



**LOWER MURRAY  
WATER**

## **2018-2023 Price Submission - Rural**

Lower Murray Water

28 September 2017

## Highlights of LMW's Rural Price Submission

LMW's Price Submission will deliver outcomes for customers, which have been formed from deep and extensive consultation and expressed in customer terms, to:

- Supply me with water when I need it
- Keep my costs to a minimum
- Be easy to contact and quick to respond
- Comply with Government obligations.

The price path will provide stability for customers while ensuring an appropriate allocation of risk, and in particular electricity price risk. Total tariffs including bulk water charges are proposed to change in real terms by:

- For irrigation and drainage customers, between a 1.3% average annual reduction in Robinvale to a 2.6% average annual increase in the Mildura HPS District.
- For domestic and stock customers, average annual reductions of between 2.0% and 0.2%.
- For private diversion customers, an annual average increase of 1.7%.

LMW will leverage off a sound operational and cost base to implement the following key change strategies that will ensure delivery of the price path and outcomes for customers.

- Optimise Irrigation Network utilisation to supply water when the crops need it both within and adjacent to the irrigation districts.
- Culture Change with the Customer at the Centre, supported by engaged people
- Business Transformation of work processes
- Asset Optimisation through asset management and system management.

Controllable costs will increase by 0.16% per annum, on average, or a total of \$130,000 over the five-year period, above the baseline 2016-17 operating costs, entirely due to electricity price increases. Major capital projects have been fully justified to optimise utilisation through supplementary irrigation pipelines, improve reliability through replacing ageing network assets and upgrading monitoring and control systems, and solar renewables projects to meet government emissions reduction targets. Renewal expenditure has been optimised to ensure a sustainable irrigation system and smooth capex over a 20 year timeframe as supported by our customers, increasing from an average of \$400,000 in the current pricing period to a proposed \$1.8 million in this submission.

Service levels will be maintained at current performance levels, with moderate improvements in channel and pipe bursts and leaks and overall customer satisfaction. New government obligations required by the Minister's Letter of Expectations and the Water for Victoria strategy will be delivered.

Risk allocation has been assessed at multiple levels, consistent with a 'no surprises' approach, and LMW has taken on additional risks associated with optimised timing and reduced contingencies associated with major projects, a proactive approach to uncertain projects such as SMP2, managing uncertainties in electricity price forecasts and their appropriate treatment, and a revenue cap to manage price risk to customers.

Management has delivered this Price Submission with extensive engagement with the LMW Board through its Finance and Audit Committee to ensure the Submission is our 'best offer', based on reasonable and prudent forecasts of demand and efficient costs, and an appropriate allocation of risk between the business and its customers. LMW staff live in the relatively small communities served. Senior management engagement and feedback of community perceptions and expectations occurs on an almost daily basis.

This price submission is underpinned by a stable track record in delivering strong performance outcomes and managing 'for the customer' through a demonstrated willingness to accept risk and return additional revenues to customers.

## Lower Murray Water Acknowledgement of the Aboriginal Traditional Owners of the Region

Lower Murray Water operates within the traditional lands of First Nations People; these groups are, starting from the furthest upstream group along the Murray (Mil) and moving downstream through to the Western edge of our area at the Victorian South Australian Border:

The Barapa Barapa Peoples, the Wamba Wamba Peoples, the Wadi Wadi Peoples, the Tatti Tatti Peoples, the Latji Latji Peoples, the Nyeri Nyeri Peoples and the Werigia Peoples.

The management and staff at Lower Murray Water proudly acknowledge the traditional owners and respect their connection to both their land and waterways.

Importantly, we at Lower Murray Water also acknowledge that the land and water in which we operate, is still the life blood of the traditional owners of this land. The stories that connected the ancestors to their world still connect the First Nations Peoples of this area today.

The land and water are to be respected and nurtured, to be in keeping with these First Nations Peoples....

# Executive Summary

## Introduction

While LMW operates as a single business entity, its prices are regulated under two different regulators and regulatory frameworks: the Australian Competition and Consumer Commission (ACCC) for rural services operated within the Murray-Darling Basin under the Water Charge Infrastructure Rules (WCIR); and the Essential Services Commission (ESC) for urban services under the Victorian government's Water Industry Regulatory Order 2014 (WIRO).

This Price Submission is submitted for the **rural irrigation and drainage services**. Costs for shared services, such as corporate, are allocated between the urban and rural parts of the business.

The Price Submission is prepared in accordance with the ESC's Lower Murray Water Rural Price Review Guidance paper for rural infrastructure services, February 2017, noting that the ESC is the accredited regulator for 10 years from 17 February 2012 for LMW's rural services. The Price Submission is also prepared under the current WCIR principles as the Commonwealth government's response to the ACCC's recommendations for changes to the WCIR principles has not been advised at the time of writing this Submission.

A five-year price period is proposed to align with LMW's urban business regulatory period.

## Overview of Proposed Rural Prices

Total tariffs including bulk water charges are proposed to change in real terms by:

- For **irrigation and drainage customers**, between a 1.3% average annual reduction in Robinvale to a 2.6% average annual increase in the Mildura High Pressure System (HPS) District.
- For **domestic and stock customers**, average annual reductions of between 2.0% and 0.2%.
- For **diversions customers**, an annual average increase of 1.7%.

The primary driver for the price changes is the substantial increase in forecast electricity costs. There is a forecast overall reduction in other costs due to a combination of investments and efficiencies, comprising:

- Labour costs arising from an initial investment in resources to drive efficiency and improvements in business processes, energy efficiency and procurement, and asset management,
- Investment in IT network security,
- Reductions in bulk water charges,
- Increase in the Regulatory Asset Base (RAB), and
- Reduction in staff numbers to deliver efficiencies in labour costs.

Table 1 overleaf sets out current and proposed unit price changes for reference customers, for the major services for the period to 2022-23. Detailed tariffs for all services are provided in Section 6.2.2.

**Table 1 Changes to Real Unit Prices for Reference Customers - \$ 1/1/18**

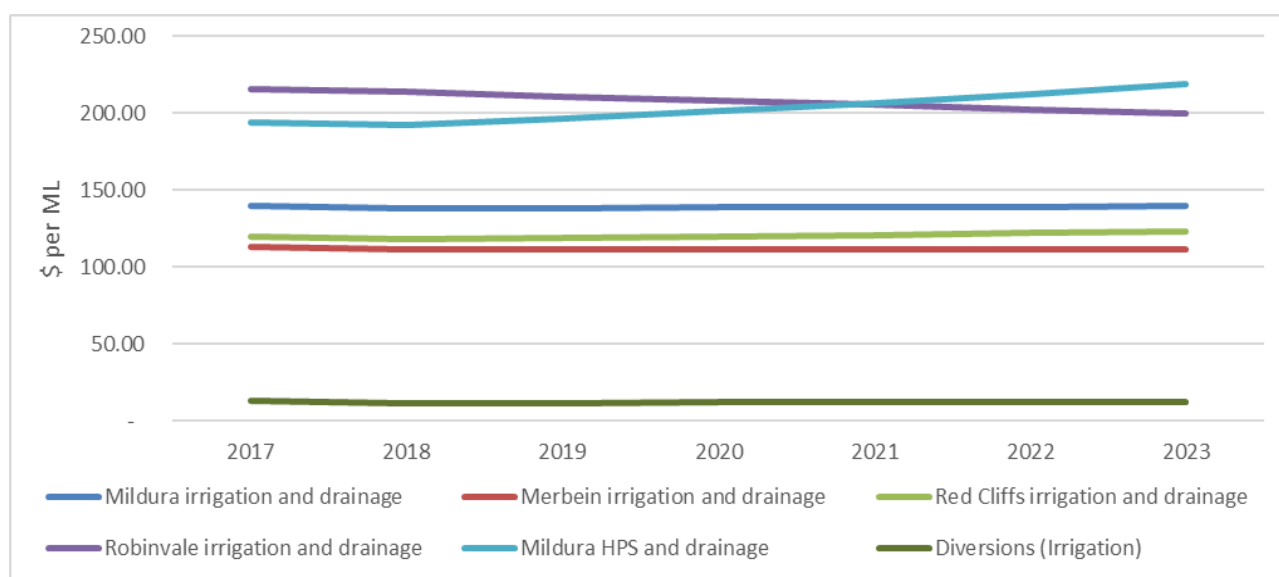
Service/District (per ML or 100kL)	Current		Fourth Regulatory Period					
	2016-17	2017-18	2018-19	2019-20	2020-21	2021-22	2022-23	% Change
Mildura irrigation and drainage (per ML)	139.77	138.20	138.49	138.79	139.11	139.45	139.79	0.2%
Merbein irrigation and drainage (per ML)	113.51	111.94	111.91	111.90	111.90	111.92	111.95	0.0%
Red Cliffs irrigation and drainage (per ML)	120.11	118.54	119.38	120.24	121.11	122.01	122.92	0.7%
Robinvale irrigation and drainage (per ML)	215.35	213.79	210.94	208.14	205.39	202.69	200.03	-1.3%
Mildura HPS (per ML)	194.26	192.69	196.87	201.58	206.85	212.73	219.26	2.6%
Millewa Urban (Irrigation) (per 100kL)	2.23	2.22	2.20	2.19	2.19	2.19	2.20	-0.2%
Millewa Rural (Irrigation) (per 100kL)	1.95	1.94	1.90	1.86	1.82	1.79	1.75	-2.0%
Other stock and domestic (Irrigation) (per ML)	546.21	545.52	540.38	534.48	528.67	522.94	517.28	-1.1%
Diversions (Irrigation) (per ML)	13.30	11.74	11.91	12.10	12.31	12.53	12.77	1.7%

Notes:

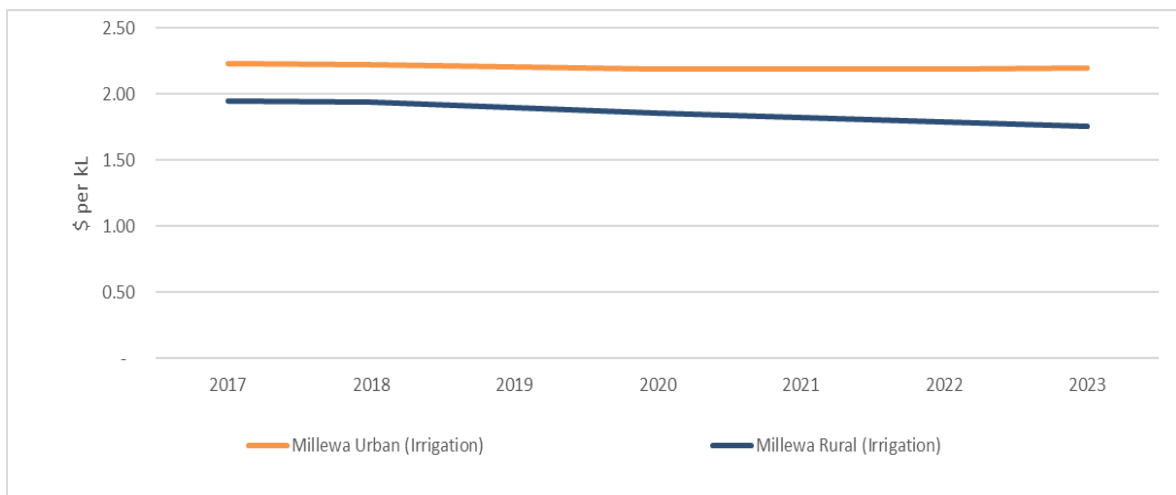
- All bills including pass through bulk water costs.
- Reference customers usage is based on 100ML/annum usage for irrigation customers, 400kL for Millewa Urban, 4300kL for Millewa Rural, 3ML for Other Domestic & Stock, and 1000ML for diversions customers.
- Percentage change (% change) is average per annum for period 2017-18 to 2022-23.

Changes to these unit prices are set out in Figure 1 for irrigation and diversions customers, and in Figure 2 overleaf for domestic and stock customers.

**Figure 1 Changes to Real Unit Prices for Irrigation & Diversion Customers**



**Figure 2 Changes to Real Unit Prices for Domestic & Stock Customers**



### Impact of Sunraysia Modernisation Project

The Sunraysia Modernisation Project Stage 1 (SMP1) was delivered, under budget and within the planned timeframe, to meet its objectives of securing a long term sustainable future for Sunraysia irrigators in the context of climate change and reduced water availability, and delivering a substantial and lasting return of water to the environment to secure real improvements in river health.

The project delivered substantial benefits to 15% more customers than planned (through an extended scope) by providing 365 day irrigation access to some 1334 irrigation outlets serving 8652 hectares, or 66% of irrigation customers in those Districts. Additional benefits to customers included improved network reliability and water quality, enhanced metering and water ordering, as well as reduced operating costs and requirements for current and future asset replacement, enabling them to increase production, diversify their farm businesses and invest in new horticulture.

The project also delivered water recovery targets for the Murray-Darling Basin from the Red Cliffs, Mildura and Merbein Districts through transfer of 7.0 GL of water savings to the Commonwealth.

The project provided further community benefits in improved community safety near channels, local employment of more than 50 local subcontractors along with an estimated 180 jobs created for the life of the project, and enhanced environmental outcomes for wetland communities.

### Overview of Proposed Customer Outcomes

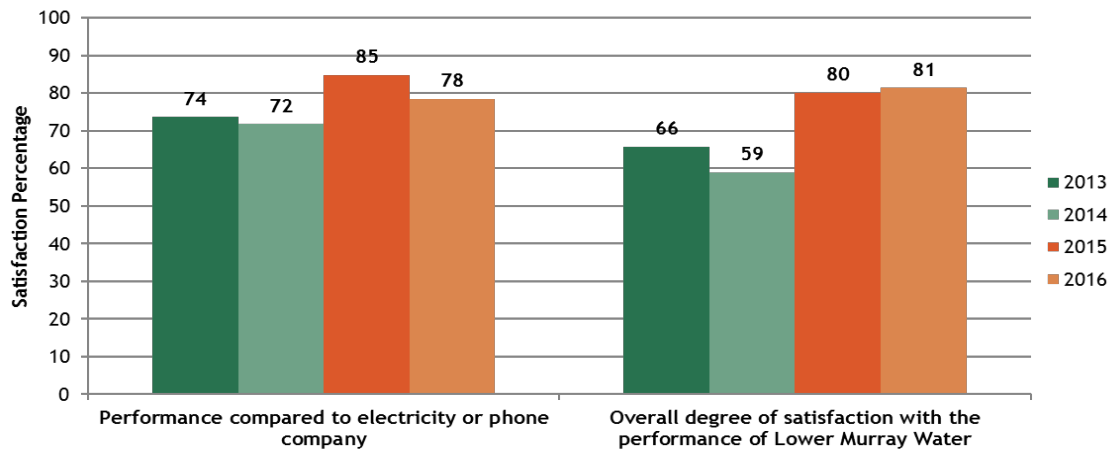
LMW adopted a new Customer Engagement Strategy prior to this Price Submission preparation, using the International Association of Public Participation (IAP2) principles for customer engagement. LMW sought a deeper level of engagement than ever before, through direct engagement at public events, consultative forums, customer committees, via the web and social media, and customer surveys. This deeper level of engagement took LMW from an 'inform' level of consultation to 'involve', which provided LMW with a strong link from customer wants to the outcomes that have been agreed.

Extensive customer engagement revealed a strong customer preference for 'maintaining services with continuous improvement while containing costs', expressed by customers

as: Supply me with water when I need it, Keep my costs to a minimum, and Be easy to contact and quick to respond.

Customer satisfaction is considered to be at appropriate levels based on survey results as shown in Figure 3. Therefore, there is no driver for a significant or step change in customer service standards or price path or tariff structure for customers over the next period.

**Figure 3 Customer Satisfaction With Irrigation Services**



LMW recognises that it must maintain its focus on delivering outcomes for customers. Following four rounds of engagement, debate, revision and agreement with its customer forums, LMW adopted four customer outcomes:

1. Supply me with water when I need it
2. Keep my costs to a minimum
3. Be easy to contact and quick to respond
4. Comply with other government obligations

These outcomes will be central to the way LMW does business with its customers. To deliver them, LMW will adopt the following strategies, together designed to improve customer experience and provide value added services:

- Optimise Irrigation Network Utilisation,
- Customer at the Centre,
- Culture Change,
- Business Transformation, and
- Asset Optimisation.

The Sunraysia Modernisation Project Phase 2 (SMP2) and Sunraysia Rejuvenation Project (SRP) are also expected to present other opportunities for improving services in partnership with rural businesses.

Service levels will be maintained largely at current levels, with LMW accepting more risk with proposed tighter service performance targets over the period for:

- Improving channel/pipe bursts and leaks to better than 60 per 100 km per year, and
- Improving overall customer satisfaction survey results to better than 82%.

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# 1. Lower Murray Water Rural Business Summary

## 1.1 Business Entity

Lower Murray Urban & Rural Water Authority was formed on 1 July 2004, and became the Lower Murray Urban and Rural Water Corporation (LMW) On 1 July 2007. On 19th August 2008, it took over the functions of the First Mildura Irrigation Trust (FMIT).

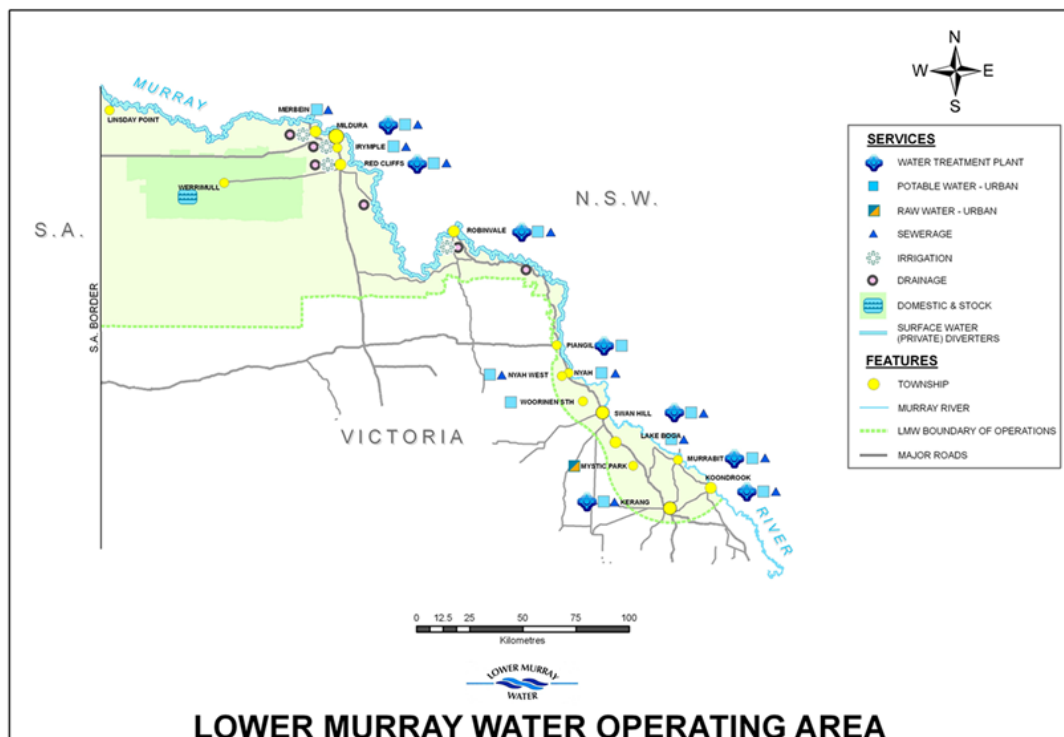
While LMW manages its rural and urban businesses as a single business entity, prices for these businesses are regulated under two different regulators and regulatory frameworks:

- Australian Competition and Consumer Commission (ACCC) for rural services operated within the Murray-Darling Basin under the Commonwealth Water Charge Infrastructure Rules (WCIR), and
- Essential Services Commission (ESC) for urban services under the Victorian government's Water Industry Regulatory Order 2014 (WIRO).

## 1.2 LMW Rural Services

LMW operates across the municipalities of Mildura, Swan Hill and Gannawarra in North-Western Victoria, with LMW's operating area and key services shown in Figure 4.

Figure 4 LMW Operating Area



LMW delivers rural water services including:

- Irrigation - districts of Mildura, Merbein, Red Cliffs and Robinvale
- Domestic and stock - Mildura, Merbein, Red Cliffs and Robinvale and Millewa rural district

- Surface water diversion licences along the Murray River in Victoria between Nyah and the South Australian border
- Subsurface Drainage - systems of Mildura, Merbein, Red Cliffs, Robinvale, Nangiloc-Colignan, Tol Tol, Bumbang and Boundary Bend diverters.

### 1.3 Customers and Assets

LMW provides untreated river water to customers through four pumped irrigation districts, domestic and stock supply and surface water diverters. A summary of customers and assets is provided in Table 2.

**Table 2 Rural Customers and Assets (2016-17)**

Rural customers and volumes	Statistic
Irrigation Customers	4,458
Domestic and Stock Customers	292
Private Diverters	1,160
Total Customers	5,910
Irrigation Usage	86,298 ML
Domestic and Stock Customers Usage	866 ML
Diverters Annual Usage Limit	566,118 ML
Assets	
Pump Stations	15
Irrigation Channels	36.2 km
Irrigation Pipelines	630.3 km
Domestic and Stock	469 km

### 1.4 Operating Context

LMW's operating region is highly productive, delivering \$2.8 billion per annum<sup>1</sup> in gross regional product to the Victorian and Australian economy. Conversely, the region is relatively remote and covers a large geographic area extending over 300 km along the lower Murray River, in the driest part of Victoria.

LMW recognises that its customers' and community's overall well-being and livelihood is directly linked to the agricultural, tourism and support industries which form the region's economic backbone. How it manages regional water resources recognises the intrinsic interrelation between the resource and the region's social and economic fabric.

These factors pose challenges for control of essential water services and their efficient management, whilst also providing opportunities for greater community engagement and a contribution to the community and its growth through the synergies of a combined urban and rural water business. Critical risks for LMW include:

- Water security and maintaining irrigation and water services and their related community amenity, especially under drought conditions and flood events
- Maintaining affordability of water services to the community under the economic impacts of fluctuating food commodity prices.

<sup>1</sup> Mildura Development Corporation [www.milduraregion.com.au/region](http://www.milduraregion.com.au/region)

## 2. Customer Engagement and Outcomes

### 2.1 Customer Engagement Approach and Basis

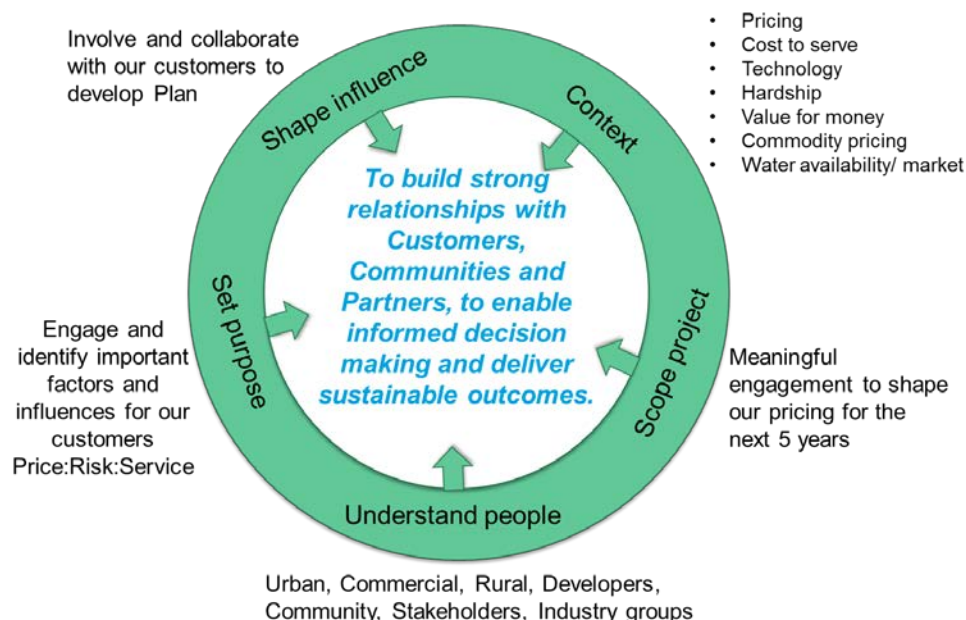
In 2016, LMW completed an organisational restructure designed to put the customer at the centre of its business. This restructure formed a sound platform to enable engagement with its customers for this Price Submission 2018-23, known as PS4. Comparative to previous pricing submissions, engagement with customers has been deeper and broader and involved all of the Board and Management in order to:

- Get to the heart of customer issues and concerns,
- Define what is important - customer value,
- Specifically develop customer outcomes, and
- To provide input to draft operating and capital expenditure programs and price paths.

Engagement for this pricing submission is part of an overall Customer Engagement Strategy<sup>2</sup> designed to build strong relationships with customers, communities and partners to enable informed decision making and deliver sustainable outcomes. The Strategy incorporated the values, ethics and process for public participation as established by the International Association of Public Participation (IAP2).

Specifically for the Price Submission and to align with both the requirements of WCIR for the rural business and the ESC's PREMO framework for the urban business, an approach was designed as depicted in Figure 5<sup>3</sup>, recognising both the urban and rural parts of the business and the diversity of customer groups and geographic regions.

**Figure 5 Price Submission Customer Engagement Overview**

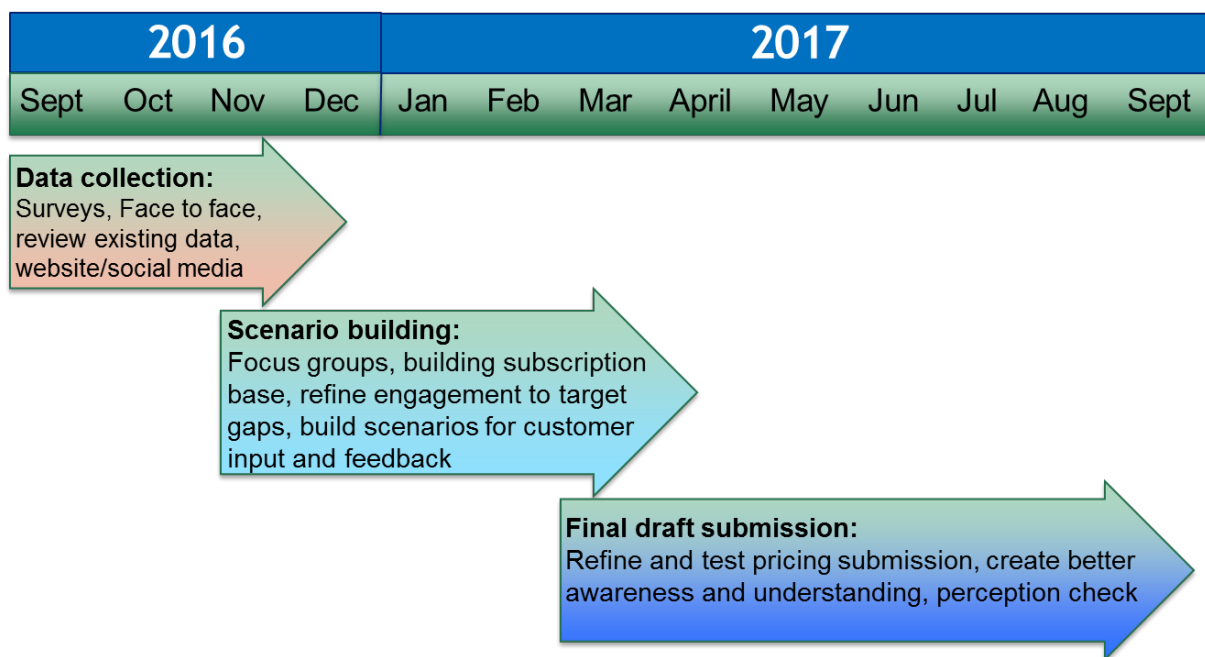


The approach was developed into a delivery plan along with funding, resourcing and a delivery timeline, shown in Figure 6, commencing in September 2016 and progressing through to finalisation of the draft Price Submission in September 2017.

<sup>2</sup> LMW Customer Engagement Strategy for 2016-18

<sup>3</sup> LMW Presentation on Pricing Submission Customer Engagement, August 2017.

Figure 6 Timeline for Price Submission Customer Engagement



LMW tailored the engagement process so that customers across the region were provided with multiple, iterative opportunities and means to contribute their views over a sustained period of time, from a broad invitation to contribute, through to individual and group customer engagement on service needs and preferences. LMW's engagement also involved all Executive Management and many staff in discussions with customers and stakeholders at their irrigation properties or businesses. This enabled LMW to process and analyse the information and progressively build and test the customer and stakeholder outcomes and the projects and activities required to deliver them. Specifically, LMW:

- Reviewed existing customer information and annual customer survey data to identify service performance gaps and any specific issues and concerns
- Undertook a further specific research based, quantitative Rural survey (Bartley Consulting, November 2016)
- Conducted customer and stakeholder interviews by LMW extended leadership team including all of the Executive Team, with both urban residential and commercial customers and major stakeholders including Citrus Australia, Murray Valley Wine Grape Growers, Dried Fruit Australia, Sunraysia Rural Financial Counselling, Regional Development Victoria, SuniTAFE and Mallee Family Care
- Developed and implemented an on-line survey that received 121 responses
- Used social media and electronic communication to update and inform the community of the pricing submission process and its requirements. For example, the use of a Price Submission informational video clip on Facebook had over 20,000 views
- One on One in-person surveys conducted through direct engagement, for example, pop up kiosks at Mildura farmers markets and the Mildura Centro shopping centre, seeking input from a wide range of customer groups
- 10 focus groups representing 10 key segments over some 11 meetings to identify customer needs and priorities (One Idea, June 2017), and develop, refine and agree to customer outcomes along with their performance measures and key projects and



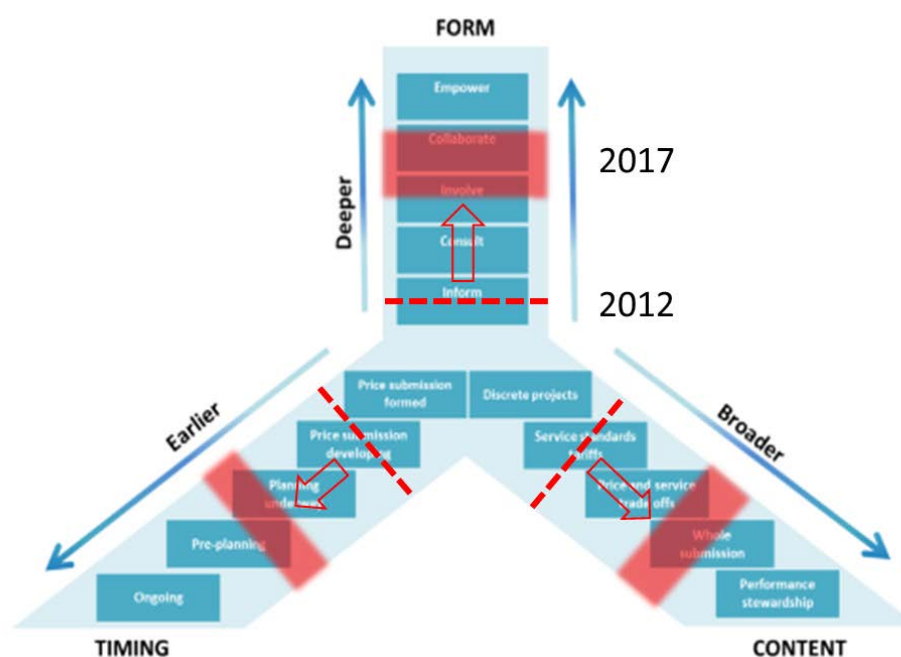
activities. The facilitator reported directly to the Board on the outcomes of the workshop to ensure there was no bias. The key focus groups for the rural customers examined and discussed topics that were identified through initial engagement. These topics were: Change to irrigation operations, Enforcement of delivery shares, Removal of channels near local schools, Capital works programs to replace tight lines

- Further focus group meetings with customer committees and interaction via electronic means to review draft operating and capital programs and price path proposals
- Throughout the process the use of our Rural Customer Service Advisory Committees (CSACs) and the Strategic Advisory Committee (SAC) was a major engagement strategy. The Committees at joint meetings helped to refine the key outputs and outcomes for this pricing submission. This process culminated in a detailed presentation of the Draft Submission to a combined meeting of the Committees in August 2017. There was general support for the plans as presented at that meeting
- Engagement with staff through a series of interactive presentations to all staff to explain the pricing submission process, the outcomes for customers, the plans for the regulatory period to deliver these outcomes and the KPIs and their role in these plans. These customer outcomes and KPIs will be embedded throughout the organisation through the annual personal performance planning and appraisal process. Note that all LMW staff are also customers of LMW.

The key to LMW’s engagement in this process has been to identify the outcomes that customers want and need as well as identifying all key concerns and issues that customers may have.

LMW’s level of maturity in customer engagement directly relating to the Price Submission, compared with the previous Water Plan 3, is depicted in Figure 7, showing improvement in deeper, broader and earlier engagement.

**Figure 7 Maturity of Customer Engagement Process**



LMW maintains extensive records of its customer engagement processes, resources and materials, feedback and customer inputs which are available to the ESC upon request.



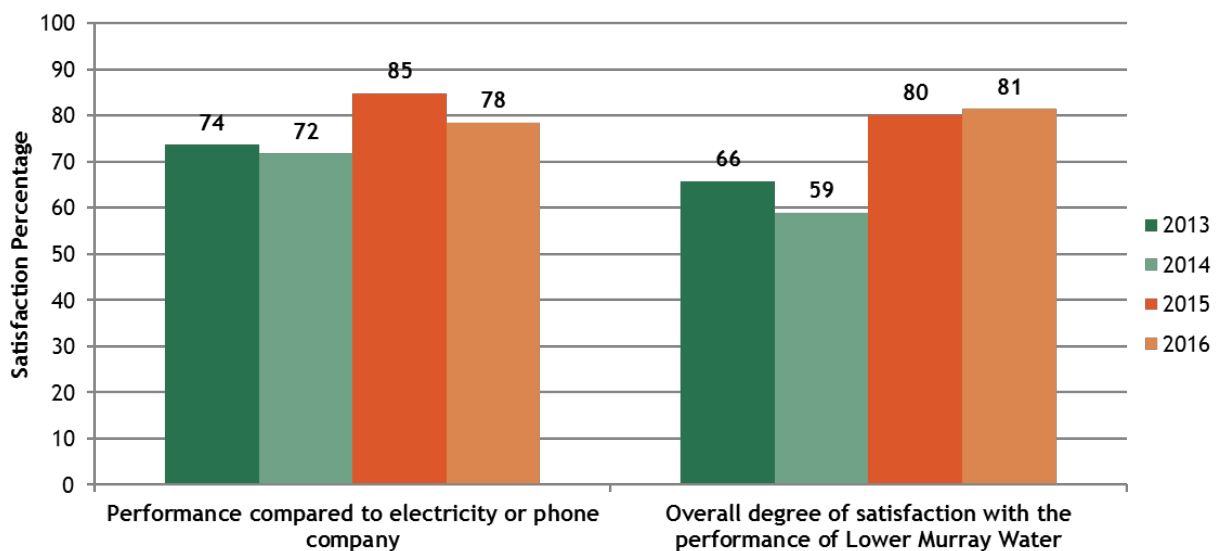
## 2.2 What LMW's Customers Say

LMW's Rural Customer Survey<sup>4</sup> and the Bartley Consulting 2016 Survey identified that:

- Overall 81% of customers are satisfied with LMW services, up from 66% in 2013.
- 70% believe LMW meets expectations as a water service provider, up from 51% in 2013.
- 49% of customers are satisfied with the total farming costs of irrigation services, trending up from 31% in 2013.
- There is a low willingness to pay more for improved services (59% no increase, 34% only up to \$20/ML, 3% more than \$20/ML).
- 88% of customers are satisfied with timing of water delivery.
- Average 80% satisfied with irrigation flow rates, the uniformity of flow rates, and the pressure or channel water level relative to their land.
- Satisfaction with irrigation supply interruptions is 68% for frequency of interruptions and 69% for duration of interruptions, declining since 2013.
- 89% of customer advised that having a secure supply of irrigation water was 'Very Important' to them.
- 52% of customers saw it as 'Very Important' to continue upgrading supply infrastructure.

Consistent with the above survey, key results from LMW's 2016 Annual Rural Survey are shown in Figure 8, indicating LMW's increasing levels of overall satisfaction, as well as a relatively high 'promoter' score compared to energy providers.

**Figure 8 Customer Survey Results for Overall Satisfaction**



This survey supported and extended the information from LMW's own annual customer survey process, and led to LMW identifying areas of service enhancement important to customers, including:

- Employ local staff and contractors where possible
- Provide personal service on the phone or through a local office
- Reduce greenhouse gas emissions

<sup>4</sup> Source: LMW Rural Customer Survey 2016

- Provide financial support to customers experiencing significant hardship
- Ability to access real time property or billing/payments information online
- Able to make account payments online or via smart phone.

In summary, LMW's customer engagement revealed strong customer views of:

**'Reliable service while containing costs',**

expressed in key preferences of:

- Deliver water when we need it,
  - minimise costs,
- maintain and improve services where possible, and
  - be responsive to our needs.

Further and more detailed and specific engagement identified the following rural customer needs and priorities<sup>5</sup>:

- There is high customer confidence in current management of the irrigation system
- LMW should not reduce the predictability or useability of supply or the level of service delivery
- Maintaining a fully staffed irrigation operations control room is important - human interaction is critical to service delivery while ensuring that technology plays a part in operational efficiency
- LMW should review improving safety of channels near schools with other stakeholders. Irrigators don't want to be the only ones paying for safety upgrades
- LMW should educate customers on the role of Delivery Share, manage specific customers affecting availability of water to others, and apply fair casual user fees
- LMW should replace tight spur lines in a progressive program, along with replacement of the ageing irrigation network to reduce interruptions
- LMW should consider expanding the urban water supply to nearby rural areas especially for stock and domestic users.

<sup>5</sup> Source: LMW Rural Customer Needs and Priorities, One Idea, May 2017

## 2.3 Proposed Outcomes Agreed With Customers

### 2.3.1 Proposed Outcomes, Outputs, Deliverables and Targets.

Following the initial engagement as described in the section above, LMW completed four rounds of engagement, debate and revision with the ten customer forums in order to review and refine the outcomes that customers were seeking. From this collaboration with customers, LMW adopted the following three customer outcomes plus an additional outcome directed at meeting its government obligations:

1. **Supply me with water when I need it**
2. **Keep my costs to a minimum**
3. **Be easy to contact and quick to respond**
4. **Comply with other government obligations**

These outcomes were expanded to include their performance measures and targets, LMW's commitment to major change projects and key operational activities, and inputs in terms of cost movements and resources required. The outcomes are detailed in Table 3 overleaf, in a format that is readily understandable and was agreed with customers. It is worth noting that three of the outcomes (all but 'Supply me with water when I need it') are also consistent with the outcomes proposed for urban services in LMW's 2018-23 Urban Price Submission.

**Table 3 Customer Outcomes**

What customers will receive	Supply Me With Water When I Need It
Performance measures and targets	<ul style="list-style-type: none"> <li>• Annual report to customers of performance against rural customer outcomes</li> <li>• Water orders delivered on time &gt; 98%</li> <li>• Channel / pipe bursts and leaks &lt; 65 per 100 km</li> </ul>
Major Change Projects	<ul style="list-style-type: none"> <li>• Upgrade tight spur lines (investment \$1.4 million over 5 years in Red Cliffs and Merbein)</li> <li>• Invest in 2 backup generator systems</li> <li>• Investment of \$1.6 million in replacement of meters for irrigation, diverters, and domestic and stock services in Millewa, to maintain meter and billing accuracy</li> <li>• Implement new water ordering website with 'mobile first' design.</li> </ul>
Key Operational Activities	<ul style="list-style-type: none"> <li>• Investment in irrigation pipeline renewals of \$9.15 million</li> <li>• Investment in drainage system renewals of \$1.5 million</li> <li>• Plan and secure our irrigation water needs</li> <li>• Engage on our service needs and report back on performance</li> <li>• Maintain safety and security of irrigation assets for growers and the community</li> <li>• Support reliability with backup generators</li> <li>• River water supply management to a higher level is promoted</li> <li>• Manage and maintain irrigation, drainage and domestic and stock water networks to meet agreed customer standards of service while adapting to changing customer needs</li> <li>• Minimise critical asset failures through replacement programs</li> <li>• Undertake condition assessment of critical irrigation pipelines with high potential for failure</li> <li>• Investigate potential assessment of methods for rehabilitating drainage lines</li> <li>• Ensure open communication channels between operations and customers</li> <li>• Maintain safety through managing channels near schools</li> </ul>
Inputs <ul style="list-style-type: none"> <li>• Cost movements</li> <li>• Resources required</li> </ul>	<ul style="list-style-type: none"> <li>• Total capital investment of \$28.3 million in irrigation and drainage systems</li> <li>• Increase in forecast power costs of an average \$1.18 million per annum over the PS4 period (over baseline cost).</li> </ul>

What customers will receive	Customer Outcome: Keep My Costs To A Minimum
Performance measures and targets	<ul style="list-style-type: none"> <li>• Deliver price path commitment for rural customers</li> <li>• Billing payment issues complaints less than 4 customers per year</li> <li>• 100% statutory compliance reports generated automatically</li> </ul>
Major change projects	<ul style="list-style-type: none"> <li>• Provide out-of-district extensions to enable reductions of tariffs in real terms</li> <li>• Develop and implement the Business Transformation project to improve productivity</li> <li>• Culture Program around 'running it like their own business'</li> <li>• Manage delivery share use. Promote regional growth through water security, attracting industry or supporting existing industry, regional development initiatives maximising the utilisation of existing irrigation networks, fostering crop diversity to enhance annual capacity management and customer economics</li> <li>• Develop innovative partnerships and shared services for support functions, and procurement collaboration to drive efficiencies in purchasing and delivering services</li> <li>• Review casual irrigation/D&amp;S supply user fees</li> <li>• Undertake Tariff review.</li> </ul>
Key operational activities	<ul style="list-style-type: none"> <li>• Manage customer billing payment issues complaints</li> <li>• Maintain and enhance hardship programs for vulnerable customers</li> <li>• Maintain long term financial viability and sustainability through full cost recovery</li> <li>• Improve asset management system to optimise whole of life cycle costs</li> <li>• Natural attrition will enable staff reductions to deliver efficiency gains</li> <li>• Promote growth by maximising utilisation of irrigation networks</li> </ul>
Inputs <ul style="list-style-type: none"> <li>• Cost movements</li> <li>• Resources required</li> </ul>	<ul style="list-style-type: none"> <li>• Reduction in labour costs due to use of technology in operations room</li> <li>• \$1.85 million cost savings delivered over the PS4 period, a substantial portion through natural attrition.</li> </ul>

What customers will receive	Be Easy to Contact and Quick to Respond
Performance measures and targets	<ul style="list-style-type: none"> <li>• Report our performance against all rural customer outcomes</li> <li>• Annual rural customer survey result for customer service 80% satisfied maintained or improved</li> <li>• Post-interaction satisfaction survey 150 completed and 80% satisfied</li> <li>• Complaints to EWOV (per 1000 customers) &lt; 0.9</li> <li>• Calls answered within 60 seconds 85%.</li> </ul>
Major Change Projects	<ul style="list-style-type: none"> <li>• Develop and implement the Business Transformation Project to improve customer's ability to easily contact LMW, obtain information, and order water</li> <li>• Completion of Customer Portal to improve customer's ability to easily contact LMW, obtain information, and request services, water ordering</li> <li>• Investment in Mobility to allow in-field resolution of issues</li> <li>• Implement an optional post-interaction satisfaction survey, including developers and customers seeking development services</li> </ul>
Key Operational Activities	<ul style="list-style-type: none"> <li>• Manage an efficient, customer-responsive water ordering and control system</li> <li>• Respond promptly and effectively to service requests and complaints</li> <li>• Deliver open and transparent customer and community engagement program</li> <li>• Manage customer services to comply with Water Customer Service Code including amendments relating to family violence</li> <li>• Maintain trained staff and resources to respond to service issues</li> <li>• Enhancing internal culture program to support 'customer centric' approach</li> <li>• Maintain functionality of Irrigations Operations Room - use technology where possible to ensure systems are efficient.</li> </ul>
Inputs <ul style="list-style-type: none"> <li>• Cost movements</li> <li>• Resources required</li> </ul>	<ul style="list-style-type: none"> <li>• Increase in two positions to support business process review - \$0.105 million per annum for 2 years</li> <li>• Training budget and HR budget for Culture Change program \$51,000 per annum.</li> </ul>

What customers will receive	Comply with Other Government Obligations and Initiatives
Performance measures and targets	<ul style="list-style-type: none"> <li>• 100% compliance with government reporting and policy requirements</li> <li>• Achieve growth aligned with customer outcomes and corporate strategy</li> </ul>
Major Change Projects	<ul style="list-style-type: none"> <li>• Extend community engagement to recreational water to consider shared benefits (LoE 4)</li> <li>• Develop/deliver strategy for gender equity and aboriginal inclusion (LoE 4 &amp; 6)</li> <li>• Review recreational water management plan for Lake Cullulleraine, and extend to maintenance of key community assets during drought periods</li> <li>• Assist with regional Catchment Management Authority water quality and Sustainable Diversion Limit projects</li> <li>• Partner with local stakeholders on Integrated Water Management.</li> </ul>
Key Operational Activities	<ul style="list-style-type: none"> <li>• Partner with DELWP on the strategic review project for recreational water (LoE 4)</li> <li>• Managing the business so that it meets its obligations and does not incur penalties for non-performance</li> <li>• Be the regional coordinator for Blue Green Algae monitoring and reporting (SoO 5.4.2)</li> <li>• Manage waterways and wetlands used for (rural) water supply to enhance ecological and recreational benefits and implement Murray-Darling Basin obligations (SoO 7.2.3)</li> <li>• Contribute to state development objectives and to development of sustainable irrigation policy</li> <li>• Monitor and report on compliance with obligations and if required, notify of failures and plan of action to rectify (SoO 8.1)</li> <li>• Arrange independent audits of compliance (SoO 8.2.2) or other audits (SoO 8.3.1).</li> </ul>
Inputs <ul style="list-style-type: none"> <li>• Cost movements</li> <li>• Resources required</li> </ul>	<ul style="list-style-type: none"> <li>• Victorian Protective Data Security Standards (VPDSS) - \$0.05 million.</li> <li>• Asset optimisation and AMAF attestation -\$0.29 million</li> <li>• Diversity and Aboriginal cultural connection - \$0.25 million.</li> </ul>

Notes:

LoE is the Minister’s Letter of Expectations

SoO is the Statement of Obligations

A number of regional and local projects have been developed to align with the customer outcomes and specifically address customer needs and priorities. These include:

- The investment in replacement of the worst performing irrigation spur lines based on failure analysis will improve LMW's ability to 'minimise costs' through a reduction in operating expenditure and improve 'supply me water when I need it'
- Replacement of the rising main from the Central Pump Station will substantially reduce the risk of a major supply outage, improving LMW's ability to 'supply me with water when I need it'
- Improvements in the service offered by the operations room through the use of improved technology will ensure improvements in 'being easy to contact and quick to respond'
- Continued initiatives to support growth in the region through the Sunraysia Rejuvenation Project and the proposed SMP2 will increase the amount of water pumped supporting 'keeping my costs to a minimum'.

*Notably, there are no significant customer-identified rural projects or activities that LMW has not included in its projects or activities.*

## 2.4 Proposed Performance Assessment and Reporting

Proposed performance standards and targets for reporting to customers are derived from the customer outcomes detailed in Section 2.3.1. Where possible and appropriate, LMW has utilised measures from the current ESC performance reporting suite to track performance and demonstrate improvement over time. These are supplemented by a range of relevant new measures agreed with customers during the engagement process, eg. a post interaction service satisfaction rating. The proposed Performance Assessment Criteria along with their annual targets are summarised in Table 4 overleaf and the broader Customer Activity Commitments are summarised in Table 5 overleaf.

Customers need to have the confidence that LMW is delivering on its commitments, or are able to understand if any changes have occurred.

All results will be published annually in summary on LMW's website with a supporting downloadable report, along with any interim reporting determined as appropriate and relevant. Results will be reported to and discussed at Strategic Advisory Committee (SAC) and CSAC meetings as part of normal meeting regimes.

In addition to the customer reporting outlined above, LMW has a range of reporting obligations under its Statement of Obligations, the Minister's Letter of Expectations and to other regulators, of which much is also required to be reported publicly.



**Table 4 Proposed Performance Assessment Criteria**

Customer Outcome	Performance Assessment Criteria	Average /Target WP3	Annual Target for Fourth Regulatory Period				
			2018-19	2017-18	2018-19	2017-18	2018-19
Supply me with water when I need it	Water orders delivered on time > 98%	99.86% /95%	> 98%	> 98%	> 98%	> 98%	> 98%
	Channel / pipe bursts and leaks < 65 per 100 km	62.6% /70%	< 64	< 63	< 62	< 61	< 60
Keep my costs to a minimum	Billing payment issues complaints per year.	4/no target	less than 4	less than 4	less than 4	less than 4	less than 4
Be easy to contact and quick to respond	Post-interaction satisfaction survey: # completed	N/A	150	150	150	150	150
	Post-interaction satisfaction survey: % satisfied	N/A	> 80%	> 80%	> 80%	> 80%	> 80%
	Number of complaints to EWOV per year.	7.5 /no target	< 7	< 7	< 7	< 7	< 7
	Calls answered within 60 seconds	83%/85%	> 85%	> 85%	> 85%	> 85%	> 85%
	Community satisfaction survey with % satisfaction maintained or increased	71.5% /no target	> 78%	> 79%	> 80%	> 81%	> 82%

Notes: WP3 is Water Plan 3 period from 2013 to 2017.

'N/A' signifies no previous data available.

'No target' signifies data previously collected but no target set.

**Table 5 Customer Activity Commitments**

Customer Outcome	Performance Measure/Target	Report Description
Supply me with water when I need it	Deliver capital plan on-cost and on-budget	Capital program progress against ESC approved capital expenditure budget and individually at major project level (> \$1 million value).
Keep my costs to a minimum	Deliver price path commitment for rural customers	Prices compared to ESC approved price path for all customer groups.
	Deliver 1% per annum efficiency improvement	Efficiency improvement on controllable opex from 2016-17 base year, measured net of growth, new obligations and abnormal events.
	100% statutory compliance reports generated automatically.	Status update on automatic compliance reporting.
Be easy to contact and quick to respond	Report our performance against all rural customer outcomes.	Status reporting of all performance measures, major change projects and key operational activities.
Comply with other government obligations	% compliance with government reporting and policy requirements	Status of compliance against government reporting requirements.
	Implement strategies to deliver Letter of Expectations and associated policies (Water for Victoria)	Status of strategies against Letter of Expectations and associated policies (Water for Victoria).

## 2.5 Delivering on Outcomes Commitments

LMW's strategy to engage more deeply and earlier with customers has already paid dividends in terms of improved customer relationships and a recognition by customers that LMW honestly and earnestly seeks a better understanding of their needs. Customers have advised that they are amenable to application, to the rural business, of the customer engagement and outcomes principles in the PREMO framework applied by the ESC to the Victorian urban water businesses.

LMW will use the improved customer relations identified above to maintain momentum by acting on its commitments before commencement of the next price period as well as establishing customer reporting arrangements based on the customer outcomes.

LMW has restructured the organisation to ensure that the customer is at the centre of its decision making. LMW's adoption of the Customer Engagement Strategy and the principles articulated by IAP2 means that there will be a greater level of customer engagement embedded throughout the entire organisation. The key aim of this is to ensure a better level of trust, service and appreciation between customers and stakeholders and LMW. As a part of this strategy roll out, staff have been trained in the principles of IAP2 so that it can be embedded across the organisation.

LMW will continue to meet with its Strategic Advisory Committee (SAC) and District-based Customer Service Advisory Committees (CSACs) and will be adopting new digital communication methods to ensure continual updates on achievements can be provided to customers and the broader community. This is to ensure accountability in meeting the outcomes agreed and that the actions LMW has articulated over the 5 year period are being completed.

Commitments have been made to customers to further engage and adapt to changing circumstances and changing customer preferences by:

- Maintain the representative focus group and conduct as a minimum, 6-monthly briefing sessions to advise on progress against the customer outcomes
- Undertaking periodic customer telephone surveys,
- Providing opportunities for indigenous engagement as our Reconciliation Action Plan develops and our relationship strengthens.

In this way the relevance of the outcomes and measures can be tested and refined as PS4 progresses. It is anticipated that this process will feed directly into the fifth regulatory period (PS5) and influence the annual business planning process.

### 2.5.1 Guaranteed Service Levels

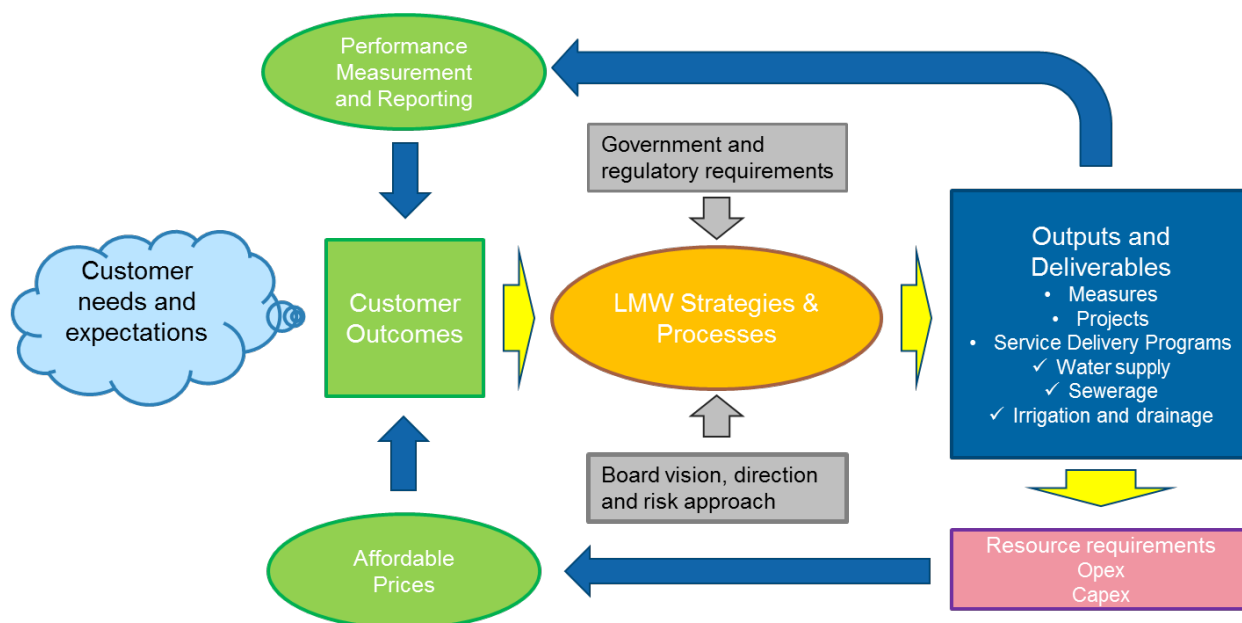
There is no regulatory requirement for Guaranteed Service Levels (GSLs) for the rural business. Nevertheless, LMW engaged with its customers on the need for rural GSLs and identified that customers consider compensation that effectively adds additional costs to the rural customer base is not productive. Customers want LMW to be responsive and quickly communicate service delivery issues, and focus available resources on improving the performance of the asset base.

# 3. LMW's Strategic Response and Management

## 3.1 LMW's Strategic Approach

LMW's overall process that demonstrates alignment or the 'line of sight' between customer outcomes, the vision and strategies, business outputs and deliverables and ultimately prices and service performance outcomes, is shown in Figure 9. This Price Submission has been developed using this process.

Figure 9 LMW's Strategic Alignment to Customer Outcomes



## 3.2 Government and Other Obligations

In addition to customer outcomes derived in close consultation with customers, LMW has a raft of legislative requirements and expectations from government stakeholders, many of which have a significant impact on the LMW business and its strategies, services, plans and processes. The most important of these include:

- Minister's Letter of Expectations<sup>6</sup> and Statement of Obligations<sup>7</sup>, with major changes derived from Water for Victoria: the State Water Plan<sup>8</sup>, including most significantly:
  - Climate change adaptation and net-zero carbon emissions
  - Aboriginal and recreational water values
  - Resilient and liveable cities and towns, including affordability
  - Diversity and inclusion.
- Department of Treasury and Finance, Asset Management Accountability Framework.

These requirements are integrated in the process outlined above, and will be met through the implementation of LMW's Vision and Strategic Themes explored below.

<sup>6</sup> 2017-18 Ministerial Expectations and Corporate Plan Guidelines for Water Corporations, 14 February 2017.

<sup>7</sup> Statement of Obligations, 20/12/15 (draft)

<sup>8</sup> Water for Victoria, State Government Victoria

### 3.3 LMW's Vision and Strategic Themes

To deliver the customer outcomes and government requirements and as part of LMW's strategic planning process, the LMW Board and Executive developed *Vision 2023*, its blueprint for the future. Inherent in Vision 2023 and all LMW's planning for delivery of services, LMW developed five key strategic themes:

- Optimise Irrigation Network Utilisation (specific to the rural business)
- Customer at the Centre
- Business Transformation
- Asset Optimisation
- Culture Change

The alignment between these strategic themes and the customer outcomes in Section 2.3.1 that they address, is shown in Table 6, demonstrating that all of the strategic themes are both essential and integral to delivering the agreed customer outcomes.

**Table 6 LMW Strategy Area Alignment to Customer Outcomes**

Customer Outcome	Strategic Theme				
	Optimise Irrigation Utilisation	Customer at the Centre	Business Transformation	Asset Optimisation	Culture Change
Supply me with water when I need it		✓	✓	✓	✓
Keep my costs to a minimum	✓	✓	✓	✓	✓
Be easy to contact and quick to respond		✓	✓		✓
Comply with other government obligations			✓	✓	

A range of supporting documentation is available to the ESC to underpin this submission, with more details of strategic projects, initiatives and their management. In particular, LMW's Corporate Plan<sup>9</sup> sets out more details of the business strategies and initiatives commenced and intended to progress through the next regulatory period. The more important aspects of each of the four strategic themes are summarised below.

#### 3.3.1 Optimise Irrigation Network Utilisation

This high level strategy is directed towards the key customer outcome of 'keep my costs to a minimum', as well as supporting growth in the region as an LMW enabler and sought through the Victorian Government's Water for Victoria plan (including key directions of 'Maximising the value of agricultural production', and 'Water for a growing economy'). The strategy comprises a number of key initiatives to:

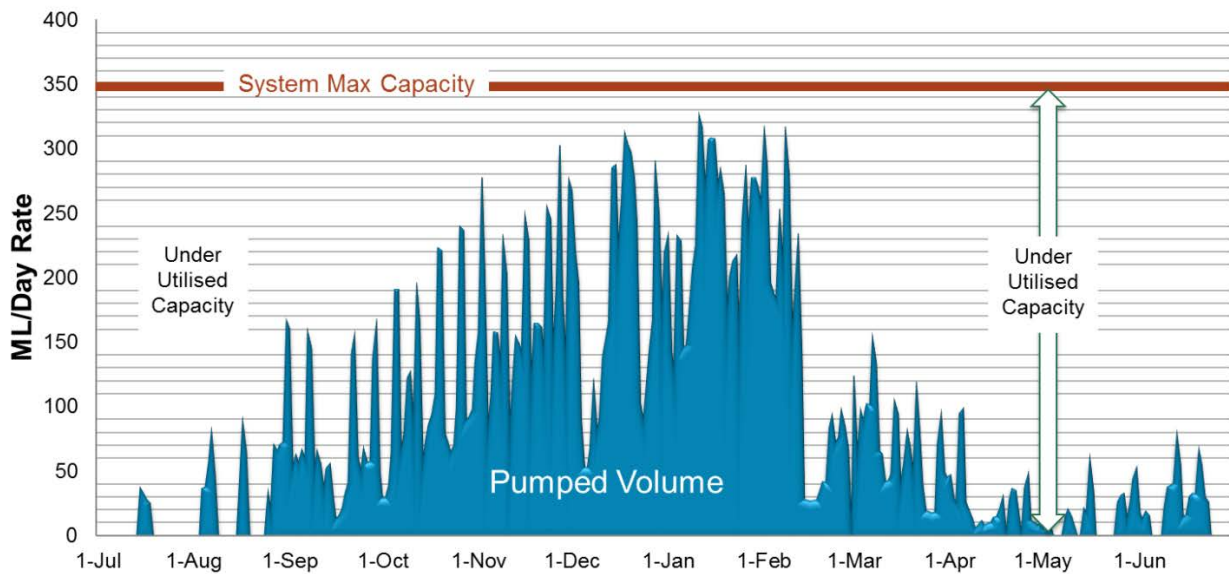
- Realise the benefits of SMP1 in terms of cost efficiencies and improved network reliability and metering, as discussed in Section 3.4.2.

<sup>9</sup> LMW Corporate Plan 2017-18

- Utilise the available or 'shoulder capacity' of the irrigation networks in the Merbein and Red Cliffs Irrigation Districts, through the Sunraysia Modernisation Project Stage 2 (SMP2), for out-of-district supply to new customers who are able to provide storage of water, without impacting on existing customer service needs.
- Maximise utilisation of the existing irrigation networks, in collaboration with other regional agencies, through the Sunraysia Rejuvenation Project (SRP), designed to consolidate currently unutilised smaller irrigation blocks into larger blocks and bringing them back into production.

Figure 10 below shows an example of the Merbein District showing the potential of the irrigation system to increase utilisation of both overall and shoulder capacity.

**Figure 10 Capacity Utilisation Opportunity**



### Sunraysia Modernisation Project Stage 2 (SMP2)

SMP2 will enable development of land which has high quality soils and low salinity impact to be developed for irrigation. These areas will have onsite storages sized to ensure that during periods of peak in-district demand the internal demands of the development can be sustained. The storages will be re filled after in-district demand has been met or during periods of reduced in-district demand. By pumping more water the fixed costs of the rural business will be spread over an increased base resulting in lower overall costs for all.

The SMP2 Business Case has sought a co-investment of \$3,025,000 from the Commonwealth Government under the National Water Infrastructure Development Fund (NWIDF) - Capital Component. The Business Case has not yet received approval from the State or Commonwealth Governments and, therefore, the benefits are not included in this version of the Price Submission. The benefits to customers identified in the Business Case include:

- Increased capacity utilisation of existing infrastructure that will result in a range of benefits to the existing 2,800 LMW irrigation customers including potential cost reductions in overall tariffs of between 1.5% and 2.5% depending upon the district and service,
- Net economic benefit of around \$40 million (in Net Present Value terms) from a State and National perspective and at a Benefit to Cost Ratio (BCR) of greater than 1.33, and

- 33 additional jobs (Full Time Equivalent) in Victoria, with 30 of those created in the Mildura regional economy.

SMP2 is also an example of the economic development role that LMW plays in its region.

### **Sunraysia Rejuvenation Project (SRP)**

The SRP aims to bring the dried off areas in existing irrigation districts back into agricultural production (rejuvenation) and to increase application rates for some crops such as table grapes. Not only will this outcome increase the productivity of the region but it will also improve the utilisation of the LMW irrigation network and lower unit costs.

The SRP is a joint initiative with the Mallee Catchment Management Authority (MCMA), Mildura Rural City Council, Department of Environment, Land Water and Planning (DELWP) and the Department of Economic Development, Jobs, Transport and Resources (DETJTR).

The SRP has successfully returned over 500 hectares to production over the past few years and it is estimated that about an additional 4,000 hectares of dried-off area may be suitable for rejuvenation. The project is now aiming to fast track rejuvenation by:

- Targeting agricultural crops that offer the highest economic value,
- Facilitating additional High Impact Zone Annual Usage Limit by working cooperatively with the MCMA,
- Assessing means of aggregating parcels of land into economically viable sizes, and
- Assessing the cost and commercial means of upgrading LMW infrastructure where required to deliver optimal application rates.

### **3.3.2 Customer at the Centre**

LMW's alignment towards 'Customer at the Centre' commenced and gained momentum during preparations for this Price Submission, and includes:

- As noted in Section 2.1, LMW embarked on a significant journey to engage customers more deeply, more broadly and earlier, through an overall Customer Engagement Strategy designed to build strong relationships with customers, communities and partners. This has been applied to engagement for the Price Submission and for major projects including the SMP2
- Embedding customer engagement methods through facilitated Focus Groups, increased external customer surveys, social media interaction and greater use of Customer Committees
- Creating the Executive Manager Customer and Stakeholder position and a Customer Experience Team that incorporates Revenue and Reception front-of-house services and puts all customer-facing roles into a single group. This has shared the message with LMW's community that the business is on a new path
- A new website and Customer Portal with improved accessibility and capacity for self-service in paying bills, reading meters, viewing and updating information. This will also improve services to developers, builders and plumbers
- Faster turnaround times for response to customer service requirements
- An aboriginal engagement action plan, including engagement with traditional owners to identify values in water management, cultural awareness for staff, and development of a partnership plan.

### **3.3.3 Business Transformation**

Business transformation is being led through the Transform project, which aims to streamline customer service delivery, operational efficiency and simplicity as well as reducing costs. This will enable LMW to serve its customers with greater flexibility and agility.

The Transform project will bring with it significant organisational change, namely:

- Improved customer interaction and information via social media
- Automated operations, business processes and reporting
- Flexible workforce enabled by mobility
- Transparency of information and improved decision making enabled by analytics
- Improved business continuity and resiliency enabled by cloud.

The project will also incorporate needs for managing data through data warehousing, standardising hardware platforms and software, and upgrading protective systems against emergencies and threats.

The appointment of a Chief Information Officer in 2016 has unified these business improvement activities under one champion, and the business case for Transform is being developed.

### **3.3.4 Culture Change**

This business transformation is not possible without the right skills and mindset in the business, and LMW has also commenced a journey to deliver a productive, performance driven culture.

LMW has initiated a highly consultative organisational restructure and recruited two new executives along with more effective succession planning. Further steps in 2017-18 are establishing the platform for benefits throughout the next regulatory period including:

- Community support and involvement through support for community events and organisations, educational events and programs, awareness of water issues, and community art
- A new performance management framework
- A training focus on people management
- Creating opportunities for improved diversity through improving recruitment processes, a traineeship and cadetship program, and ensuring that our promotional materials reflect the diversity of the organisation and our community
- Improvement to workplace culture through improved work methods and styles, as well as developing shared values and preferred behaviours to guide people in their work, as evidenced by Organisational Cultural Identity (OCI) survey results.

### **3.3.5 Asset Optimisation**

Optimising assets will contribute to improved customer outcomes in terms of service reliability and compliance, managed risk and efficiency of decision making and service delivery. The theme encompasses a range of initiatives covering management systems, lifecycle asset management (planning, asset acquisition, operations and maintenance, asset renewal and disposal), information systems and data (also linked to the Transform project) and capability (resources, skills and tools).



As part of this initiative, LMW has developed an implementation plan for compliance with the Asset Management Accountability Framework (AMAF) and the principles of ISO55000, the international standard for an Asset Management System.

In 2016, LMW commenced on a pathway to System Management, through introducing an 'input-activity-output' business process perspective to management of service delivery systems and networks. System Management will embed consideration of risk and efficiency with outputs focused on customer service outcomes.

Together, these initiatives will also:

- Assist the customer culture of LMW by a greater focus on the systems and processes which produce services to customers
- Promote greater clarity in customer service objectives at the level of each water-related system
- Improve the assessment of performance of systems and decision-making based on these assessments to address gaps and risks
- Improve the justification of resources and budgets, including business cases for new initiatives, and in turn to improve pricing submissions to regulators
- Improve efficiencies by targeting renewals programs to higher risk 'critical' assets, and optimising preventive maintenance and condition-based inspections.

### 3.4 Track Record in Performance

LMW has a strong track record in delivering commitments, managing service performance and meeting approved budgets over the past three regulatory periods. This section summarises LMW's performance and cost outcomes over the Water Plan 3 (WP3) period to date, and is intended to support LMW's management track record in the following section.

#### 3.4.1 Service Standards and Other Outcomes

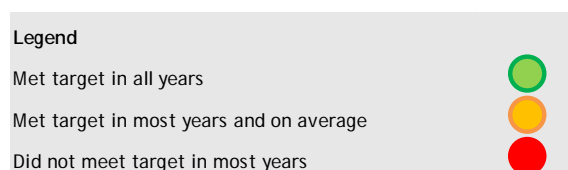
LMW has met or bettered most service performance targets approved for the WP3 period, as shown in Table 7. It is noted that SMP has had limited impact on the performance measures detailed in the Table, as the measures do not cover *availability* of irrigation services, where SMP has provided 365 day services to 66% of customers in the relevant districts.

The irrigation networks, with the exception of Robinvale and the trunk assets replaced through SMP, are ageing significantly and their service performance is deteriorating, as evidenced by the bursts and leaks in Mildura, Red Cliffs and Merbein. While LMW generally met the targets for Unaccounted for water, it is still in excess of 10% in all districts except the newly-replaced Robinvale. This level of service performance has led to LMW's strategy to implement a major irrigation pipeline replacement or renewal program, which is fully supported by customers.



**Table 7 Service Performance for 2013-18**

Rural Service Standards	Outcome to date					
	Whole of business	Merbein	Red Cliffs	Robinvale	Millewa	Mildura (FMID)
<b>Irrigation and Drainage</b>						
Irrigation water orders delivered on day requested %						
Number channel bursts and leaks (per 100km)						
Unaccounted for water (per cent)						
<b>Customer Service</b>						
Complaints to EWOV (per 1000 customers)						
Telephone calls answered within 60 seconds %						



Other notable improvements or outcomes over the WP3 period that improved customer service or managed risk included:

- Significantly faster turnaround times for customers wishing to expand their irrigation
- Proposed improvements in customer service via digital communications platform, improving customer’s ability to view bills and usage, pay accounts, submit a meter read, and update details.
- Implemented remote meter reading for all irrigation districts and for diverters.

### 3.4.2 Improvements in Customer Service Outcomes from SMP1

The Sunraysia Modernisation Project Stage 1 (SMP1) was delivered, under budget and within the planned timeframe, to meet its objectives of:

- Securing a long term sustainable future for Sunraysia irrigators in the context of climate change and reduced water availability, and
- Delivering a substantial and lasting return of water to the environment to secure real improvements in river health.

SMP was designed to provide a modernised system capable of meeting the needs of current and future irrigation businesses and delivered a range of quantifiable benefits to local farming businesses, to LMW in the operation and maintenance of the system, to the environment of the Murray-Darling Basin and to the local Mildura community.

The original business case for SMP was aimed at delivering 365-day irrigation access in Sunraysia to 885 irrigation outlets, 5801 hectares or 49% of irrigation outlets in Sunraysia. The project delivery model used, allowed significant enhancements to Red Cliffs and Mildura areas. The final enhanced SMP scope provided 365-day irrigation access to some 1334 irrigation outlets serving 8652 hectares, or 66% of irrigation customers in those Districts - a total increase in service for some 15% of Sunraysia’s Irrigation Outlets. Customers downstream of the pipelines receive increased access to winter supply due to a reduction in channel maintenance times and therefore system shutdown. Additional benefits to customers included improved

network reliability and water quality, enhanced metering and water ordering, as well as reduced operating costs and requirements for current and future asset replacement, enabling them to increase production, diversify their farm businesses and invest in new horticulture.

The water quality issues relating to sediment, weeds, algae and wind-blown contaminants have been eliminated for customers serviced through the pipelines. Customers downstream of the pipelines now receive improved water quality, resulting in less time and money for farmers in cleaning and servicing filters and pumps in their on-farm irrigation systems.

The project also delivered water recovery targets for the Murray-Darling Basin from the Red Cliffs, Mildura and Merbein Districts through transfer of 7.0 GL of water savings to the Commonwealth.

The project provided a strong base for the PS4 period by replacing the trunk infrastructure, modernising the pump stations, and automating the channel control systems. This has reduced the budgeted repair and maintenance and meter reading costs for this upgraded infrastructure. Further, the SMP investment has allowed LMW to invest in a planned irrigation network replacement program to have a direct impact on reducing channel / pipe bursts and leaks. Cost reductions are reflected in the proposed operating expenditure in Section 5.3.

Importantly the SMP project has laid the foundation for the SPM2 project which will optimise the utilisation of the available system capacity providing financial benefits for all system users.

The upgrade of pump stations and replacement of high risk areas of raised channel reduces the incidence of system shut down and potential loss of production and crop failure.

It is estimated that this will result in an additional 400 ha of irrigated production over the next 5 years in those areas of the system compared to the previous situation supplied through open channels.

Administrative cost saving in billing efficiency and management of water usage data, reduction in meter read errors and efficiency in water trading transactions has been achieved through the installation and upgrade of modernised meters. Real-time and accurate water use data allows LMW to more closely monitor and manage water delivery through the system, identify any unmetered usage or meter errors and provide more efficient billing processes to customers. Accurate measurement and reading of meters is consistent with the National Water Initiative.

### **3.4.3 Actual Capital Expenditure for the Delivery of Outcomes**

Actual capital expenditure over the WP3 period is expected to be \$131.68 million (\$M 1/1/18) comprising \$18.19 million for business-as-usual capital and a further \$113.49 million for SMP, as shown in Table 8. The business-as-usual amount plus LMW's contribution to SMP of \$17.35 million, a total of \$35.54 million, compares to an ESC approved forecast of \$37.72 million. Figure 11 indicates the relative comparison of the amounts for the WP3 period.

LMW's contribution to SMP comprised a number of the approved capital projects which were included in the ESC's Final Decision for WP3, that were transferred into SMP when the project was signed off by government.

All other planned projects and renewals programs were completed, generally under budget enabling LMW to deliver a number of new projects arising from undertaking risk and condition assessments.

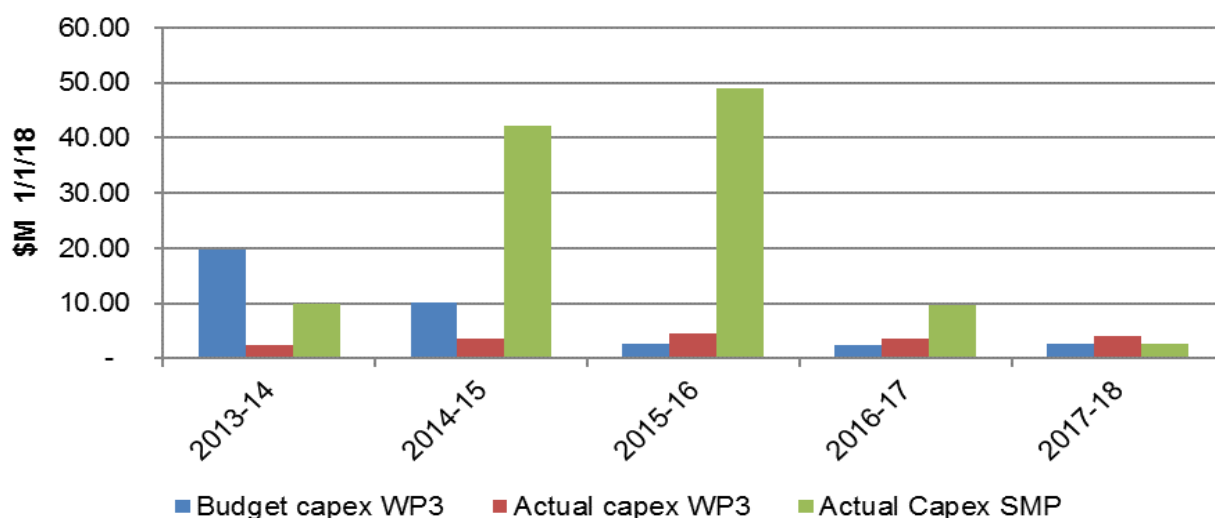
In all cases, changes made to projects were fully justified internally, approved by the Board where required, carefully planned and considered options and risks as appropriate. Projects were delivered either through competitive tendering processes, or within available internal resources for some projects.

All capital expenditure is considered to be prudent and efficient in accordance with WIRO regulatory requirements.

**Table 8 Actual Capital Expenditure for 2013-18 - \$M 1/1/18**

\$M 1/1/18	2013-14	2014-15	2015-16	2016-17	2017-18	Total WP3
Irrigation (excluding SMP)	1.61	3.31	4.13	3.46	3.69	16.19
Drainage	0.35	0.23	0.20	0.08	0.18	1.03
Domestic and stock	0.14	0.02	0.00	0.00	0.05	0.21
Surface water diversions	0.26	0.11	0.11	0.17	0.09	0.75
<b>Actual Capital Expenditure (exc SMP)</b>	<b>2.36</b>	<b>3.67</b>	<b>4.44</b>	<b>3.71</b>	<b>4.02</b>	<b>18.19</b>
SMP Actual Capex (LMW contribution)	7.97	9.38	0.00	0.00	0.00	17.35
SMP Actual Capex (Gov contribution)	2.05	32.86	48.94	9.75	2.55	96.14
<b>SMP Total Capital Expenditure</b>	<b>10.02</b>	<b>42.24</b>	<b>48.94</b>	<b>9.75</b>	<b>2.55</b>	<b>113.49</b>
<b>Total Prescribed Capital Expenditure</b>	<b>12.38</b>	<b>45.90</b>	<b>53.38</b>	<b>13.46</b>	<b>6.57</b>	<b>131.68</b>
<i>ESC Approved Forecast (exc SMP)</i>	<i>19.69</i>	<i>10.07</i>	<i>2.77</i>	<i>2.54</i>	<i>2.65</i>	<i>37.72</i>

**Figure 11 Actual Capital Expenditure Compared to Approved Forecast**



### 3.4.4 Actual Operating Expenditure for the Delivery of Outcomes

Actual operating expenditure over the WP3 period is expected to be \$112.90 million, as shown in Table 9 overleaf, compared to an ESC approved forecast of \$117.14 million as depicted in Figure 12.

**Table 9 Actual Operating Expenditure for 2013-18**

\$M 1/1/18	2013-14	2014-15	2015-16	2016-17	2017-18	Total WP3
Irrigation	10.87	11.37	12.21	11.72	10.94	57.12
Drainage	2.37	2.38	2.80	2.87	2.72	13.13
Domestic and stock	1.02	0.57	0.57	0.64	0.59	3.39
Surface water diversions	1.10	1.06	1.26	1.22	1.30	5.94
Non controllable costs	5.40	5.25	5.32	4.28	3.66	23.92
SMP1	1.37	2.84	2.08	1.39	0.35	8.04
SMP2	0.00	0.00	0.00	1.36	0.00	1.36
<b>Total Prescribed Operating Expenditure</b>	<b>22.14</b>	<b>23.48</b>	<b>24.24</b>	<b>23.48</b>	<b>19.55</b>	<b>112.90</b>

The controllable costs over the WP3 period were slightly higher than that approved by the ESC in the Final Determination by \$0.98 million, or 1.25%.

The actual controllable costs include \$0.46 million of expenditure related to maintenance works on connection valves carried out in conjunction with the SMP project but outside of the SMP scope of works. These additional connection works were not planned for within WP3, however LMW took advantage of completing these works at the same time SMP works were being carried out on the same connection point. Scheduling these works in conjunction with SMP saved LMW the plant mobilisation and site setup costs that would have been occurred if done in isolation at a later date.

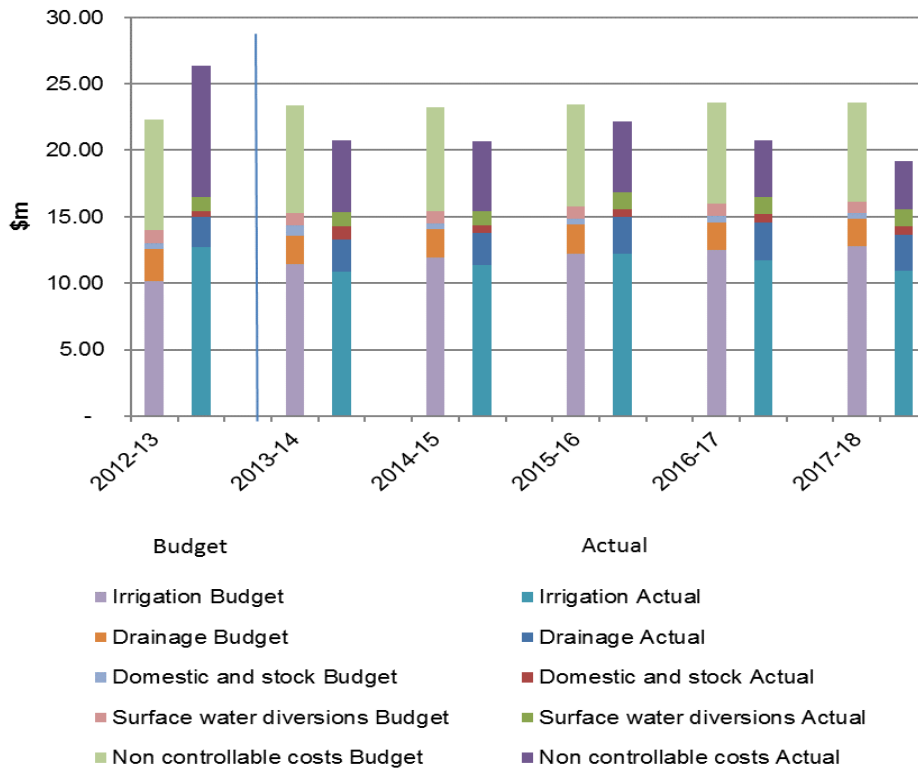
Also included in the forecast costs for 2017-18 are costs relating to new obligations placed on LMW in the Minister's Letter of Expectations 2016 to increase Aboriginal engagement and cultural diversity; as well as initial business transformation labour costs which will not have an offset saving due to the infancy of the project.

The SMP1 and SMP2 projects were not included in the WP3 submission due to both projects being uncertain and unknown at the time of WP3 formation and should not be included in the comparison of actual operating expenditure and WP3 ESC approved operating expenditure.

Overall the operating expenditure is lower than the approved determination by 5.3%. This is mainly due to the uncontrollable costs which have been offset within the revenue as the majority is attributed to pass through costs of Goulburn-Murray Water (GMW) Entitlement Storage Fees (Bulk Water). The reduced costs were due to:

- Transfer of an estimated 10,000 ML of non-water users from LMW customer base to GMW and hence reduced pass through bulk water costs LMW incurred.
- GMW has reduced the unit cost rates for the bulk water that it bills.
- The SMP business case allowed for small operating expenditure savings however as the project has not been completed for any great period of time, it has little impact on the WP3 period.

**Figure 12 Actual Operating Expenditure Compared to Approved Forecast**



### 3.4.5 Actual Revenue for 2013-18

Table 10 overleaf and

Figure 13 overleaf shows actual prescribed tariff revenue over the WP3 period is expected to be \$140.55 million, compared to an ESC approved forecast of \$151.80 million. The actual revenue excludes SMP government contributions of \$6.50 million (including interest earned) received during the WP3 period.

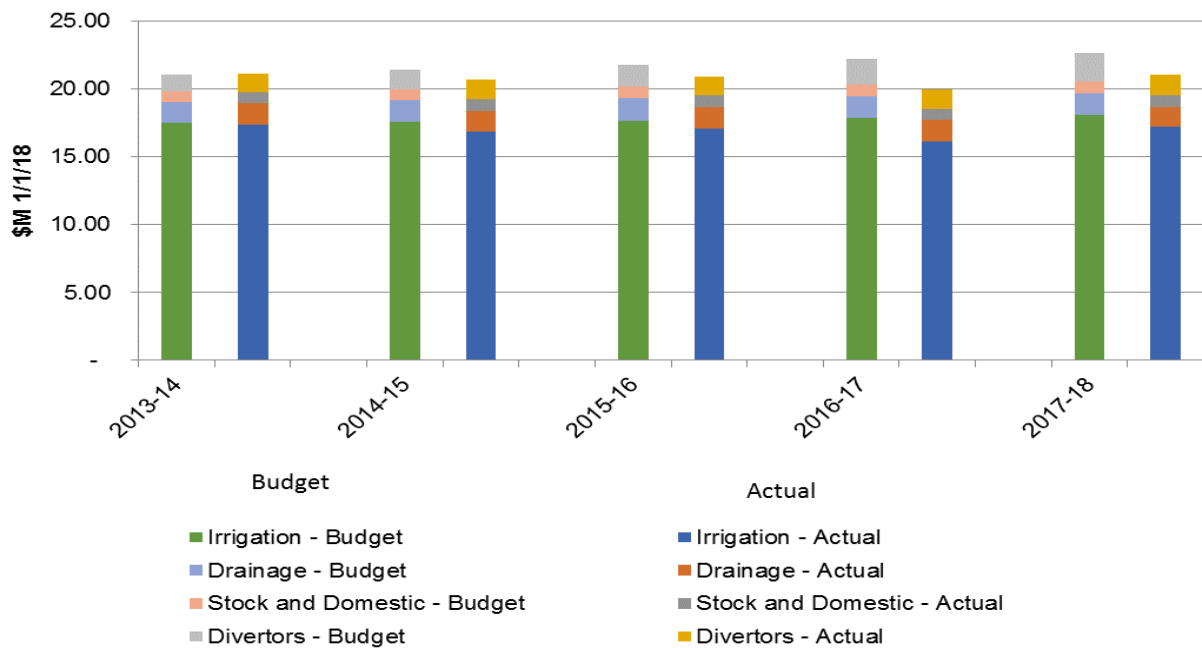
Significant impacts on the reduced revenue for the period include:

- The LMW Board strategy to set prices below the maximum allowable in consideration of its customers' business climate, commodity prices and debt carryover
- The private diverters specifically negotiated with the LMW Board to gain price relief through a reduced WP3 price path to reduce their service sector's cash balance.
- Reduction in revenues resulting from transfer of customers to GMW and reduced bulk water charges from approved.

**Table 10 Actual Revenue for 2013-18**

Revenue Component	2013-14	2014-15	2015-16	2016-17	2017-18	Total WP3
<b>Irrigation and Drainage Revenue</b>						
Mildura Irrigation and Drainage	6.44	6.45	6.51	6.18	6.41	31.99
Mildura HPS	0.89	0.89	0.88	0.83	0.89	4.37
Merbein irrigation and Drainage	2.72	2.57	2.61	2.49	2.64	13.02
Red Cliffs irrigation and Drainage	4.56	4.11	4.07	3.89	4.13	20.76
Robinvale irrigation and Drainage	4.11	4.18	4.40	4.13	4.44	21.26
<b>Other Revenue</b>						
Other drainage	0.19	0.18	0.18	0.18	0.18	0.90
Millewa Urban (Irrigation)	0.09	0.09	0.09	0.08	0.09	0.43
Millewa Rural (Irrigation)	0.74	0.78	0.77	0.77	0.77	3.84
Other stock and domestic (Irrigation)	0.01	0.01	0.01	0.01	0.01	0.03
Diversions (Irrigation)	1.38	1.43	1.42	1.43	1.47	7.13
<b>Total Revenue</b>	<b>21.12</b>	<b>20.68</b>	<b>20.93</b>	<b>19.97</b>	<b>21.01</b>	<b>103.72</b>

**Figure 13 Actual Tariff Revenue Compared to Approved Forecast**



# 4. Management

## 4.1 Management of the Price Submission

In September 2016, LMW developed a comprehensive Project Plan<sup>10</sup> and program for preparation, review and verification of this Price Submission. Key parts of the delivery process included:

- Established governance arrangements<sup>11</sup> involving the Board, Finance and Audit Committee, a PS4 Governance Group comprising the Executive Team and Finance Manager, a Project Delivery Team, along with processes to support oversight and review, direction and decisions,
- Regular tracking of Price Submission progress and risks, and reporting to the Executive Team and Board<sup>12</sup>,
- Accelerated and adaptive customer engagement program delivered through the entire Price Submission preparation,
- Planning and progressive delivery of papers on each key Price Submission input for critical review by the Finance and Audit Committee prior to Board approval,
- Risk assessment to treat and mitigate risks associated with or arising in the course of preparation of the Price Submission<sup>13</sup>, and
- Automated financial model processes to ensure financial table and figure outputs are directly input into the Price Submission document.

## 4.2 Managing Risk

Significant risks that may have a material impact on customer services or prices are summarised in Table 11 overleaf, along with LMW's proposed risk mitigation strategies and residual customer risks. LMW has supporting documentation detailing the basis for the risk allocation<sup>14</sup>, and the risk tools and strategies adopted by LMW for their management.

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<sup>10</sup> PS4 Project Plan 28-09-2016

<sup>11</sup> PS4 Planning Workshop Minutes 28 September 2016.

<sup>12</sup> Example, Board Pricing Submission 20170223 v4.

<sup>13</sup> Delivering PS4 Risk Assessment

<sup>14</sup> LMW Price Submission 2018-23, Risk Management

**Table 11 Risk Management and Mitigation Tools**

Risk	Risk Description	Risk Mitigation/Allocation
Demand	<ul style="list-style-type: none"> <li>• Demand Forecasting approach</li> <li>• Tariff structure providing control for customers.</li> <li>• Board practice of returning revenues to customers where demand significantly exceeds forecast.</li> </ul>	Low risk of higher costs over the period in the event of higher than forecast demand, due to LMW practice of returning revenues to customers where demand significantly exceeds forecast.
Uncertain projects	<ul style="list-style-type: none"> <li>• Uncertain projects are included within the Capex program and result in higher costs being allocated to customers</li> </ul>	In depth business cases and detailed investigations of proposals lead to projects being assessed as 'uncertain' being delayed to PS5 or abandoned. For example Red Cliffs water intake suction.
Managing capital costs - planning /construction /project management	<ul style="list-style-type: none"> <li>• Long term strategies and relevant investigations</li> <li>• Capital program development and approval process.</li> <li>• Robust cost estimation and refinement as projects progress through planning, development and design.</li> <li>• 'Most likely outcome' cost estimates developed for major projects (premature to develop P50 cost estimates due to incomplete scoping of projects at this early stage).</li> <li>• Major project delivery risk assessments.</li> <li>• Project Business Cases and justifications.</li> <li>• Capital program delivery management within resource constraints.</li> <li>• Contract Management Manual.</li> </ul>	<ul style="list-style-type: none"> <li>• Limited risk of cost implications from major project cost overrun that would be passed onto customers.</li> <li>• Low risk of service failure due to inability of L:MW to complete capital projects on time to meet demand or compliance requirement.</li> </ul>
Financial risks - electricity prices	<ul style="list-style-type: none"> <li>• Price adjustment mechanism for electricity price changes.</li> <li>• Shared risk for increases and decreases.</li> </ul>	Partial risk of higher bills due to significantly higher electricity prices than forecast.

### 4.3 Regulatory Period

Under Rule 24 of the WCIR, LMW proposes a five-year regulatory period from 2018-19 to 2022-23, consistent with previous practice and to align with the proposed urban regulatory period.

LMW notes the ESC's advice<sup>15</sup> that it proposes to set a five-year regulatory period from 1 July 2018, but that the regulatory period 'may need to be reviewed depending on the timing and outcomes of the Commonwealth's review of the WCIR'.

<sup>15</sup> ESC 2018 Lower Murray Water Rural Price Review, Guidance paper for rural infrastructure services, February 2017, Section 2.1.



# 5. Revenue Requirement

## 5.1 Overview of Revenue Requirement

Table 12 summarises the revenue requirement from the last year of the Water Plan 3 period through the PS4 period.

The table shows the 2017-18 WP3 revenue requirement of \$30.64 million falling to \$25.98 million in the first years of the PS4 period. This is mainly due to the operating expenditure building block component of the revenue requirement.

As explained in section 3.4.4 above, LMW’s actual operating costs in the WP3 period were significantly lower than forecast. The majority of the reduction was in the non-controllable costs of the GMW bulk water costs. As this cost is a ‘pass through’ LMW’s revenue was also reduced.

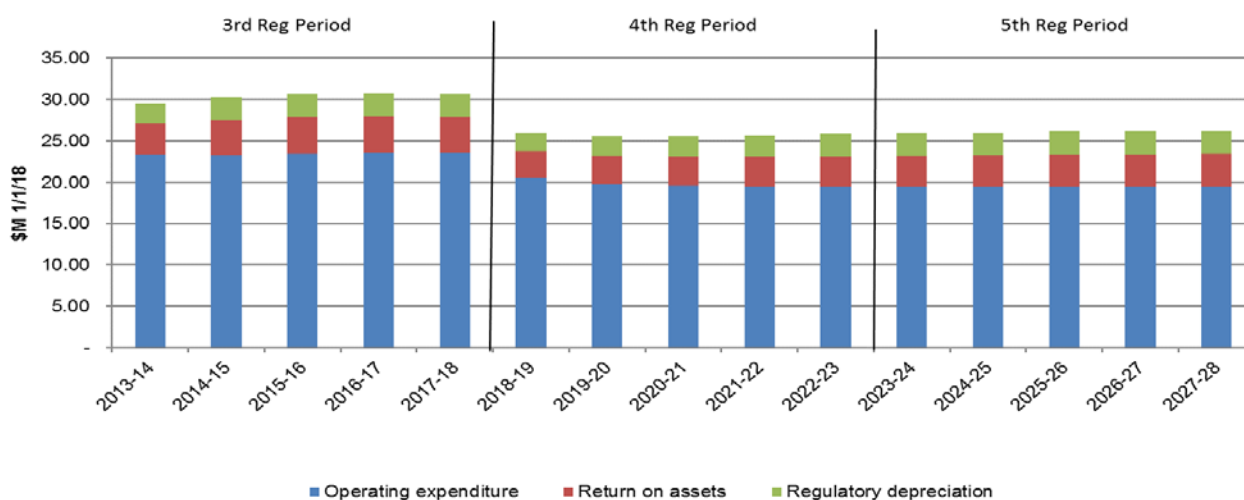
From the starting point of the PS4 period, where the operating cost for bulk water has been re-aligned, LMW’s revenue requirement remains relatively flat going forward.

**Table 12 Revenue Requirement - \$M 1/1/18**

	Current	Fourth Regulatory Period				
(\$M 1/1/18)	2017-18	2018-19	2019-20	2020-21	2021-22	2022-23
Operating expenditure	23.56	20.58	19.77	19.56	19.54	19.48
Return on existing assets	2.88	2.91	2.81	2.73	2.64	2.57
Return on new assets	1.44	0.25	0.60	0.78	0.92	1.05
Regulatory depreciation of existing assets	2.77	2.03	1.86	1.72	1.60	1.52
Regulatory depreciation of new assets	-	0.21	0.57	0.81	0.99	1.21
Adjustments from last period	-	-	-	-	-	-
Benchmark tax liability	-	-	-	-	-	-
<b>Total revenue requirement</b>	<b>30.64</b>	<b>25.98</b>	<b>25.61</b>	<b>25.59</b>	<b>25.70</b>	<b>25.83</b>

Figure 14 depicts the revenue requirement through to the PS5 period, similarly showing a relatively flat revenue requirements out to 2027-28.

**Figure 14 Revenue Requirement - \$M 1/1/18**



Note: Third period revenue is requirement per ESC Decision for 2017-18, not actual.

## 5.2 Demand

### 5.2.1 Rural Demand Context and Drivers

LMW revenue is dependent on demand from several relatively discrete markets:

- Pumped districts irrigation
- Private diversion
- Stock and domestic and other services

Demand changes impact on capital and operating costs but not to the extent they do for the urban business. The pumped irrigation districts were largely established decades ago and have not been expanded significantly to date as new capacity for irrigation has been built on greenfield sites that are serviced by private diversion. Other services, which include drainage and stock and domestic services, are not major revenue items so even in periods of change, the impact on revenue can be relatively minor.

Diverters use much larger volumes of water than customers in the pumped irrigation districts. Nonetheless the work and costs associated with diverters tends to be similar regardless of the volume of water being managed as all of the assets used to divert water are owned by the customers.

### 5.2.2 Basis for Demand Forecasts

Charges to LMW's rural customers are levied on the following bases:

- Irrigation:
  - Delivery share, measured as ML of delivery share (being the maximum volume of water able to be delivered in a 14 day period)
  - Usage, measured in terms of ML of actual water delivered
  - Entitlement storage fees, measured in ML of water shares held in the Victorian Water Register, with charges differentiated according to the source of water
  - A service charge levied on each account.
- Drainage for irrigation customers:
  - Fees are levied on the basis of delivery shares.
- Water Works District:
  - Per connection and per ML usage.
- Millewa stock and domestic districts:
  - Number of connections
  - Per kilolitre (kL) usage
  - Number of scrub or stocked hectares on each account.
- Private diverters:
  - Largely based on ML per annual use limit, plus
  - Pass through GMW charges based on per ML water shares held in the Victorian Water Register as at 1 July each year for the forthcoming year.

### 5.2.3 Demand Forecast

This section summarises the demand forecasts for all services making up the charging base for the rural business. These forecasts form the basis of future revenue and the water volume forecasts that underpin LMW's capital expenditure requirements. In broad terms:

- Delivery shares are projected to remain stable with small growth throughout the regulatory period where previously Small Block Irrigation Exit Grant (SBIEG) properties are now being redeveloped by neighbours expanding their land holdings.
- Water share in the irrigation districts are also predicted to be relatively constant.
- The key factor in determining demand usage is the amount of allocation provided, and the weather.

## Pumped Irrigation

The University of Melbourne conducted an analysis of the linkage between evapotranspiration rates and average daily temperatures. Combined with the long term warming trend of the Sunraysia climate this report gave confidence to LMW that its demand forecast showing increases in demand was realistic.

The Mildura District demand is forecast to increase slightly due to more favourable business conditions and development occurring within the district. This district is also suffering from urban encroachment which has limited the forecast growth.

The Merbein District demand is forecast to increase as it is showing signs of re development of dried off areas as business conditions improve. The introduction of different crop types such as almonds and table grapes within the district, which have a higher MI/ha usage, is driving the increase in forecast demand.

The Red Cliffs District demand is also forecast to increase slightly as redevelopment and transition to higher MI/ha crop types continues.

The Robinvale District is fully developed and LMW does not foresee any changes to the district's crop types so demand is forecast to be flat.

Private diverter demand is expected to grow consistently with the recent past

Table 13 shows the forecast volumes for all services. Detailed analysis of the basis for each component of the charging base are provided in Appendix A.

**Table 13 Rural Services Forecast Volumes Summary- ML pa**

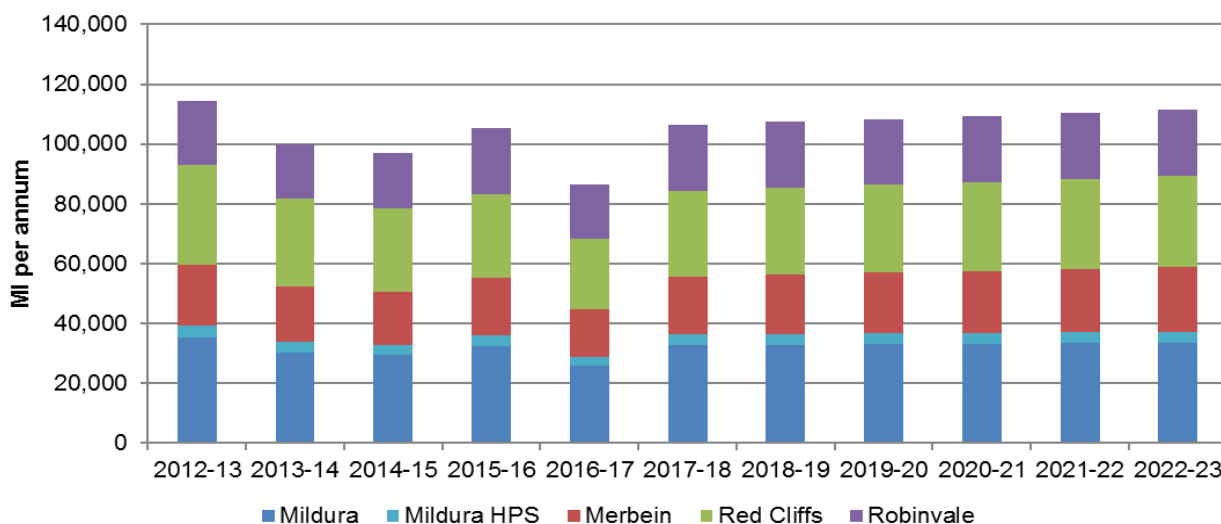
Service/District	Current	Fourth Regulatory Period				
	2017-18	2018-19	2019-20	2020-21	2021-22	2022-23
<b>Pumped Irrigation</b>						
Mildura	32,736	32,899	33,064	33,229	33,395	33,562
Mildura HPS	3,486	3,504	3,521	3,539	3,557	3,574
Merbein	19,546	19,937	20,335	20,742	21,157	21,580
Red Cliffs	28,528	28,955	29,390	29,831	30,278	30,732
Robinvale	22,082	22,082	22,082	22,082	22,082	22,082
<b>Total Irrigation</b>	<b>106,377</b>	<b>107,376</b>	<b>108,392</b>	<b>109,422</b>	<b>110,468</b>	<b>111,530</b>
<b>Stock &amp; Domestic</b>						
Millewa Urban	49	49	49	49	49	49
Millewa Rural	850	850	850	850	850	850
<b>Diversers</b>						
Diversers	587,793	593,295	615,548	633,751	646,031	657,565

Figure 15 overleaf shows the actual historic volumes delivered to the irrigation districts since 2012-13, and the forecast for the fourth regulatory period.

The historical volumes show the impact of wet and dry years and industry conditions. It can be seen from Figure 15 that over the majority of years in WP3 actual total usage has

been below the forecast of total usage for PS4. The allocation of risk of actual demand not meeting forecast demand lies with LMW, particularly when taking into account the history of LMW not recovering foregone revenue.

**Figure 15 Historic and Forecast Water Usage Irrigation Districts (ML pa)**



## 5.2.4 Other Services

### Water Trading

Water trading is now a key feature of the sector. LMW anticipates continued trading in both permanent water shares and in annual allocation as irrigators reposition their businesses to manage risk and to maximise commodity price opportunities.

### Drainage

Drainage services are expected to be maintained at existing levels for the duration of the regulatory period.

## 5.3 Forecast Operating Expenditure

### 5.3.1 Actual and Planned Operating Expenditure

Table 14 sets out LMW’s proposed prudent and efficient operating expenditure for each year of the fourth regulatory period, across each major service category. The total operating expenditure for the period is \$98.93 million in real dollars (\$1/1/18).

**Table 14 Actual and Planned Operating Expenditure - \$M 1/1/18**

\$M, 1/1/18	Current Period		Fourth Regulatory Period				
	2016-17	2017-18	2018-19	2019-20	2020-21	2021-22	2022-23
Irrigation	11.72	10.94	11.80	11.38	11.27	11.24	11.27
Drainage	2.87	2.72	2.68	2.70	2.65	2.66	2.59
Domestic and stock	0.64	0.59	0.98	0.57	0.56	0.56	0.57
Surface water diversions	1.22	1.30	1.28	1.28	1.26	1.26	1.23
Non controllable costs	4.28	3.66	3.83	3.83	3.83	3.83	3.82
<b>Total prescribed opex</b>	<b>20.73</b>	<b>19.20</b>	<b>20.58</b>	<b>19.77</b>	<b>19.56</b>	<b>19.54</b>	<b>19.48</b>

The table separates out the costs that are not controllable by LMW which relate to GMW bulk water cost, environmental levy contribution and the regulatory licence fees of the ESC. Some of these non-controllable costs are pass through fees, detailed in Section 5.3.3.

Controllable operating expenditures are expected to increase by 0.16% on average per annum over the period. Material expenditure impacts are:

### **Electricity**

The primary increase in controllable operating expenditure is due to the forecast increase of electricity prices. In year 2018-19, electricity costs equate to approximately 28% of LMW's overall controllable costs. LMW currently has a favourable power contract which expires on 30 June 2018. For the PS4 period of 2018-23, LMW forecasts the power costs based on a forecast price path provided by power pricing experts, Ernst & Young. Their price forecast was modelled on LMW's power consumption, energy demand profile, energy tariffs and water usage/delivery forecast. The forecast electricity price fluctuates throughout the PS4 period but on average is an increase of \$1.18 million per year on 2016-17 costs. To manage the risk to LMW and the customer, as detailed in Section 6.3.2, a price adjustment mechanism is proposed.

### **Labour**

LMW's current EBA is due to expire on 30 June 2018. LMW has forecast an annual increase of 0.7% (real) for pay rates throughout the PS4 period however has forecast an overall cumulative reduction in labour expense of \$0.345 million on the 2016-17 baseline labour cost. To achieve the labour cost reduction, LMW has forecast a reduction of an equivalent of 5 FTE staff within the rural business. The labour resource reduction will come by natural attrition and retirements.

### **Business Transformation**

LMW recognises that it can streamline business processes with the use of technology and enable the information and procedural tasks to flow more efficiently throughout its workforce. To enable the labour resource reduction LMW has initiated the Business Transformation project. LMW undertook an organisational restructure throughout 2016-17 which aligned LMW's labour resources with its corporate goals and objectives. Within the restructure 2 new executive manager positions were created, Chief Information Officer and Executive People & Culture. The restructure with the additional executive managers complementing the business transformation project will enable LMW to realise labour force efficiencies through the PS4 period.

As examples of the business transformation benefits:

- LMW has invested in a new corporate website which will be launched during 2018. The new website will enable our customers to interact with LMW without the need to contact staff members. The website will be interactive and enable customers to view their water bills, change personal information, inform LMW of tenant movements, request meter readings and have links with Centrelink for rebate card validation.
- Another valuable benefit to customers and LMW alike will be that the website will link to LMW's new Customer Relation Management (CRM) software which captures all dealings that occur between LMW and the customer. This will save valuable time when a staff member is interacting with customers.

### **Sunraysia Modernisation Project**

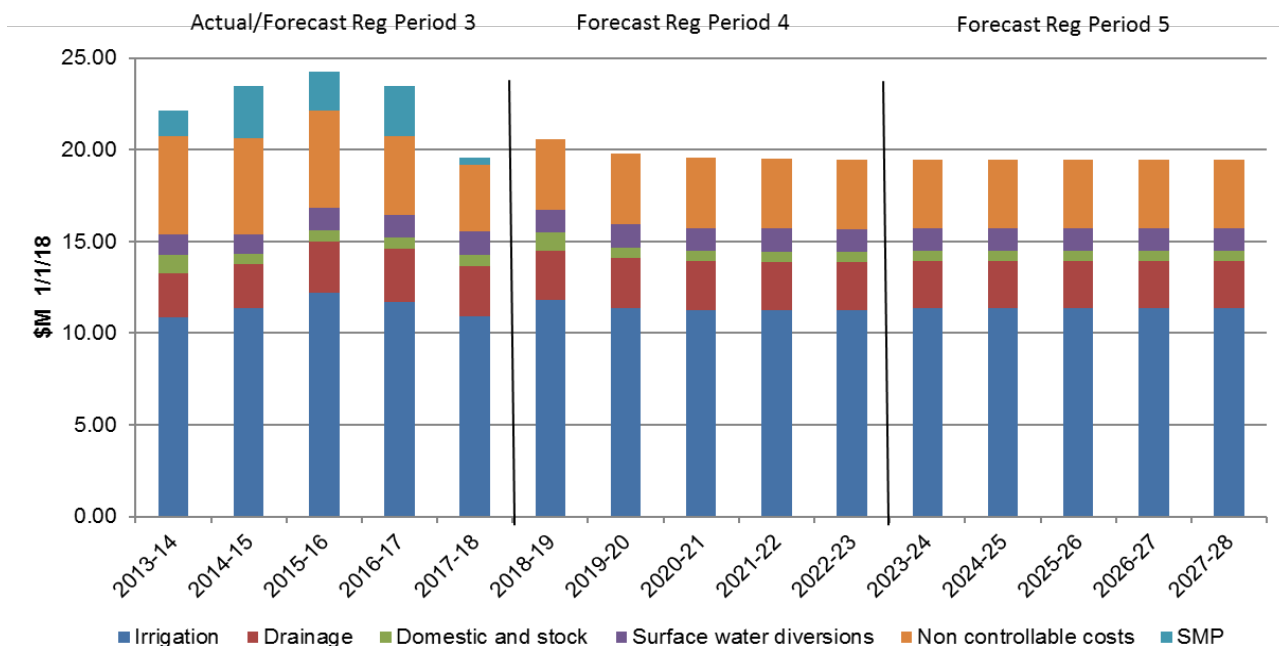
Although operational and maintenance savings were not one of the key outcomes of the SMP project, nevertheless it will generate some. Due to the change in technology with

the new irrigation meters LMW has also forecast additional operating and maintenance costs which negate the level of cost reduction generated. Specific information on SMP operating cost impacts are set out in Section 5.3.4.

Accompanying this document is the financial model template which provides the ESC with the detailed categorised operating costs.

Figure 16 shows the trend in proposed operating expenditure through the fifth regulatory period, and reveals a fundamentally flat cost profile.

**Figure 16 Forecast Operating Expenditure - \$M 1/1/18**



Note: SMP1 and SMP2 costs shown in addition to base opex for WP3 period.

### 5.3.2 Baseline Controllable Operating Expenditure

Table 15 overleaf shows the summary calculation of the 2016-17 baseline controllable operating expenditure, and projection through the PS4 period including a reconciliation of variations to the baseline.

**Table 15 Baseline Controllable Operating Expenditure 2016-17**

Component	Current Period		Fourth Regulatory Period				
	2016-17	2017-18	2018-19	2019-20	2020-21	2021-22	2022-23
Prescribed Opex in 2016-17	23.48						
Less non controllable Opex	-4.28						
<b>Total controllable Opex 2016-17</b>	<b>19.20</b>						
Less adjustments:	-3.34						
<i>SMP1 admin costs</i>	-1.39						
<i>SMP2 business case costs</i>	-1.36						
<i>LMW SMP1 outlet maint'ce</i>	-0.46						
<i>PS4 contractor/consultants</i>	-0.13						
<b>Baseline controllable operating expenditure</b>	<b>15.86</b>	<b>15.86</b>	<b>15.86</b>	<b>15.86</b>	<b>15.86</b>	<b>15.86</b>	<b>15.86</b>
Variations to Baseline			0.89	0.08	-0.13	-0.15	-0.21
<i>Administration</i>			-0.32	-0.31	-0.39	-0.22	-0.39
<i>Tech Services</i>			-0.62	-0.60	-0.66	-0.89	-0.97
<i>IT</i>			0.29	0.29	0.16	0.17	0.17
<i>Infrastructure Labour and Contractors</i>			0.10	-0.31	-0.32	-0.32	-0.29
<i>Electricity</i>			1.44	1.01	1.08	1.11	1.27
<b>Total Controllable Operating Costs</b>			<b>16.75</b>	<b>15.94</b>	<b>15.73</b>	<b>15.71</b>	<b>15.65</b>

### Establishing the 2016-17 Baseline

The 2016-17 year had some non-recurring costs considered abnormal operating conditions for which LMW proposes adjustments to construct the baseline cost. To 'normalise' the 2016-17 cost for efficient and prudent operation some \$3.34 million of operating costs were removed from the total controllable operating expenditure as detailed in Table 16. No adjustment has been made to the baseline for costs not occurring with the 2016-17 baseline year that would be considered as business-as-usual.

LMW undertook an organisational restructure throughout 2016-17 which aligned LMW's labour resources with its corporate goals and objectives. Within the restructure 2 new executive manager positions were created, Chief Information Officer and Executive People & Culture. No adjustment was made to the baseline due to this expenditure being considered business-as-usual labour costs. The restructure with the additional executive managers complementing the business transformation project will enable LMW to realise labour force efficiencies throughout the PS4 period.

**Table 16 Non-Recurring Cost Adjustments to 2016-17 Base Operating Expenditure**

Baseline Cost Adjustment Description	Amount \$M
<b>SMP management costs</b> - SMP will finalise during 2017-18 and not incur any further management/administration costs in the PS4 period.	-1.39
<b>SMP2 business case costs</b> - To build on the benefits created from SMP, LMW put a business case to the Commonwealth Government for further funding of SMP2, and incurred costs to complete and lodge a business case, which was separately funded by government.	-1.36
<b>LMW SMP1 outlet maintenance</b> - During the SMP installation of new meters with telemetry, further maintenance costs were incurred on connection point valves which were out of the scope of works to be completed under SMP.	-0.46

Baseline Cost Adjustment Description	Amount \$M
PS4 contractor/consultants - LMW is also proposing to adjust the 2016-17 baseline for costs of \$0.13 million used in the preparation of PS4 planning and documentation.	-0.13
<b>Total Adjustments to Baseline Operation Expenditure 2016-17</b>	<b>-\$3.34 M</b>

### Projecting the Baseline Forward

The baseline 2016-17 year of \$15.86 million remains flat throughout the PS4 period as the ESC financial model template calculating the baseline do not allow for growth or indexation.

In the first two years of the PS4 period LMW will exceed the baseline by \$0.89 million and \$0.08 million respectively, and then operating costs remain under the baseline for the remainder of the period. Over the total PS4 period the baseline totals \$79.31 million which is \$0.47 million lower than LMW's total forecast costs of \$79.78. Whilst LMW is embarking on the business transformation project and forecasting savings from the completion of SMP, LMW has not been able to offset the increase in forecast electricity costs.

#### 5.3.3 Pass Through Fees

LMW levies 'pass through' fees, raised on behalf of other agencies in which the revenue collected is remitted by LMW to those agencies. The cost categories and costs LMW incurs for 'pass through' fees are set out in Table 17, including:

- Spillable water fee
- Water storage entitlement fees,
- MCMA Salinity Levy, and
- DSE water share fees.

The revenue expected to be raised from these charges are included as other revenue. The amount of the fees is also included in LMW's cost base, ensuring that the pass through of these fees has no net effect on the tariffs levied by LMW on its customers.

**Table 17 Costs Attributable to Pass Through Fees - \$M 1/1/18**

\$M, 1/1/18	Current Period		Fourth Regulatory Period				
	2016-17	2017-18	2018-19	2019-20	2020-21	2021-22	2022-23
Spillable water	0.02	0.00	0.00	0.00	0.00	0.00	0.00
Storage entitlement fees - total cost	3.68	3.10	3.13	3.13	3.13	3.13	3.13
<i>Storage entitlement - losses charge to delivery share</i>	<i>0.12</i>	<i>0.10</i>	<i>0.10</i>	<i>0.10</i>	<i>0.10</i>	<i>0.10</i>	<i>0.10</i>
<i>Storage entitlement fees - net cost passed on</i>	<i>3.57</i>	<i>3.00</i>	<i>3.03</i>	<i>3.03</i>	<i>3.03</i>	<i>3.03</i>	<i>3.03</i>
Water share (DSE) charge	0.08	0.08	0.08	0.08	0.08	0.08	0.08
Salinity fees	0.12	0.12	0.11	0.11	0.11	0.11	0.10
<b>Total Costs to be Passed Through</b>	<b>3.79</b>	<b>3.19</b>	<b>3.22</b>	<b>3.22</b>	<b>3.22</b>	<b>3.22</b>	<b>3.21</b>



#### 5.3.4 Impact of Sunraysia Modernisation Project Stage 1 on Operating Costs

LMW is approaching the completion of SMP. There are some uncertainties in confidently establishing costs of SMP1 due to short period of full operation.

The value that SMP offers customers is not only limited to reduced operating cost to LMW, it offers a wide range of other benefits and reduced costs to irrigators on-farm.

These other benefits align with our key service outcomes, reliable service providing water when needed with maintaining and improved service levels as confirmed with customers during consultation.

The backbone of the delivery system was through open channels that required winter shut-down between late May and late September for maintenance. Restricted access to water during winter limited the establishment of crop types such as winter vegetables that require on-demand irrigation over this period, reduced the potential yield of table grape varieties that required extended irrigation periods into late autumn and early winter and eliminated the efficacy of frost control for citrus and avocados.

The open channel system received large amounts of wind-blown debris, blocking on-farm filtration systems and pumps. This required the significant attention, time and cost to irrigators on-farm cleaning filtration system and also to the LMW rural business cleaning the channels 'trash racks'.

The upgrade of pump stations and replacement of high risk areas of raised channel reduces the incidence of system shut down and potential loss of production and crop failure.

Catastrophic failure of the irrigation system could result in reduced crop yields, lost income or in the worst case, crop death and failure. Areas of raised channels in Red Cliffs and smaller areas in Mildura presented a risk of breaching, leading to localised flooding potentially having broader effects to the region and system shut down.

The majority of irrigation outlets were mechanical meters, the accuracy of meter readings and some Domestic and Stock outlets were not metered at all, resulting in meter reading errors across the Districts. No real-time recording of water use information made it difficult for LMW to monitor and manage water delivery and for landholders to maximise the efficiency of their water use.

Administrative cost saving in regards to billing efficiency and management of water usage data, reduction in meter read errors and efficiency in water trading transactions has been achieved through the installation and upgrade of modernised meters. Real time and accurate water use data allows LMW to more closely monitor and manage water delivery through the system, identify any unmetered usage or meter errors and provide more efficient billing processes to customers. Accurate measurement and reading of meters is consistent with the National Water Initiative.

The SMP has delivered a fully automated and integrated network of pump stations combined with operation of the channel regulator network. This removes the requirement of system planners having to operate and deliver water throughout the network on a 24/7 hour basis in peak season. Staffing and operation of the operations room is now during standard business hours with an 'on call' component to support the automation where required. Rectification actions may be required from outside operational impacts which create alarms instigating an intervention to avoid potential risk to the network infrastructure, or a reduction in water supply and customer service.

With combination of metering, telemetry and channel network enhancements the system operators are now able to focus on compliance of customer irrigations and adherence to their orders, further improving the efficiency and customer service.

The operational costs forecast to reduce and increase due to the completion of SMP over the PS4 period are set out in Table 18 overleaf.

**Table 18 SMP Operating Cost Impacts for PS4**

Cost Reductions		Additional Costs	
Description	Amount \$M	Description	Amount \$M
Operations room labour - reduction of shift work and workforce numbers	1.12	Meter maintenance - includes solar panels, telemetry boards, software updates and batteries	0.67
Contract meter reading and water delivery management- meter readings via telemetry-connected meters have reduced the requirement of manual irrigation meter reading contractors. The 'live' information also enables LMW to manage and monitor the water delivery reducing the requirement of field officers	1.72	Telemetry network transmitting data cost	0.08
Channel maintenance, both physical repairs and water quality treatment	0.29	Metermaid server licence and maintenance	0.05
Pump station and electrical switchboard maintenance	0.09	Telemetry meter reading repeater towers	0.01
Elimination of redundant un-utilised pipelines decommissioned within Mildura where urban encroachment has occurred	0.04	New cluster/tower/termination structures maintenance	0.06
<b>Total Cost Reductions PS4</b>	<b>\$3.26 M</b>	<b>Total Additional Costs PS4</b>	<b>\$0.87 M</b>

In addition to operation cost savings, SMP avoided LMW customer funded capital expenditure to high risk assets. The main areas of avoided capital expenditure are the channel lining due to replacement of some lengths of channel with pipelines, pump station asset replacement and irrigation meter replacement. The SMP business case estimated the value of avoided capital expenditure would be valued at \$22.69 million over the 30 year life of the project.

### 5.3.5 Additional Costs for PS4

LMW will incur new costs in the PS4 period and into the future. These additional costs are not substantial and are mainly in response to the Minister for Water's 2016 Standing Directions or other compliance requirements.

LMW has included costs into the PS4 submission for:

- Victorian Protective Data Security Standards (VPDSS) - establish 18 high level mandatory requirements to protect public sector data and provide for governance across the four domains of information, personnel, ICT and physical security. Each standard is supported by four protocols, this follows the continuous improvement process of plan, do, check, and act. This enables LMW to continually assess our security controls against any new or updated threats and vulnerabilities. The aim is

to ensure that LMW's and its customers' information is secure and also that LMW's business systems and operating infrastructure are safe - \$0.05 million.

- Asset optimisation and AMAF attestation - The Asset Management Accountability Framework (AMAF) was issued in February 2016 under the Financial Management Act, Section 8 - Standing Direction 3.4.9 - 'Managing Assets' and closely aligns with the International Standard ISO55000 series for Asset Management. The framework is intended to ensure that Victorian public sector agencies manage their asset portfolios appropriately so that they contribute effectively and efficiently to delivering services to the community. Public Attestation of compliance will be required for the 2017-18 year in the LMW Annual Report. - \$0.29 million
- Diversity and Aboriginal cultural connection - LMW will generate opportunities for diverse people to join our business. To this aim, LMW is improving its recruitment processes, developing an aboriginal traineeship program and ensuring that promotional materials reflect the diversity of the organisation and the local community. - \$0.25 million
- LMW's environmental levy contribution has been increased from \$0.37 million to \$0.51 million per annum - totalling \$0.7 million over the PS4 period.
- Power engineer - LMW is responding to its greenhouse gas emission pledge and acting on its customer feedback to support and approve of LMW being mindful of the environment whilst operating and doing business - \$0.4 million.
- Millewa Air Scouring - 5 yearly cyclic water quality program for the Millewa pipeline network used in conjunction with new water treatment plant constructed in 2012 to provide enhanced water quality to Millewa urban and rural customers.

### 5.3.6 Other Productivity Improvements for the Forthcoming Period

In order to find productivity improvements, LMW has not proposed any cost savings that would reduce LMW's level of service to its customers. LMW has, however, sought productivity improvements through an organisation restructure and the business transformation project.

LMW recognises that it can streamline business processes with the use of technology and enable the information and procedural tasks to flow more efficiently throughout its workforce. For the PS4 period, LMW has forecast that a reduction of 5 rural FTE employees will generate a saving of \$1.85 million which will more than offset the wage increases forecast of 0.7% real annually with a new Enterprise Bargaining Agreement to be negotiated during 2017-18.

As examples of the business transformation benefits:

- LMW has invested in a new corporate website which will be launched during 2018. The new website will enable customers to interact with LMW without the need to contact staff members. The website will enable customers to view their water bills, change personal information, inform LMW of tenant movements, and request meter readings.
- Another valuable benefit to customers and LMW alike will be that the website will link to LMW's new Customer Relation Management (CRM) software which captures all dealings that occur between LMW and the customer. This will save valuable time when a staff member is interacting with customers.

Other productivity improvements include:

- Reductions in reactive maintenance costs are expected due to increased investment in irrigation pipeline renewals<sup>16</sup>, amounting to an estimated \$0.8 million in total over the regulatory period. Reactive maintenance cost reductions will arise from a forecast reduction in the number of repairs and restorations from failures of irrigation pipelines, with external costs and impacts also reduced from supply interruptions and possible flooding.
- Five 100kW solar energy generation offsetting electricity purchase costs.

### 5.3.7 Electricity Costs

The operating environment for the energy sector across Australia is highly uncertain and consequently volatile, and there is significant uncertainty as to electricity price outcomes for LMW in common with all Victorian regulated water businesses.

LMW currently has an agreed contract for electricity - energy network and demand, which expires on 30 June 2018, and is exploring options for electricity procurement post 30 June 2018.

In preparing the PS4 draft submission LMW assembled six electricity price forecasts based on a variety of scenarios and which were produced at different points of time, revealing marked variations in prices over the next six years.

A further electricity price forecast<sup>17</sup> was developed based upon LMW's actual demand profile and latest market intelligence, which is lower than the previous forecasts, and has been adopted for the purposes of this Price Submission. However, given the high uncertainties and risks associated with electricity pricing, alternative mechanisms for managing electricity price volatility were developed by LMW, following consultation with the ESC on its view and in seeking the most stable outcome for customers:

- LMW be provided with an opportunity to adjust the draft price submission in March 2018 based upon the latest market intelligence at that time, and
- Propose a price adjustment mechanism within this draft Price Submission, whereby deviations from the electricity price forecast in this Price Submission, outside of an upper and lower bound (or 'collar'), would be passed via an 'offramp', to customers.

Details of the proposed price adjustment mechanism are provided in 6.3.2. The proposed set-point of the collar requires LMW to take significant risk and creates an incentive for management of electricity costs.

### 5.3.8 Allocation of Shared Costs

LMW has a Corporate Allocation Framework<sup>18</sup> that defines the allocation methodology used to reallocate 'indirect' revenue or expenditure to a business function, district or activity. Allocations are generated to reflect inclusive revenue or expenditure and to enable monitoring of the financial performance of individual business functions or districts inclusive of indirect corporate transactions.

This framework is configured within LMW's financial system to remove the need for manual allocation of indirect revenue or expenditure to functions and districts for financial reporting purposes.

The bases used for allocation of the majority of shared costs between the urban and rural businesses of LMW, and between water and sewerage within the urban business, are:

<sup>16</sup> LMW Pipeline Renewals Forecasts 2016, April 2017.

<sup>17</sup> Ernst Young, LMW Electricity Price Forecast, August 2017.

<sup>18</sup> LMW Corporate Allocation Framework, April 2014

- Billing and customer services: number of customer services.
- Corporate and administration, and depreciation of corporate assets: operational asset expense ledger labour and contractor expenditure.
- IT and depreciation of IT assets: number of customer services.

Allocations are adjusted annually to reflect the changing nature of the customer base, assets or costs, as appropriate.

For the PS4 period, the allocations of shared costs for the business is:

	Corporate	Billing and IT
Urban	52.5%	90%
Rural	47.5%	10%.

### 5.3.9 Potential Uncertain Event for SMP2

As described in Section 3.3.1, the SMP2 proposal has been developed, planned and progressed by LMW to business case stage, and a submission has been made to government. Expressions of interest and financial commitments have been received from potential participants.

Government approval is pending, but at the current time and given these circumstances, the progression and timing of the SMP2 is considered uncertain.

The impact on existing customers will be positive in terms of reducing prices; by spreading the fixed costs of operating and managing the irrigation networks over a larger number of customers.

In the event that the project proceeds, LMW does not propose to seek a variation to the ESC's Determination, but will undertake to pass the majority of the benefits to customers by adjusting prices downwards with the balance towards infrastructure renewals. We intend to consult with our customers as to how benefits are applied.

## 5.4 Forecast Capital Expenditure

### 5.4.1 Basis for Development of the Capital Program

LMW has developed, documented<sup>19</sup> and followed a consistent approach to capital forecasting and cost estimating for the Price Submission, covering capital planning processes, alignment of capital planning with business requirements, business case preparation, cost estimating and contingencies, capital efficiency, and allocation of risk between LMW and its service providers.

The capital expenditure for this Price Submission has been prepared with specific attention to:

- Major strategy development for irrigation services, in conjunction with government and other agencies, for SMP2 and the SRP,
- Specific investigations for major projects such as the Central Rising Main,

<sup>19</sup> LMW Price Submission 2018-23 Capital Forecasting Approach

- Renewals forecast for irrigation and drainage pipelines based on network performance to meet customer outcomes, taking into account the ageing of the irrigation and drainage networks and their failure history, and
- A site-based inspection regime for all key facilities, to identify any projects arising for reasons of non-compliance with safety or other standards, or condition of assets.

Each project was justified as prudent and efficient to meet the agreed customer outcomes and associated performance targets, current and new government obligations and commitments, and/or to manage risk to the business. Options have been considered and evaluated wherever relevant.

Cost estimating has been based on P50 (50% probability) of cost outcomes as far as possible for the level of project development and scope that is appropriate at the current time. This recognises that many projects need to undergo further planning, investigation, design and market testing prior to their implementation, and that there are a range of risks to be considered and managed, including risks associated with planning, site conditions, integration with existing facilities, and the application of new technologies.

The program has been prioritised by operational and engineering management, followed by review and approval by the Executive team and the Board. Supporting documentation is available to the ESC for inspection on all projects.

#### 5.4.2 Forecast Capital Expenditure

Table 19 sets out LMW's proposed prudent and efficient capital expenditure for each year of the fourth regulatory period, across each major service category. The total proposed capital expenditure for the period is \$34.34 million in real dollars (\$1/1/18).

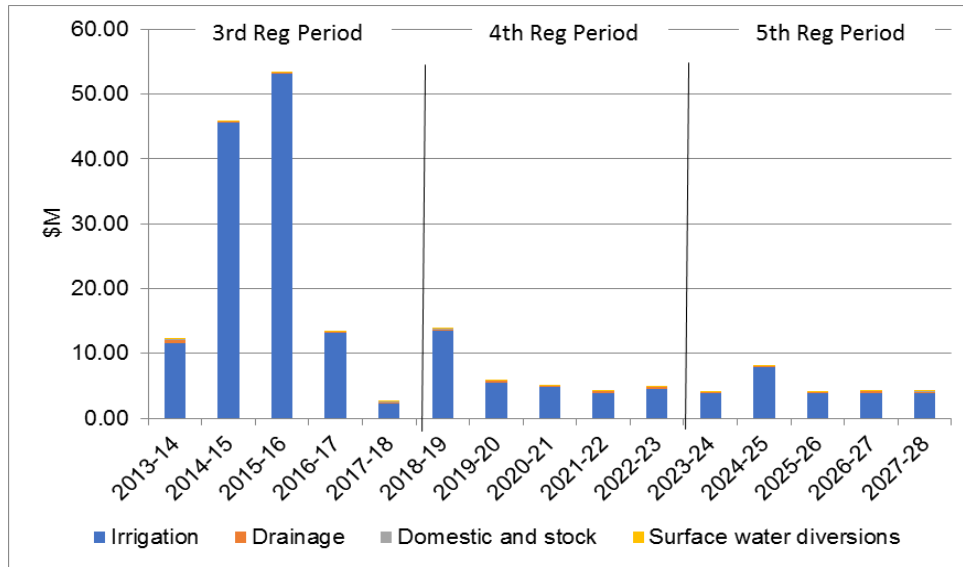
A detailed capital expenditure program is provided in Appendix B.

**Table 19 Forecast Capital Expenditure - \$M 1/1/18**

\$M, 1/1/18	Current period		Fourth regulatory period					Total PS4
	2016-17	2017-18	2018-19	2019-20	2020-21	2021-22	2022-23	
Irrigation	13.21	6.24	13.47	5.50	4.75	3.91	4.48	32.12
Drainage	0.08	0.18	0.22	0.22	0.22	0.28	0.28	1.22
Domestic and stock	0.00	0.05	0.06	0.06	0.06	0.06	0.06	0.30
Surface water diversions	0.17	0.09	0.17	0.17	0.12	0.12	0.12	0.70
<b>Total prescribed capex</b>	<b>13.46</b>	<b>6.57</b>	<b>13.92</b>	<b>5.95</b>	<b>5.15</b>	<b>4.37</b>	<b>4.94</b>	<b>34.34</b>

Figure 17 overleaf shows the increase in proposed capital expenditure along with the trend forecast through the next regulatory period, revealing a significantly reduced program than has been delivered over the WP3 period.

**Figure 17 Forecast Capital Expenditure**



**5.4.3 Major Projects**

Major Projects for the rural business are defined as those over \$2 million or 5% of revenue, whichever is lower. There are only two projects or major programs in this category, summarised in Table 20. LMW has business cases developed for both these projects that are available to the ESC, along with supporting documentation. Appendix C provides the alignment between individual projects and the supporting business cases, as well as a summary for each project that provides the information required by the ESC Guidance Paper.

**Table 20 Proposed Major Capital Projects and Programs**

Business Case	Major Projects or Programs	Service	Total Project Cost (\$M)	ESC Cost Driver
1. Pipeline Renewals	Irrigation Mains Replacement (Mildura, Merbein, Red Cliffs)	Rural Irrigation	9.31	Renewals
2. Central Rising Main Replacement	Mildura Central Pump Station Replacement of Manifold/Rising Main	Rural Irrigation	4.00	Renewals

Most significantly, this capital expenditure program introduces a large investment in replacement and renewals of irrigation infrastructure that has not been possible before. The irrigation networks, except of course where replaced recently in Robinvale and for some trunk infrastructure in Red Cliffs, Merbein and Mildura, are approaching their end of life and incurring increasing failures. The failures come with attendant maintenance costs and customer interruptions to supply. A detailed analysis provided justification for a substantial investment in replacement or renewal of irrigation mains, based on their criticality and/or service performance.

All other projects in the capital program are supported by at least a Project Briefing Sheet that sets out the project drivers, justification, scope, cost and expenditure by year, and alignment with customer outcomes.

#### 5.4.4 Capex/Opex Tradeoffs

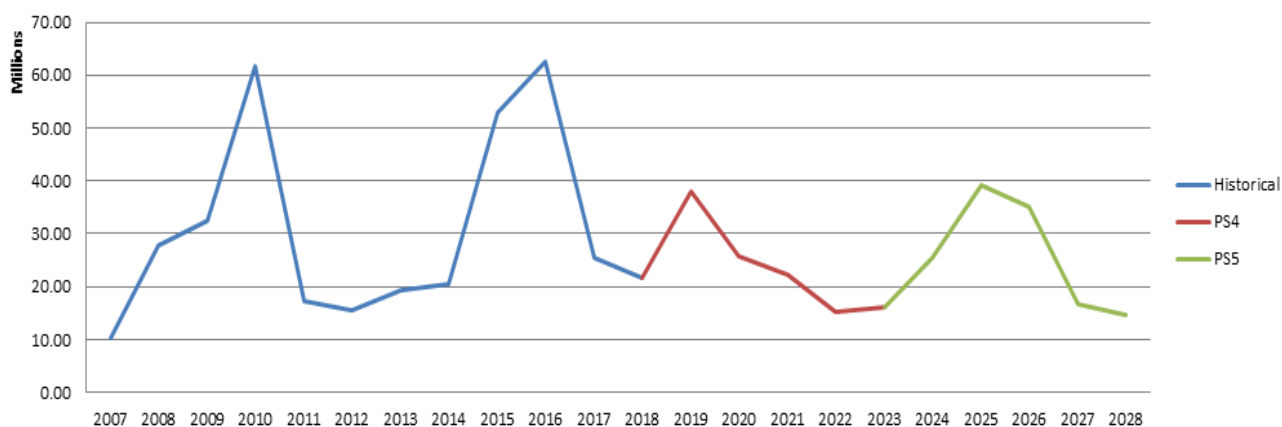
Projects which have potential capex/opex tradeoffs include:

- Renewals projects, where replacing a failing asset may reduce future maintenance requirements. In the case of irrigation pipeline renewals, LMW has included reduced reactive maintenance costs for irrigation mains in its operating expenditure forecast.
- Automation projects, where increased automation, and remote monitoring and meter reading, provide opportunities for reductions in labour costs and site attendance. The operating expenditure efficiencies from these projects are described elsewhere in this document relating to SMP, productivity improvements and the business transformation project.

#### 5.4.5 Delivery of the Capital Program

LMW has demonstrated a track record of delivering varied and larger capital programs than proposed for the fourth regulatory period. The forward total capital program for both the rural and urban businesses is significantly below historic peaks as shown in Figure 18 overleaf, and LMW is very confident in its capability to deliver the forward program.

*Figure 18 Historical and Forecast Urban and Rural Capital Program*



LMW has an established suite of planning and project/contract management procedures and documents, and a dedicated team of staff supported by consultants where required, to ensure successful management and efficiency of the capital program delivery.

Construction is typically undertaken by contractors under competitive tendering conditions with contractual performance requirements. Some low risk capital projects are undertaken by LMW staff where resources and capability can demonstrate efficient and quality delivery, for example, for water main construction or replacement.

#### 5.4.6 Uncertain Projects

A potentially material uncertain event identified as part of the PS4 development process is failure of the Red Cliffs District water intake suction. The Red Cliffs pump station has suction pipes which extend into the Murray River. Silt has historically built up around these suction pipes and can potentially isolate the suction pipes from the main river flow during periods of low flows or when the river level is low. This could result in the inability to supply water to irrigation customers, as well as a costly cleaning exercise caused by transferring silt from the Murray River into the pipes of the irrigation system.

The suction pipes were recently desilted by using a desilting barge to remove built up silt and deposit on land for drying. The build-up of silt has been modelled and the actual levels surveyed. A long term solution of extending the suction pipes has been developed after



consideration of several options. The cost estimate for the long term solution was \$4 million.

Due to the uncertainty of the rate of silt deposition, the relatively low silt levels in the latest silt survey and the required timing for the investment in the long term solution, a decision was made to delay this project to PS5.

The risk of having to do these works if a flood or sequence of dirty river events increases the silt levels has been accepted by LMW and not passed through to its customers within PS4.

One further uncertain event relates to the irrigation drainage systems, which is ageing and is incurring significant problems with blockages or restrictions caused by calcification of the drains. LMW operational staff have identified the known worst areas, and a minimal investment has been allocated in PS4 to address these issues.

LMW has deferred major investment while investigating technology options to rectify calcification. Should any significant issues arise during PS4, LMW will accept the risk of funding a solution.

## 5.5 Other Revenues

### 5.5.1 Pass Through Fees

LMW levies 'pass through' fees, raised on behalf of other agencies and the revenue collected is remitted by LMW to those agencies. The charges which are levied by LMW on behalf of other agencies are:

- Spillable water fee,
- Water storage entitlement fees,
- Mallee Catchment Management Authority (MCMA) Salinity Levy, and
- DSE water share fees.

The revenue expected to be raised from these charges are included as other revenue. The amount of the fees is also included in LMW's cost base, ensuring that the pass through of these fees has no effect on the tariffs levied by LMW on its customers.

Table 21 summarises the revenue from pass through fees.

*Table 21 Revenue From Pass Through Fees*

Component \$M 1/1/18	Current Period		Fourth Regulatory Period				
	2016-17	2017-18	2018-19	2019-20	2020-21	2021-22	2022-23
Spillable water	-	-	-	-	-	-	-
Storage entitlement fees	3.57	3.00	3.03	3.03	3.03	3.03	3.03
Water share (DSE) charge	0.08	0.08	0.08	0.08	0.08	0.08	0.08
Salinity fees	0.12	0.12	0.11	0.11	0.11	0.11	0.10
<b>Total Pass Through Revenue</b>	<b>3.77</b>	<b>3.19</b>	<b>3.22</b>	<b>3.22</b>	<b>3.22</b>	<b>3.22</b>	<b>3.21</b>

### 5.5.2 Other Revenues

There are two additional types of revenue that serve to reduce the prescribed revenues that are recovered through published tariffs. These comprise miscellaneous charge revenue and termination fees, detailed in Table 22 overleaf.

Many of the rural miscellaneous charges made by the rural business are charged on the same basis as the urban side of the business. Miscellaneous charges have been set to recover the costs involved, including an allowance for overheads.

Termination fees are payable by properties that relinquish their delivery shares. The termination fees are a lump sum equivalent to 10 years' worth of delivery share fees. Accordingly termination fee revenue is amortised over 10 years for the purpose of identifying the appropriate addition to other revenue.

**Table 22 Other Revenue**

Component	Current Period		Fourth Regulatory Period					
	\$M 1/1/18	2016-17	2017-18	2018-19	2019-20	2020-21	2021-22	2022-23
Misc charge revenue		0.55	0.60	0.67	0.67	0.67	0.67	0.67
Termination fees		0.37	0.36	0.36	0.13	0.12	0.11	0.10

## 5.6 Return on and of the RAB

### 5.6.1 Rolling Forward the RAB

The revenue requirement includes a return on the RAB and depreciation of the RAB. The RAB is rolled forward over time by adding new capital expenditure and deducting the government and customer contributions and asset disposals expected for each price review period, and RAB depreciation.

At the start of a new review period, the RAB is updated for actual outcomes with respect to capital expenditure, contributions and disposals for the current regulatory period. As the final year of the 3rd regulatory period is not complete, however, 2017/18 capital expenditure, contributions and disposals remain as per the 2013 Price Determination and will not be updated until the 5th Regulatory Review. Forecast capital expenditure for 2017-18 is anticipated to slightly greater than that originally budgeted for, which means that LMW will not receive a return on or of this additional planned expenditure during the fourth regulatory period.

Table 23 overleaf shows the updated roll forward calculation for the RAB, with actuals included for the years 2012/13 to 2016/17. Large government contributions for the SMP are shown coming through in the years 2013-14 to 2016-17 with the last remaining payment due in 2017-18 on provision of the final SMP milestone report to the Commonwealth Government. The SMP funding offsets the additional capital expenditure for that project through that period. This mismatch between the capital expenditure and government contributions in some years results in a mid-term dip in the RAB calculation. The proceeds from disposals, especially in the 2015-16 and 2017-18 years, is largely due to sale of surplus land not required for operational purposes which will be used to offset prices in the Mildura Irrigation District.

There are gifted assets for the rural business that are accounted for as either customer or government contributions in the Table.

**Table 23 Updating the Regulatory Asset Base**

Updated Asset Base	2nd Period	Third Regulatory Period				
	2012-13	2013-14	2014-15	2015-16	2016-17	2017-18
\$M, 1/1/18						
Opening asset base	68.31	78.17	54.64	45.10	74.25	84.45
plus Gross capital expenditures	13.48	12.38	45.90	53.38	13.46	2.60
less Customer contributions	1.49	0.50	0.30	0.21	0.10	0.30
less Government contributions	-	32.33	51.86	19.18	-	6.21
less Regulatory depreciation	1.87	2.45	2.73	2.78	2.77	2.81
less Proceeds from disposals	0.27	0.61	0.55	2.05	0.39	3.88
<b>Closing Asset Base</b>	<b>78.17</b>	<b>54.64</b>	<b>45.10</b>	<b>74.25</b>	<b>84.45</b>	<b>73.86</b>

Table 24 shows the RAB rolled forward with forecast expenditure, contributions and disposals for the Fourth Regulatory Period.

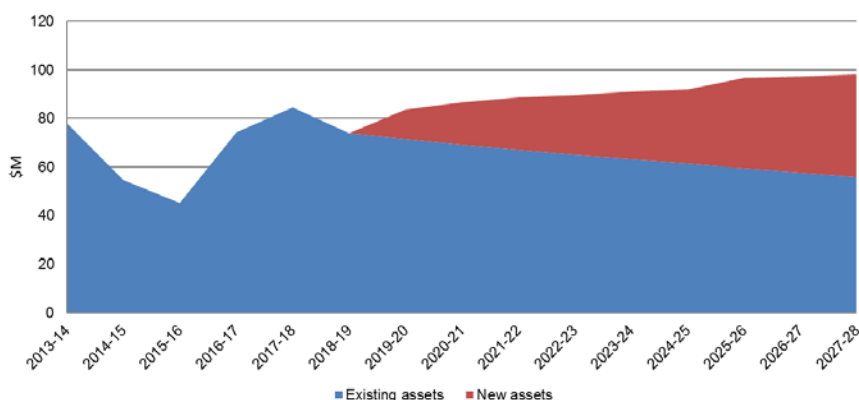
**Table 24 Rolling Forward the Regulatory Asset Base**

Rolled forward asset base	Current	Fourth Regulatory Period				
	2017-18	2018-19	2019-20	2020-21	2021-22	2022-23
\$m, 1/1/18						
Opening asset base	84.45	73.86	83.80	86.64	88.58	89.68
plus Gross capital expenditures	2.60	13.92	5.95	5.15	4.37	4.94
less Customer contributions	0.30	0.30	0.30	0.30	0.30	0.30
less Government contributions	6.21	1.05	-	-	-	-
less Regulatory depreciation	2.81	2.24	2.43	2.53	2.60	2.73
less Proceeds from disposals	3.88	0.38	0.38	0.38	0.38	0.38
<b>Closing Asset Base</b>	<b>73.86</b>	<b>83.80</b>	<b>86.64</b>	<b>88.58</b>	<b>89.68</b>	<b>91.21</b>

The government contribution shown for 2018-19 is a forecast for the Millewa pump station upgrade. The Murray River is proposed to be run in a more natural state, where the water pool levels will vary greatly. In the lower water level periods, LMW’s pumps will not be able to supply water to the Millewa stock and domestic district and will be upgraded.

Figure 19 shows the RAB roll forwarded over the entire 3<sup>rd</sup>, 4<sup>th</sup> and 5<sup>th</sup> regulatory periods, using actual and forecast numbers. The dip in the RAB seen in 2014/15 and 2015/16 is a result of the government contributions received for SMP, as discussed in Section 5.6.1 above.

**Figure 19 Rolling Forward the Regulatory Asset Base to 2027-28**



### **5.6.2 Regulatory Depreciation**

Regulatory depreciation is calculated on a straight line basis, using the ESC's methodology for new asset additions. Regulatory depreciation is calculated separately for each of the rural districts, with the RAB rolled forward from a starting value of zero in 2004/5 using actual/forecast expenditure. As outturn capital expenditure and contributions etc. will differ from forecast, then the regulatory depreciation allowed for in the revenue requirement for the 3rd regulatory period may differ from the regulatory depreciation calculated with outturn actuals. Therefore an adjustment is made to ensure that regulatory depreciation is not over or under recovered in total. The schedule of regulatory depreciation is included in the supporting documentation to the submission.

### **5.6.3 Rate of Return**

For the rural business, the return on capital is determined using a Weighted Average Cost of Capital (WACC) of returns to equity and debt. LMW has used the ESC indicative 'vanilla' after tax WACC (real) of 4.0% as contained in its template for the rural water business.

## **5.7 Tax Allowance**

The tax allowance ESC requires information on actual tax payments forecast as payable for NTER purposes under the Corporate Plan. Tax depreciation allowances have been calculated using the opening allowances and the amount of capital expenditure for each tax category. Carried forward losses mean that there will be no tax forecast as being payable in the regulatory review period.

## 6. Prices

### 6.1 Form of Price Control

LMW has used the revenue cap form of price control to manage rural prices over the past 3 regulatory periods. LMW proposes to continue to use the revenue cap form of control for the PS4 period, with a proposed additional price adjustment mechanism.

The price adjustment mechanism proposed has been developed due to the volatility and uncertainty surrounding the electricity market. See Section 6.3.2 - Adjustment to Prices.

### 6.2 Prices and Tariff Structures

#### 6.2.1 Introduction

The tariff structures of all rural districts are proposed to remain unchanged for the PS4 period.

Over the past 3 regulatory periods, LMW has refined its tariff structures in response to the changing environment that LMW operated within. The tariff structure changes were mainly due to the introduction of unbundling of water entitlements in 2008 and bringing the merged former First Mildura Irrigation Trust (FMIT) tariff structure in line with LMW's other irrigation districts in 2013-14.

The tariff structure changes were made at that time after comprehensive consultation with LMW customers. With the current tariff structure having been in place for the past 4 years, or more in many instances, the tariffs are now well understood and accepted by customers.

LMW provides its customers with an explanation sheet on tariffs that accompanies the accounts when posted. LMW's website also contains information to assist customers to understand their account. Other information required in accordance of the Water Charge Infrastructure Rules (WCIR) such as Water Planning and Management Information is also published.

#### 6.2.2 Tariff Structures

LMW uses the locational pricing method to set prices for rural services: each district has its own prices for tariffs.

There are four pumped irrigation districts: Mildura, Merbein, Red Cliffs and Robinvale, the Waterwork district (WWD), the Millewa Urban and Rural Stock and Domestic district and the private diversion customers for whom LMW manages their licensing conditions.

The existing structure is based on unbundling principles to provide the customer with transparency on what they pay for within their account.

Prices are calculated for each district based on forecast demand of volumetric water delivery, growth and planned operating and capital expenditure investment.

In determining the revenue requirement, costs that are incurred by an individual district directly are attributed to that service area. Indirect costs, such as corporate overheads are allocated in proportion to the number of assessments of each district.

The tariffs applicable within the tariff basket for each different service, i.e. Irrigation district customer or private diverter customer or Millewa customer, differs due to the varying service being delivered.

### Irrigation District Tariff Suite

- **Service Charge:** A fixed charge per assessment to contribute to administration costs.
- **Delivery Share Fee:** Based on the property's defined level of access to the delivery infrastructure. The property's defined level of access is its Delivery Share which is expressed in ML per 14 day period. This fee contributes to LMW's fixed irrigation infrastructure and maintenance costs.
- **Usage Charge:** Based on the metered volume of water delivered to the property. This fee contributes to the cost of supply for each ML delivered.
- **Drainage Fee:** Based on the property's defined level of access to the drainage infrastructure to collect excess applied irrigation water, equivalent to the Delivery Share expressed in ML per 14 day period. This fee contributes to LMW's fixed drainage infrastructure and maintenance costs.
- **Garden Unmetered:** A flat annual charge for stock and domestic customers that do not have a garden connection metered.

### Private Diverter Tariff Suite

- **Service Charge:** A fixed charge per Assessment to contribute to administration costs.
- **Operational Fee:** This fee contributes to LMW's fixed diversion infrastructure and maintenance costs, including service costs to manage and ensure compliance of property's licensing conditions.
- **Annual Permit:** Annual charge for stock and domestic service only customers.

### Millewa Stock and Domestic District Tariff Suite

- **Service Charge:** A fixed charge per Assessment to contribute to administration costs, applicable to both urban and rural customers.
- **Rural Access - House:** Flat annual charge for water access to a house within the Rural District.
- **Rural Access - Scrub:** Based on the property's defined level of access to the infrastructure based on the number of hectares with scrub land. This fee contributes to LMW's fixed infrastructure and maintenance costs.
- **Rural Access - Stocked:** Based on the property's defined level of access to the infrastructure based on the number of hectares that is cleared and can be stocked (graze sheep/cows). This fee contributes to LMW's fixed infrastructure and maintenance costs.
- **Delivery - Rural:** Based on the metered volume of water delivered to the property. This fee contributes to the cost of supply for each kilolitre delivered.
- **Urban Access - House:** Flat annual charge for water access to a house within the Urban District.
- **Delivery - Urban:** Based on the metered volume of water delivered to the property. This fee contributes to the cost of supply for each kilolitre delivered.

### Water Works District

- **Service Charge:** A fixed charge per assessment to contribute to administration costs.
- **Connection Charge:** A flat annual charge for access to the delivery infrastructure. This fee contributes to LMW's fixed infrastructure and maintenance costs.

- **Usage Charge:** Based on the metered volume of water delivered to the property. This fee contributes to the cost of supply for each megalitre delivered.

### 6.2.3 Proposed Tariffs

Table 25 overleaf details the overall tariff schedule for all districts and services.

Total tariffs including bulk water charges are proposed to change in real terms by:

- For **irrigation and drainage customers**, between a 1.3% average annual reduction in Robinvale to a 2.6% average annual increase in the Mildura HPS District.
- For **domestic and stock customers**, average annual reductions of between 2.0% and 0.2%.
- For **diversions customers**, an annual average increase of 1.7%.

**Table 25 Proposed Rural Tariffs - \$ 1/1/18**

Region	Units	Current	Fourth Regulatory Period				
		2017-18	2018-19	2019-20	2020-21	2021-22	2022-23
<b>Mildura - Irrigation</b>							
Service Charge	\$ per Assessment	100.00	97.75	95.55	93.41	91.31	89.25
Delivery Share	\$ per DS	583.92	580.98	578.05	575.14	572.24	569.36
Usage Charge	\$ per ML Delivery	51.00	51.74	52.50	53.26	54.04	54.82
Garden - unmetered	\$ per property	-	-	-	-	-	-
<b>Mildura - Drainage</b>							
Drainage div 1	\$ per WR/DS	59.16	58.52	57.88	57.26	56.63	56.02
Drainage div 2	\$ per WR/DS	44.40	-	-	-	-	-
Drainage div 3	\$ per WR/DS	29.56	-	-	-	-	-
Drainage div 4	\$ per WR/DS	14.76	-	-	-	-	-
<b>Mildura - HPS</b>							
Service Charge	\$ per Assessment	100.00	97.75	95.55	93.41	91.31	89.25
Delivery Share	\$ per DS	668.08	720.09	776.14	836.56	901.69	971.88
Usage Charge	\$ per ML Delivery	95.39	93.43	91.51	89.63	87.79	85.98
Garden - unmetered	\$ per property	-	-	-	-	-	-
<b>Merbein - Irrigation</b>							
Service Charge	\$ per Assessment	100.00	97.75	95.55	93.41	91.31	89.25
Delivery Share	\$ per DS	381.56	386.43	391.36	396.35	401.40	406.52
Usage Charge	\$ per ML Delivery	44.83	44.42	44.02	43.62	43.23	42.84
Garden - unmetered	\$ per property	463.05	463.35	463.64	463.94	464.23	464.53
<b>Merbein - Drainage</b>							
Drainage div 1	\$ per WR/DS	94.08	92.56	91.06	89.58	88.13	86.71
Drainage div 2	\$ per WR/DS	70.52	-	-	-	-	-
Drainage div 3	\$ per WR/DS	47.00	-	-	-	-	-
Drainage div 4	\$ per WR/DS	23.48	23.73	23.99	24.24	24.51	24.77
<b>Red Cliffs - Irrigation</b>							
Service Charge	\$ per Assessment	100.00	97.75	95.55	93.41	91.31	89.25
Delivery Share	\$ per DS	446.04	448.93	451.84	454.77	457.72	460.69
Usage Charge	\$ per ML Delivery	43.65	44.35	45.07	45.79	46.53	47.28
Garden - unmetered	\$ per property	463.05	466.59	470.16	473.75	477.37	481.02
<b>Red Cliffs - Drainage</b>							
Drainage div 1	\$ per WR/DS	94.48	92.92	91.38	89.86	88.38	86.91
Drainage div 2	\$ per WR/DS	70.80	74.73	78.88	83.27	87.89	92.78
Drainage div 3	\$ per WR/DS	47.20	-	-	-	-	-
Drainage div 4	\$ per WR/DS	23.60	23.26	22.93	22.60	22.28	21.96
<b>Robinvale - Irrigation</b>							
Service Charge	\$ per Assessment	100.00	97.75	95.55	93.41	91.31	89.25
Delivery Share	\$ per DS	945.48	927.06	909.00	891.29	873.93	856.90
Usage Charge	\$ per ML Delivery	79.48	79.07	78.65	78.24	77.83	77.43
Garden - unmetered	\$ per property	463.05	-	-	-	-	-
<b>Robinvale - Drainage</b>							
Drainage div 1	\$ per WR/DS	90.16	88.48	86.84	85.22	83.64	82.08
Drainage div 2	\$ per WR/DS	67.60	-	-	-	-	-
Drainage div 3	\$ per WR/DS	45.04	-	-	-	-	-
Drainage div 4	\$ per WR/DS	22.48	-	-	-	-	-
<b>WWD</b>							
Service Charge	\$ per Assessment	100.00	97.75	95.55	93.41	91.31	89.25
Connection charge	\$ per customer	100.00	97.75	95.55	93.41	91.31	89.25
Usage charge	\$ per ML Delivery	411.48	406.25	401.09	395.99	390.96	385.99
<b>Millewa</b>							
Rural access - house	\$ per connection	565.20	541.19	518.19	496.18	475.10	454.91
Rural access - scrub	\$/Ha	0.58	0.57	0.56	0.56	0.55	0.54
Rural access - stocked	\$/Ha	2.34	2.31	2.29	2.26	2.23	2.21
Delivery - rural	\$ per kl	0.20	0.18	0.17	0.16	0.14	0.13
Urban access - offtake	\$ per connection	565.20	541.14	518.11	496.05	474.94	454.72
Urban access - no offtake	\$ per connection	282.60	265.65	249.72	234.74	220.66	207.42
Delivery - urban	\$ per kl	0.56	0.61	0.66	0.71	0.78	0.84
Service Charge - rural	\$ per Assessment	100.00	97.75	95.55	93.41	91.31	89.25
Service Charge - urban	\$ per Assessment	100.00	97.75	95.55	93.41	91.31	89.25
<b>Diversers</b>							
Operational Fee	\$ per ML	141.41	141.50	141.59	141.68	141.77	141.86
Annual Permit	\$ per customer	302.12	304.62	304.62	304.62	304.62	304.62
Service Charge	\$ per Assessment	2.23	2.42	2.62	2.83	3.07	3.32



The changes to tariffs are reflected in changes to unit prices per ML, which vary according to the balance of service, delivery and usage charges for any one customer. For comparative purposes, reference customers representing a typical customer in each district and for each service have been defined by their annual usage, as follows:

- Irrigation customers 100ML/annum usage
- Millewa Urban customers 400kL
- Millewa Rural customers 4300kL
- WWD - Other Stock & Domestic 3ML
- Diversions customers 1000ML

The comparison of changes to unit prices (including pass through bulk water costs) for reference customers is shown in Table 26, in real terms (\$ 1/1/18). Percentage change (% change) is average per annum for period 2017-18 to 2022-23.

**Table 26 Comparison of Changes to Unit Prices for Reference Customers**

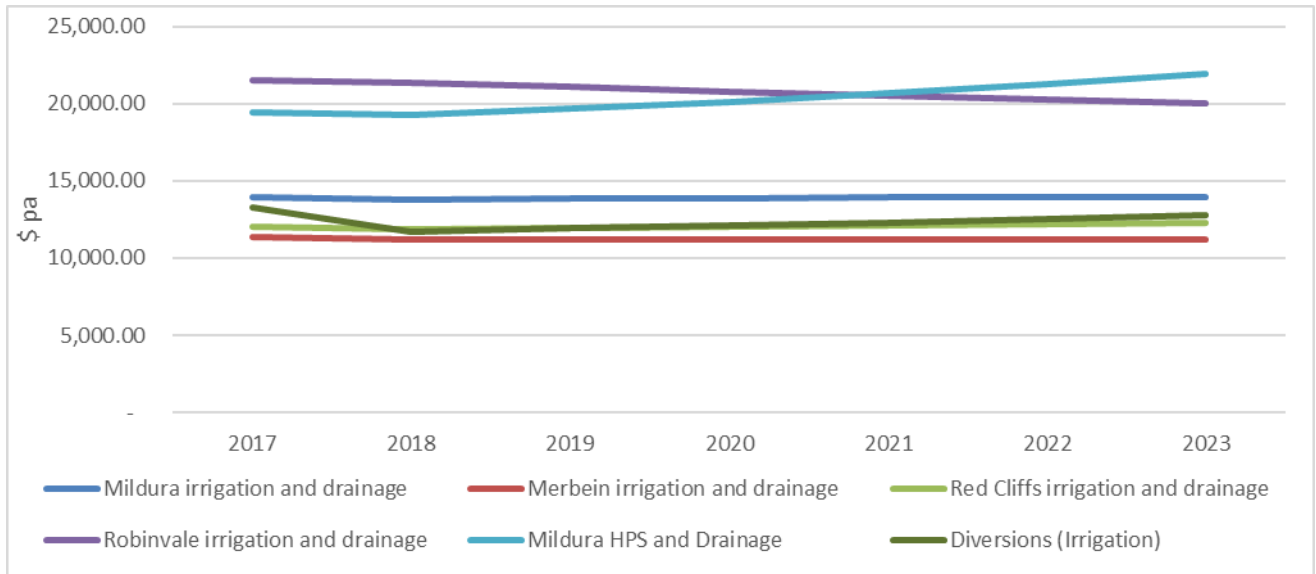
Service/District (per ML or 100kL)	Current (\$ 1/1/18)		Fourth Regulatory Period (\$ 1/1/18)					
	2016-17	2017-18	2018-19	2019-20	2020-21	2021-22	2022-23	% Change
Mildura irrigation and drainage (per ML)	139.77	138.20	138.49	138.79	139.11	139.45	139.79	0.2%
Merbein irrigation and drainage (per ML)	113.51	111.94	111.91	111.90	111.90	111.92	111.95	0.0%
Red Cliffs irrigation and drainage (per ML)	120.11	118.54	119.38	120.24	121.11	122.01	122.92	0.7%
Robinvale irrigation and drainage (per ML)	215.35	213.79	210.94	208.14	205.39	202.69	200.03	-1.3%
Mildura HPS (per ML)	194.26	192.69	196.87	201.58	206.85	212.73	219.26	2.6%
Millewa Urban (Irrigation) (per 100kL)	2.23	2.22	2.20	2.19	2.19	2.19	2.20	-0.2%
Millewa Rural (Irrigation) (per 100kL)	1.95	1.94	1.90	1.86	1.82	1.79	1.75	-2.0%
Other stock and domestic (Irrigation) (per ML)	546.21	545.52	540.38	534.48	528.67	522.94	517.28	-1.1%
Diversions (Irrigation) (per ML)	13.30	11.74	11.91	12.10	12.31	12.53	12.77	1.7%

Notes:

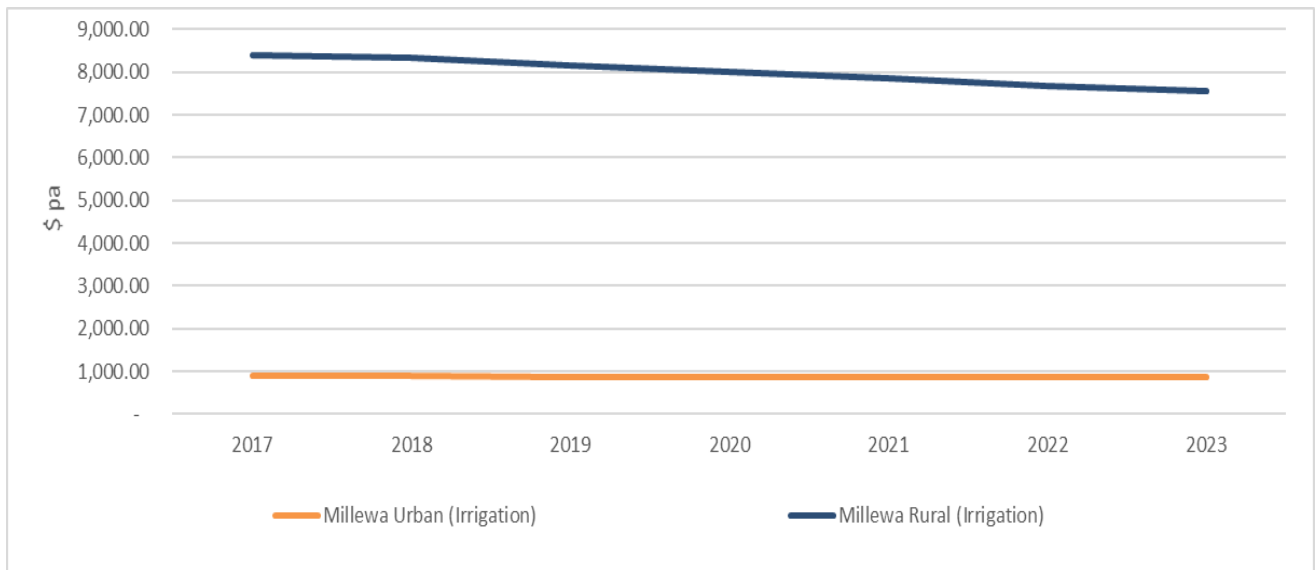
- Reference customers usage is based on 100ML/annum usage for irrigation customers, 400kL for Millewa Urban, 4300kL for Millewa Rural, 3ML for Other Domestic & Stock, and 1000ML for diversions customers.
- Percentage change (% change) is average per annum for period 2017-18 to 2022-23.

These changes for reference bills are set out in Figure 20 overleaf for irrigation and diversion customers, and in Figure 21 overleaf for Millewa customers. There are only 12 customers in the Waterworks District (WWD), shown as Other stock and domestic in Table 26.

**Figure 20 Proposed Bills for Reference Customers - Irrigation & Diversions**



**Figure 21 Proposed Bills for Reference Customers - Millewa**



**6.2.4 Miscellaneous Charges**

Appendix D lists all of the miscellaneous charges levied by LMW and the charges levied for the current year. The Appendix also sets out the increases in charges proposed for the five years of the regulatory period.

**6.2.5 Non-Prescribed Services**

Investment income is considered as the only potentially non-prescribed service for the rural business however LMW does not anticipate having any investments for the PS4 period. There are no other non-prescribed services for the rural business and hence no expenditure or revenue associated with non-prescribed services.

## 6.3 Adjustment to Prices

### 6.3.1 Uncertain or Unforeseen Events

LMW proposes that the adjustment mechanism for unforeseen or uncertain events continues to apply for this regulatory period unchanged. Under the provisions of the Determination, and subject to WCIR, LMW would be able to apply for an adjustment of the scheduled prices and/or the revenue requirements as a result of events that could not reasonably have been foreseen or were uncertain at the time the Determination is made. Examples of unforeseen or uncertain events include licence fees or contributions which differ from the forecast, changes in the timing or scope of expenditure on major capital projects, or material differences in outturn demand. Exclusions would continue to apply, including matters which should have been known about or under LMW's control, could have been planned for or managed by LMW or reflect inefficient expenditure.

### 6.3.2 Electricity Prices

LMW's development of the Price Submission along with the risk allocation and regulatory mechanisms proposed, provide a strong base for it to manage prices for the regulatory period within the boundaries of reasonably foreseeable events with the exception of electricity costs.

Table 27 shows LMW's forecast for electricity costs and usage, and the implied price per MWh for large sites.

*Table 27 Electricity Usage and Implied Prices*

	2017-18	Fourth Regulatory Period				
		2018-19	2019-20	2020-21	2021-22	2022-23
Total MWh pre solar savings Large Sites	20,823	21,286	21,428	21,572	21,718	21,866
Solar savings MWh	0	810	810	810	810	810
Total MWh Large Sites	20,823	20,476	20,618	20,762	20,908	21,056
Total energy costs Large Sites pre solar savings \$M	3.542	4.998	4.544	4.615	4.644	4.806
Less Solar savings \$M	0	0.147	0.123	0.125	0.122	0.128
Total energy costs post solar savings \$M	3.542	4.851	4.421	4.490	4.522	4.677
Price of electricity \$/MWh for large sites	170.11	236.90	214.42	216.27	216.28	222.14

As introduced in Section 5.3.7, LMW proposes a price adjustment mechanism for electricity prices whereby deviations from the electricity price forecast basis for the Submission, outside of an upper and lower bound (or 'collar'), would trigger an adjustment to usage charges for customers.

Upper and lower bounds of the 'collar' of plus or minus 10% are proposed, which implies that LMW would absorb a financial impact up to \$500,000 before passing through an adjustment in prices to customers.

Once the trigger has been reached, the adjustment would be calculated by multiplying a portion of the incremental energy price by the forecast MWh as per the WP4 Submission. To avoid a full pass-through, the adjustment mechanism passes through only the additional costs over the trigger plus half the additional costs that follow from electricity prices reaching the trigger point.

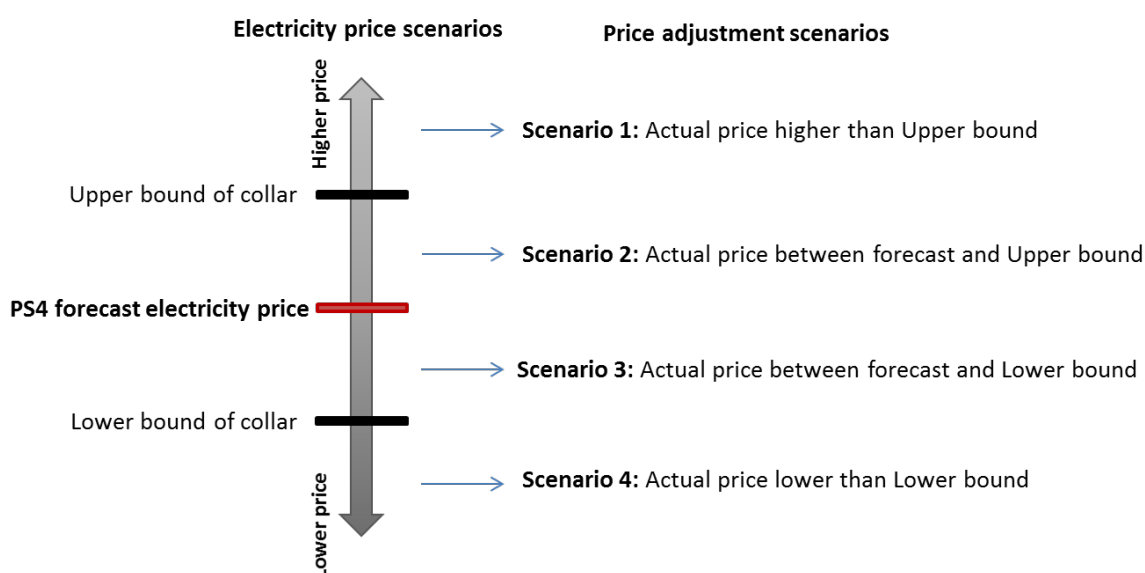
Less than full pass through of costs will ensure that LMW does not simply rely on passing through any and all costs differences between the actual and forecast onto the customer, and will be motivated to negotiate the lowest possible total electricity price as well as minimising energy use where possible.

LMW considers that the proposed adjustment mechanism meets the requirements of the WIRO because:

- Less than full pass through of increased electricity costs creates incentives for LMW to pursue efficiency improvements (WIRO cl 8(b)(iii)) and promotes efficiency within LMW (WIRO cl 8(b)(ii))
- Adjusting the volumetric price (which is directly influenced by the cost of pumping water) promotes the efficient use of services (WIRO cl 8(b)(i)) and provides signals about the efficient costs of providing services (WIRO cl 11(d)(ii))
- By protecting LMW from the adverse financial impact of a very significant escalation in costs, the adjustment also protects the financial viability of the industry (ESC Act s8A(b)).

The concept and possible price scenarios are shown in Figure 22 below.

**Figure 22 Price Adjustment Scenarios**



Under Scenarios 1 and 4, LMW would pass on a proportion of the energy price increase/decrease. Under Scenarios 2 and 3, LMW would absorb additional energy costs/savings, although it would be open to LMW to pass on the full savings of a price decrease.

The effect on prices to customers would be spread across the remaining years of the price review period, so that if electricity prices were increased by say 20% above the base case in 2018/19, then usage charges for customers would be increased by \$0.1807 per ML for the years 2019-20 to 2022-23.

The advantage of this mechanism is that LMW is protected from large unforeseen electricity price increases, and this protection enables LMW to incorporate lower energy prices in its Price Submission than would be possible without some form of risk sharing.

LMW proposes that the mechanism operate through the 'unders and overs' mechanism of the Water Charge Infrastructure Rules (WCIR), as proposed by the proposed adjustment to Schedule 3 formulae below.

The mechanism necessarily operates with a lag, with actual changes in energy prices resulting in an adjustment to prices to customers in the following year (if the collar is passed). Actual energy costs per MWh for the financial year will not be known in time for the price adjustment to be assessed, so LMW proposes that the movement in energy prices on a Feb to Jan year be used as the basis of determining the energy price increase.

Table 28 sets out the base Feb to Jan energy prices that form the baseline for calculation of the collar each year.

**Table 28 Base Usage Charges and Energy Prices**

	Units	Fourth Regulatory Period				
		2018-19	2019-20	2020-21	2021-22	2022-23
Price of electricity \$/MWh for large sites		219.59	220.94	215.66	216.21	220.37
Mildura irrigation usage	\$ per ML	51.74	52.50	53.26	54.04	54.82
Merbein irrigation usage	\$ per ML	44.42	44.02	43.62	43.23	42.84
Red Cliffs irrigation usage	\$ per ML	44.35	45.07	45.79	46.53	47.28
Robinvale irrigation usage	\$ per ML	79.07	78.65	78.24	77.83	77.43
Mildura HPS usage	\$ per ML	93.43	91.51	89.63	87.79	85.98
Millewa Urban usage	\$ per KL	0.61	0.66	0.71	0.78	0.84
Millewa Rural usage	\$ per KL	0.18	0.17	0.16	0.14	0.13
Other drainage usage	\$ per AUL	3.38	3.75	4.17	4.63	5.15

#### Schedule 3 Formulae - Rural

$$cap_t = rev_t + (cap_{t-1} - \sum_i \sum_j p_{ij,t-1} q_{ij,t-1}) \times CPI_t \times (1 + wacc) + PEC_{t-1}$$

Provided  $IEC_{t-1} / FMWh_{t-1} > 10\% \times FEC_{t-1} / FMWh_{t-1}$  or  $< -10\% \times FEC_{t-1} / FMWh_{t-1}$

Where  $IEC_{t-1} = EC_{t-1} - FEC_{t-1} \times \frac{IND_{t-1}}{IND_{18}}$

And  $PEC_t = EC_t - FEC_t \times 110\% \times \frac{IND_t}{IND_{18}} + FEC_t \times \frac{10\%}{2} \times \frac{IND_t}{IND_{18}}$

$PEC_t$  is the incremental electricity cost calculated on forecast megawatt hours to be passed through in prices

$IEC_t$  is the incremental electricity cost calculated on forecast megawatt hours

$EC_t$  is outturn electricity prices in regulatory year t x forecast megawatt hours

$FEC_t$  is forecast electricity costs per the 2017 determination, in 2017/18 prices

$IND_t$  is the CPI index for regulatory year t

$IND_{18}$  is the CPI index for 2017/18

$FMWh_t$  is forecast megawatt hours per the 2017 determination

## 6.4 Financial Position

LMW has completed the financial model templates as required by the ESC. The financial indicators are provided for the ESC to assess LMW's financial position in context with the prices proposed within the PS4 submission.

Table 29 details the financial indicators for the primary measures included in the ESC financial template. These financial indicators demonstrate that:

- LMW's operating activities are generating a positive cashflow annually ranging from \$1.84 million to \$3.24 million over the PS4 period. LMW will need to borrow to cover the capital investment program
- The primary indicator - FFO interest cover, demonstrates LMW's ability to meet its debt obligations. It is noted that the indicator remains slightly below 1.8 times in the 2018-19 to 2022-23 years, which is a caution signal and that LMW needs to monitor its performance closely throughout the PS4 period.
- The remaining indicators also point to the LMW rural business continuing a viable financial position.

**Table 29 Financial Indicators**

Financial Indicator	Current	Fourth Regulatory Period				
	2017-18	2018-19	2019-20	2020-21	2021-22	2022-23
Funds from operations \$m	2.35	1.84	2.28	2.64	2.88	3.24
FFO interest cover (times)	1.66	1.53	1.57	1.62	1.65	1.70
Net Debt / RAV (Gearing) (%)	69.0%	55.6%	62.5%	63.2%	63.3%	62.4%
FFO / Net debt (%)	4.3%	4.1%	4.1%	4.4%	4.7%	5.1%
Internal financing ratio (%)	-60.2%	14.3%	38.5%	50.8%	64.5%	62.3%

# Appendix A Demand Forecasts

## Pumped Irrigation

Table 30 shows the forecast for the fourth regulatory period.

*Table 30 Pumped Irrigation Forecast Volumes Summary- ML pa*

District	Current	Fourth Regulatory Period				
	2017-18	2018-19	2019-20	2020-21	2021-22	2022-23
Mildura	32,736	32,899	33,064	33,229	33,395	33,562
Mildura HPS	3,486	3,504	3,521	3,539	3,557	3,574
Merbein	19,546	19,937	20,335	20,742	21,157	21,580
Red Cliffs	28,528	28,955	29,390	29,831	30,278	30,732
Robinvale	22,082	22,082	22,082	22,082	22,082	22,082
<b>Total</b>	<b>106,377</b>	<b>107,376</b>	<b>108,392</b>	<b>109,422</b>	<b>110,468</b>	<b>111,530</b>

## Stock and Domestic Supplies

No significant changes are anticipated in net stock and domestic supplies. Table 31 indicates the volumes charged as usage for the Millewa stock and domestic regions. The forecasts for 2017-18 onwards are based on the most recent (2016-17) actual data available.

*Table 31 Stock and Domestic Volumes (kL pa)*

District	Current	Fourth Regulatory Period				
	2017-18	2018-19	2019-20	2020-21	2021-22	2022-23
Millewa Urban	49	49	49	49	49	49
Millewa Rural	850	850	850	850	850	850

## Forecast of Delivery Share

Delivery share forms an important element of the charging base for water and drainage services.

### *Delivery Share Charged for Water*

Delivery shares for Merbein, Red Cliffs and Robinvale were calculated on the 1 July 2006 Water Right. Mildura delivery shares are based on the irrigable size of the land (in hectares).

Table 32 shows expected future delivery shares for the irrigation districts. Recent declines in delivery share in Merbein, Red Cliffs and Robinvale are expected to stabilise.

*Table 32 Delivery Share Forecast - Irrigation Districts (ML pa)*

District	Current	Fourth Regulatory Period				
	2017-18	2018-19	2019-20	2020-21	2021-22	2022-23
Mildura	7157	7123	7089	7055	7021	6987
Merbein	3628	3628	3628	3628	3628	3628
Red Cliffs	5231	5241	5251	5261	5271	5281
Robinvale	2566	2566	2566	2566	2566	2566
Mildura HPS	816	820	820	820	820	820

### *Delivery Share Charged for Drainage*

Drainage charges are based on delivery share also, but with four divisional charges.

Table 33 sets out the past, current and forecast delivery shares used as the basis for the drainage charges. As drainage services are dependent on the irrigation demand in the pumped districts, forecast delivery share is closely related to the pattern of irrigation delivery share, and are assumed to remain constant through the regulatory period.

**Table 33 Water Rights and AULs (For drainage) (ML pa)**

District/Division	Current	Fourth Regulatory Period				
	2017-18	2018-19	2019-20	2020-21	2021-22	2022-23
<b>Mildura</b>						
Division 1 water rights	6,212	7,533	7,533	7,533	7,533	7,533
<b>Merbein</b>						
Division 1	3,003	3,018	3,033	3,048	3,063	3,078
Division 2	-	-	-	-	-	-
Division 3	-	-	-	-	-	-
Division 4	71	71	71	71	71	71
<b>Red Cliffs</b>						
Division 1	4,299	4,309	4,319	4,329	4,339	4,349
Division 2	10	10	10	10	10	10
Division 3	-	-	-	-	-	-
Division 4	420	420	420	420	420	420
<b>Robinvale</b>						
Division 1	2,534	2,534	2,534	2,534	2,534	2,534
Division 2	-	-	-	-	-	-
Division 3	-	-	-	-	-	-
Division 4	-	-	-	-	-	-

### **Diversions**

Charges to diverters are based on per ML of water shares held in Victorian Water Register and ML per annual use limit.

Water delivered is expected to progressively increase over the period due to continued development of out-of-district irrigation. Table 34 shows the quantity expected to be delivered to diverters, on which the operational fee is levied.

**Table 34 Water Delivered**

	Current	Fourth Regulatory Period				
	2017-18	2018-19	2017-18	2018-19	2017-18	2018-19
Water Delivered	587,793	593,295	615,548	633,751	646,031	657,565



Table 35 shows the number of Annual Stock and Domestic Permits.

**Table 35 Annual Permits (Diverters) ML pa**

	Current	Fourth Regulatory Period				
	2017-18	2018-19	2017-18	2018-19	2017-18	2018-19
Licensed Number	294	294	294	294	294	294

### Other Elements of the Charging Base

Table 36 sets out past actuals and forecasts of the other elements of the charging base.

The number of unmetered properties in the irrigation districts is reduced to low levels with the completion of the garden metering program. The number of diverters and the number of off takes in Millewa are assumed to remain the same over the review period.

**Table 36 Properties and Hectares**

District/Type	Current	Fourth Regulatory Period				
	2017-18	2018-19	2017-18	2018-19	2017-18	2018-19
<b>Number of Properties</b>						
Mildura- total properties	1914	1906	1906	1906	1906	1906
Merbein - unmetered	29	29	29	29	29	29
Merbein - total properties	803	803	803	803	803	803
Red Cliffs - unmetered	5	5	5	5	5	5
Red Cliffs - total properties	1295	1295	1295	1295	1295	1295
Robinvale - unmetered	0	0	0	0	0	0
Robinvale - total properties	350	350	350	350	350	350
Diverters	1175	1175	1160	1160	1160	1160
D&S customers	12	12	12	12	12	12
Millewa - no of rural connections	184	184	184	184	184	184
Millewa - no of houses	98	98	98	98	98	98
Millewa - no of urban - offtake	81	81	81	81	81	81
Millewa - no of urban - no offtake	15	15	15	15	15	15
<b>Hectares</b>						
Millewa - Hectares scrub	8763	8763	8763	8763	8763	8763
Millewa - Hectares stock	221202	221202	221202	221202	221202	221202
WWD Hectares - div 1	0	0	0	0	0	0
WWD Hectares - div 2	0	0	0	0	0	0
WWD Hectares - div 3	0	0	0	0	0	0

# Appendix B Capital Expenditure

		Fourth Regulatory Period (\$million 1/1/18)					
District	Irrigation & Drainage Capital Expenditure	2018-19	2019-20	2020-21	2021-22	2022-23	Project Total
Merbein	MER - Main PS 100 kW Solar PV Pilot	0.18	-	-	-	-	0.18
Merbein	MER - Upgrade Tight Spurs	0.10	0.10	0.10	0.08	0.08	0.45
Merbein	MER - Drainage PS Switchboards Replacement	-	-	-	0.06	-	0.06
Merbein	MER Air Release Valves	0.04	0.04	0.04	-	-	0.12
Merbein	MER D&S Metering Program	0.03	0.03	0.03	0.03	0.03	0.13
Merbein	MER Drainage Pit Lids	0.04	0.04	0.04	0.04	0.04	0.20
Merbein	MER Install Isolation Valves	0.08	0.08	0.08	-	-	0.24
Merbein	MER Install Scour Valves	0.09	0.09	0.09	-	-	0.27
Merbein	MER Irrigation Meter Replacement	0.05	0.05	0.05	0.05	0.05	0.25
Merbein	MER Replace Main Dow Avenue	0.33	-	-	-	-	0.33
Merbein	MER Mains Replacement (Irr) TOTAL Allocation	0.47	0.40	0.48	0.65	0.63	2.62
Merbein	MER Minor Capital - New	0.09	0.09	0.09	0.09	0.09	0.43
Merbein	MER Minor Capital - Replacement	0.10	0.10	0.10	0.10	0.10	0.50
Mildura	MDA - 17th St HPPS PS 100 kW Solar PV Pilot	0.18	-	-	-	-	0.18
Mildura	MDA - Benetook PS 100 kW Solar PV Pilot	0.18	-	-	-	-	0.18
Mildura	MDA - Central PS 100 kW Solar PV Pilot	0.18	-	-	-	-	0.18
Mildura	MDA - Drainage PS Switchboard Replacement	0.06	0.06	0.06	0.06	0.06	0.30
Mildura	MDA - Mildura Central Pump Station Upgrade to Control System	0.20	-	-	-	-	0.20
Mildura	MDA Reline K Channel Inverted Syphon Stage 2	0.13	-	-	-	-	0.13
Mildura	MDA Air Release Valves	0.01	0.01	-	-	-	0.01
Mildura	MDA Central PS Replace Manifold/Rising Main	4.00	-	-	-	-	4.00
Mildura	MDA D & S Metering Program	0.04	0.04	0.04	0.04	0.04	0.18
Mildura	MDA Drainage Pit Lids	0.05	0.05	0.05	0.05	0.05	0.23
Mildura	MDA Install Isolation Valves	0.05	0.05	-	-	-	0.09
Mildura	MDA Install Scour Valves	0.05	0.05	-	-	-	0.10
Mildura	MDA Irrigation Meter Replacement	0.10	0.10	0.10	0.10	0.10	0.50
Mildura	MDA New Pipeline to Supplement Mid Area	0.35	-	-	-	-	0.35
Mildura	MDA 17th St HP Replace pipeline at Deacon & Walnut	0.30	-	-	-	-	0.30
Mildura	MDA New Pipelines to Supplement Tight Lines	0.10	0.10	0.10	0.10	0.10	0.50
Mildura	MDA Minor Capital - New	0.12	0.12	0.12	0.12	0.12	0.60
Mildura	MDA Minor Capital - Replacement	0.20	0.20	0.20	0.20	0.20	1.00
Mildura	MDA Minor IRR Pipeline Replacements	1.35	1.35	1.30	1.10	1.00	6.10
Millewa	MILL - Millewa Replace River Pump Station	1.25	-	-	-	-	1.25
Millewa	MILL - Millewa Upgrade to ClearSCADA	-	0.30	0.30	-	-	0.60
Millewa	MILL Minor Capital - New	0.01	0.01	0.01	0.01	0.01	0.05
Millewa	MILL Minor Capital - Replacement	0.05	0.05	0.05	0.05	0.05	0.25
Private Diverters	PD D&S Metering Program	0.02	0.02	0.02	0.02	0.02	0.10
Private Diverters	PD Metering Program	0.10	0.10	0.10	0.10	0.10	0.50
Private Diverters	PD Telemetry System	0.05	0.05	-	-	-	0.10
Red Cliffs	RC - Drainage PS Switchboards Replacement	-	0.12	0.12	-	-	0.24
Red Cliffs	RC - Main PS 100 kW Solar PV Pilot	0.28	-	-	-	-	0.28
Red Cliffs	RC - Red Cliffs Main Pump Station Upgrade to ClearSCADA	0.20	-	-	-	-	0.20
Red Cliffs	RC - Upgrade Tight Spurs	0.10	0.10	0.10	0.08	0.08	0.45
Red Cliffs	RC Air Release Valves	0.02	0.05	-	-	-	0.07
Red Cliffs	RC D&S Metering Program	0.05	0.05	0.05	0.05	0.05	0.25
Red Cliffs	RC Drainage Pit Lids	0.05	0.05	0.05	0.05	0.05	0.25
Red Cliffs	RC Install Isolation Valves	0.06	0.14	-	-	-	0.20
Red Cliffs	RC Irrigation Meter Replacement	0.04	0.04	0.04	0.04	0.04	0.20
Red Cliffs	RC Mains Replacement (Irr) TOTAL Allocation	0.05	0.11	0.13	0.08	0.22	0.59
Red Cliffs	RC Minor Capital - New	0.10	0.10	0.10	0.10	0.10	0.50
Red Cliffs	RC Minor Capital - Replacement	0.20	0.20	0.20	0.20	0.20	1.00
Red Cliffs	RC Scour Valves	0.05	0.13	-	-	-	0.18
Robinvale	ROB - Drainage PS Switchboards Replacement	-	-	-	-	0.06	0.06
Robinvale	ROB - HPPS 100 kW Solar PV Pilot	0.28	-	-	-	-	0.28
Robinvale	ROB - Robinvale High Pressure Pump Station Spare Pump	0.10	-	-	-	-	0.10
Robinvale	ROB D&S Metering Program	0.01	0.01	0.01	0.01	0.01	0.03
Robinvale	ROB Drainage Pit Lids	0.03	0.03	0.03	0.03	0.03	0.13
Robinvale	ROB Irrigation Meter Replacement	0.03	0.03	0.03	0.03	0.03	0.13
Robinvale	ROB Minor Capital - New	0.04	0.04	0.04	0.04	0.04	0.18
Robinvale	ROB Minor Capital - Replacement	0.06	0.06	0.06	0.06	0.06	0.28
<b>Irrigation and Drainage TOTAL</b>		<b>12.41</b>	<b>4.88</b>	<b>4.46</b>	<b>3.77</b>	<b>3.78</b>	<b>29.29</b>

		Fourth Regulatory Period (\$million 1/1/18)					
	Corporate Capital Expenditure	2018-19	2019-20	2020-21	2021-22	2022-23	Project Total
Various	Motor Vehicles	0.89	0.86	0.47	0.39	0.95	3.55
Various	Computer Hardware	0.05	0.05	0.05	0.05	0.05	0.23
Various	Computer Software	0.03	0.03	0.03	0.03	0.03	0.13
Various	General Equipment	0.06	0.05	0.06	0.05	0.05	0.27
Various	Communications	0.01	0.01	0.01	0.01	0.01	0.07
Various	Workshop Tools	0.13	0.04	0.04	0.04	0.04	0.27
Various	Safety Equipment	0.01	0.01	0.01	0.01	0.01	0.03
Various	Lab Equipment	0.01	0.01	0.01	0.01	0.01	0.03
Various	Buildings Combined	0.33	0.04	0.04	0.04	0.04	0.48
<b>Corporate TOTAL</b>		<b>1.51</b>	<b>1.07</b>	<b>0.70</b>	<b>0.61</b>	<b>1.16</b>	<b>5.05</b>

# Appendix C Major Projects and Programs

Capital Program and Business Case Alignment		Price Submission 2017-18 to 2022-23 Rural										All costs in \$ million 1/1/18			
Business Case	Component Project	Project Cost										2020-21	2021-22	2022-23	
		PS4 Cost	2017-18	2018-19	2019-20	2020-21	2021-22	2022-23	2020-21	2021-22	2022-23				
1 Pipeline Renewals	MER Mains Replacement (Irr) TOTAL Allocation	9.31	2.62	-	0.47	0.40	0.48	0.65	0.63						
	MDA Minor IRR Pipeline Replacements		6.10	0.32	1.35	1.35	1.30	1.10	1.00						
	RC Mains Replacement (Irr) TOTAL Allocation		0.59	-	0.05	0.11	0.13	0.08	0.22						
Central Rising Main	MDA Central PS Replace Manifold/Rising Main	4.00	4.00	-	4.00	-	-	-	-						
11 Replacement															

Capital Program and Business Case Alignment		Price Submission 2017-18 to 2022-23			Rural			All costs in \$ million 1/1/18		
Business Case	Component Project	Project Cost	Major Service Category	Asset Category			Scope			Justification
				Cost Driver	Relevant Customer	Outcome	Objective	Scope	Justification	
1 Pipeline Renewals	MER Mains Replacement (Irr) TOTAL Allocation	9.31	Rural Irrigation	Rural Network	Maintain - Renewals	Supply me with water when I need it	Maintain performance of irrigation network	Replace irrigation pipelines in accordance with performance and condition assessments	Condition and performance of irrigation network	
	MDA Minor IRR Pipeline Replacements		Rural Irrigation	Rural Network	Maintain - Renewals					
	RC Mains Replacement (Irr) TOTAL Allocation		Rural Irrigation	Rural Network	Maintain - Renewals					
11 Central Rising Main Replacement	MDA Central PS Replace Manifold/Rising Main	4.00	Rural Irrigation	Rural Network	Maintain - Renewals	Supply me with water when I need it	Maintain performance of irrigation network and minimise critical Central Rising Main failures	Replace Central Rising Main	Condition and failure history of Central Rising Main	

# Appendix D Miscellaneous Charges

Tariff and Price Component 1/1/18	Unit	2018/19	2019/20	2020/21	2021/22	2022/23
<b>Groundwater Licence Fees</b>						
Application for groundwater licence	App	373.17	373.17	373.17	373.17	373.17
Application for renewal of groundwater licence	App	89.56	89.56	89.56	89.56	89.56
Application for transfer of groundwater licence	App	89.56	89.56	89.56	89.56	89.56
Ground Water Licence - Volume	ML	1.90	1.90	1.90	1.90	1.90
Minimum Charge		91.35	91.35	91.35	91.35	91.35
<b>Information Statements</b>						
Application for information statement under Sect. 158 of the Act (Includes one (1) meter read) - Fee Listed under other Charges "Special meter Reading Fee"	App	90.38	90.38	90.38	90.38	90.38
<b>Drainage Diversion Licence Fees</b>						
Application for drainage diversion licenses	App	91.91	91.91	91.91	91.91	91.91
<b>Subdivision Fee</b>						
Irrigation, 2 lot	App	957.94	957.94	957.94	957.94	957.94
Irrigation, 3 lot	App	1,198.96	1,198.96	1,198.96	1,198.96	1,198.96
Irrigation, 4 lot	App	1,423.63	1,423.63	1,423.63	1,423.63	1,423.63
Irrigation, 5 lot	App	1,677.93	1,677.93	1,677.93	1,677.93	1,677.93
Irrigation, 6 lot and over	App	1,996.56	1,996.56	1,996.56	1,996.56	1,996.56
*If a Staged Subdivision then 1st Stage is charged as above then remaining Stages charged at 2 lot fee unless other wised determined						
Subdivision of Holdings (half of a 2 lot subdivision of title)	App	475.91	475.91	475.91	475.91	475.91
Waterworks	App	475.91	475.91	475.91	475.91	475.91
Rural	App	475.91	475.91	475.91	475.91	475.91
Diversion	App	475.91	475.91	475.91	475.91	475.91
Excision Fee	App	956.92	956.92	956.92	956.92	956.92
Amalgamation of Holdings (Other than via subdivision process)	App	423.82	423.82	423.82	423.82	423.82
Resubmission of a Subdivision of Water Entitlements	App					
<b>Photocopying</b>						
A0 Plan	Copy	13.09	13.09	13.09	13.09	13.09
A1 Plan	Copy	8.60	8.60	8.60	8.60	8.60
A2 Plan	Copy	4.74	4.74	4.74	4.74	4.74
A3 Copy	Copy	2.58	2.58	2.58	2.58	2.58
A4 Copy	Copy	0.57	0.57	0.57	0.57	0.57
<b>Other Charges</b>						
Application Fee - Meter Investigation	App	361.52	361.52	361.52	361.52	361.52
Special Meter Reading Fee	Read	45.19	45.19	45.19	45.19	45.19
Application for Reconnection Fee	App	82.72	82.72	82.72	82.72	82.72
Lockdown and Unlock Fee	Connection	135.83	135.83	135.83	135.83	135.83
Meter Testing Fee	Test	75.06	75.06	75.06	75.06	75.06
Application for Hydraulic Assessment	App	52.08	52.08	52.08	52.08	52.08
Application Fee - District (Outside District) D & S Supply	App	135.83	135.83	135.83	135.83	135.83
Application Fee - Millewa WWD Stock and Domestic	App	135.83	135.83	135.83	135.83	135.83
Title Search Fee	Search	67.91	67.91	67.91	67.91	67.91
Consolidation (Of Titles) Investigation Fee	App	481.01	481.01	481.01	481.01	481.01
Water Analysis	Test	67.91	67.91	67.91	67.91	67.91
Merchant Fee (for payments over \$1,000)	Cust	Actual Cost	Actual Cost	Actual Cost	Actual Cost	Actual Cost
Direct Connection Fee (\$400 Security-Refundable, \$80 Supervision)	Connection	635.22	635.22	635.22	635.22	635.22
Tender Document Charge	Tender	132.76	132.76	132.76	132.76	132.76
<b>Drainage Only</b>						
Merbein - Property Drainage	DS	96.08	96.08	96.08	96.08	96.08
Red Cliffs - Property Drainage	DS	96.49	96.49	96.49	96.49	96.49
Robinvale - Property Drainage	DS	92.08	92.08	92.08	92.08	92.08
<b>Drainage Reuse Agreement</b>						
Private Use	per Agreement	157.27	157.27	157.27	157.27	157.27
Commercial Use	per Agreement	633.18	633.18	633.18	633.18	633.18
Debt collection fees passed on to customers	Cust	Actual Cost	Actual Cost	Actual Cost	Actual Cost	Actual Cost
Dishonoured Cheque Fees	Cust	Actual Cost	Actual Cost	Actual Cost	Actual Cost	Actual Cost
Excess Water	ML	977.52	955.54	934.06	913.06	892.53
Occupational & Grazing Licences	Licence	Actual Cost	Actual Cost	Actual Cost	Actual Cost	Actual Cost
Outside District Winter Garden Supply Valve Opening Fee	Opening	38.30	38.30	38.30	38.30	38.30
Cardross Lakes	ML	82.72	82.72	82.72	82.72	82.72
<b>Private Works Agreement (Licence)</b>						
Application Fee (Initial)	per Agreement	82.72	82.72	82.72	82.72	82.72
Annual Fee	Licence	35.95	35.95	35.95	35.95	35.95

<i>Tariff and Price Component 1/1/18</i>	<i>Unit</i>	<b>2018/19</b>	<b>2019/20</b>	<b>2020/21</b>	<b>2021/22</b>	<b>2022/23</b>
<b>Meter and Connection Fee</b>						
Irrigation District						
D & S Supply 40mm meter installation	Meter	2,226.34	2,226.34	2,226.34	2,226.34	2,226.34
D & S Supply 40mm meter installation & tapping band	Meter	2,415.27	2,415.27	2,415.27	2,415.27	2,415.27
Millewa WWD						
Tapping 20mm	Tapping	211.40	211.40	211.40	211.40	211.40
Tapping 25mm	Tapping	238.97	238.97	238.97	238.97	238.97
Meter Installation (20mm)	Meter	199.15	199.15	199.15	199.15	199.15
Meter Installation (25mm)	Meter	414.63	414.63	414.63	414.63	414.63
D & S Meter Payment ( 5 Year)	Meter per year	507.05	507.05	507.05	507.05	507.05
Disconnection Fee D & S	App	621.95	621.95	621.95	621.95	621.95
Disconnection of an irrigation outlet (Price on Application POA)	App	POA	POA	POA	POA	POA
Disconnection and Removal of an irrigation outlet (Price on Application POA)	App	POA	POA	POA	POA	POA
<b>Drainage Schemes</b>						
Nangiloc-Colignan - Operating Rate	AUL	3.10	3.10	3.10	3.10	3.10
Boundary Bend - O&M	AUL	3.10	3.10	3.10	3.10	3.10
Bumbang - O&M	AUL	3.10	3.10	3.10	3.10	3.10
Tol Tol - O&M	AUL	3.10	3.10	3.10	3.10	3.10
<b>Licences</b>						
Lake Cullulleraine - 12 Months	ML	21.16	21.16	21.16	21.16	21.16
<b>LMW Specific Fees for Water Register Fees</b>						
Application for a Water Use Licence	App	197.10	197.10	197.10	197.10	197.10
Application for a Water Use Registration	App	197.10	197.10	197.10	197.10	197.10
Application for a Works Licence	App	197.10	197.10	197.10	197.10	197.10
Applications to vary, cancel, issue or transfer a delivery share	App	87.73	87.73	87.73	87.73	87.73
Applications to vary a water use licence/registration	App	87.73	87.73	87.73	87.73	87.73
Applications to amend or renew a work licence	App	197.10	197.10	197.10	197.10	197.10
Applications to establish a tagged interstate entitlement	App	166.36	166.36	166.36	166.36	166.36
Applications to place an order against a tagged interstate entitlement	App	87.73	87.73	87.73	87.73	87.73
Applications to issue amend or transfer a bundled entitlement	App	197.10	197.10	197.10	197.10	197.10
Applications to transfer of Annual Use Limit	App	197.10	197.10	197.10	197.10	197.10
Cancel a water use licence or registration (Application Form 25)	App	87.73	87.73	87.73	87.73	87.73
Water Register administration fee (100pt check, ABA creation, ASIC extract)	App	27.78	27.78	27.78	27.78	27.78
Subdivision of Water Entitlements (associated with a subdivision of land)	App	102.13	102.13	102.13	102.13	102.13
Irrigation, 1 lot	App	439.14	439.14	439.14	439.14	439.14
Irrigation, 2 lot	App	822.11	822.11	822.11	822.11	822.11
Irrigation, 3 lot	App	1,100.91	1,100.91	1,100.91	1,100.91	1,100.91
Irrigation, 4 lot	App	1,378.70	1,378.70	1,378.70	1,378.70	1,378.70
Irrigation, 5 lot	App	1,656.48	1,656.48	1,656.48	1,656.48	1,656.48
Irrigation, 6 lot and over	App	POA	POA	POA	POA	POA
<i>* Set to align with the Fees as set by the Victorian Water Registrar</i>						
<b>Water Register Fees (Non Prescribed - Set by Victorian Water Registrar)</b>						
Transfer a water share including divide and transfer (Forms 1 & 3)	App	197.10	197.10	197.10	197.10	197.10
Divide a water share (Application Form 5)	App	165.95	165.95	165.95	165.95	165.95
Consolidate water shares (Application Form 6)	App	165.95	165.95	165.95	165.95	165.95
Issue a water share (Application Form 7)	App	197.10	197.10	197.10	197.10	197.10
Cancel a water share (Application Form 8)	App	197.10	197.10	197.10	197.10	197.10
Surrender a water share	App	197.10	197.10	197.10	197.10	197.10
Vary and/or associate, or revoke a water share association and standing direction (Application Form 9)	App	87.73	87.73	87.73	87.73	87.73
Give a limited term transfer (Application Form 10)	App	197.10	197.10	197.10	197.10	197.10
Trade water allocation (Form 39)	App	87.73	87.73	87.73	87.73	87.73
Use of water on land which a water share is not associated with (Form 3)	App	97.94	97.94	97.94	97.94	97.94
On line Trade water allocation (Form 39)	App	46.57	46.57	46.57	46.57	46.57
Form 9 & 5 Vary and Divide Water Share	App	166.36	166.36	166.36	166.36	166.36
Form 6 & 9 Vary and Consolidate Water Share	App					
Search Fee by applicant using online facilities	App	14.20	14.20	14.20	14.20	14.20
Search Fee by LMW on behalf of applicant	App	27.17	27.17	27.17	27.17	27.17
<i>* Fees are determined and set by the Victorian Water Registrar</i>						

<i>Tariff and Price Component 1/1/18</i>	<i>Unit</i>	<b>2018/19</b>	<b>2019/20</b>	<b>2020/21</b>	<b>2021/22</b>	<b>2022/23</b>
<b>Salinity Disposal Fees (Non Prescribed)</b>						
SDE Levy Post 14th April 2002 LIZ 1 Lump Sum	ML/AUL	37.47	37.47	37.47	37.47	37.47
SDE Levy Post 14th April 2002 LIZ 2 Lump Sum	ML/AUL	96.13	96.13	96.13	96.13	96.13
SDE Levy Post 14th April 2002 LIZ 3 Lump Sum	ML/AUL	192.29	192.29	192.29	192.29	192.29
SDE Levy Post 14th April 2002 LIZ 4 Lump Sum	ML/AUL	384.63	384.63	384.63	384.63	384.63
O&M Charge	ML/AUL	4.71	4.71	4.71	4.71	4.71
SDE Levy Post 14th April 2002 LIZ 1 Over 10 Years	ML/AUL	4.70	4.70	4.70	4.70	4.70
SDE Levy Post 14th April 2002 LIZ 2 Over 10 Years	ML/AUL	11.84	11.84	11.84	11.84	11.84
SDE Levy Post 14th April 2002 LIZ 3 Over 10 Years	ML/AUL	23.65	23.65	23.65	23.65	23.65
SDE Levy Post 14th April 2002 LIZ 4 Over 10 Years	ML/AUL	47.38	47.38	47.38	47.38	47.38
<b>MCMA Salinity Levy (Non Prescribed)</b>						
MCMA Salinity Levy - Private Diverters	ML	0.49	0.48	0.47	0.46	0.45
<b>Non Water Users</b>						
Service Fee		97.32	94.72	92.18	89.72	87.32
Entitlement Storage Fee Murray Basin HR	ML/Ent	9.09	9.09	9.09	9.09	9.09
Entitlement Storage Fee Murray Basin LR	ML/Ent	4.14	4.14	4.14	4.14	4.14
Entitlement Storage Fee Goulburn Basin HR	ML/Ent	7.35	7.35	7.35	7.35	7.35
Entitlement Storage Fee Goulburn Basin LR	ML/Ent	3.78	3.78	3.78	3.78	3.78
GMW Above Entitlement Storage Fee Murray Basin	ML	4.14	4.14	4.14	4.14	4.14
GMW Above Entitlement Storage Fee Goulburn Basin	ML	3.78	3.78	3.78	3.78	3.78
DEPI Water Share Fee	Share	13.80	13.80	13.80	13.80	13.80

\* based on CPI increases only. Goulburn Murray Water set these prices through ESC approval process



**LOWER MURRAY  
WATER**