnt1]: The denominator (ie. number of water customers) should be changed to the number of sewer customers. The current denominator does not allow for accurate performance benchmarking.

Comment [lincolnt2]: The denominator (ie. number of water customers) should be changed to the number of sewer customers. The current denominator does not allow for accurate performance benchmarking.

		~~Prepared works turned around in 45 business days~~	-	~~Counting the day application received as day zero.~~
		~~Non-prepared works turned around in 12 business days~~	-	~~Counted from the day that applicant satisfies all their responsibilities for application.~~
~~CRS 13~~	~~Information statements turned around in 5 days~~	-	~~% information statements applications turned around within 5 days~~	~~Counting the day request received as day zero.~~ ~~Counted from the day that applicant satisfies all their responsibilities for statement.~~

Briefing note / request

To:

Cc:

From: Denis Musaefendic

Date: 18 April 2012

Subject: **ESC - Review of Water Performance Report Indicators (Usage, Price Trends and Payment Management)**

Background

In 2004, the ESC consulted on a performance reporting framework for regulated water businesses with industry and other stakeholders with the purpose of:

- Informing customers about levels of service
- Identify baseline performance and make comparisons between businesses
- Provide incentive for improvement over time
- Collecting data to develop regulatory standards and targets
- Inform decision making processes of regulators, businesses and government.

The ESC was conscious about the need to minimised costs associated with imposing any additional information and reporting requirements.

It was also noted that a review in the future will need to occur to ensure that indicators and definitions remain relevant given changes and developments in the water sector and regulated environments.

Purpose of the review

The ESC is proposing to undertake a review of the indicators that inform the water performance report to ensure that the data is relevant given the present water sector and regulatory environment.

The review should be undertaken in conjunction with the ESC's ongoing initiative to make performance reporting more timely and accurate.

Core Principles

Core performance monitoring framework principles to consider while undertaking the review:

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- Identify whether there is scope for greater **national consistency in reporting and comparison**, to facilitate national assessment of relative performance
- **Costs** associated with collecting information and data need to be **balanced against the benefits of collecting that information**. That is, it will be necessary to ensure that the framework is not excessively onerous or costly to implement by focusing on a reasonable range of meaningful indicators.

Refining the Performance Categories

Removing any of the current performance indicator categories is not in the scope of this review.

Given developments in the water sector, the ESC is providing the opportunity to potentially include the following categories:

- financial and pricing
- resource security
- productivity, and
- innovation.

The review also provides the ability to include new indicators, within the existing categories, to reflect changes in technology and the regulatory environment, such as those associated with providing customer service via the internet and trade waste.

Table 1 - Current Performance Indicator Categories

Performance indicator categories
Baseline explanatory data
Drinking water quality
Water and sewerage network reliability and efficiency
Water consumption reuse and recycling
Environmental issues
Customer responsiveness and service
Usage, price trends and payment management [previously Affordability]
Drainage and waterways services*

*Not applicable to Barwon Water.

Timeframes

19 April – nomination of working group representatives

27 April – Response to this Briefing note / request due

4 May – Submissions to Staff Discussion Paper due

7 May – Working group at ESC

Recommendation / request

For stakeholders of each relevant performance indicator category to:

1. Review and comment on the ESC's *Review of Water Performance Report Indicators* staff discussion paper regarding the extract for *usage, price trends and payment options* indicators in Attachment 1.
2. Responsible officers review the current set of KPI's and definitions in Attachment 2 in light of the core principles outlined above and comment if required.
3. Note the contents of this Briefing note.

Attachments

Attachment 1 – Barwon Water response to: *Review of Water Performance Report Indicators (Staff Discussion Paper)*

Attachment 2 – Indicator Definitions

Attachment 1 – Barwon Water response to: *Review of Water Performance Report Indicators* (Staff Discussion Paper)

Below is an extract of the ESC's proposed new categories and indicators, removals, and modifications for *usage, price trends and payment options* indicators.

The staff discussion paper can be accessed here.

General comments

N/A

Proposed new categories and indicators (by the ESC)

UPP 7 – Physical visits

Consistent with the final decision relating to the implementation of a hardship related Guaranteed Service Level (GSL) measure, we are proposing the inclusion of a measure that tallies the number physical visits made to customer's premises in the event of a customer having their water supply restricted due to non-payment, or legal action having commenced.

In discussions with the Energy and Water Ombudsman (Victoria) (EWOV) we have found that it is difficult to identify whether water businesses have complied with the guidance provided by the reasonable endeavours checklist regarding customer contact.

Proposed approach

We are proposing the incorporation of a measure of physical visits—and the reason for the visit—in the performance indicator data set, and are seeking feedback regarding the most appropriate method for collecting this data.

Barwon Water Comment

Barwon Water believes that this indicator should not add significant administrative burden but the effort / value needs to be justified.

Proposed indicators for removal (by the ESC)

The ESC is not proposing to remove any *usage, price trends and payment options* indicators.

Proposed indicator modification (by the ESC)

UPP 1 – Instalment plans

The number of domestic and non-domestic customers on instalment plans can provide insight into the socio-economic and demographic aspect of a water businesses' service area, as well as the relationship management between customers and businesses.

While we collect instalment plan data on a domestic/non-domestic basis, this does not fully capture information associated with the management of potentially vulnerable customers. We propose that this can be achieved by collecting additional concession status information.

Proposed approach

- Changes are proposed to the ‘Split’ to reflect the inclusion of ‘Concession’.

Barwon Water Comment

Support that the split between legal and restriction but recognise a customer can fall into both so will be counted twice.

Attachment 2 – Indicator Definitions

Usage, price trends and payment management (UPP)

Indicator reference	Performance indicator	Split	Performance measure	Definition (Responsible officer modify definition if needed)
UPP 1	*Instalment plans*	*Domestic* *Non-domestic*	*% of customers on instalment plans*	*Total number of instalment plans entered into during the reporting period.* *An instalment plan is an alternative payment arrangement (confirmed in writing) between the customer and the water business in accordance with clause 5.4 of the Customer Code.* *A verbal extension of the payment period does not constitute an instalment plan.*
UPP 2	Restrictions applied for non-payment of bill	Domestic Domestic concession Non-domestic	% of customers restricted	The total number of restrictions applied for non-payment of water bills in the reporting period. It does not include restrictions carried out for breach of water restriction or disconnections due to unsafe infrastructure, or customers who choose to disconnect from the water business's supply (e.g. due to preference for a tank water supply).
UPP 3	Legal action for non-payment of bill	Domestic Domestic concession Non-domestic	% of customers subject to legal action	The number of customer accounts forwarded to a solicitor for legal action, subjecting the customers concerned to additional costs. Cases in which accounts are forwarded to a solicitor for legal action and the legal costs to the customer are subsequently waived should be included. It does not include where a business threatens to take legal action, but does not proceed.
UPP 4	Restriction duration (Days)	Domestic	% of restrictions restored within 3 days % of restrictions still in place after 14 days	Number of domestic restriction for non-payment that are removed within 3 days of the restriction being applied. Number of domestic restriction for non-payment that are still in place 14 days after the restriction being applied.
UPP 5	Debt levels for customer subject to restriction and legal action ($)	Domestic	Average debt levels for customer subject to restriction or legal action	Domestic customer debt levels are to be measured at the time action is taking to recover the debt either by legal means or by the use of restriction.

UPP 6	Hardship grants		Number of hardship grant applications per 100 customers	Number of hardship assistance grant applications made under the water business's hardship policy.
			Number of hardship grants awarded per 100 customers	Number of hardship assistance grants awarded under the water business's hardship policy.
			Value of hardship grants	Value of hardship assistance grants awarded under the water business's hardship policy.

Briefing note / request

To:

Cc:

From: Denis Musaefendic

Date: 18 April 2012

Subject: **ESC - Review of Water Performance Report Indicators (Financial)**

Background

In 2004, the ESC consulted on a performance reporting framework for regulated water businesses with industry and other stakeholders with the purpose of:

- Informing customers about levels of service
- Identify baseline performance and make comparisons between businesses
- Provide incentive for improvement over time
- Collecting data to develop regulatory standards and targets
- Inform decision making processes of regulators, businesses and government.

The ESC was conscious about the need to minimised costs associated with imposing any additional information and reporting requirements.

It was also noted that a review in the future will need to occur to ensure that indicators and definitions remain relevant given changes and developments in the water sector and regulated environments.

Purpose of the review

The ESC is proposing to undertake a review of the indicators that inform the water performance report to ensure that the data is relevant given the present water sector and regulatory environment.

The review should be undertaken in conjunction with the ESC's ongoing initiative to make performance reporting more timely and accurate.

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Timeframes

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4 May – Submissions to Staff Discussion Paper due

7 May – Working group at ESC

Recommendation / request

For stakeholders of each relevant performance indicator category to:

1. Review and comment on the ESC's *Review of Water Performance Report Indicators* staff discussion paper regarding the extract for *financial* indicators in Attachment 1.
2. Note the contents of this Briefing note.

Attachments

Attachment 1 – Barwon Water response to: *Review of Water Performance Report Indicators (Staff Discussion Paper)*

Attachment 1 – Barwon Water response to: *Review of Water Performance Report Indicators* (Staff Discussion Paper)

Below is an extract of the ESC's proposed new categories and indicators, removals, and modifications for *financial* indicators.

The staff discussion paper can be accessed here.

General comments

It is acknowledged that some stakeholders would find the inclusion of financial indicators as useful.

Financial indicators, and metrics are useful tools, but in comparing businesses across the sector, significant differences result purely due to the variances in operations, systems, scope, water sources, level of urbanisation, size etc. They do not form a useful comparison of operational or financial performance without these differences being taken into context.

Further still, comparisons of financial indicators outside of the industry draw even wider comparisons. This was clearly seen a number of years ago where the inclusion of a liquidity ratio in the annual VAGO acquittal report, tabled in Parliament, drew significant media comment and scrutiny as the level of liquidity held at a point in time did not meet typical "commercial" benchmarks.

In general, financial indicators without appropriate commentary and scope can be misleading and misinterpreted.

They are already widely published, by the businesses within annual reports and through VAGO reports annually. Another set of financial ratios, utilising a different asset base may well add further confusion and complexity to the information already publicly available.

Proposed new categories and indicators (by the ESC)

Financial Information

At the finalisation of the development of the performance reporting framework in 2004, it was agreed and noted that:

> *Financial and pricing information is not covered by the performance reporting framework as this information will be separately identified and linked to the businesses' Water Plans.*

However, a number of stakeholders have noted that introducing financial data to the annual performance report would provide valued contextual information.

While it is our intention to ensure that the performance report remains focused on service delivery outcomes, and noting that water businesses already publically report financial data in their annual reports, we have identified five financial indicators that may fulfil this role (refer Table 2.1). These common financial indicators are currently utilised by us and the sector to assess the strength of each water business' financial viability and were used in 2005 to establish the regulatory asset values (RAV).

We have placed an emphasis on utilising financial indicators that reflect the cash needs of the businesses. The objective that the businesses should be expected to be able to pay their bills as they fall due is inherently a cash constraint. Financial indicators that reflect accounting identities like provisions and accruals are influenced by firms' accounting policies. As a result, they may not be easily compared across firms and may provide a misleading impression of the actual cash needs of the businesses.

Proposed approach

- Is the inclusion of financial indicators as proposed and defined workable?
- What are the strengths and weaknesses associated with this approach?

- Is this duplicating the Regulatory Accounts?

Table 2.1

Identifier	Performance indicator	Performance measure	Barwon Water Comment
FIN 1	Funds from Operations (FFO) interest cover (times)	(FFO + net interest) / net interest	Acceptable
FIN 2	Internal financing ratio (%)	(FFO – dividends) / net capital expenditure	Acceptable
FIN 3	Net Debt payback (years)	(Interest bearing liabilities – cash) / FFO	Acceptable, but not as well as FIN 4.
FIN 4	FFO/net debt	FFO / (Interest bearing liabilities - cash	Not required if Net Debt payback is used.
FIN 5	Net debt/Regulatory Asset Value	(Interest bearing liabilities – cash) / Regulatory asset value	Acceptable, though will need to be clearly detailed as a regulatory value base of gearing. **Please Note:** A possible omission, that a profitability ratio is also not detailed within this set of ratios. Whilst not a driven outcome of the regulatory process, a RoA and/or RoI ratio would typically be seen when reporting a suite of financial metrics.

Proposed indicator for removal (by the ESC)

Not applicable for financial ESC indicators.

Proposed indicator modification (by the ESC)

Not applicable for financial ESC indicators.

Briefing note / request

To:

Cc:

From: Denis Musaefendic

Date: 18 April 2012

Subject: **ESC - Review of Water Performance Report Indicators (Resource Security)**

Background

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- **Costs** associated with collecting information and data need to be **balanced against the benefits of collecting that information**. That is, it will be necessary to ensure that the framework is not excessively onerous or costly to implement by focusing on a reasonable range of meaningful indicators.

Refining the Performance Categories

Removing any of the current performance indicator categories is not in the scope of this review.

Given developments in the water sector, the ESC is providing the opportunity to potentially include the following categories:

- financial and pricing
- resource security
- productivity, and
- innovation.

The review also provides the ability to include new indicators, within the existing categories, to reflect changes in technology and the regulatory environment, such as those associated with providing customer service via the internet and trade waste.

Table 1 - Current Performance Indicator Categories

Performance indicator categories
Baseline explanatory data
Drinking water quality
Water and sewerage network reliability and efficiency
Water consumption reuse and recycling
Environmental issues
Customer responsiveness and service
Usage, price trends and payment management [previously Affordability]
Drainage and waterways services*

*Not applicable to Barwon Water.

Timeframes

19 April – nomination of working group representatives

27 April – Response to this Briefing note / request due

4 May – Submissions to Staff Discussion Paper due

7 May – Working group at ESC

Recommendation / request

For stakeholders of each relevant performance indicator category to:

1. Review and comment on the ESC's *Review of Water Performance Report Indicators* staff discussion paper regarding the extract for *resource security* indicators in Attachment 1.
2. Note the contents of this Briefing note.

Attachments

Attachment 1 – Barwon Water response to: *Review of Water Performance Report Indicators (Staff Discussion Paper)*

Attachment 1 – Barwon Water response to: *Review of Water Performance Report Indicators* (Staff Discussion Paper)

Below is an extract of the ESC's proposed new categories and indicators, removals, and modifications for *resource security* indicators.

The staff discussion paper can be accessed here.

General comments

Resource security is a result of good planning and some degree of good luck that it will rain at the right time. Given the influence of nature I'm not supportive of this as a measure of business performance. Despite the very best of planning any indicators in this space are to a large degree uncontrollable.

If these are to be applied I think we should try to make sure that small systems (say under xML/yr) are not included. Especially towns where demand could be met by engaging water carters. I feel only Geelong and Colac could be reported in our region. When you do this the figures would be misleading. Geelong could have 3 years of demand available, Colac less than 1, but in reality not much difference because of the reliability of the catchment and size of catchment.

Figure across the state will not be useful for comparing unless the reader understood all factors.

ESC Comment

The inclusion of resource security in the performance framework was explored at a high level during the formative stages of the development process. While recognised as a desirable component of the framework, time constraints and the lack of refined and uniform measures that could be applied to the sector meant that this aspect of performance measurement was not incorporated.

Water businesses each have a Water Supply Demand Strategy (WSDS) that sets out the approach that will sustainably achieve a balance between water supply and demand over the long term. As part of the business's WSDS they must describe the major challenges that will affect how they plan for water in the future, which means that water corporations need to make decisions in the face of considerable uncertainty such as droughts, climate variability, population growth and environmental requirements. Businesses must also set out a methodology for analysing the current and future supply-demand balance for water systems in light of the challenges they face.

As evidenced by drought and recent flooding events, the provision and maintenance of a safe, reliable and sustainable water supply service is a significant challenge. Impacted by a range of factors—including population, climate, water source and infrastructure condition—water security is an issue of growing interest to a range of stakeholders.

Public scrutiny of water use and supply security has also arisen due to an unprecedented amount of expenditure been directed towards new supply sources and on water conservation programs.

While such programs have been undertaken in Victoria—and it is generally accepted that supply security has improved—there is no standard system or method applied in Australia to define supply security, let alone to determine aspects such as appropriate buffers between supply and demand and 'sustainable' demand. In addition, water strategy plans of water utilities around Australia do not often define water security targets.

The above issues will continue to impact on the quest to develop meaningful resource security measures. For discussion purposed, we have identified three potential candidates that may serve as proxies for capturing information on water supply security.

Barwon Water Comment

There are good reasons as to why there is no standard system to define supply security – it is too complex to break down into a few simple KPI's. That's why we need a WSDS to explain it all.

Water Systems and Resource Planning don't believe these KPI's should be part of our reporting to the ESC.

The best systematic approaches to water security have been completed using a risk based approach, which could be used to apply structure and comparison. However due to the complexity this cannot be quantified, and this does not translate well to use as KPIs.

Performance management and appraisal should be undertaken by DSE in line with the Water Supply Demand Strategy process. DSE is best place to issue qualitative review and approval of planning activities and then the performance of each business.

Most authorities appear to use 'system yield reliability' as a measure. Barwon Water's level of service describes a minimum reliability of operating 95% of the time without restrictions.

Measurement of actual performance is not possible, but it does provide an outlook of risk.

Systems that have recently been upgraded may have up to 99 % reliability (i.e. more secure), other systems with a delayed augmentation may have a reliability of <95%).

If we have to go down this path, my thoughts would be to see if this can be steered to be a better reflection of planning. Our customers would understand that we can't control the amount of rain and runoff but may wish to see how resilient or diversified our resources are.

So would it be possible to demonstrate good planning by reporting entitlements compared to annual demand. Entitlements could include BEs, licences, recycled water 'contracts' etc.

Proposed new categories and indicators (by the ESC)

SEC 1 – Supply volume available to meet demand volume (ML)

We are proposing to collect data that will allow us to calculate how long current average demand levels can be serviced by current supply sources. Our objective in collecting this information is to monitor:

- The number of days of potable water supply that is available to the water business based on average demand over the reporting year.
- ESSENTIAL SERVICES COMMISSION VICTORIA Review of Water Performance Report Indicators – Staff Discussion Paper 2 New Categories and Indicators 16
- what immediate activities a water business is undertaking to mitigate the risk of supply shortages. In WSDS double up and inefficient.

We note that this approach is one that focuses on the shorter term, and as such does not provide an indication of longer term strategies to secure supply. We anticipate that business systems to collect this information are well developed, and captured on a consistent

Proposed approach

- • What are the strengths and weaknesses associated with this approach?
- • Is there and alternative approach that can measure the information sought?

Definition

The ability of water businesses to meet demand taking into account supply variations but excluding demand variations

Supply volume (ML) is the amount of potable water from all sources available on the final date of the annual reporting period.

Average demand level (ML) is the average demand of all customers over the period of the annual reporting period.

Barwon Water Comment

As stated earlier this performance is very much determined by uncontrollable factors. Rainfall. This KPI could swing dramatically but be no indication of how a business is performing.

Is this done on a discrete system basis?

Is Storage included in the volume? If so, how does the measure account for places of high rainfall vs smaller rainfall but more supply through capital investment?

What is the "acceptable" limit of supply? Who determines this? Is it different across businesses based on specific characteristics? What is the consequence of going below the measure (i.e. is it a reason for further augmentation?)?

A KPI of this type does present a measure that may be more easily understood by the community. This could be produced by adding the annual storage, groundwater entitlement, bulk entitlement (with adjustment for short term forecast availability).

However this may be difficult to calculate consistently as demand patterns and resource availability changes throughout the year. Forecasts will be sensitive to climate outlook and other factors, and ignoring changes in consumption behaviour may be misleading. Particularly in small systems were demand can vary greatly year to year.

This may also be difficult to calculate and compare with smaller systems that are supplied from run of river sources (with minimal storage). Comparisons may be even be unduly alarming, unless back up supplies/options are counted in this KPI (e.g. capacity to cart water).

Results may also be interpreted as inequalities in service provision. Whereas the augmentation of a supply system is more driven by a more complex risk assessment or supply and demand buffer analysis.

In systems where annual entitlements/allocations may change due to resource availability or licence conditions, the results may also be misleading in indicating 'more' resource availability beyond the following 12 months (e.g. 10 year licence caps etc).

The major problem with this indicator is that it presumes that the only source of water is stored in surface reservoirs where a meaningful volume can be measured. Many water businesses obtain a significant percentage of bulk water from underground aquifers or bulk transfers from other systems, and may even include seawater desalination. A better indicator would be 'days of supply remaining', which could be calculated to include an estimate of volumes of water that can be pumped or supplied from sources other than storage reservoirs. The indicator would need to be qualified if a level of restrictions were in place and assumed in the calculation of demand volume.

Care would be needed to develop and test a method that can be used effectively to calculate and report on such a KPI.Some water corporations may lack the resources (personnel or expertise) to monitor and report on such a KPI adequately. This would result in increased time and investment by Barwon Water to produce this report.

Potentially to keep this KPI simple, a measure of % storage available may be sufficient.

SEC 2 – Demand versus sustainable yield

We are proposing to collect data that will allow us to calculate demand versus sustainable yield—that is whether demand can be supplied from sources over the longer term without risking the supply source. In a review of urban water security strategies prepared for Infrastructure Australia, PricewaterhouseCoopers (PWC) defined sustainable yield as:

> *the long term capacity of a water system to deliver a particular volume of water each year, subject to the environmental and infrastructure constraints of the system… which include manufactured sources of water*.2

Our objective in collecting this information is to monitor:

- how long a water business can continue to supply potable water to customers—considering environmental supply constraints—based on average demand over the reporting year
- what long term activities a water business is undertaking to mitigate the risk of supply shortages.

We note that this approach focuses on the longer term, and does not provide an indication of short term water availability. We anticipate that business systems to collect sustainable yield information are unlikely to be developed, and where such information is available it is unlikely to be captured in a consistent basis. Consequently we note that there would be implementation costs.

Proposed approach

- Do stakeholders have a view on the definition of 'sustainable yield'?
- What are the strengths and weaknesses associated with this approach?
- Is there and alternative approach that can measure the information sought?

Definition

Average demand level (ML) is the average demand of all customers over the period of the annual reporting period.
Sustainable yield – definition and criteria to be discussed.

Barwon Water Comment

Sustainable yield is an important concept that is part of Barwon Water's WSDS review process. It is complex and relies on assessing each water source individually in a way that best deals with the economic, social and environmental factors associated with use.

Quantifying these assessments is very difficult, although for threats such as long term climate change modelling approaches are used to compare future scenarios and quantify the impacts.

For this reason it is too difficult to use this as an all encompassing KPI.

Assessments such as climate change impact, where consistent accepted approaches exist may provide some benefit in the area of understanding long term sustainability. However the calculation and update of these assessments can be technical and very time consuming.

From a risk point of view, some sources will be subject to more risk than others. A structured qualitative assessment may be a useful and relatively simple way of indicating long term resource 'risk'.

Public perceptions are also a strong factor in influencing the appraisal of these factors. Given perceptions will change over time this adds uncertainty and inconsistency to any assessment of sustainability.

Yield not understood by the general public!

This is a better measure than SEC 1. Sustainable Yield is well defined by water resource system modellers using programs such as REALM. The level of reliability assumed by the calculation of yield would need to be specified (e.g. 95% reliability with no restrictions).

SEC 3 – Independent supply systems

We are proposing to collect data that will allow us to monitor the number and type of independent potable water supply sources. Our objective in collecting this information is to monitor:

- the diversity of water sources within a water business's service area

- the number of each type of water source.

We anticipate that business systems to collect this information are well developed, and captured on a consistent basis. Consequently we note that there would be little costs in implementation.

Proposed approach

- What are the strengths and weaknesses associated with this approach?
- Is there and alternative approach that can measure the information sought?

Definition

Counts each discrete supply system i.e. there may be several surface water supply systems, groundwater systems or recycled water systems and each of these would be counted as an independent supply source

Barwon Water Comment

This information should be easy to collect but hard to see how it is informing the public of supply security. It wouldn't mean much if there are just counts of our various types of water supply systems. Would be better located in the 'baseline data' area as background information.

This measure needs to be calculated in way that considers the yield/volumetric contribution of sources, and as a proportion of the total consumption requirements of a town/system. Otherwise the results would be misleading in terms of the actual value of diversity in supply.

Perhaps the consideration of individual supply sources that supply more than 5% of customer demand helps keep the measure comparable.

This is another factor/assessment that we deal with in the WSDS.

Another flaw with this indicator is that it treats all sources as having equal weight. For example in reality there may be three sources supplying one town but one of the sources may only be capable of supplying say 20% of demand.

Proposed indicator for removal (by the ESC)

Not applicable

Proposed indicator modification (by the ESC)

Not applicable.

Briefing note / request

To:

From: Denis Musaefendic

Date: 18 April 2012

Subject: **ESC - Review of Water Performance Report Indicators**

Background

In 2004, the ESC consulted on a performance reporting framework for regulated water businesses with industry and other stakeholders with the purpose of:

- Informing customers about levels of service
- Identify baseline performance and make comparisons between businesses
- Provide incentive for improvement over time
- Collecting data to develop regulatory standards and targets
- Inform decision making processes of regulators, businesses and government.

The ESC was conscious about the need to minimised costs associated with imposing any additional information and reporting requirements.

It was also noted that a review in the future will need to occur to ensure that indicators and definitions remain relevant given changes and developments in the water sector and regulated environments.

Purpose of the review

The ESC is proposing to undertake a review of the indicators that inform the water performance report to ensure that the data is relevant given the present water sector and regulatory environment.

The review should be undertaken in conjunction with the ESC's ongoing initiative to make performance reporting more timely and accurate.

Core Principles

Core performance monitoring framework principles to consider while undertaking the review:

- Performance indicators need to be **relevant to the nature of the services** provided by each business
- Performance indicators need to be **meaningful and relate to key issues** of concern to both businesses and their customers
- Performance indicators need to be **defined and collected on a consistent basis** across businesses to provide a valid measure of actual performance and to aid reasonable comparisons
- The **accuracy and reliability** of information provided by businesses must be verifiable.
- Identify whether there is scope for greater **national consistency in reporting and comparison**, to facilitate national assessment of relative performance

- **Costs** associated with collecting information and data need to be **balanced against the benefits of collecting that information**. That is, it will be necessary to ensure that the framework is not excessively onerous or costly to implement by focusing on a reasonable range of meaningful indicators.

Refining the Performance Categories

Removing any of the current performance indicator categories is not in the scope of this review.

Given developments in the water sector, the ESC is providing the opportunity to potentially include the following categories:

- financial and pricing
- resource security
- productivity, and
- innovation.

The review also provides the ability to include new indicators, within the existing categories, to reflect changes in technology and the regulatory environment, such as those associated with providing customer service via the internet and trade waste.

Table 1 - Current Performance Indicator Categories

Performance indicator categories
Baseline explanatory data
Drinking water quality
Water and sewerage network reliability and efficiency
Water consumption reuse and recycling
Environmental issues
Customer responsiveness and service
Usage, price trends and payment management [previously Affordability]
Drainage and waterways services*

*Not applicable to Barwon Water.

Timeframes

19 April – nomination of working group representatives

27 April – Response to this Briefing note / request due

4 May – Submissions to Staff Discussion Paper due

7 May – Working group at ESC

Recommendation / request

For stakeholders of each relevant performance indicator category to:

1. Review and comment on the ESC's *Review of Water Performance Report Indicators* staff discussion paper regarding the extract for *productivity* indicators in Attachment 1.
2. Note the contents of this Briefing note.

Attachments

Attachment 1 – Barwon Water response to: *Review of Water Performance Report Indicators (Staff Discussion Paper)*

Attachment 1 – Barwon Water response to: *Review of Water Performance Report Indicators* (Staff Discussion Paper)

Below is an extract of the ESC's general comments, proposed new categories and indicators, removals, and modifications for *productivity* indicators.

The staff discussion paper can be accessed here.

General comments

ESC Comment

Productivity is the efficiency with which inputs are transferred into outputs. In a typical business environment, there are two ways to improve productivity: through an increase in outputs (product or revenue) and/ or decrease in inputs (predominantly labour and capital). However simple measures such as this cannot necessarily be applied when attempting to measure the productivity of water businesses.

The legacy of decisions that have moulded the structure and operation of the Victorian water sector has resulted in businesses having to accommodate multiple—and sometimes conflicting—social, environmental and political objectives. In addition, water sector productivity is influenced significantly by external factors, making direct comparison between businesses difficult; factors include:

- network size and density—economies of scale
- geography—particularly pumped versus gravity systems
- climate and rainfall—the major determinant of consumption patterns
- government policy—for example the regulatory framework and decisions on water restrictions, supply augmentations and other government programs (that are administered by water businesses)
- water supply sources—generally with lower source water quality, higher inputs are required
- treatment levels—there is a large difference in energy and chemical requirements between primary, secondary and tertiary treatment of wastewater
- capital procurement strategies—for example level of contracting/outsourcing.

That said benchmarking productivity for water utilities may be useful with respect to observing trends, and may allow readers of the annual performance report to better understand the drivers of efficiency within and across the water businesses.

Overall (total factor) productivity measures

In a recent Commission research paper, we explored productivity trends and comparative productivity levels of the Victorian water industry.[3] This paper utilised a Total Factor Productivity (TFP) approach—both indexed and econometric—to benchmark the performance of Victorian water businesses.

While the use of TFP is a robust approach to measuring productivity over the longer term—and is particularly applicable to the regulatory decision making process and useful for management within a water business—we do not think it is applicable to the context of communicating relevant performance information to a wider audience in a simple and clear fashion in the annual performance report.

Discrete (partial factor) productivity measures

In contrast to TFP, partial factor productivity (PFP)—which considers a single input against outputs, or may focus on a particular area of a business' operations—offers a more accessible picture of productivity trends over the short- to medium-term.

In the water sector, there are literally hundreds of partial productivity indicators that can be used to measure efficiency—both within and between water businesses. These indicators can be defined at different business levels, including at the:

- utility level—for example number of employees per 1000 customers
- service level—for example sewerage operating costs per kL collected
- geographic level—for example operating cost per customer for town X
- business unit level—for example corporate costs per customer
- process level—for example number of invoices processed per accounts payable employee.

Indicators can also be defined according to:

- inputs—for example labour, capital (specifically water delivery assets, pump stations and treatment plants), materials (specifically contractors, energy and treatment chemicals).
- outputs—for example ML of water delivered or wastewater disposed, water quality, length of main, number of customers served, size of service area.

Our view in proposing PFP measures is that:

- the 'utility' and 'service' levels seem appropriate for the purposes of public reporting
- in terms of 'inputs', using labour, capital or materials in isolation can make water business comparisons difficult. As an alternative, we propose to combine costs into one input such as 'operating costs', which is a commonly used metric in the water industry.
- in terms of 'outputs', we propose to utilise the number of customers as the base metric given that it is the simplest—and least discriminatory—measure.

On this basis we propose the consideration of two productivity measures:

- PRO 1 – Operation maintenance and administration (OMA) costs per customer
- PRO 2 – Cost to serve ($ per customer).

Barwon Water Comment

The dot point:

- treatment levels—there is a large difference in energy and chemical requirements between primary, secondary and tertiary treatment of wastewater

should include "and between different biosolids treatment and beneficial use options".

Proposed new categories and indicators (by the ESC)

PRO 1 – Operation maintenance and administration (OMA) costs per customer

We are proposing to collect data that will allow us to calculate the operation, maintenance and administration (OMA) costs for water and sewerage service provision on a per customer basis. Our objective in collecting this information is to monitor relative changes in costs over time.

We anticipate that business systems to collect this information are well developed as operating costs per property is collected by water businesses for reporting on a national level and cost data is already subject to an auditing regime. Consequently we note that there would be little costs in implementation.

Proposed approach

- What are the strengths and weaknesses associated with this approach?
- Is there and alternative approach that can measure the information sought?

Definition

Operation maintenance and administration costs defined consistent with NWI [F11, F12 – Operating cost – Water, sewerage]

Domestic and non-domestic water customers defined consistent with BED 1

Barwon Water Comment

One problem with using operating cost for comparison purposes occurs where businesses have part of their services delivered by means of public-private partnership arrangements where capital financing is embedded in the annual operating cost. These financing arrangements distort the true operating cost. Where such arrangements exist the true underlying operating cost should be derived by stripping out the embedded capital charges from the annual payment by the water business to the public-private partnership entity.

Easy to implement (was done for the WSAA benchmarking) however there needs to be an understanding of how the business-specific characteristics influence the outcomes

PRO 2 – Cost to serve ($ per customer)

We are proposing to collect data that will allow us to calculate how much it costs each water business to serve each of their customers.

Service costs—which are a component of operating costs—are defined as those activities related to the management of customer facing activities such as meter reading, billing and dispatch, call centre, communications, customer contract management, and preparation of information statements. As all water businesses have the same functions and similar customer service obligations we anticipate that the cost to serve metric should face few issues when compared across businesses.

However the metric must be well-defined and relies upon utilities being able to accurately identify customer service costs. We anticipate that business systems are developed enough to be able to identify costs to serve.

Proposed approach

- What should be included as a measured activity?
- When comparing outcomes, should we classify businesses based on customer numbers or business size to provide grounds for comparison?
- What are the strengths and weaknesses associated with this approach?
- Is there and alternative approach that can measure the information sought?

Definition

Costs to include: office functions of Finance, IT, HR, Communications, Customer Service and the like.

Domestic and non-domestic water customers defined consistent with BED 1

Barwon Water Comment

Same comment as above. Easy to implement (was done for the WSAA benchmarking) however there needs to be an understanding of how the business-specific characteristics influence the outcomes

In addition, what is included in the operating costs – labour? Systems? Electricity? Needs to be the same for all businesses

Difficult to apportion operating costs between Domestic and Non-Domestic.

Proposed indicator for removal (by the ESC)

Not applicable for productivity indicators.

Proposed indicator modification (by the ESC)

Not applicable not applicable for productivity indicators.

Briefing note / request

To:

Cc:

From: Denis Musaefendic

Date: 18 April 2012

Subject: **ESC - Review of Water Performance Report Indicators - Innovation**

Background

In 2004, the ESC consulted on a performance reporting framework for regulated water businesses with industry and other stakeholders with the purpose of:

- Informing customers about levels of service
- Identify baseline performance and make comparisons between businesses
- Provide incentive for improvement over time
- Collecting data to develop regulatory standards and targets
- Inform decision making processes of regulators, businesses and government.

The ESC was conscious about the need to minimised costs associated with imposing any additional information and reporting requirements.

It was also noted that a review in the future will need to occur to ensure that indicators and definitions remain relevant given changes and developments in the water sector and regulated environments.

Purpose of the review

The ESC is proposing to undertake a review of the indicators that inform the water performance report to ensure that the data is relevant given the present water sector and regulatory environment.

The review should be undertaken in conjunction with the ESC's ongoing initiative to make performance reporting more timely and accurate.

Core Principles

Core performance monitoring framework principles to consider while undertaking the review:

- Performance indicators need to be **relevant to the nature of the services** provided by each business
- Performance indicators need to be **meaningful and relate to key issues** of concern to both businesses and their customers
- Performance indicators need to be **defined and collected on a consistent basis** across businesses to provide a valid measure of actual performance and to aid reasonable comparisons
- The **accuracy and reliability** of information provided by businesses must be verifiable.

- Identify whether there is scope for greater **national consistency in reporting and comparison**, to facilitate national assessment of relative performance
- **Costs** associated with collecting information and data need to be **balanced against the benefits of collecting that information**. That is, it will be necessary to ensure that the framework is not excessively onerous or costly to implement by focusing on a reasonable range of meaningful indicators.

Refining the Performance Categories

Removing any of the current performance indicator categories is not in the scope of this review.

Given developments in the water sector, the ESC is providing the opportunity to potentially include the following categories:

- financial and pricing
- resource security
- productivity, and
- innovation.

The review also provides the ability to include new indicators, within the existing categories, to reflect changes in technology and the regulatory environment, such as those associated with providing customer service via the internet and trade waste.

Table 1 - Current Performance Indicator Categories

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Usage, price trends and payment management [previously Affordability]
Drainage and waterways services*

*Not applicable to Barwon Water.

Timeframes

19 April – nomination of working group representatives

27 April – Response to this Briefing note / request due

4 May – Submissions to Staff Discussion Paper due

7 May – Working group at ESC

Recommendation / request

For stakeholders of each relevant performance indicator category to:

1. Review and comment on the ESC's *Review of Water Performance Report Indicators* staff discussion paper regarding the extract for *innovation* indicators in Attachment 1.
2. Note the contents of this Briefing note.

Attachments

Attachment 1 – Barwon Water response to: *Review of Water Performance Report Indicators (Staff Discussion Paper)*

Attachment 1 – Barwon Water response to: *Review of Water Performance Report Indicators* (Staff Discussion Paper)

Below is an extract of the ESC's general comments, proposed new categories and indicators, removals, and modifications for *innovation* indicators.

The staff discussion paper can be accessed here.

General comments

ESC Comments

In recent forums we have raised the potential for the inclusion of an innovation measure as part of the performance monitoring framework in an effort to promote the development and realisation of new ways of operating. This was most notably identified in a speech presented by our Chairman—Dr Ron Ben-David—who identified that innovation must be linked directly and demonstrably to:

- *step-change improvements in service levels over-and-above expectations; and/or production costs sustainably lower than assumed through the water planning process…*
- *an increased level of risk that is borne by the shareholder rather than customers…*
- *increased value as perceived by either customers or the shareholder; or both.*[1]

To our knowledge, measuring and benchmarking innovation in the water sector has not been undertaken before—from either the producer or customer perspective—and very limited measurement of innovation appears to occur in other sectors. However we note that significant resources and studies are being devoted to innovation measurement techniques and indicators globally.

One of the core issues associated with the measurement of innovation is actually achieving a robust definition that can be used as the basis for measurement. A significant amount of academic and practitioner literature has emerged to try and isolate the concept in order to assist in the measurement of innovation.

Unfortunately much of the literature treats innovation analogously to research and development (R&D) spending, as R&D spending is easily measured. While simple, the connection has been proven to be spurious as highlighted in a Booz&Co. report (2005) that sought to identify the key factors contributing to innovation. They found that:

> *Contrary to conventional assumptions, R&D spending levels within the Global Innovation 1000 had no apparent impact on sales growth, gross profit, operating profit, enterprise profit, market capitalization, or total shareholder return. Whether we looked at R&D as a leading or a lagging indicator, whether we looked at absolute dollar amounts or growth trends for the performance measures, and no matter what the time horizon for the analysis, the story was the same.*
>
> *This is big news. It suggests that strategies that focus primarily on increasing the cash input to an innovation "black box" — a process presumed to transform R&D spending into results without anyone fully understanding how — are more likely than not to fail to deliver the desired performance.*[2]

Our view in the context of measuring the innovation in the water sector is that R&D should be defined as the investment of resources (financial and non-financial) to develop ideas that

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[1] Dr Ron Ben-David (2011), *Economic regulation of the water sector: Presentation to the VicWater Annual 2011 Conference*, 8 September 2011.

[2] Barry Jaruzelski, Kevin Dehoff, and Rakesh Bordia (2005) "Money Isn't Everything", *strategy+business*, Winter, pp: 4-5.

may or may not lead to benefits to an organisation. In contrast, we would define innovation as the turning of ideas—whether formed though a formal R&D process or not—into actions that result in efficiency and/or effectiveness gains—either through radical or incremental changes to business as usual. Innovation must also deliver direct and demonstrable benefits as noted above.

On this understanding we are seeking the views of all stakeholders on potential measures of innovation that meet the core criteria on which the performance indicators have been

Barwon Water Comments

Given the subjective nature of innovation, it is difficult to suggest specific performance indicators for measuring innovation consistently across the water sector. Barwon Water has an internal innovation program whereby innovation is encouraged, supported and recognised across the business. In measuring the success of the program, we review the rate of employee participation in the program, the volume of innovations and ideas implemented, and the financial implications of these.

Proposed new categories and indicators (by the ESC)

The ESC did not recommend any new industry indicators for innovation.

Proposed indicator for removal (by the ESC)

Not applicable for innovation indicators.

Proposed indicator modification (by the ESC)

Not applicable for innovation indicators.

Briefing note / request

To:

Cc:

From: Denis Musaefendic

Date: 19 April 2012

Subject: **ESC - Review of Water Performance Report Indicators (Trade Waste)**

Background

In 2004, the ESC consulted on a performance reporting framework for regulated water businesses with industry and other stakeholders with the purpose of:

- Informing customers about levels of service
- Identify baseline performance and make comparisons between businesses
- Provide incentive for improvement over time
- Collecting data to develop regulatory standards and targets
- Inform decision making processes of regulators, businesses and government.

The ESC was conscious about the need to minimised costs associated with imposing any additional information and reporting requirements.

It was also noted that a review in the future will need to occur to ensure that indicators and definitions remain relevant given changes and developments in the water sector and regulated environments.

Purpose of the review

The ESC is proposing to undertake a review of the indicators that inform the water performance report to ensure that the data is relevant given the present water sector and regulatory environment.

The review should be undertaken in conjunction with the ESC's ongoing initiative to make performance reporting more timely and accurate.

Core Principles

Core performance monitoring framework principles to consider while undertaking the review:

- Performance indicators need to be **relevant to the nature of the services** provided by each business
- Performance indicators need to be **meaningful and relate to key issues** of concern to both businesses and their customers
- Performance indicators need to be **defined and collected on a consistent basis** across businesses to provide a valid measure of actual performance and to aid reasonable comparisons
- The **accuracy and reliability** of information provided by businesses must be verifiable.

- Identify whether there is scope for greater **national consistency in reporting and comparison**, to facilitate national assessment of relative performance
- **Costs** associated with collecting information and data need to be **balanced against the benefits of collecting that information**. That is, it will be necessary to ensure that the framework is not excessively onerous or costly to implement by focusing on a reasonable range of meaningful indicators.

Refining the Performance Categories

Removing any of the current performance indicator categories is not in the scope of this review.

Given developments in the water sector, the ESC is providing the opportunity to potentially include the following categories:

- financial and pricing
- resource security
- productivity, and
- innovation.

The review also provides the ability to include new indicators, within the existing categories, to reflect changes in technology and the regulatory environment, such as those associated with providing customer service via the internet and trade waste.

Table 1 - Current Performance Indicator Categories

Performance indicator categories
Baseline explanatory data
Drinking water quality
Water and sewerage network reliability and efficiency
Water consumption reuse and recycling
Environmental issues
Customer responsiveness and service
Usage, price trends and payment management [previously Affordability]
Drainage and waterways services*

*Not applicable to Barwon Water.

Timeframes

19 April – nomination of working group representatives

27 April – Response to this Briefing note / request due

4 May – Submissions to Staff Discussion Paper due

7 May – Working group at ESC

Recommendation / request

For stakeholders of each relevant performance indicator category to:

1. Review and comment on the ESC's *Review of Water Performance Report Indicators* staff discussion paper regarding the extract for *Trade Waste* indicators in Attachment 1.
2. Responsible officers to review the current set of KPI's and definitions in Attachment 2 in light of the core principles outlined above and comment if required.
3. Note the contents of this Briefing note.

Attachments

Attachment 1 – Barwon Water response to: *Review of Water Performance Report Indicators (Staff Discussion Paper)*

Attachment 2 – Indicator Definitions

Attachment 1 – Barwon Water response to: *Review of Water Performance Report Indicators* (Staff Discussion Paper)

Below is an extract of the ESC's proposed new categories and indicators, removals, and modifications for *Trade Waste* indicators.

The staff discussion paper can be accessed here.

General comments

ESC Comments

In June 2010, the Minister for Water approved the recommendations arising from the trade waste review conducted by the Department of Sustainability and Environment (DSE) detailed in the report *Future directions for trade waste management in Victoria: a review of Victoria's trade waste management framework*.[1]

The extensive trade waste review was undertaken in response to the Victorian Government *Our Water, Our Future* initiative and found that the regulatory arrangements lacked consistency and transparency and that trade waste management objectives were unclear.

The review made a number of recommendations; it specifically defined a role for us by recommending that we regulate trade waste management and develop regulatory decision making processes that are consistent, open and timely. Consequently, we developed a Trade Waste Customer Service Code to meet this objective, which came into effect on 1 January 2012.

To assist us in our monitoring and compliance role we are proposing that two additional trade waste specific performance indicators be included in the data set:

1. TDW1 – Number of sampling activities: a new indicator to be added to a new category.

2. BED 19 – Volume of trade waste received (ML): a new indicator to be added to Baseline Explanatory Data.

Barwon Water Comments

N/A

Proposed new categories and indicators (by the ESC)

TDW 1 – Number of sampling activities

We are proposing to collect data that will allow us to calculate the number of check sampling activities conducted by a water business as percentage of forecast.

Our objective in collecting this information is to monitor:

- whether a water business is providing the sampling service that the customers are being charged for via annual trade waste fees (which include monitoring costs)
- the extent to which the water business is helping trade waste customers maintain compliance with trade waste discharge criteria.

[1] A copy of this report can be viewed at http://www.water.vic.gov.au/__data/assets/pdf_file/0007/79783/Review-of-Trade-Waste-Management-Final-Report-July2010.pdf

Proposed approach

- Addition of new category ‘Trade waste’
- Addition of new ‘Performance indicator’ – ‘Number of sampling activities’ that includes:
    - ‘Split’ into ‘Forecast’ and ‘Completed’
    - ‘Coverage’ of ‘Regional and Metropolitan’.

Definition

A check sampling activity is any scheduled sampling activity undertaken in connection with a trade waste agreement for which an annual trade waste management fee is charged.

Forecast is the total number of scheduled sampling activities proposed for all trade waste customers in a reporting year.

Completed is the total number of scheduled sampling activities undertaken for all trade waste customers in a reporting year (excluding any repeat or additional tests conducted as part of a non-compliance investigation).

Barwon Water Comment

Barwon Water has mechanisms in place to capture and therefore report the number of completed sampling activities against forecast quantities. As such, reporting will not introduce any additional burden.

BED 19 – Volume of trade waste received (ML)

We are proposing to collect data that will allow us to calculate the trade waste volumes received into a water business's sewer.

This data will form part of the BED data set consistent with data entry requirements already in place for water and sewerage. As proposed, this new indicator will provide information that will allow us to compare trade waste volumes between water businesses, and also indicate any trends that emerge within a water business's trade waste customer base.

Proposed approach

We propose the following reporting parameters:

- Volume of trade waste received into sewers delivered to a wholesaler's treatment plant (ML).
- Volume of trade waste received into sewers delivered to a water business’s own treatment plant (ML).
- Total volume of trade waste received into sewers (ML).

It should be noted that this information is currently provided to us by water businesses as part of the ‘Treatment plant’ data template. This proposal compiles the data into summary form in the BED data set. Similarly we will modify the ‘Melbourne Water’ data template to include a summation of trade waste received where necessary.

Definition

Volume of trade waste received into sewers delivered to a wholesaler's treatment plant (ML).

Volume of trade waste received into sewers delivered to a water business’s own treatment plant (ML).

Total volume of trade waste received into sewers (ML).

Barwon Water Comment

Barwon Water has mechanisms in place to capture and is currently reporting the volume of trade waste received. As such, reporting will not introduce any additional burden.

Proposed indicator for removal (by the ESC)

BED 13 – Water treatment plants: Disinfection, unfiltered; Further treatment

The information that we collect on the level of water treatment undertaken by each water business' treatment plants was established to provide contextual information to stakeholders.

Subsequent developments have highlighted that this indicator does not provide information of great value to us or wider stakeholders. We do not currently publish the results of this indicator in the Annual Performance Report or other publications, or use the results for any internal calculations.

Further, the framework administered by the NWC has also moved away the full split of this indicator as it has proven difficult to distinguish between different types of water treatment plants. On this basis the NWC framework now only collects the 'full treatment' category.

Proposed approach

- Maintain the 'Full treatment' aspect to remain aligned with the reporting requirements of the NWC framework (A1).
- Change the "performance indicator' descriptor.
- Remove from the 'Split' disinfection, unfiltered and further treatment categories.
- Change the definition to recognise the removal of the 'Split' categories.

Definition

Full treatment: The water treatment plant includes processes to remove colour/and or turbidity as well as providing filtration and disinfection. In addition, it may include processes for taste and/or odour reduction, softening, pH correction and target removal of elements and compound such as iron, manganese, nitrates and pesticides.

Barwon Water Comment

Barwon Water supports the omission of this indicator.

CRR 8 – Trade wastes priority parameter

This indicator was developed to monitor the annual loads of priority parameters for individual sewage treatment plants. We now collect this trade waste data from water businesses as required by the Department of Sustainability and Environment (DSE) on a set of standard parameters—Total Dissolved Solids (TDS), Biological Oxygen Demand (BOD), Suspended Solids (SS) and nitrogen. This refinement makes CRR8 redundant.

Proposed approach

• Remove CRR 8.

Barwon Water Comment

Barwon Water supports the omission of this indicator.

Proposed indicator modification (by the ESC)

Not applicable *Trade Waste* indicators.

Attachment 2 – Indicator Definitions

Water conservation, reuse, recycling (CRR)

Indicator reference	Performance indicator	Split	Performance measure	Definition
CRR 1	Effluent reuse (ML) - End use	Volume of effluent produced (excludes evaporation)	Volume of effluent reused	Volume reused means volume of treated sewage effluent reused. It includes all treated effluent that is used by either the water business, a business supplied by the water business, or supplied through a third pipe system for urban reuse. Evaporation is excluded.
		Percentage recycled for urban and industrial uses	% of effluent reused	Volume of treated 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.
		Percentage recycled for agricultural uses	% of effluent reused by category	The percentage of recycling is to be calculated as:
		Percentage recycled for beneficial allocations (i.e. environmental flows)		
		Percentage recycled within process		% category recycling = (category volume recycled)
		Volume discharged to the environment (i.e. ocean outfalls or inland water discharges)		(volume effluent produced + volume of within process recycling)
CRR 2	Effluent Reuse -	Volume of effluent produced	Volume of effluent produced	Effluent can be treated sewage, treated trade waste and treated greywater. (Definition of greywater is unclear and would be difficult to separate from blackwater)

	Water Resource Management		% of effluent reused % of effluent reused by category	Note: Water authorities are accountable for recycling from treated sewage, but will need to develop methods for estimating reuse of treated trade waste and treated greywater.
		Volume providing potable water substitution		Effluent, treated "fit for purpose"[1], used for non-drinking purposes that would have previously been supplied from the drinking water supply system (for example, garden use, toilet flushing, industrial process, open space watering).
		Volume providing raw water substitution		Effluent, treated "fit for purpose", used for purposes that would have previously been supplied with raw water (i.e. surface or groundwater resources) for non-drinking purposes. For example, agriculture, water released from treatment plant to waterway for downstream water supply purposes (provided environmental requirements are met)
		Volume providing direct environmental flows		Effluent, treated "fit for purpose", discharged to waterway for environmental purposes (criteria to be developed by EPA).
		Volume providing new water		Effluent, treated "fit for purpose", used in development in areas previously not supplied with water. Note that existing on-site reuse, not substituting traditional sources, should be classified retrospectively as New Water.
CRR 3	*Volume of sewage spilt from emergency relief structures (ERS) and pumping stations (ML)*	*Blockage* *Hydraulic* *Extreme wet weather* *System failure*	*Volume of sewage spilt as a % of the volume of sewage transported.*	*An estimation of spill volumes may be used where direct measurement of spill volume cannot be made.*
CRR 4	Sewage treatment standards		Number of analyses complying with licence agreements as % of samples	Analyses performed means the total number of EPA license compliance analyses performed on the treated effluent for all treatment plants. Analyses complying means the number of analyses complying with EPA license limits for all treatment plants. Non-compliance means the water business has not met a quantitative standard prescribed by an EPA licence (or equivalent).
CRR 6	Biosolid reuse	· Mass produced · Mass reused Mass stored	% of biosolids reused	Mass produced means the mass dry weight of sludge produced by the licensee's sewage treatment plants. (Shouldn't include the solids in a treatment process e.g. lagoons?) Mass reused means the mass dry weight of biosolids~~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.

CRR 7	Trade waste volume received			The aggregated volumes of trade waste received by the water business and reported separately as a percentage of treatment facility influent for customer categories of: industrial; commercial customers.
~~CRR 8~~	~~Trade wastes priority parameter~~	-	-	~~The annual loads of priority parameters for individual sewage treatment plants are reported. Priority parameters relevant to individual facilities are agreed with EPA at the beginning of the reporting period. Priority parameters are established on a prioritised, case by case basis where:~~ ~~- the parameter poses a risk to STP compliance with EPA licence;~~ ~~- the parameter impacts on opportunities for water recycling or biosolids recycling; or~~ ~~- the parameter significantly exceeds domestic sewerage quality and has a potential environmental impact associated with discharge from the STP.~~

Briefing note / request

To:

Cc:

From: Denis Musaefendic

Date: 19 April 2012

Subject: **ESC - Review of Water Performance Report Indicators (Water Network Reliability and Efficiency)**

Background

In 2004, the ESC consulted on a performance reporting framework for regulated water businesses with industry and other stakeholders with the purpose of:

- Informing customers about levels of service
- Identify baseline performance and make comparisons between businesses
- Provide incentive for improvement over time
- Collecting data to develop regulatory standards and targets
- Inform decision making processes of regulators, businesses and government.

The ESC was conscious about the need to minimised costs associated with imposing any additional information and reporting requirements.

It was also noted that a review in the future will need to occur to ensure that indicators and definitions remain relevant given changes and developments in the water sector and regulated environments.

Purpose of the review

The ESC is proposing to undertake a review of the indicators that inform the water performance report to ensure that the data is relevant given the present water sector and regulatory environment.

The review should be undertaken in conjunction with the ESC's ongoing initiative to make performance reporting more timely and accurate.

Core Principles

Core performance monitoring framework principles to consider while undertaking the review:

- Performance indicators need to be **relevant to the nature of the services** provided by each business
- Performance indicators need to be **meaningful and relate to key issues** of concern to both businesses and their customers
- Performance indicators need to be **defined and collected on a consistent basis** across businesses to provide a valid measure of actual performance and to aid reasonable comparisons
- The **accuracy and reliability** of information provided by businesses must be verifiable.

- Identify whether there is scope for greater **national consistency in reporting and comparison**, to facilitate national assessment of relative performance
- **Costs** associated with collecting information and data need to be **balanced against the benefits of collecting that information**. That is, it will be necessary to ensure that the framework is not excessively onerous or costly to implement by focusing on a reasonable range of meaningful indicators.

Refining the Performance Categories

Removing any of the current performance indicator categories is not in the scope of this review.

Given developments in the water sector, the ESC is providing the opportunity to potentially include the following categories:

- financial and pricing
- resource security
- productivity, and
- innovation.

The review also provides the ability to include new indicators, within the existing categories, to reflect changes in technology and the regulatory environment, such as those associated with providing customer service via the internet and trade waste.

Table 1 - Current Performance Indicator Categories

Performance indicator categories
Baseline explanatory data
Drinking water quality
Water and sewerage network reliability and efficiency
Water consumption reuse and recycling
Environmental issues
Customer responsiveness and service
Usage, price trends and payment management [previously Affordability]
Drainage and waterways services*

*Not applicable to Barwon Water.

Timeframes

19 April – nomination of working group representatives

27 April – Response to this Briefing note / request due

4 May – Submissions to Staff Discussion Paper due

7 May – Working group at ESC

Recommendation / request

For stakeholders of each relevant performance indicator category to:

1. Review and comment on the ESC's *Review of Water Performance Report Indicators* staff discussion paper regarding the extract for *Water Network Reliability and Efficiency* indicators in Attachment 1.
2. Responsible officers to review the current set of KPI's and definitions in Attachment 2 in light of the core principles outlined above and comment if required.
3. Note the contents of this Briefing note.

Attachments

Attachment 1 – Barwon Water response to: *Review of Water Performance Report Indicators (Staff Discussion Paper)*

Attachment 2 – Indicator Definitions

Attachment 1 – Barwon Water response to: *Review of Water Performance Report Indicators* (Staff Discussion Paper)

Below is an extract of the ESC's proposed new categories and indicators, removals, and modifications for *Water Network Reliability and Efficiency* indicators.

The staff discussion paper can be accessed here.

Proposed new categories and indicators (by the ESC)

The ESC did not propose to add any new *Water Network Reliability and Efficiency* indicators.

Proposed indicator for removal (by the ESC)

REW 4 – Bursts and leaks fully rectified

At the inception of the performance reporting framework, the working group agreed that information associated with full rectification of bursts and leaks—within 12, 24 and 120 hours—would provide insight into the business responsiveness over time.

However, experience with this indicator has proven that it is difficult to consistently define and measure full 'rectification'. When reporting on this indicator, it has become apparent that each water business applies different policies and procedures that result in non-comparable measures of 'full rectification'.

In addition, the definition of time periods has resulted in a clustering of results, reducing the usefulness of the information. Consequently, we do not currently publish the results of this indicator in the Annual Performance Report or other publications, or use the results for any internal calculations.

Proposed approach

- Remove REW 4.
- Rely on separate indicators to provide more meaningful information:
    - REW 2—Total minutes to respond to bursts and leaks (Min).
    - REW 3—Time taken to rectify bursts and leaks.

Barwon Water Comment

Agree with removal. REW 3 (average hours to rectify) should be sufficient.

REW 6 – Water supply interruptions restored within 3, 5 & 12 hours

Early performance of water businesses—particularly in the area of water supply interruptions—was not high. Consequently, this performance indicator was introduced to highlight improvements to service reliability achieved by the water businesses over time.

Improvements made to water infrastructure over the past twenty years have reduced the usefulness of this indicator as currently defined. Results tend to cluster at 100 per cent, which does not serve to distinguish one business from another or service improvements.

On this basis we propose to remove reference to the three and 12 hour restoration time, and instead collect information on planned and unplanned water supply interruptions restored within five hours.

This will also maintain alignment with the approved service standard as applied by Schedule 2 of the Customer Service Code.

Proposed approach

- Remove reference to 3 and 12 hour restoration timeframes from 'Performance indicator'.
- Remove reference to 3 and 12 hour restoration timeframes from 'Performance measure'.

Definition

Where the loss of water supply is due to the shutdown of a section of water main, the water supply interruption begins when the water supply is shut off and ends when the main is fully recharged.

Otherwise, the water supply interruption begins when the water supply is lost and ends when it is fully restored.

Barwon Water Comment

Agree with the removal of 3 and 12 hr KPI's. Although we may still measure the 3 hr KPI internally to assist with driving performance against the 5 hr target.

Definition - Sometimes difficult to know when water was lost. Usually always some water available to customers, although pressure may be low, unless burst is very bad. Typically we would record water off (beginning of interruption) when the last valve is closed prior to repair. The reference to "water lost" provides little value – it would be much easier to define if related to valve operations.

It would be useful for definition to include a pipe size. Larger mains can take longer to repair. Are all businesses using the same criteria for this KPI? Also arguable as to whether the best approach may be to report against a slightly different measure such as "Avg duration of water supply interruptions (planned and unplanned)" (refer REW 8).

REW 12 – Water pressure (bulk supplier)

This indicator was developed to measure the performance of Melbourne Water regarding wholesale-retail interfaces that did not meet pressure requirement for more than 30 continuous minutes.

On review, we have concluded that the results of water pressure tests are an intra-industry issue. We do not currently publish the results of this indicator in the Annual Performance Report or other publications, or use the results for any internal calculations.

Proposed approach

- Remove REW 12.

Barwon Water Comment

Barwon Water supports the omission of this indicator.

Proposed indicator modification (by the ESC)

REW 7 – Water supply customer interruptions (No.)

The number of planned and unplanned water supply interruptions sits at the core of the performance reporting framework. It indicates how frequent interruptions have been within a service area, and serves a powerful benchmarking role.

While contextual information may provide justification for results—positive or negative—the indicator falls short in that it only highlights the level of service provision associated with the delivery of water. However, when an interruption occurs it is more often than not the accuracy of communication regarding the length of supply interruption that will be valued by customers.

This aspect of service delivery has been recognised in the Guaranteed Service Level schemes approved for Yarra Valley Water (No. planned interruption longer than advised) and Western Water (Planned water supply interruption longer than notification given), which both carry an approved payment of $50. We do note that measuring this may create perverse incentives for the water businesses. For example, if you do not want to score low on this indicator, you will ensure that you always overestimate the time advised for the planned interruption.

With the precedent set by Yarra Valley Water and Western Water, we are keen to explore the inclusion of a measure that captures the accuracy of communication provided to customers during a planned interruption in a form consistent with the existing approved GSL scheme.

Proposed approach

- Changes are proposed to the 'Split' by including reference to 'Planned: Longer than advised or notified'
- Changes are proposed to the 'Definition', which will need to reflect the addition of 'Time advised or notified'.

Barwon Water Comment

Agree that this is a good addition, although I don't see why this split is associated with customer interruptions which is all about the frequency of interruptions. Not about the time taken to restore. This is a good example where the performance measure description should be the KPI title. Looks like we would need to record the number of customer interruptions where the outage is longer than advised. Given our reporting is automated, the advised outage time would need to be included in the case creation in FOCUS.

This may also sit better under REW 8. Anecdotally though, it is one area that we struggle a bit with, especially in regard to Developer Works. Reporting will need to be amended to incorporate this. Assume that this only relates to planned works. However, a large % of the planned interruptions relate to works by contractors/developers and as such are outside the control of Field Services who actually perform the isolations and record the interruption times. For this reason, Both Water Supply and D&C departments will have to take some responsibility for the KPI.

REW 10 – Customers affected by planned water supply interruptions greater than 5 hours

Comment [iwd1]: Need to make sure supply by agreement customers are not included.

The number of customers planned and unplanned water supply interruptions sits at the core of the performance reporting framework. It indicates how many customers have been impacted by interruptions within a service area.

With the proposed removal of REW 6—the rationale for which is discussed in section 3.2—we are proposing that high level customer interruption duration data continue to be recorded through the modification of this indicator.

This aspect of service delivery has partially been recognised by thresholds incorporated in the Guaranteed Service Level schemes approved for Yarra Valley Water (No. planned interruption longer than 5 hours), Central Highlands Water (Unplanned interruptions to water supply not rectified within 5 hours), which both carry an approved payment of $50.

With the precedent set by Yarra Valley Water and Central Highlands Water, we are keen to explore the change to the indicator to recognise the time threshold consistent with the approved GSL schemes.

Proposed approach

- Changes are proposed to the 'Performance indicator', the 'Split', the 'Performance measure' and the 'Definition' to reflect the inclusion of 'Unplanned' water supply interruptions.

Comment [drm2]: Missing words here, after and…

Definition

The number of planned domestic water customer-interruptions greater than 5 hours. For example, a water supply interruption which causes loss of supply to 100 customers is 100 customer-interruptions

Barwon Water Comment

Probably ok to add Unplanned. Why is it just domestic customers? Should be all customers – also makes it easier to report.

This will again put pressure where we have tappings off large mains that take a long time to repair.

Also, Barwon Water is potentially impacted greater than other businesses, due to its extensive planned air scouring program which means a significantly greater number of planned interruptions than others might have.

Supply by agreement customers should not included.

Barwon Water

Attachment 2 – Indicator Definitions

Water network reliability and efficiency (REW)

Indicator reference	Performance indicator	Split	Performance measure	Definition
REW 1	Bursts and leaks	Priority 1 Priority 2 Priority 3	Burst and leaks per 100km of water main	An unplanned event in which water is lost which is attributable to failure of a pipe, hydrant, valve, fitting or joint material (being the mains and trunk infrastructure, excluding the mains to meter connections) regardless of cause. Priority 1 means a burst or leak which causes, or has the potential to cause, substantial damage or harm to customers, water quality, flow rate, property or the environment. Priority 2 means a burst or leak which causes, or has the potential to cause, minor damage or harm to customers, water quality, flow rate, property or the environment. Priority 3 means a burst or leak which is causing no discernible impacts on customers, property or the environment. A burst or leak may not necessarily result in loss of supply.
REW 2	Total minutes to respond to bursts and leaks (Min)	Priority 1 Priority 2 Priority 3	Average minutes to respond to priority 1, 2 and 3 burst and leaks	The duration between the times the water business is first notified or becomes aware of a burst or leak to the time at which the water business arrives at the site of the burst or leak.
REW 3	*Time taken to rectify bursts and leaks*	*Priority 1* *Priority 2* *Priority 3*	*Average hours taken to fully repair and rectify bursts and leaks*	*The total job duration, including time from receiving first notification, responding to, and rectifying the fault to the required level of service.* *Follow-up rectification works, such as reinstatement of nature strips are not included.*
~~REW 4~~	~~Bursts and leaks fully rectified~~	~~Priority 1~~ ~~Priority 2~~ ~~Priority 3~~	~~Bursts and leaks fully repaired and rectified within 12 hrs., 24 hrs. and 120 hrs.~~	~~Burst and leaks fully repaired and rectified within 12, 24 and 120hr. Includes time from receiving job, responding, and rectifying fault to the required level of service.~~ ~~Follow-up rectification works, such as reinstatement of nature strips are not included.~~

Comment [pjb3]: The assigning of priorities is likely to be inconsistent across the industry due to subjective definitions. Could be simplified by just recording all leaks where water is lost.

REW 5	Water supply interruptions	Planned Unplanned	Water supply interruptions per 100km of water main	A water supply interruption is any event causing a total loss of water supply due to any cause. An unplanned interruption means an interruption which is caused by a fault in the water business's system. Interruptions do not include those caused by bursts or leaks in the property service (mains to meter connection) unless the burst or leak requires the mains to be shut down for repair. A planned interruption means an interruption of supply to a customer for which the water business has provided at least 2 business days advanced notification.
REW 6	Water supply interruptions restored within ~~3,~~ 5 ~~and 12~~ hours	Planned Unplanned	% of water supply interruptions restored within ~~3,~~ 5 ~~and 12~~ hrs.	Where the loss of water supply is due to the shutdown of a section of water main, the water supply interruption begins when the water supply is shut off and ends when the main is fully recharged. Otherwise, the water supply interruption begins when the water supply is lost and ends when it is fully restored.
REW 7	*Water supply customer-interruptions*	*Planned* *Unplanned*	*Average customer interruption frequency*	*A water supply customer-interruption is a loss of water supply to an individual customer due to a water supply interruption. For example, a water supply interruption which causes loss of supply to 100 customers is 100 customer-interruptions.*
REW 8	Customer-minutes to restore water supply (Min)	Planned Unplanned	Average duration of water supply interruptions Average customer minutes off supply	The total duration of all water supply customer-interruptions. For example, a water supply interruption which causes loss of supply to 100 customers and lasts for 150 minutes counts as 15,000 customer-minutes to restore water supply.
REW 9	Customers receiving 1, 2, 3, 4, 5, and 6+ water supply interruptions in year	Unplanned	Number of customers receiving 1, 2, 3, 4 ,5, and 6+ interruptions in a year as % of customers	The number of water customers experiencing receiving 1, 2, 3, 4, 5, and 6+ interruptions in the 12 months ending on the final date of the annual reporting period.
REW 10	*Customers affected by planned water supply interruptions greater than 5 hours*		*Number of domestic customers affected by planned interruptions greater than 5 hours*	*The number of planned domestic water customer-interruptions greater than 5 hours. For example, a water supply interruption which causes loss of supply to 100 customers is 100 customer-interruptions.*

Comment [drm4]: Prefer this one over the Average customer minutes off supply

Comment [drm5]: The "Average customer minutes off supply" measure is vague and complex in nature, being based on another measure (customer minutes to restore). Always difficult to quickly understand.

REW 11	Customers affected by planned water supply interruptions in peak hours (5am-9am and 5pm-11pm)		Number of domestic customers affected by planned water supply interruptions in peak hours (5am-9am and 5pm-11pm)	The number of planned domestic water customer-interruptions during peak hours (5am-9am and 5pm-11pm). Customer-interruptions that start outside peak hours but continue into peak hours are included.
~~REW 12~~	~~Water Pressure (Bulk Supplier)~~	-	~~% compliance at wholesale/retail interface~~	~~Number of sites failing "criteria" (not meeting pressure requirement for more than 30 continuous mins) divided by the total number of measured pressure sites.~~
REW 13	Non-revenue water		% non-revenue (unaccounted) water	Unaccounted water is the difference between the volume of bulk water supplied and the volume of water billed to the water businesses customers.
REW 14	Leakage		Infrastructure Leakage Index (ILI) Real water losses per connection per day Real water losses per kilometre per day	Infrastructure Leakage Index (ILI) The ILI is the ratio of the Current Annual Real Losses (CARL, calculated from a Water Balance) to the Unavoidable Annual Real Losses (UARL, calculated from an equation developed by the IWA Water Losses Task Force). For Melbourne Water the measure is calculated as the estimated manageable losses over average yearly consumption. Total estimated manageable losses from aqueducts, reservoirs, pipes and operations divided by average yearly water supplied to retail water companies. Estimates of losses do not include evaporation, seepage or environmental flows. Real Losses Leakage and overflows from mains, service reservoirs and service connections prior to customer meters. Current Annual Real Losses (CARL) The numerator of the ILI calculation – real losses as measured in the pressurised distribution system up to the point of customer metering. When calculating the Current Annual Real Losses, a number of assumptions are required regarding errors in metered components of the Water Balance, and estimates of unmetered components. For Unbilled Authorised Consumption, Unauthorised Consumption and Customer Metering Errors, water utilities may elect to use the default values prescribed below, or determine the actual values for their operations. The defaults are outlined in the NWI handbook. Unbilled Authorised Consumption

				Any consumption for which a bill is not issued to the consumer (e.g. process water at water treatment works, hydrants for mains flushing, fire services, etc.). It can be metered or unmetered. Unauthorised Consumption Generally this refers to illegal use. The water utility should be consistent across reporting years in calculating its CARL and, where appropriate, have supporting documentation to verify assumptions for the purpose of auditing. Service Connections The number of service connections is not the same as the number of metered accounts or connected properties. The number of service connections can be taken as being the number of metered accounts, minus the total of any sub-meters (after master meters e.g. to shops and flats), plus the estimated number of unmetered service connections (e.g. fire service connections).
REW 15	Water main breaks		Water main breaks per 100km	The total number of main breaks and bursts in all diameter mains for the reporting period. Excludes those in the mains to meter connection) and weeps or seepages associated with above ground mains that can be fixed without shutting down the main.

Briefing note / request

To:

From: Denis Musaefendic

Date: 18 April 2012

Subject: **ESC - Review of Water Performance Report Indicators (Sewerage Network Reliability and Efficiency)**

Background

In 2004, the ESC consulted on a performance reporting framework for regulated water businesses with industry and other stakeholders with the purpose of:

- Informing customers about levels of service
- Identify baseline performance and make comparisons between businesses
- Provide incentive for improvement over time
- Collecting data to develop regulatory standards and targets
- Inform decision making processes of regulators, businesses and government.

The ESC was conscious about the need to minimised costs associated with imposing any additional information and reporting requirements.

It was also noted that a review in the future will need to occur to ensure that indicators and definitions remain relevant given changes and developments in the water sector and regulated environments.

Purpose of the review

The ESC is proposing to undertake a review of the indicators that inform the water performance report to ensure that the data is relevant given the present water sector and regulatory environment.

The review should be undertaken in conjunction with the ESC's ongoing initiative to make performance reporting more timely and accurate.

Core Principles

Core performance monitoring framework principles to consider while undertaking the review:

- Performance indicators need to be **relevant to the nature of the services** provided by each business
- Performance indicators need to be **meaningful and relate to key issues** of concern to both businesses and their customers
- Performance indicators need to be **defined and collected on a consistent basis** across businesses to provide a valid measure of actual performance and to aid reasonable comparisons
- The **accuracy and reliability** of information provided by businesses must be verifiable.

- Identify whether there is scope for greater **national consistency in reporting and comparison**, to facilitate national assessment of relative performance
- **Costs** associated with collecting information and data need to be **balanced against the benefits of collecting that information**. That is, it will be necessary to ensure that the framework is not excessively onerous or costly to implement by focusing on a reasonable range of meaningful indicators.

Refining the Performance Categories

Removing any of the current performance indicator categories is not in the scope of this review.

Given developments in the water sector, the ESC is providing the opportunity to potentially include the following categories:

- financial and pricing
- resource security
- productivity, and
- innovation.

The review also provides the ability to include new indicators, within the existing categories, to reflect changes in technology and the regulatory environment, such as those associated with providing customer service via the internet and trade waste.

Table 1 - Current Performance Indicator Categories

Performance indicator categories
Baseline explanatory data
Drinking water quality
Water and sewerage network reliability and efficiency
Water consumption reuse and recycling
Environmental issues
Customer responsiveness and service
Usage, price trends and payment management [previously Affordability]
Drainage and waterways services*

*Not applicable to Barwon Water.

Timeframes

19 April – nomination of working group representatives

27 April – Response to this Briefing note / request due

4 May – Submissions to Staff Discussion Paper due

7 May – Working group at ESC

Recommendation / request

For stakeholders of each relevant performance indicator category to:

1. Review and comment on the ESC's *Review of Water Performance Report Indicators* staff discussion paper regarding the extract for *Network Reliability and Efficiency* indicators in Attachment 1.
2. Responsible officers to review the current set of KPI's and definitions in Attachment 2 in light of the core principles outlined above and comment if required.
3. Note the contents of this Briefing note.

Attachments

Attachment 1 – Barwon Water response to: *Review of Water Performance Report Indicators (Staff Discussion Paper)*

Attachment 2 – Indicator Definitions

Attachment 1 – Barwon Water response to: *Review of Water Performance Report Indicators* (Staff Discussion Paper)

Below is an extract of the ESC's proposed new categories and indicators, removals, and modifications for *Sewerage Network Reliability and Efficiency* indicators.

The staff discussion paper can be accessed here.

General comments

Barwon Water Comment

Some KPI's / measures that are collected in the ESC KPI Collection Template are not used in the Performance Report. Should these KPI's / measures be collected by businesses?

Proposed new categories and indicators (by the ESC)

Not applicable to *Sewerage Network Reliability and Efficiency* indicators.

Proposed indicator for removal (by the ESC)

RES 5 – Customers receiving 1, 2, 3, & 4+ sewer blockages in year

Similar to other reliability measures, the inclusion of the number of sewer blockages faced by a customer each year was intended to track performance improvements over time.

While improvements have been made to sewerage infrastructure, the usefulness of this data as currently collected is questionable, and the data has proven difficult to collect.

On this basis we propose to remove reference to anything other than 3+ sewer blockages experienced by customers in any given reporting period. This should improve measurement accuracy and will maintain alignment with the approved service standard as applied by Schedule 2 of the Customer Service Code.

Proposed approach

- Remove reference to 1, 2, and 4+ sewer blockages from 'Performance indicator', 'Performance measure' and 'Definition'.

Definition

The number of sewerage customers receiving 3+ sewerage blockages in the 12 months ending on the final date of the annual reporting period.

Barwon Water comment

Barwon Water has mechanisms in place to enable automated reporting of the existing indicator. The simplification of the indicator (ie. only 3+), therefore can be easily reported.

Proposed indicator modification (by the ESC)

CRR 3 – Volume of sewage spilt from emergency relief structures (ERS) and pumping stations (ML)

Measuring the volume of sewage spilt provides businesses and other stakeholders with information that can identify a number of issues—for instance where sewer blockages are occurring, where maintenance of pumping stations may be required, infiltration, and system growth and condition.

Often weather contingent, the current performance measure collects information on volume only. Of equal importance is the frequency of sewer spill events—this information when presented with volume information may highlight further problem areas. We propose to add the number sewage spill events that can be attributed to each cause—as per our current 'Split'.

Proposed approach

- Changes are proposed to the 'Performance indicator' to include the number of events for each 'Split'.

Definition

An estimation of spill volumes may be used where direct measurement of spill volume cannot be made.

Barwon Water Comment

Barwon Water has no nominated ERS's, therefore reporting is limited to pumping station spills. It is possible to report the number of pumping station spill events by "split", however it is very difficult to report on the volume of sewage as it rarely possible to quantify with any accuracy. As such, it is recommended to omit volume reporting.

Barwon Water

Attachment 2 – Indicator Definitions

Sewerage network reliability and efficiency (RES)

Indicator reference	Performance indicator	Split	Performance measure	Definition
RES 1	Sewer blockages	Main House Connection Branch*	Sewer blockages per 100 km of sewer main	A confirmed partial or total blockage which causes an interruption to service and/or a spill. Includes all trunk and reticulation main blockages (including common effluent pipelines, rising mains and vacuum system mains), but excludes blockages in the service connection or house connection branch and the property drain. *Metropolitan water businesses are to include an extra category of blockages on the HCB, where it is their responsibility to maintain the service.
RES 2	Total minutes to respond to reported blockage/spill (Min)		Average minutes to respond to a reported blockage / spill	Average number of minutes to attend and commence rectification of a reported blockage/spill measured from the time notification is made.
RES 3	Total time taken to repair blockage/ spill (Hr.)		Average number of hours taken to repair a blockage/spill	Average number of hours taken to repair a blockage/spill measured from the time notification is made.
~~RES 4~~	**NOW IDENTIFIED CORRECTLY AS REW 15**			
RES 5	Customers receiving ~~1, 2~~ ,3, ~~and 4~~+sewer blockages in year		Average number of customers ~~receiving 1, 2~~, 3, ~~and 4~~+ sewerage blockages in a year as a % of customers	The number of sewerage customers receiving ~~1,2,3~~ ~~and 4~~+ sewerage blockages in the 12 months ending on the final date of the annual reporting period.
RES 6	Sewer spills from reticulation and branch sewers	Priority 1and2	Number of spills	For the purpose of this indicator, a priority one or two sewer spill is a failure to contain sewage within the sewerage system, excluding: - spills from emergency relief structures (a manhole is not an emergency relief structure); - pump station spills; and - spills due to house connection branch blockages. Priority I spill means, a spill that results in - a public health concern; - significant damage to property;

Comment [lincolnt1]: It is suggested that Sewer Blockages be limited to blockages in Reticulation and Trunk Sewers for parity with the definition of RES6.

Comment [drm2]: Definition could be clearer on the exclusion of spills not caused by blockage.

Comment [drm3]: Definition could be clearer on the exclusion of spills not caused by blockage.

Comment [lincolnt4]: Branch Sewers is inconsistent terminology with RES1 – Sewer Blockages, which refers to these assets as "Trunk Sewers". Need to ensure consistency of terminology for "like" indicators.

Comment [amcghee5]: What about rain events?

				- a discharge to a sensitive receiving environment; - a discharge from a sewer pipe that is 300mm diameter or greater; or - the flow is >80l/min. 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.
RES 7	Sewer spills from reticulation and branch sewers fully contained within 5 hours	Priority 1and2	% of sewer spills contained within 5 hrs.	A sewer spill is to be regarded as: - having taken place at the time the water business becomes aware of the spill; and - being fully contained when there is no longer a discharge from the containment area. Containment means the sewage spill has ceased or has been alleviated by by-pass pumping/ diversions, educations or sand bagging.
RES 8	Sewer spills to customer's properties		Number of spills	A sewer spill caused by a fault in the water business's system that discharges to a customer's property. Excludes sewer spills caused by faults in the service connection or house connection branch and the property drain.
RES 9	Customers affected by sewerage interruptions not restored within 5 hours*		Number of domestic customers affected by sewerage interruptions not restored within specified time	The number of domestic sewerage customers experiencing sewerage interruptions not restored within 5 hours*. Sewerage interruptions means a confirmed partial or total blockage which causes an interruptions to service Restore means the repair of a blockage/interruption measured from the time notification is made. It does not include interruptions caused by faults in the customer's pipe. ** In the case of Yarra Valley Water and South East Water, the time is 4 hours to recognise their GSL targets.*
RES 10	Customers affected by sewer spills in a house not contained within 1 hour of notification		Number of domestic customers affected by sewer spills in a house not contained within 1 hour of notification	The number of domestic sewerage customers experiencing a sewer spill in their house not contained within 1 hour of notification, caused by a fault in the water businesses' system. Contained means the sewage spill has ceased or has been alleviated. It does not include sewer spills caused by faults or blockages in the customer's pipes.

Comment [lincolnt6]: Indicator for Priority 1 & 2 Spills should be exclusive of spills, where greater than 1 in 5 ARI rainfall event. This is consistent with EPA SEPP requirements for sewerage system design, management and maintenance.

Comment [amcghee7]: To limit any pressure on containment, could we make all spills responded to within 1 hour? This allows the maximum possible containment time.

Comment [drm8]: Due to the relatively low number of spills at BW, just one failure can impact the result significantly. Maybe better to not split these on priority. Just have the one figure.

Comment [lincolnt9]: Indicator should be exclusive of spills where greater than 1 in 5 ARI rainfall event. This is consistent with EPA SEPP requirements for sewerage system design, management and maintenance.