

# **Irrigation Price Review Submission**

## **Appendix C**

### **2012 QCA recommendations and other issues**

Public

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# 1. Introduction

## 1.1 QCA pricing practices recommendations

The Queensland Competition Authority (QCA), as part of its irrigation price review in 2012, made eight pricing practices recommendations which it believed would improve SunWater's ability to capture, plan, report on and apportion costs to irrigation service contracts (see Table 2.1).

Subsequently, SunWater was directed under the *Rural Water Pricing Direction Notice (No 1) 2012* to consult with the QCA and irrigation peak bodies on an implementation plan setting out the scope of works, timetable and cost estimates required to address the QCA's recommendations and provide a copy of the implementation plan to the (then) Minister for Energy and Water Supply.

In response, SunWater prepared an implementation plan in consultation with the QCA and irrigation peak bodies, via the Queensland Farmers' Federation, and published the implementation plan in September 2012.

In addition to complying with this direction, we outlined our progress against our implementation plan in eight progress reports which are also on our website.<sup>1</sup> Many of our implementation plan actions were undertaken during the 2012/13 to 2016/17 period. Some have been expanded upon and will continue to apply throughout the next price path period. This is particularly the case for actions regarding engagement with customers on our forecast costs and non-routine projects.

Other implementation actions have not continued, or were put on hold, as a result of the changing operating environment and a reprioritisation of effort to meet customer outcomes in light of these changes. The Local Management Arrangements (LMA) review is a particular example of this. SunWater's efforts to improve transparency of costs to assist with the LMA review processes delivered positive outcomes for customers. As a result, however, recommendations which assumed SunWater would continue to own distribution assets were given lower priority.

Other recommendations supported regulatory practice at the time, which have since been superseded. For example, the QCA (and other regulators) now routinely adopts a base-step-trend approach to establish efficient operating costs and therefore actions which were aimed at supporting legacy forecasting approaches have not been continued.

SunWater itself has evolved and continues to strive toward a more customer-centric approach to service delivery which has changed our own processes and policies, resulting in further evolution of asset management and planning arrangements since the 2012 review and the positions set out in the subsequent implementation plan and progress reports.

Going forward, we welcome any feedback from the QCA on how we might improve our systems and processes. However, we do not believe this feedback is appropriate in the form of recommendations as this falls outside the QCA's role in recommending irrigation prices to the Queensland Government. In addition, feedback that is relevant today may not continue to be considered best practice during the price path period and beyond.

A summary of our actions against each of the recommendations, as well as our current positions, is provided in Table 3.1 below.

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<sup>1</sup> Refer to <http://www.sunwater.com.au/schemes/nsp/annual-nsp-and-performance-reports>.

## 1.2 Other issues

In addition to the above recommendations, the QCA raised several other issues in the previous irrigation price review. Table 4.1 provides a summary of these other issues (as agreed with the QCA), how we have progressed them and the extent to which they are reflected in our submission.

## 2. QCA pricing practices recommendations

Table 2.1: QCA pricing practices recommendations

QCA Final Report page reference <sup>1</sup>	Recommendation	SunWater reference/s
97	The Authority recommends that a review of drainage charges be initiated by SunWater immediately upon completion of the current price investigation. For this purpose, SunWater should identify its drainage system costs from 1 July 2012 for consideration by the Authority prior to 30 June 2014.	3.3
161	The Authority recommends that, in forecasting renewals expenditure, SunWater undertake: <ul style="list-style-type: none"> <li>(a) high-level options analysis for all material renewals expenditures expected to occur over the Authority's recommended planning period, with a material renewal expenditure being defined as one which accounts for 10% or more in present value terms of total forecast renewals expenditure;</li> <li>(b) detailed options analysis (which also take into account trade-offs and impacts on operational expenditures) for all material renewals expenditures expected to occur within the subsequent five-year regulatory period, with a material renewal expenditure being defined as one which accounts for 10% or more in present value terms of total forecast renewals expenditure over that period; and</li> <li>(c) a review of its renewals planning process (taking into account the Authority's consultants' suggested improvements) and provide a copy of the review to Government and the Authority by 30 June 2014.</li> </ul>	1.1, 1.2
178	The Authority recommends that SunWater's Statement of Corporate Intent (and relevant legislation) be amended to require SunWater to consult with customers in relation to, and publish annually on its website, updated NSPs [Network Service Plans] commencing prior to 30 June 2014. <p>The NSPs should be enhanced to present:</p> <ul style="list-style-type: none"> <li>(a) high level options analysis for all material renewals expenditures expected to occur over the Authority's recommended planning period;</li> <li>(b) detailed options analysis for all material renewals expenditures expected to occur within the subsequent five-year regulatory period; and</li> <li>(c) details of SunWater's proposed renewals expenditure items and accounting for significant variances between previously forecast and actual material renewals expenditure items.</li> </ul> <p>Customers' submissions in response to the NSPs and annual updates should also be published on SunWater's website alongside SunWater's responses and related decisions.</p>	2.1, 2.2, 2.4
199	The Authority also recommends that, at the conclusion of this review, SunWater commence a review of a more appropriate means for allocating fixed renewals costs in distribution systems for consideration by the Authority prior to 30 June 2014.	3.4
257	The Authority recommends that SunWater undertake a review of its planning policies, processes and procedures to better achieve its strategic objectives. Proposed amendments should be reviewed by the Authority prior to 30 June 2014.	1.3

QCA Final Report page reference <sup>1</sup>	Recommendation	SunWater reference/s
260	<p>The Authority recommends that SunWater improve the usefulness of its information systems. In particular, SunWater needs to support its NSPs with documentation and access to the relevant information necessary to:</p> <ul style="list-style-type: none"> <li>(a) attain greater operating efficiency;</li> <li>(b) achieve greater transparency; and</li> <li>(c) facilitate future price reviews.</li> </ul> <p>To achieve greater transparency on SunWater’s improved operating efficiency, the Authority recommends that SunWater’s Statement of Corporate Intent (and relevant legislation) be amended to require SunWater to consult with customers in relation to forecast and actual operating expenditure. SunWater should publish on its website annually updated NSPs (containing this and renewals information) with stakeholder submissions and SunWater’s responses commencing prior to 30 June 2014.</p> <p>The NSPs should also be enhanced to present details of SunWater’s proposed operating expenditure for the next year, and to account for significant variances between previously forecast and actual operating expenditure.</p> <p>The (above) proposed improvements, to be made by SunWater (in consultation with stakeholders), to facilitate future price reviews should be approved by the Authority prior to 30 June 2014.</p>	2.3, 2.4, 3.1
264	<p>The Authority recommends that SunWater improve its management accounting for the recording, documentation and analysis of labour cost information. SunWater should submit proposals for approval by the Authority by 30 June 2014.</p>	3.2
330	<p>The Authority recommends that SunWater explore the feasibility of basing future (subsequent regulatory period) working capital requirements on efficient forecasts of revenue and cash flows from SunWater’s irrigation schemes, rather than relying on historical, whole of business data.</p>	3.5

1. Page numbers refer to the QCA’s Final Report, SunWater Irrigation Price Review: 2012-17, Volume 1.

### 3. Implementation of QCA pricing practices recommendations

Table 3.1: SunWater’s implementation of the QCA’s pricing practices recommendations

SunWater reference	QCA recommendation	SunWater implementation plan outcomes	Current SunWater position (including any changes to previous commitments)
<b>Improved planning</b>			
1.1	Options analysis for material renewals expenditure for 2012/13 to 2016/17 (p161)	<p>SunWater provided the QCA a detailed options analysis example in December 2012 and a high-level options analysis example in March 2013.</p> <p>Following this, in April 2013, we consulted with the QCA on the detailed and high-level options analysis templates we had developed. Options analysis templates incorporating QCA feedback were finalised in May 2013 and rolled out internally in 2013/14.</p> <p>We also developed guidelines for options analyses and incorporated the new options analyses procedures for material projects into the renewals planning process.</p>	<p>SunWater has been preparing options analyses for all material renewals projects within the planning period.</p> <p>In 2018, we reviewed the current process and considered whether it is the most efficient approach or whether there was another way that provides customers with reassurance that our renewals expenditure is prudent and justified.</p> <p>We found that:</p> <ul style="list-style-type: none"> <li>• Many options studies/business cases were of limited value as the options were restricted to ‘do nothing’, ‘replace’ or ‘refurbish’, and the outcomes were usually known beforehand, based on engineering experience.</li> <li>• Many of the options analyses took a week to prepare at a cost of approximately \$5000 to \$10,000 each.</li> <li>• Preparing options analyses up to 10–20 years in advance may result in an out-of-date solution being implemented, particularly for electrical projects where the rate of technological progress is high.</li> <li>• Projects may be removed from the annuity period upon review of the condition and risk data, meaning unnecessary costs are incurred in preparing the options analyses.</li> </ul> <p>In light of this, we decided to implement a new approach to options assessments. Under this new approach, SunWater will continue to prepare an options analysis and supporting investigation where:</p> <ul style="list-style-type: none"> <li>• there is no obvious solution</li> <li>• the current maintenance strategy is changing</li> </ul>

SunWater reference	QCA recommendation	SunWater implementation plan outcomes	Current SunWater position (including any changes to previous commitments)
			<ul style="list-style-type: none"> <li>• technology has changed significantly, or</li> <li>• there is a high risk in the project execution.</li> </ul> <p>For less complex (more routine) renewals projects with fewer practical outcomes, we will use our engineering knowledge and experience to determine the optimum solution.</p> <p>This approach takes the emphasis off the value of the renewals project and focuses on solutions and risk. It ensures that SunWater invests resources appropriately in those projects that would benefit from an options analysis.</p> <p>SunWater consulted with customers, via Irrigator Advisory Committees, on the proposed changes during February and March 2018 and received support for the new approach. We have revised our existing documentation to reflect the new approach and will roll-out training to staff ahead of the 2019/20 financial year.</p>
1.2	Review the renewals planning process for the subsequent price path period – expected to be 2017/18 to 2021/22 (p161)	<p>SunWater undertook a review of the renewals planning process during 2013 and 2014. This review took into account:</p> <ul style="list-style-type: none"> <li>• suggested improvements detailed in the 2012 Irrigation Price Review</li> <li>• customer and QCA feedback received in response to the prototype NSPs, where relevant to renewals planning.</li> </ul> <p>We consulted with the QCA throughout the review process and generally received positive feedback on the proposed amendments. We updated our positions to reflect comments received from the QCA, particularly in relation to condition and risk assessment.</p> <p>We presented a renewals planning review paper to the QCA and the Queensland Government in April 2014, which highlighted a number of future actions. Specifically, SunWater would:</p> <ul style="list-style-type: none"> <li>• continue to use a portfolio approach to estimate the required renewals expenditure</li> </ul>	<p><u>Portfolio approach</u></p> <p>SunWater continues to apply a portfolio approach to predicting the level of funding required for renewals expenditure, in line with best practice. This approach is outlined in our Strategic Asset Management Plan (see Appendix G).</p> <p><u>Decay curves</u></p> <p>In the renewals planning review paper, we committed to undertaking a review of the decay curves, with a view to introducing additional decay curves matched to different asset classes. However, further investigation revealed that there was insufficient information on asset decay to generate these curves. Most of the assets are medium to long-term assets so they have a slow rate of deterioration. As a result, we have decided not to introduce additional decay curves and therefore continue to use a standardised asset condition decay curve in our reliability centred maintenance program. In applying the decay curve, the methodology automatically adjusts the curve for the asset life.</p>

SunWater reference	QCA recommendation	SunWater implementation plan outcomes	Current SunWater position (including any changes to previous commitments)
		<ul style="list-style-type: none"> <li>• review the decay curves used in our reliability centred maintenance program, with a view to introducing additional curves</li> <li>• continue to use non-invasive testing methods in asset condition monitoring</li> <li>• ensure asset condition assessments are completed within specified maximum frequencies prior to each price review</li> <li>• continue to employ a portfolio approach to long-term renewals planning with a detailed 12-month works delivery plan determined at each budget cycle</li> <li>• continue to train employees on the renewals planning process and monitor compliance</li> <li>• address technological improvements for all material projects through the new options analysis approach</li> <li>• consider updating the Bill of Materials (BOM) valuations used in the Works Management System (WMS) prior to the next price review</li> <li>• continue to apply the QCA-approved method of determining and allocating indirect costs and overheads</li> <li>• assess operating cost implications as part of the options analysis process</li> <li>• amend the NSP prototypes to take into account customer feedback in relation to real versus nominal cost reporting, clearer reporting of renewals spend and renewals project churn.</li> </ul> <p>In addition to the review, renewals planning documentation was updated to reflect the requirement to perform options analyses for material projects and training on the new renewals planning process was provided to staff in late 2014. We also improved the quality of our condition and risk data.</p>	<p><u>Non-invasive testing methods</u></p> <p>SunWater uses a range of non-invasive tests to support asset condition monitoring, including:</p> <ul style="list-style-type: none"> <li>• insulation resistance testing for electrical cables and motors</li> <li>• vibration monitoring on large pumps, to indicate early signs of failure so remedial action can be taken</li> <li>• paint thickness testing of gates/baulks at dams, to schedule re-painting before corrosion occurs, thereby avoiding more expensive unplanned repairs</li> <li>• thermographic inspections of electrical switchgear, to detect the onset of deteriorating equipment and connections</li> <li>• aerial drones, to inspect equipment and for vegetation management purposes</li> <li>• pipe crawler remote operator vehicles (ROVs), to inspect joints and seals in smaller pipes, and underwater ROVs</li> <li>• ground penetrating radar surveys, to identify voids and deterioration under the surface</li> <li>• sending pulses down pipelines, to identify pitting corrosion inside the pipeline.</li> </ul> <p>We are also trialling the proprietary EPHOD™ process, which is a non-destructive technique used to determine reduced strength in wood due to decay and cavities.</p> <p><u>Asset condition assessments</u></p> <p>SunWater maintains our position that asset condition assessments should be completed within the specified maximum frequencies.</p> <p>Condition assessments for the majority of bulk water assets were updated in 2015, to underpin our forecasts for the next price path period which was originally scheduled to commence in 2017/18. This task involved considerable effort, with the number of assets with a condition assessment increasing from around 25% to more than 80%. We did not assess underwater assets or</p>



SunWater reference	QCA recommendation	SunWater implementation plan outcomes	Current SunWater position (including any changes to previous commitments)
			<p>assets that were low risk, run to failure assets (for example, customer meters, air valves and scour valves).</p> <p>SunWater continues to undertake scheduled irrigation scheme condition assessments and specific facility inspections (such as pump station electrical assets).</p> <p>Asset condition inspections are undertaken in accordance with SunWater’s Asset Condition Users Manuals and Procedures.</p> <p>In practice, all assets have routine surveillance as part of normal operations which may prompt an earlier formal condition assessment. In addition, condition scores are updated following refurbishment works, enhancements or when assets are replaced.</p> <p><u>Works delivery plan</u></p> <p>SunWater employs a portfolio approach to long-term renewals planning with a detailed 12-month works delivery plan determined at each budget cycle. As part of this process, we also develop a high-level works plan for the upcoming five-year period. However, these estimates are less certain.</p> <p><u>Renewals training and monitoring compliance</u></p> <p>SunWater conducts regular training on the administration of refurbishment and enhancement, and condition assessment processes. We also undertake annual audits of our refurbishment and enhancement program. The audits are completed on the entire annuity to make sure the forward investment plan is as accurate as it can be at that point in time.</p> <p><u>Incorporation of technological advances</u></p> <p>The technical specification process identifies new technologies that should be considered for the specific project under review. In situations where identified technological advances lead to lower cost solutions, these are rolled out for other relevant projects across the different service contract areas and are incorporated into future projects in the form of technical standards and/or technical scopes.</p>

SunWater reference	QCA recommendation	SunWater implementation plan outcomes	Current SunWater position (including any changes to previous commitments)
			<p>SunWater also contracts Isle Utilities to inform us of technological advances specific to our company needs. These technologies range from data management systems to non-destructive testing and monitoring devices.</p> <p><u>Bill of Materials valuation</u></p> <p>SunWater undertook a revaluation of bulk water assets<sup>2</sup> and irrigation system assets<sup>3</sup> during the previous price path period. We engaged Maintenance Systems Solutions to assist with the revaluation project. The revaluations were completed in December 2015 and April 2016, respectively.</p> <p>Material values were subsequently updated in WMS and the SAP Technical Asset Register. These values, subject to any changes made following the revaluation projects, were used for this submission’s renewals cost estimates.</p> <p>For bulk water supply:</p> <ul style="list-style-type: none"> <li>• 1714 materials were created and attached to 1871 individual BOMs.</li> <li>• The replacement cost was updated on 2731 assets and 1880 replacement items.</li> <li>• The replacement value of bulk water assets covered by the project was increased from \$2.4 billion to \$6.6 billion.</li> </ul> <p>For irrigation (distribution) systems:</p> <ul style="list-style-type: none"> <li>• 893 materials were created and attached to 6861 individual BOMs.</li> <li>• The replacement cost was updated on 10,850 assets.</li> <li>• The replacement value of irrigation system assets increased from \$2.0 billion to \$3.0 billion.<sup>4</sup></li> </ul>

<sup>2</sup> The revaluation project covered 23 service contracts, one subsidiary service contract and two Hydro Electric service contracts. The project revalued most of the bulk water assets at the material level.

<sup>3</sup> The revaluation project covered eight distribution systems, including two distribution systems which have since transitioned to local management entities. Only certain asset types were revalued as part of the initial phase of the project. SunWater undertook an asset revaluation on most of the remaining assets in April 2016 at the request of our insurer.

<sup>4</sup> Figures relate to the variation phase of the revaluation project.

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			<p>A detailed valuation of the BOM is scheduled to be completed every five years, with a sample review undertaken annually.</p> <p><u>Indirect costs and overheads</u></p> <p>SunWater determines our indirect costs and overheads using the SunWater Financial Model and feeds these into WMS at least once per year during the budget process.</p> <p>We allocate indirect costs and overheads using our Cost Allocation Methodology (CAM). SunWater considered various amendments to the CAM during 2017/18 and consulted with the QCA during this process. The final CAM was updated in 2018 to increase the transparency of local overhead costs and the allocation of corporate support costs to direct expenses. We also:</p> <ul style="list-style-type: none"> <li>• removed the cascading of corporate overheads into indirect costs</li> <li>• made the local overhead rate specific to each region</li> <li>• simplified the cost drivers to labour only, removing the 5% on direct cash costs excluding labour and electricity.</li> </ul> <p><u>Operating cost/renewals trade-off</u></p> <p>The trade-off between operating and capital costs is considered as part of the Net Present Value calculation in the options analyses.</p> <p><u>Reconciling renewals target spend to the QCA Final Report</u></p> <p>SunWater used the renewals cost targets extracted from the QCA’s pricing model in our NSPs. These targets have been presented in nominal dollar terms.</p> <p><u>Real versus nominal cost reporting</u></p> <p>All data presented in the NSPs is in nominal dollars. We included the conversion factors used to convert real dollars (as presented in the QCA’s Final Report) to nominal dollars in earlier versions of the NSPs. However, following customer feedback about the</p>

SunWater reference	QCA recommendation	SunWater implementation plan outcomes	Current SunWater position (including any changes to previous commitments)
			<p>length of the NSPs, this information has been removed from the 2019 NSPs.</p> <p><u>Reporting of renewals spend</u></p> <p>Our NSPs and Annual Performance Reports separately report all categories of non-routine works (that is, annuity funded (operations, preventative maintenance, corrective maintenance and renewals) and non-annuity funded expenditure).</p> <p><u>Variations to the program of works</u></p> <p>We highlight in our NSPs and Annual Performance Reports that, while the immediate program is well defined, the program of works and associated estimates for the later years of the planning period are less certain. As such, the program of works is not a specific forecast of when individual projects are expected to be executed, but rather a portfolio-level estimate based on the best available risk and condition information for the service contract area as a whole.</p> <p>Items requiring immediate maintenance or replacement are included in the budget for the following year and outlined in the relevant NSP. Projects that were undertaken during the year are then outlined in the Annual Performance Reports. We also discuss variations to the forecast program of works during Irrigator Advisory Committee meetings, on an ad hoc basis.</p> <p>SunWater recognises that we can do more in this space. We have recently developed the Workflow Root Cause Analysis Report to identify the cause of program changes. We expect this report will help us provide customers with an explanation in future Annual Performance Reports of the variance between the projects we expected to undertake during the most recently completed financial year (as set out in the NSP) and the projects we undertook.</p>
1.3	Review operating planning policies,	SunWater undertook a review of our operating policies, processes and procedures during 2013 and 2014. This review took into account:	<p><u>Strategic Planning Framework</u></p> <p>The QCA’s consultant put forward a list of criteria for a well-functioning planning framework. We outlined how our strategic</p>

SunWater reference	QCA recommendation	SunWater implementation plan outcomes	Current SunWater position (including any changes to previous commitments)
	<p>processes and procedures (p257)</p>	<ul style="list-style-type: none"> <li>• suggested improvements detailed in the 2012 Irrigation Price Review</li> <li>• customer and QCA feedback received in response to the prototype NSPs, where relevant to the operating planning process.</li> </ul> <p>We consulted with the QCA throughout the review process and generally received positive feedback on the proposed improvements. We updated our positions to reflect comments received from the QCA, particularly in relation to the management of labour cost information.</p> <p>We presented a final operating planning review paper to the QCA in April 2014, which highlighted several future actions. Specifically, SunWater would:</p> <ul style="list-style-type: none"> <li>• continue to employ our Strategic Planning Framework, as it appropriately addresses the suggested planning framework criteria</li> <li>• base future price path operating cost forecasts on at least five years of historical cost data, and clearly document and justify any data cleansing actions</li> <li>• analyse the historical cost data for each service contract to determine if a clear correlation to megalitres (ML) exists and choose the appropriate forecasting model for each cost category</li> <li>• generate five-year price path direct operating cost forecasts (1) for correlated operating costs, using the long-term average water use and (2) for uncorrelated operating costs, by rolling forward the average annual cost</li> <li>• continue to improve cost allocations through staff training, improved reporting and internal checking</li> </ul>	<p>planning framework addressed each of these criteria in our operating planning review paper. Aspects of our framework have been updated since that time, as part of our focus on continuous improvement and to align with best industry practice. However, the intent of our framework remains unchanged and continues to meet the suggested criteria.</p> <p>Chapter 1 and Appendix B of our submission outline our current strategic framework, how our strategic work programs align to our strategic objectives, and how these programs are cascaded down to different parts of our business.</p> <p>We have also recently developed a customer-centric strategy, which sets out the plans and actions that need to be delivered in support of our goal to be a valued, trusted and respected service provider. Responsibility for this strategy sits across the entire business.</p> <p><u>Future operating costs</u></p> <p>SunWater has decided to adopt a base-step-trend approach to forecast operating costs for the 2021–24 period. While this represents a departure from our previous commitment to use at least five years of historical cost data, it is consistent with current regulatory practice.<sup>5</sup> The QCA also expressed a preference for this approach during preliminary discussions with us in February 2018.</p> <p>We support the QCA’s preference, as there were several drawbacks with adopting historic averages and regression analysis to estimate future costs. Further, we agree with the views of the QCA and its consultant in the last price review that correlation does not necessarily equal causation and in respect of some costs, like electricity, multivariate factors need to be considered.</p>

<sup>5</sup> See, for example, the QCA’s Final Report: Seqwater Bulk Water Price Review 2018-21 available at <http://www.qca.org.au/Water/Urban-bulk-water/SEQ-bulk-water/Final-Report/Seqwater-Bulk-Water-Prices-2018-21#finalpos>, and the Australian Energy Regulator’s Final Decision: Powercor Distribution Determination 2016 to 2020 available at <https://www.aer.gov.au/networks-pipelines/determinations-access-arrangements/powercor-determination-2016-20/final-decision>.

SunWater reference	QCA recommendation	SunWater implementation plan outcomes	Current SunWater position (including any changes to previous commitments)
		<ul style="list-style-type: none"> <li>• for future price review direct operating cost forecasts:               <ul style="list-style-type: none"> <li>– thoroughly document any changes to the historical data set, including supporting justification and evidence</li> <li>– thoroughly document any analysis leading to the choice of the forecasting model for each operating cost category</li> <li>– provide spreadsheet models used to support the analysis</li> <li>– provide final forecast figures over the next price path</li> </ul> </li> <li>• amend the NSP prototypes to take into account customer feedback in relation to real versus nominal cost reporting.</li> </ul> <p>In addition to the review, operating planning process documentation was updated to reflect the requirements to produce annual NSPs and performance reports. Training on the new operating planning process, including on the importance of improved cost allocations, was provided to staff in late 2014.</p>	<p>Under the base-step-trend approach, we have:</p> <ul style="list-style-type: none"> <li>• used our estimate of 2018/19 operating (routine) costs as the base year</li> <li>• adjusted 2018/19 for the removal of recreation facilities costs and non-routine expenditure, as well as one-off reductions to routine non-direct expenditure</li> <li>• applied price input trends over the price path period</li> <li>• applied an efficiency saving of 0.2% (cumulative) each year.</li> </ul> <p>Our approach is largely consistent with the approach taken by the QCA when recommending bulk water prices for Seqwater’s customers in south east Queensland for the 2018–21 period. Chapter 3 of the main submission provides further information on this approach, including justification for adjustments we have made to the data set when establishing the base year estimate.</p> <p>SunWater has developed a transparent regulatory model to assist customers with their understanding of how our forecast costs are calculated. This model sets out the final forecast figures for the 2021–24 period for each service contract area, as well as the underlying calculations (see Appendix F).</p> <p>We provided a draft of the regulatory model to the QCA in February 2018. At that time, the QCA considered the model to be robust. We also consulted with our customers on the new forecasting methodology and the regulatory model during February to April 2018.</p> <p><u>Improved cost allocations</u></p> <p>SunWater undertakes monthly reviews of financial transactions to ensure coding accuracy. Where systemic errors are detected, we discuss them with the relevant business units to limit future reoccurrences.</p> <p><u>Real versus nominal cost reporting</u></p> <p>Please refer to our response under 1.2 — Review the renewals planning process.</p>

SunWater reference	QCA recommendation	SunWater implementation plan outcomes	Current SunWater position (including any changes to previous commitments)
<b>Annual publication of and consultation on NSPs</b>			
2.1	Inclusion of renewals options analysis (p178)	<p>SunWater identified projects in 2013/14 and 2014/15 that met the 10% materiality threshold recommended by the QCA and undertook options analyses for these projects.</p> <p>We presented a summary of the findings of each options analysis in the relevant NSP. We chose not to publish the options analyses in their entirety as they contained commercial-in-confidence material. However, customers could request copies from us. This approach was well received by customers.</p> <p>In undertaking the options analyses, we encountered issues in determining a definitive list of material projects for the planning period since the program of works is continually evolving. The further ahead of the expected start date of the project that options analyses are performed, the more likely that inefficiencies will result through analysis of projects that turn out to be immaterial or are otherwise removed from the plans.</p> <p>To reduce these inefficiencies, SunWater proposed to adopt a tailored approach to projects depending on when they were expected to be undertaken, for example within the current price path, the next price path or during the remaining years of the annuity period. This approach was outlined in the April 2014 Progress Report, but was not implemented.</p>	As highlighted in 1.1 — Options analysis for material renewals expenditure, SunWater has adopted a new approach to options analyses. A summary of the options analyses conducted under this revised approach will be included in future NSPs.
2.2	Variance reporting and re-forecasting of renewals (p178)	SunWater built a NSP Reporting Tool in 2013 to track variance between actual renewals spend and the QCA's targets. Renewals cost variance for each service contract area was reported in the Annual Performance Reports published in October 2013. We also highlighted our intention to include this variance reporting in the NSPs going forward.	<p>SunWater continues to report on renewals cost variances in our Annual Performance Reports. We have also included this variance reporting in our NSPs.</p> <p>We conduct variance reporting for the QCA's five-year price path period only. This is because there are no QCA-determined targets for the transition period, ie 2017/18 to 2019/20.</p>
2.3	Variance reporting and re-forecasting of operating costs (p260)	As above, we built a NSP Reporting Tool to track variance between actual operating costs and the QCA's targets, and reported this information in our Annual Performance Reports.	SunWater continues to report on operating cost variances in our Annual Performance Reports. We have also included this variance reporting in our NSPs.

SunWater reference	QCA recommendation	SunWater implementation plan outcomes	Current SunWater position (including any changes to previous commitments)
		We also highlighted our intention to include this variance reporting in the NSPs.	We conduct variance reporting for the QCA's five-year price path period only. This is because there are no QCA-determined targets for the transition period, ie 2017/18 to 2019/20.
2.4	Customer consultation on the annual NSPs (p178 & 260)	<p>SunWater sought amendments to our 2013/14 Statement of Corporate Intent to include a requirement for us to consult with customers in relation to, and publish annually on our website, the annual NSPs. We also reported on our progress against the implementation plan in our Annual Reports, starting with the 2012/13 Annual Report.</p> <p>We produced and published the first round of annual NSPs in April 2013, six months ahead of the implementation plan date. We consulted with customers, via the Irrigator Advisory Committees and our website, and published customers' submissions and our responses to the feedback received at the time.</p> <p>The draft 2015 NSPs were published in March 2014. We enhanced our previous consultation measures – for example, we notified customers and other stakeholders of the publication of the plans via email and SMS notifications, and via customers' April bills. The final 2015 NSPs took into account feedback received and were published in June 2014.</p>	<p>SunWater values customer feedback and continues to consult with our customers and other stakeholders in relation to the development of our annual NSPs. We publish all relevant documentation on our website at: <a href="http://www.sunwater.com.au/schemes/nsp/annual-nsp-and-performance-reports">http://www.sunwater.com.au/schemes/nsp/annual-nsp-and-performance-reports</a>.</p> <p>Further information on our customer engagement activities for this price review submission and the 2019 NSPs (including our responses to customer feedback) can be found at Appendix A.</p>
<b>Improved cost allocation</b>			
3.1	Improved information systems for operating costs (p260)	<p>SunWater's information systems were already able to provide the required cost data to allow SunWater to report directly against the QCA's targets from the 2012 Irrigation Price Review. However, to improve the reporting of operating costs, we developed a NSP Reporting Tool. The tool aggregates detailed SAP cost information into reports that are directly comparable with the QCA's targets, and will enable more timely responses to information requests in the future.</p> <p>The development and use of the NSP Reporting Tool highlighted that some transactions had been incorrectly coded in the past and therefore misallocated within SunWater's cost hierarchy.</p>	<p>SunWater continues to maintain financial tools to enable the reporting of operating costs, including against the QCA's targets. This functionality is also incorporated in our regulatory model at Appendix F.</p> <p>To ensure coding accuracy, we review financial transactions monthly and as part of the annual tax return process.</p> <p>SunWater has fully amortised our information systems and investigations are underway on options for replacing legacy systems in order to improve transparency and operational efficiency. Our forecasts reflect some allowance for improved information systems consistent with QCA recommendations.</p>



SunWater reference	QCA recommendation	SunWater implementation plan outcomes	Current SunWater position (including any changes to previous commitments)
		<p>We worked to reduce the amount of miscoded financial transactions to improve the quality of the reported cost information going forward.</p> <p>We consulted with the QCA and customer groups on the proposed approach to improved cost reporting and implemented the changes through the development of the tool and subsequent production of the Annual Performance Reports for each service contract area.</p>	
3.2	Improved recording and analysis of labour cost information (p264)	<p>SunWater reviewed labour cost information as part of the operating planning review (refer above). To address concerns about our labour cost forecasting, we proposed to base future price path labour cost forecasts on at least five years of historical cost data, and clearly document and justify any data cleansing actions.</p> <p>We also proposed several initiatives to improve labour cost allocations, including staff training, improved reporting and internal checking. These initiatives were approved by the QCA in May 2014 and rolled out within the business.</p> <p>Finally, we developed a labour tracking tool to support the monitoring of actual versus budgeted labour costs.</p>	<p>We consulted early with the QCA on their preferred approach to operating expenditure forecasts. Consequently, we have adopted a base-step-trend approach to forecast operating costs (including labour costs) for the 2021–24 period. The methodology for this forecast is consistent with the QCA’s recent decision for Seqwater’s bulk water prices.</p> <p>This has resulted in a departure from our previous commitment to base future labour cost forecasts on at least five years of historical cost data.</p> <p>Our estimate 2018/19 labour costs are based on the Resources Planning Tool, which details labour requirements for all projects expected to be undertaken that year. Escalation is applied to labour costs consistent with the methodology the QCA adopted for Seqwater.</p> <p>SunWater’s SAP financial system and Business Intelligence tools are used to monitor actual versus budgeted labour costs. In addition, we complete a monthly review of activities to ensure cost allocations are correct.</p>
3.3	Separate identification of drainage costs to support the determination of cost-reflective drainage tariffs in the future (p97)	<p>During 2013 and 2014, SunWater reviewed our SAP financial system to separate drainage costs from channel costs. We re-allocated most drainage costs to drainage profit centres within SAP and educated the business on the appropriate cost allocation process. Business-as-usual monitoring was also implemented.</p> <p>At the time, we noted cost misallocation may still occur and there may be some residual shared costs between channels and</p>	<p>Consistent with our implementation plan, processes are now in place which allow drainage costs to be allocated to drainage profit centres within our SAP financial system. Nevertheless, some issues in correctly separating drainage related direct costs (primarily in relation to operations labour) from other direct costs remain.</p>

SunWater reference	QCA recommendation	SunWater implementation plan outcomes	Current SunWater position (including any changes to previous commitments)
		<p>drains. We suggested the use of a standard allocator outside of SAP to re-allocate any significant drainage costs found in the channel profit centres for the next price review.</p> <p>We provided drainage costs for 1 July 2012 to 30 June 2014 to the QCA in July 2014.</p>	<p>We noted in the July 2014 Progress Report that an appropriate allocator would be used to re-allocate any significant drainage costs found in the channel profit centres prior to the next price review. However, resources to investigate and implement the best method to setting and maintaining standard allocators were reallocated due to the immateriality of these costs and customers' priority for assistance during the various LMA reviews.</p> <p>We therefore do not believe an accurate bottom up build of costs to determine cost-reflective drainage charges is available at this stage, and the additional costs to establish a more precise charge may be greater than the benefit. This is particularly the case given the ongoing nature of the LMA review process which has already resulted in the transfer of drainage assets to other entities in two schemes.<sup>6</sup></p> <p>For the 2021–24 period, SunWater proposes that the QCA consult with customers on whether existing drainage charges should be increased in line with the labour escalation rates determined for the base-step-trend model (with revenues from drainage charges treated as revenue offsets).</p>
3.4	More appropriate allocation of fixed costs in distribution systems (p199)	SunWater suspended this item. We considered that it was inappropriate to investigate alternative charging methodologies for fixed renewals costs in distribution systems until the LMA review was resolved.	SunWater maintains our previous position to suspend further work on this item, while the LMA review is ongoing.
3.5	Separate identification of irrigation working capital requirements (p330)	<p>SunWater applied Deloitte's methodology from the 2012 Irrigation Price Review to produce estimate irrigation working capital requirements. We presented these forecasts to the QCA in the December 2014 Progress Report.</p> <p>We noted that the working capital requirements will need to be re-estimated at the time of the next price review as the operating cost forecasts will not be established until that time.</p>	SunWater proposes that no working capital requirements be applied to our revenue allowances in the next price path period. Chapter 5 of our main submission provides further detail.

<sup>6</sup> St George and Dawson Valley (Theodore) drainage assets transferred to local management entities in 2018. The LMA review for Burdekin Haughton and Nogo Mackenzie (Emerald) is ongoing.

## 4. Implementation of other issues

**Table 4.1: SunWater’s implementation of other issues raised by the QCA**

Category	Scheme/s	Issue	QCA reference	SunWater implementation
Pricing	Burdekin Haughton distribution system	<p>Under a legacy arrangement, discounted charges currently apply in the Giru Benefited Groundwater area to reflect the fact that 49% of volumes in the groundwater area were deemed to be natural groundwater yields.</p> <p>The QCA recommended that SunWater investigate the hydrological circumstances of the Giru Benefited Groundwater area to confirm the current allocation, or negotiate alternative arrangements with irrigators.</p>	<p>Page 22</p> <p>Volume 2: Burdekin-Haughton distribution system</p>	<p>In 2017/18, SunWater commissioned a report to assess the groundwater hydrology and the interaction of surface and groundwater in the Giru Benefited Area (Appendix K).</p> <p>As part of the review, groundwater modelling and a yield assessment were completed to determine the natural yield being captured and utilised in the system. Scenario assessments (based on simulations in the model) indicated a sustainable, reliable supply of approximately 30 to 50 per cent of current demands, depending on the level of reliability sought.</p> <p>SunWater therefore considers that it may be appropriate for the QCA to review the 49% discount currently provided to these customers. In doing so, we believe that any resultant price increases should be subject to a transition path to manage customer impacts.</p> <p>Until this matter is consulted on and resolved, SunWater has included the full groundwater allocations in our regulatory model.</p>
	Burdekin Haughton distribution system	<p>Under current pricing arrangements, the natural flows to Gladys’s Lagoon (360 ML) do not attract a charge. Bulk and channel charges apply to volumes delivered after the first 360 ML is supplied.</p> <p>The QCA recommended that SunWater investigate the hydrological circumstances of the Gladys’s Lagoon area to confirm the current</p>	<p>Page 23</p> <p>Volume 2: Burdekin-Haughton distribution system</p>	<p>Pending budget approval, SunWater expects to investigate groundwater recharge from Gladys’s Lagoon in 2019/20. This pondage test will also deliver a reasonable estimate of recharge from rainfall and overland flow that contributes to yield from the lagoon. We will provide this information to the QCA should it become available.</p> <p>SunWater believes the QCA should consult with stakeholders on the appropriate adjustment. In</p>

Category	Scheme/s	Issue	QCA reference	SunWater implementation
		allocation, or negotiate alternative arrangements with irrigators.		the meantime, we have included the full Gladys Lagoon water allocations in our regulatory model.
	Burdekin Haughton distribution system	<p>SunWater holds 110,000 ML of medium priority water access entitlements on behalf of the Townsville Thuringowa Water Supply Joint Board (TTWSJB).</p> <p>In its 2012 decision, the QCA considered that distribution costs should not be apportioned to these entitlements as there is no distribution system capacity installed to deliver all or part of the 110,000 ML water access entitlements.</p> <p>The QCA stated that a share of channel costs should be allocated to the TTWSJB if a portion of the reserve allocation is taken up.</p>	<p>Page 24</p> <p>Volume 2: Burdekin-Haughton distribution system</p>	<p>At the time of this submission, there has been no firm commitment from the TTWSJB to take up a portion of the 110,000 ML medium priority water access entitlements SunWater holds on their behalf. Our modelling therefore reflects the QCA's approach in 2012; apportioning bulk costs only to the reserve allocation.</p> <p>SunWater notes the contract under which this volume is reserved is due to expire on 30 June 2020. SunWater and the TTWSJB intend to negotiate a new agreement prior to the expiration of the existing contract.</p> <p>TTWSJB continues to be apportioned bulk and distribution costs associated with the 10,000 ML of high priority water access entitlements they hold.</p>
	Mareeba-Dimbulah distribution system	<p>The lower bound cost reflective Part C and D charges for the River (Supplemented Streams &amp; Walsh River) tariff group reflected an assumption that, on average, 40% of water delivered to this section was sourced from natural stream flows and 60% was sourced through the channel system.</p> <p>The QCA recommended that SunWater investigate the hydrology circumstances of the supplemented streams and Walsh River to confirm this assumption.</p>	<p>Page 28</p> <p>Volume 2: Mareeba-Dimbulah distribution system</p>	<p>Pending budget approval, SunWater expects to undertake a hydrological assessment as part of our business case for Nullinga Dam. This assessment will identify the percentage of water that is delivered to these customers by natural stream flows. We will provide this information to the QCA should it become available.</p> <p>In the meantime, we have included the full Walsh River &amp; Supplemented Streams allocations in our regulatory model.</p>
	Mareeba-Dimbulah distribution system	The QCA recommended that the appropriate classification of the four weirs in the Mareeba-Dimbulah water supply scheme (Bruce, Collins, Leafgold and Solanum Weirs) be clarified between SunWater and the Department of Natural Resources, Mines and Energy. If these	<p>Pages 3 to 4</p> <p>Volume 2: Mareeba-Dimbulah distribution system</p>	SunWater proposes to classify these weirs as distribution assets, consistent with the QCA's 2012 decision. These assets have only a small storage capacity (2175 ML) and form part of the distribution system.

Category	Scheme/s	Issue	QCA reference	SunWater implementation
		assets are considered to be bulk assets, SunWater should revise our NSPs and cost data to reflect the designation of these assets as bulk assets.		<p>We also note that, under an interim program approved by the Department on 30 May 2006, the useable volume of weirs are not included in the methodology for determining announced allocations in the Mareeba-Dimbulah bulk water supply scheme. This suggests that these weirs are not bulk water assets.</p> <p>SunWater included the costs associated with the operation and maintenance of these weirs in the Mareeba-Dimbulah distribution system in our 2019 NSPs and did not receive any stakeholder feedback in relation to their classification. We have therefore continued this approach in our submission.</p>
	Bundaberg distribution system	Any material \$/ML cost reduction due to a larger amount of Burnett Water (Paradise Dam) water access entitlements in the distribution system should be passed to distribution customers. This may occur within period, or at the end of the period, depending on materiality. The QCA will consider stakeholder submissions to this effect during and at the conclusion of the regulatory period.	Page 21 Volume 2: Bundaberg distribution system	<p>At the time of the 2012 decision, distribution services were provided to a total of 5832 ML of Burnett Water contracts (including 2483 ML peak) and a further 2515 ML of leased Burnett Water (all off-peak). The QCA therefore included 8347 ML of Burnett Water entitlements when setting distribution system prices.</p> <p>The amount of Burnett Water entitlements used in the distribution system have decreased since the 2012 decision. As at 2 October 2018, distribution services are provided to 6301 ML of Burnett Water contracts (including 2688 ML peak) plus a further 165 ML of leased Burnett Water (all off-peak). Cost reductions therefore do not need to be passed through to distribution customers.</p> <p>It should be noted that SunWater sought expressions of interest for the purchase of medium priority water allocations from Paradise Dam in October 2018. This may lead to additional volumes being delivered through the distribution system in</p>

Category	Scheme/s	Issue	QCA reference	SunWater implementation
				the future. SunWater will provide updates to the QCA throughout the review process.
	All distribution systems	The QCA recommended that drainage diversion charges be reviewed as part of the review of drainage charges (refer above) to allow cost-reflective costs in the next price path period.	Page 454 Volume 1	<p>During the period, SunWater reprioritised resources toward the LMA review process, recognising that a successful outcome of the LMA review would reduce SunWater’s requirement for more granular pricing of distribution services. With the LMA review still progressing, we have not revisited the work to separate drainage diversion costs from drainage costs.</p> <p>In our view the costs of establishing a framework and processes to correctly establish revenue allocation on a fully cost-reflective basis exceed the benefits for customers. Many of the activities undertaken on the drainage network are required to both maintain the drainage network and to allow customer diversions. The expenditure for drainage diversion is also relatively immaterial compared to other costs.</p> <p>For the 2021–24 period, SunWater proposes that the QCA consult with customers on whether existing drainage diversion charges should be increased in line with the labour escalation rates determined for the base-step-trend model (with revenues from drainage diversion charges treated as revenue offsets).</p>
<b>Market costs risks</b>	All schemes	The QCA’s Final Report provided an option to apply for price triggers or a cost pass through where cost inputs are materially different to original forecasts.	Page 42 Volume 1	<p>SunWater wrote to our Shareholding Ministers in August 2013 seeking guidance as to their preferred mechanism to respond to uncontrollable cost increases, such as electricity and insurance, that had occurred since irrigation prices were set in 2012.</p> <p>The Queensland Government decided that the current price path was not to be re-opened before the end of the current price path. SunWater was</p>

Category	Scheme/s	Issue	QCA reference	SunWater implementation
				<p>therefore required to absorb any cost increases over and above those reflected in prices, for the duration of the current price path.</p> <p>We have since consulted with our customers regarding the impact of electricity price increases and are cognisant that our customers are facing the same cost pressures. We therefore do not believe it is feasible for customers to bear the impact of price increases needed to fund future electricity costs <u>plus</u> further price increases to recover past electricity costs. Our modelling therefore does not include any end-of-period adjustments for these costs. Similarly, we have not included any adjustments for insurance.</p> <p>We are proposing an alternative mechanism to address cost risks for electricity in the next price path period. We believe our proposed electricity true-up mechanism is a more effective and balanced approach for both SunWater and customers than the price triggers from the 2012 review. Refer to Appendix I for more detail.</p> <p>SunWater proposes that any material increases in costs in the next price path period be subject to an adjustment mechanism (similar to the approach adopted by the QCA in the 2012 decision).</p>
<b>Risk of Government imposts</b>	All schemes	The QCA's Final Report provided an option to apply for a cost pass through where costs are materially different to original forecasts.	Page 42 Volume 1	The legislative requirement to provide free water to 1058 ML of high priority water access entitlements in Barker Barambah was repealed in September 2013. This means the share of costs assigned to irrigation customers in this scheme were higher than they should have been from this point in time. However, we have not sought to apply a negative cost pass through as the impact on prices is immaterial.

Category	Scheme/s	Issue	QCA reference	SunWater implementation
				<p>SunWater has not identified any other circumstances where costs are materially different to original forecasts as a result of government imposts.</p> <p>SunWater proposes that any material increases in costs in the next price path period as a result of regulatory imposts be subject to an adjustment mechanism (similar to the approach adopted by the QCA in the 2012 decision).</p>
<b>Distribution losses</b>	All distribution systems	The QCA recommended that SunWater consider making an application to the Queensland Government to review the status of distribution loss allocations held by SunWater in excess of those needed to meet required actual loss releases.	Page 86 Volume 1	<p>SunWater lodged an application with the former Department of Natural Resources and Mines in May 2012 to change the purpose of surplus distribution loss allocations to have a purpose of 'any'.</p> <p>We withdrew this application in May 2013, following feedback from a number of Irrigator Advisory Committees and the Queensland Farmers' Federation about the timing and objective of this application in light of the LMA review process.</p> <p>Since then, we have consulted with the affected Irrigator Advisory Committees on their preferred approach to distribution loss water allocations. Chapter 6 and Appendix I of our main submission provide further detail.</p>
<b>Insurance (floods)</b>	All schemes, except: <ul style="list-style-type: none"> <li>• Callide Valley</li> <li>• Three Moon Creek</li> <li>• Mareeba-Dimbulah (distribution)</li> </ul>	SunWater should apply for a within-period or end-of-period adjustment to prices once insurance revenue and flood costs from the 2010/11 and 2011/12 flood events are finalised and able to be made public.	Page 131 Volume 1	<p>SunWater has adjusted the opening balances in 2020/21 to reflect flood damage costs from 2010/11 and 2011/12 and the associated insurance proceeds where applicable (adjusted for financing/interest costs).</p> <p>Details of the adjustments, by affected service contract area, can be found in the Addendums to the 2019 NSPs at Appendix D.</p>



Category	Scheme/s	Issue	QCA reference	SunWater implementation
<b>Planning period length</b>	All schemes	The length of the planning period (20 years) should be reviewed in subsequent price reviews (or as the result of a price trigger) should problems of intergenerational equity arise from future significant capital expenditure proposals.	Page 172 Volume 1	<p>SunWater revisited the idea of moving to a longer planning period after the Bundaberg LME Board raised concerns regarding intergenerational inequity associated with the shorter (20-year) annuity and recommended moving to a 30-year annuity.</p> <p>Following customer consultation in 2018, we have proposed a 30-year annuity for the next price path period. The majority of customer representatives were supportive of this and we received endorsement from two Irrigator Advisory Committees.</p> <p>Chapter 5 of our main submission provides further details.</p>
<b>Electricity</b>	All schemes, except: <ul style="list-style-type: none"> <li>• Boyne River &amp; Tarong</li> <li>• Chinchilla</li> <li>• Cunnamulla</li> <li>• Lower Mary River (bulk)</li> </ul>	The QCA recommended that SunWater review the cost differential between franchise and contestable electricity contracts on an annual basis.	Page 269 Volume 1	<p>SunWater tests the contestable electricity market on an annual basis to identify potential cost savings.</p> <p>We also perform tariff analysis on our regulated retail electricity tariffs (franchise tariffs) to ensure sites are assigned to the most appropriate tariff.</p> <p>Further information on our energy strategy and action plan is contained in our main submission.</p>
<b>Service standards</b>	All schemes, except Pioneer River	The QCA recommended that service standards should be reviewed for schemes where water is not always available. A similar proposition applies where service quality standards or other technical requirements may create excessive costs (where, for example, exit from a scheme renders the maintenance of previous service quality standards inappropriate).	Pages 55 to 56 Volume 1 Page 32 Volume 2: Burdekin Houghton water supply scheme	There have been no changes to the service standards since the 2012 Irrigation Price Review.