In association with

2008 REVIEW OF WATER PRICES - ASSESSMENT OF EXPENDITURE FORECASTS FOR FMIT

Final Report

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Essential Services Commission

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2008 REVIEW OF WATER PRICES - ASSESSMENT OF EXPENDITURE FORECASTS FOR FMIT

FINAL REPORT

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EXECUTIVE SUMMARY

The draft recommendations for FMIT's operating and capital expenditure forecasts for the second regulatory period are outlined in Table 1 and 2 respectively.

Table 1 Recommendations for FMIT's Operating Expenditure Forecasts

Business	Forecast	Operating Expenditure ($m, 01/01/07)				
		2008/09	2009/10	2010/11	2011/12	2012/13
FMIT	Final Water Plan	5.14	5.18	5.24	5.26	5.29
	Cardno Revised	5.10	5.04	5.097	5.118	5.149
	Net Change	-0.04	-0.140	-0.143	-0.142	-0.141

Table 2 Recommendations for FMIT's Capital Expenditure Forecasts

Business	Forecast	Capital Expenditure ($m, 01/01/07)				
		2008/09	2009/10	2010/11	2011/12	2012/13
FMIT	Final Water Plan	0.06	0.86	1.49	0.06	0.06
	Cardno Revised	0.052	1.722	3.666	0.052	0.052
	Net Change	**-0.008**	**+0.862**	**+2.176**	**-0.008**	**-0.008**

Operating Expenditure Forecasts

- We consider that FMIT's forecasts for the second regulatory period are generally prudent and consistent with the historic expenditure.
- The increases through the second regulatory period and the variation from the ESC target BAU opex can be explained largely from the forecast 2007/08 increase in electricity, which has been based on historic consumption data and cost estimates and contract rates provided to FMIT for its current supply agreement and the increase in employee benefits in line with FMIT's Enterprise Bargaining Agreement. Although the current EBA expires at the end of 2008/09, FMIT have assumed the same increases going forward, which is reasonable.
- However, in the time since FMIT prepared its Water Plan, there has been a significant drop in the pool price of electricity prices. FMIT signed their current electricity agreement when prices were at a high level, with this contract to run for the two years, including the first year of the second regulatory period. Although FMIT has not forecast any additional increase in electricity costs for their next contract, due to start in 2009/10, they have not assumed any decrease in electricity prices. As the prices for the next electricity contract, which is likely to cover some if not all of the last four years of the second regulatory, are likely to be lower than those included in FMIT's Water Plan, we have adjusted the electricity costs for 2010 to 2013 with an assumed 10% reduction in prices from FMIT's current contract.
- We have requested additional information from FMIT relating to contracts used for repair and maintenance contractors and whether they include agreed pay rises, as the forecasts allow for a 7% per annum increase. However, this information had not been provided at the time of the Final Report.

Capital Expenditure Forecasts

- The 2008/13 capital program has been taken from the 2005 Master Plan. We have revised the costs for the program to reflect a number of issues that we consider impact on the capex forecasts that FMIT has included in its 2008 Water Plan:
  - The capex costs are at 2005 prices and have not been inflated to 2007 prices but have instead been assumed to be in the dollars of the day and so have been deflated back from future year's prices to 01/01/2007 dollars.

- The cost estimates included in the 2005 Master Plan for pipeline projects appear very low when compared to current prices, even though the costs include a 40% contingency.
- The projects included in the 2005 Master Plan that have been completed during the first regulatory period have costed significantly more than was first forecast.

- As a result of this, we have inflated the pipeline replacement projects by 125%.
- In addition, as the pump replacement and electrical replacement projects included a contingency of 40% we have reduced the contingency to 15% and inflated the 2005 costs up to 2007.
- With the capital program for 2008/13 being fairly small, we consider that there should be no issues with FMIT being able to deliver the identified projects over the five year regulatory period. The highest spend in any one year in the second regulatory period is less than FMIT has achieved in the last two years.
- Asset management planning and processes are still not well developed but FMIT is currently improving this, with improvements to its asset register expected to be completed by the end of 2007/08 to allow it to start to develop maintenance work schedules and record the costs associated with the work.

1. INTRODUCTION AND BACKGROUND

On 1 January 2004 the Essential Services Commission (ESC) became the economic regulator for the Victorian water sector. The Commission's role involves regulating the prices and service standards of 20 regulated water businesses supplying water, sewerage and related services to residential, industrial and commercial, and irrigation customers throughout the State.

Each of the regulated water businesses is required to develop and submit a Water Plan to the Commission for its approval. The Plans are required to set out:

- What the water business proposes to achieve over the regulatory period in meeting demands for rural and where relevant urban water and sewerage services, and complying with its obligations;
- How the water business proposes to achieve those outcomes;
- The water business's revenue requirement to deliver those outcomes; and
- The proposed prices, or the manner in which prices will be calculated or otherwise determined, for each of the prescribed services.

Cardno has been engaged by the ESC to undertake an independent review of the expenditure forecasts provided by First Mildura Irrigation Trust (FMIT) as part of their Water Plan submissions for the five year period commencing 1 July 2008.

The main objectives of the review is to determine whether the operating expenditure (opex) and capital expenditure (capex) forecasts included in FMIT's Water Plan;

- Reflect efficient expenditure;
- Are consistent with delivering the required service levels, outputs and obligations over the regulatory period; and
- Take into account a planning horizon that extends beyond the regulatory period.

In undertaking the review, Cardno is required to provide advice to the ESC on whether:

- The capital expenditure forecasts are consistent with existing obligations and service standards are reasonable - having regard to trends in historical expenditure, the reasons underpinning any difference in the expected level from those trends and any other relevant factors;
- There is sufficient evidence of, and consistency with, well developed asset management planning and processes that demonstrate that the forecasts for the next regulatory period have been determined in the context of a planning horizon that extends beyond the term of the Water Plan;
- The proposed program of capital expenditure is deliverable over the five year regulatory period – having regard to the required lead time, approvals processes, any resource constraints and the businesses' abilities to deliver previous capital expenditure programs;
- The proposed trend in operating expenditure over the regulatory period consistent with existing obligations and service standards is reasonable – having regard to expected productivity improvements, trends in input prices and the impact of growth on operating expenditure needs and any other relevant factors; and

- The operating and capital expenditure forecasts associated with meeting new obligations and/or meeting higher service levels reflect their likely expenditure requirements – having regard to any benchmarking or other quantitative techniques considered appropriate.

An Issues Report and presentation, which identified the preliminary views on FMIT's proposed expenditure forecasts and the nature of further work and investigation to be undertaken, was presented to the ESC on 26 November 2007.

A draft report, submitted to the ESC on 18 January 2008, presented the preliminary comments and recommendations based on a detailed assessment of the forecasts, including a series of structured interviews at FMIT, where the assumptions and bases used to derive the forecast expenditures were discussed in depth.

The ESC made the draft report available to FMIT. FMIT was expected to provide a written response to this draft report to comment on the findings and recommendations that have been made, clarify any outstanding issues, and correct factual errors and any misinterpretations. Comments from the water business were due by 29 February 2008. However, at the time of submission of the final report, on 19 March 2008, FMIT had not submitted a formal written response to the Draft Report.

2. EXPENDITURE REVIEW METHODOLOGY

Our approach to reviewing FMIT's expenditure forecasts involved an initial desktop study where the Final Water Plan and expenditure forecasts that had been submitted to the ESC, along with other information that was readily available, were reviewed. This preliminary review and assessment was then followed by a more detailed analysis of the expenditure forecasts, involving a series of structure interviews with FMIT to discuss how the forecasts had been derived and the assumptions that had been made.

2.1 Initial Review Stage

The initial review and assessment involved:

- A desktop assessment of FMIT's Water Plan for 2008-13 and the expenditure forecast templates that had been submitted to the ESC;
- An initial review of any other information that was readily available, i.e., recent Annual Reports that were able to be downloaded from the business's website;
- Identifying the key issues in the submission that would need to be reviewed in more detail; and
- Identifying any additional information requirements to assist in the more detailed review.

The outcomes of the initial review phase were used to prepare an Issues Report and presentation, submitted to the ESC on 26 November 2007, which identified the key issues associated with the business's proposed expenditure forecasts. These key issues were discussed in detail with the ESC and used to form the review plan The Issues Report also formed the main focus of the more detailed review stage.

2.2 Detailed Review Stage

The detailed review stage involved more in depth analysis of the expenditure forecasts and included a series of structure meetings with key FMIT staff. In particular the detailed review stage involved:

- A more in depth review of the key aspects of FMIT's expenditure forecasts for 2008-13;
- Specific focus on the key issues that had been identified through the Issues Report and discussions with the ESC;
- An assessment of FMIT's supporting systems and processes, including those used for asset management, capital planning, project management and budgeting;
- A more detailed review of the main and highest costing capital projects proposed during the 2008-13 timeframe; and
- A more detailed assessment of the impacts on operating expenditure of these capital projects.

The outcomes from this detailed review stage are outlined in this Draft Report, dated 18 January 2008. This report was made available to FMIT for their comments and feedback, with this information to be used to prepare the Final Report. Comments from the water business were due by 29 February 2008. However, at the time of submission of the final report, on 19 March 2008, FMIT had not submitted a formal written response to the Draft Report.

3. OVERVIEW OF FMIT

First Mildura Irrigation Trust (FMIT) is an independent water service business providing rural water services to Mildura.

FMIT's supply system consists of 32km of open channel, 26km of which is concrete lined and a further 250km of main and distribution pipes. The water supply system also has three major and one minor pumping station and two balancing storage facilities.

In addition FMIT operates a drainage system consisting of 309km of pipelines, 13km of rising mains and 9km of open earth channels. The drainage system includes 24 relift pumping stations, seven of which discharge to the supply system and seventeen within the drainage system itself. The drainage pipelines are between 100 to 900mm in diameter, with over half being either 150mm or 225mm. The majority of the pipes are concrete or earthenware, although there are some lengths of PVC and asbestos cement pipes.

4. DETAILED ANALYSIS OF FMIT'S PROPOSED EXPENDITURE

4.1 Operating Expenditure

A summary of FMIT's water business historical and forecast operating expenditure, as included in the ESC's information template is shown in Table 4-1.

Table 4-1 FMIT Historical and Forecast Operating Expenditure

Item	First Regulatory Period			Second Regulatory Period				
	Financial Year Opex ($m, 01/01/07)							
	05/06	06/07	07/08	08/09	09/10	10/11	11/12	12/13
Operating Expenditure Summary								
Business As Usual Opex	3.14	4.04	4.51	4.57	4.63	4.69	4.73	4.77
Bulk Water Charges	0.54	0.53	0.45	0.44	0.43	0.42	0.41	0.40
Licence Fees	-	-	-	-	-	-	-	-
Environmental Levy	0.14	0.14	0.14	0.13	0.13	0.12	0.12	0.12
Total Prescribed BAU Opex	3.82	4.72	5.10	5.14	5.18	5.24	5.26	5.29

4.1.1 General and Key Issues

- FMIT employed Pitcher Partners to prepare the operating forecasts for 2008/13 based on historic data taken from FMIT's General Ledger. The initial estimates were made as nominal costs, with additional work carried out to convert the estimates into 01/01/2007 dollars. Although the ESC templates separates out expenditure related to Irrigation and Drainage, due to the fairly small figures involved the data was combined and reported in the Irrigation fields in the ESC's templates.
- Increases in electricity are the main reason for the increases in the forecast operating costs. The historic and forecast expenditure on electricity is provided in Table 4-2.

Table 4-2 FMIT Historical and Forecast Expenditure on Electricity ($m, 01/01/07)

	05/06 $m	06/07 $m	07/08 $m	08/09 $m	09/10 $m	10/11 $m	11/12 $m	12/13 $m
Electricity	0.635	0.580	0.973	0.998	1.005	1.030	1.018	1.007

The main increase is from 2006/07 to 2007/08 which has been as a result of FMIT entering into a new electricity contract with AGL. This contract started on 1 July 2007 and is for two years, meaning that FMIT will need to review its power supplier at the end of 2008/09. FMIT had the option of entering into a one year contract at a slightly lower price but with the risk of a larger increase after one year but decided to enter a two year contract anticipating that the drought will break

The forecasts that have been made by FMIT are based on the quotes supplied by AGL, with the prices in the quotes becoming the contract rates. FMIT employed Utilicorp as a consultant to find the best price for the business, with the quotes from AGL being the lowest.

The estimated costs included in the forecasts are based on the invoiced costs related to FMIT's main pumping stations (Psyche, Central, Benetook) for the May 2006 to April 2007 consumption and an estimate for the new Mildura pumping station. No allowances have been made for the power uses by any of the smaller pumping stations or any of FMIT buildings. Pumping usage in the current year

has been significantly below the volumes estimated and is expected to also be lower than estimated in 2008/09 due to FMIT being allocated less water.

The expenditure estimates for the rest of the second regulatory period, after the current electricity supply contract expires, are forecast to remain fairly steady. FMIT has not received any guidance from the ESC as to changes to electricity prices going out towards the end of the second regulatory period and so has assumed that there will not be any decreases in prices to previous levels.

- FMIT's General Ledger includes expenditure for Materials and Consumables which has been allocated to 'Inventories Distributed' and included in the opex related to Operations. FMIT has forecast a nominal spend of $523,000 in each year of 2008/13, a total of $2.615m over the five year period, reducing when the spend is normalised to 01/01/07 dollars.

  The historic and forecast expenditure on Inventories Distributed at 2007 dollars is provided in Table 4-3.

Table 4-3 FMIT Historical and Forecast Expenditure on Inventories Distributed ($m, 01/01/07)

	05/06 $m	06/07 $m	07/08 $m	08/09 $m	09/10 $m	10/11 $m	11/12 $m	12/13 $m
Inventories Distributed	0.501	0.514	0.511	0.495	0.480	0.465	0.451	0.437

Although major capital expenditure related to specific projects is separated out in the General Ledger, if general materials are capitalised they would only be included against the cost codes that have been allocated to 'Inventories Distributed'. As such, it is likely that the historic spend used to derive the forecast estimates includes capital expenditure that should not be included as an operating expense in addition to materials that have been used for maintenance purposes and attributed to opex.

We reviewed the materials end of year materials inventory stocktakes for 2006 and 2007 and noted that in addition to pipe and pipe ancillaries, meters were included in the list and were being included in operating costs. In addition, the 2007/08 data that was used in the Water Plan was only for the first 10 months of the year and would not have included any materials that were capitalised at the end of the year when the 10 months of data was pro rata-ed to get 12 months of costs.

We reviewed the information recorded against the materials and consumables cost codes in FMIT's finance system but although the report provides details of who the materials were purchased from, it does not provide what specific materials were purchased.

Therefore, although it appears that some of the costs recorded against 'Inventories Distributed' should be capital expenditure and not operating expenditure, the actual level that the opex should be reduced by through reclassifying the expenditure as capex is hard to ascertain. By assuming this opex as a cashflow going forward, irrespective of whether it is operating or capital expenditure, the overall forecast is considered adequate going forward when compared to the historic expenditure that FMIT has incurred against these cost codes.

However, we recommend that FMIT reviews its approach to it accounting so that more emphasis is placed on accrual accounting and that the capitalisation policy is reviewed as part of this.

- FMIT has forecast bulk water charges to decrease over the course of the period. Actual 2005/06 and 2006/07 bulk water charges were $0.54m and $0.53m respectively. The charges are forecast to be $0.44m in 2008/09 and reduce each year to be $0.40m by the end of the period. FMIT has forecast a stage return to 100% allocations over the first three years of the period and an estimated 1% p.a. decline in demand due to on-farm efficiencies, urban encroachment and crop abandonment.
- Opex for the first year of the regulatory period was approximately $400,000 over budget. The variance was predominantly due to unpredicted maintenance works, with an increase in maintenance materials and contractors accounting for $300,000 of the difference.
- Repairs and maintenance costs have been forecast to increase over the second regulatory period, despite the upgrades in the first period and those to occur in the second period. FMIT has explained this as being due to the continued ageing of the remaining systems throughout the district. The Master Plan indicates that the majority of assets have a remaining life way out into the future, although it also identifies that the water supply system is approaching 50 years old and that the drainage system is almost seventy years old. The historical and forecasts costs for repairs and maintenance, along with the changes from the previous year, are provided in Table 4-4.

Table 4-4 FMIT Historical and Forecast Expenditure on Repairs and Maintenance ($m, 01/01/07)

Item	First Regulatory Period			Second Regulatory Period				
	Financial Year Opex ($m, 01/01/07)							
	05/06	06/07	07/08	08/09	09/10	10/11	11/12	12/13
Repairs and Maintenance	0.518	0.518	0.525	0.553	0.584	0.616	0.651	0.689
Change from Previous Year	-0.045	-0.001	0.007	0.028	0.031	0.032	0.035	0.038
% Change from Previous Year	-7.95	-0.11	1.41	5.31	5.52	5.53	5.73	5.84

- The increases that have been forecast for the 2008/13 repairs and maintenance estimates match the increases assumed for Contractors, with a 7% year-on-year increase assumed for contractors during the five year period. We have requested additional information from FMIT relating to contracts used for repair and maintenance contractors and whether they include agreed pay rises, as the forecasts allow for a 7% per annum increase. However, this information had not been provided at the time of the Draft Report.

  The historical and forecasts costs for Contractors included in the repairs and maintenance forecasts, along with the changes from the previous year, are provided in Table 4-5.

Table 4-5 FMIT Historical and Forecast Expenditure on Contractors ($m, 01/01/07)

Item	First Regulatory Period			Second Regulatory Period				
	Financial Year Opex ($m, 01/01/07)							
	05/06	06/07	07/08	08/09	09/10	10/11	11/12	12/13
Contractors	0.384	0.423	0.413	0.442	0.474	0.507	0.543	0.581
Change from Previous Year	-0.073	0.039	-0.010	0.029	0.031	0.033	0.036	0.038
% Change from Previous Year	-15.93	10.19	-2.34	7.03	7.03	7.03	7.03	7.03

Overall the annual percentage increases for Repairs and Materials costs of 5.31% to 5.84% over the second regulatory period are reasonable considering increases in prices through price index rises and increased maintenance on aging infrastructure. Although FMIT's 2008/13 capital program is relatively small the forecast program for the third regulatory period is expected to be higher based on the information included in the 2005 Master Plan.

- The current EBA allows for 1% increase above inflation in wages per year. The increase is not tied to any improvements in productivity. The current EBA is for three years and is currently in the second year. A new agreement will be implemented for 2009/10 but FMIT has assumed the same rate of wage increases going forward. At the present time, FMIT does not anticipate that there will be any increases on current staff levels during 2008/13.

4.1.2 Recommendations

- As shown in the Table 4-6 below, the ESC's operating expenditure template shows an increase in the Business As Usual opex from 2006/07 to 2007/08 of $0.47m. The BAU opex is forecast to increase by a further $0.26m from the 2007/08 expenditure by the end of the 2012/13.

Table 4-6 FMIT Historical and Forecast Business As Usual Opex ($m, 01/01/07)

Item	First Regulatory Period			Second Regulatory Period				
	Financial Year Opex ($m, 01/01/07)							
	05/06	06/07	07/08	08/09	09/10	10/11	11/12	12/13
Business As Usual Opex	3.14	4.04	4.51	4.57	4.63	4.69	4.73	4.77
Change from Previous Year	-	+0.9	+0.47	+0.06	+0.06	+0.06	+0.04	+0.04

- The two year electricity contract that FMIT has entered into at the start of 2007/08 is the main reason for the increase between 2006/07 and 2007/08, with the analysis and the best quote obtained for FMIT by Utilicorp from AGL estimating an increase of $0.393m between the two years. FMIT has assumed that there will be no significant changes in electricity prices when this contract expires at the end of 2008/09. This is shown in Table 4-7.

Table 4-7 FMIT Historical and Forecast Expenditure on Electricity ($m, 01/01/07)

Item	First Regulatory Period			Second Regulatory Period				
	Financial Year Opex ($m, 01/01/07)							
	05/06	06/07	07/08	08/09	09/10	10/11	11/12	12/13
Electricity	0.635	0.580	0.973	0.998	1.005	1.030	1.018	1.007
Change from Previous Year	-	-0.055	+0.393	+0.025	+0.007	+0.025	-0.012	-0.011

The electricity requirements are based on the 2006/07 consumptions at FMIT's main pumping stations. This assumes an end to the drought and a return to pre-drought consumptions. We consider that this is a reasonable assumption looking forward.

However, in the time since FMIT prepared its Water Plan, there has been a significant drop in the pool price of electricity prices. Although FMIT has not forecast any additional increase in electricity costs for their next contract, they have not assumed any decrease in the costs. As the prices for the next electricity contract, which is likely to cover some if not all of the last four years of the second regulatory, are likely to be lower than those included in FMIT's Water Plan, we have adjusted the electricity costs for 2010 to 2013 with an assumed 10% reduction in prices from FMIT's current contract.

Table 4-8 Cardno Adjustments to FMIT's Forecast Expenditure on Electricity ($m, 01/01/07)

	08/09 $m	09/10 $m	10/11 $m	11/12 $m	12/13 $m
FMIT Electricity Forecasts in Water Plan	0.998	1.005	1.030	1.018	1.007
Cardo Adjusted Electricity Forecasts	0.998	0.905	0.927	0.916	0.906
Change from Water Plan Forecasts	0	-0.100	-0.103	-0.102	-0.101
% Change from Water Plan Forecasts	0	-10%	-10%	-10%	-10%

- The other main reason for the increases in BAU opex over the second regulatory period is due to the increase in wages. Although FMIT does not forecast any increases in staff numbers it is currently in Year 2 of a three year Enterprise Bargaining Agreement, which sets the wage increase at 1% above CPI. The increase is not tied in to any productivity improvements from FMIT's staff. The forecast spend on employee benefits and the changes from the previous year are shown in Table 4-9.

Table 4-9 FMIT Historical and Forecast Expenditure on Employee Benefits ($m, 01/01/07)

Item	First Regulatory Period			Second Regulatory Period				
	Financial Year Opex ($m, 01/01/07)							
	05/06	06/07	07/08	08/09	09/10	10/11	11/12	12/13
Employee Benefits	1.607	1.791	1.869	1.902	1.935	1.969	2.004	2.040
Change from Previous Year	-	+0.184	+0.078	+0.033	+0.033	+0.034	+0.035	+0.036

- There is an increase forecast for repairs and maintenance but the increases are due to the annual increase in contractor costs. We have requested additional information from FMIT relating to contracts used for repair and maintenance contractors and whether they include agreed pay rises, as the forecasts allow for a 7% per annum increase. However, this information had not been provided at the time of the Draft Report.
- Therefore, we consider that FMIT's forecasts for the second regulatory period are generally prudent and consistent with the historic expenditure. The increases through the second regulatory period and the variation from the ESC target BAU opex can be explained largely from the forecast 2007/08 increase in electricity, which has been based on historic consumption data and cost estimates and contract rates provided to FMIT for its current supply agreement and the increase in employee benefits in line with FMIT's Enterprise Bargaining Agreement. Although the current EBA expires at the end of 2008/09, FMIT have assumed the same increases going forward, which is reasonable.
- One issue that we have found in our detailed review of the operating expenditure is that it appears that a degree of expenditure which has been allocated to materials and used to derive the future forecasts should be capital expenditure and not operating expenditure. However, based on the information from FMIT's financial system, it was hard to ascertain the actual level of opex allocated to 'Inventories Distributed' that should be reclassified as capex. As a result we have assumed this opex as a cashflow going forward, irrespective of whether it is operating or capital expenditure, and the overall forecast is considered adequate going forward when compared to the historic expenditure that FMIT has incurred for the materials and consumables included against 'Inventories Distributed'. As a result of this, we recommend that FMIT reviews its approach to its accounting so that more emphasis is placed on accrual accounting and that the capitalisation policy is reviewed as part of this.
- In line with the ESC's guidance, we have applied a 1% productivity gain to our recommended forecasts based on the Business As Usual opex (excluding bulk water charges) incurred in 2006/07. As a result, we have calculated the 1% productivity improvement as $0.04m/annum.
- Our recommended changes to FMIT's regulatory operating expenditure forecast are as follows:

Table 4-10 Recommended Changes to FMIT's Operating Expenditure for Regulatory Purposes

Item	Item/Description		$m				
			2008/09	2009/10	2010/11	2011/12	2012/13
1	Productivity Improvements	Original Water Plan Forecast	0	0	0	0	0
		Recommended Revised Forecast	-0.04	-0.04	-0.04	-0.04	-0.04
		Recommended Net Change	**-0.04**	**-0.04**	**-0.04**	**-0.04**	**-0.04**
2	Reduction in Electricity Costs for Next Contract	Original Water Plan Forecast	0.998	1.005	1.030	1.018	1.007
		Recommended Revised Forecast	0.998	0.905	0.927	0.916	0.906
		Recommended Net Change	**0**	**-0.100**	**-0.103**	**-0.102**	**-0.101**
Total Recommended Net Change:			-0.04	-0.140	-0.143	-0.142	-0.141
Original Water Plan Total Regulatory Opex:			5.14	5.18	5.24	5.26	5.29
Recommended Revised Total Regulatory Opex:			5.10	5.04	5.097	5.118	5.149
% Change:			-1%	-3%	-3%	-3%	-3%

4.2 Capital Expenditure

A summary of FMIT's historical and forecast capital expenditure, as included in the ESC's information template is shown in Table 4-11.

Table 4-11 FMIT Historical and Forecast Capital Expenditure

Item	First Regulatory Period			Second Regulatory Period				
	Financial Year Capex ($m)							
	2005/06	2006/07	2007/08	2008/09	2009/10	2010/11	2011/12	2012/13
Headworks & Bulk Carriers		2.52	1.54	-	-	-	-	-
Distribution Network	4.00	-	-	-	0.80	1.43	-	-
Licensing	-	-	-	-	-	-	-	-
Drainage	-	-	-	0.06	0.06	0.06	0.06	0.06
Corporate	-	-	-	-	-	-	-	-
Total Business As Usual	**4.00**	**2.52**	**1.54**	**0.06**	**0.86**	**1.49**	**0.06**	**0.06**
Unregulated	-	-	-	-	-	-	-	-
New Obligations	-	-	-	-	-	-	-	-
Total (Whole of Business)	**4.00**	**2.52**	**1.54**	**0.06**	**0.86**	**1.49**	**0.06**	**0.06**
Total (Regulated)	**4.00**	**2.52**	**1.54**	**0.06**	**0.86**	**1.49**	**0.06**	**0.06**

Note: Prices are not at 01/01/07 prices. The information has been taken from the Master Plan which was completed in January 2005. It has been assumed that the prices are at December 2004 dollars.

4.2.1 General and Key Issues

- The capital program for 2008/13 has been driven by FMIT's Master Plan, the latest version of which was completed in early 2005. The program for the second period is small, with a number of larger projects identified in the Master Plan having been completed during 2007.
- The full extent of FMIT's capital program for 2008/13, as included in the 2005 Master Plan is provided in Table 4-12. Further details on the projects are provided in Appendix A.

Table 4-12 FMIT's Capital Program 2008/13

Project	Requirement	2008/09	2009/10	2010/11	2011/12	2012/13
		Prices from 2005 Water Plan ($)				
K East Pipelines	Partial Replacement		230,700			
K West	Partial Replacement		36,900			
T South	Partial Replacement		183,200			
E Pipelines	Partial Replacement		222,800			
L South Sub-Area	Partial Replacement			1,606,060		
Benetook Pumps	Replace Electrical Works		200,000			
Drainage Pump Replacement	Pump, motor & switchboard replacement	67,940	67,940	67,940	67,940	67,940
Total Capex		**67,940**	**941,540**	**1,674,000**	**67,940**	**67,940**

- The projects and the associated costs have been directly lifted from the Environmental and Water Saving Infrastructure Master Plan dated 18 January 2005, with the exception of the L South Sub-Area, which has been increased from $1,604,800 (an increase of $1,260).
- The capital costs included in the Water Plan have not been inflated to 2007 dollars from the estimated costs included in the 2005 Master Plan. The data included in the Water Plan and in the ESC's templates has been incorrectly normalised from the proposed project timing back to 2007 prices, i.e. forecast costs to be incurred

in 2010/11 have had the ESC-provided discount rate applied to them to bring them back to 01/01/2007 costs.

- The consultant did not provide any detailed breakdowns of the costs included in the Master Plan, meaning that for the future projects for the second regulatory period the only cost forecasts that FMIT has available are the high level costs included in the Master Plan.

- The capital costs included in the Master Plan have been based on estimated replacement costs and include normal survey, design, project management and overhead costs. All costs include 40% contingency, including those for pump replacement and electrical works.

- Benetook Relift PS replacement costs of $200,000 were included in the Master Plan for Years 7 to 16, i.e. the third regulatory period but have now been moved forward to be included in the capital program for 2009/10.

- The Master Plan also identifies a further $7.9m for L South Sub-Area system replacement for Years 7 – 16 but noted that there was the possibility of bringing this forward into the second regulatory period . FMIT has said that is still possible that this additional partial replacement work could still be brought forward but that this would only happen if external funding was made available from government grants or the sale of assets.

- As the projects are still a couple of years away from their identified timeframes, no detailed design work has yet been started and FMIT do not expect this work to be completed until nearer the planned dates.

- Contracts for the replacement pipeline work will go out to tender but FMIT has found that local contractors who have worked on recent projects have completed the work to a satisfactory level.

- No provision has been made for any corporate capex in the current Water Plan. In the previous Water Plan, FMIT included $120,000 for corporate capex, 5.2% of the capex program for the first regulatory period.

  Expenditure related to vehicles has been included as a Business As Usual operating expenditure, with FMIT buying and selling vehicles on a rolling program. FMIT's vehicle fleet is predominantly purchases, although there are a small number of leased cars that are paid for through salary sacrifices. Vehicles are depreciated at 15%/year, resulting in an asset life as just under seven years. However, FMIT's policy was to replace at 2 years and 9 months or 90,000km but it is being flexible now, with vehicles used being rotated to defer replacement if the review at 2 years and 9 months shows that the useful life can be prolonged.

  FMIT's fixed asset register shows that as at 30/06/07 its vehicles had an asset cost of $578,690 and a Written Down Value of $279,883. This includes $137,933 that FMIT has spent during 2006/07 on new vehicles.

  Expenditure related to IT has also been assumed to be a Business As Usual operating expenditure. FMIT replaces its servers every three years, a process which has just recently been completed and, as a result, would also be expected to occur during 2008/13. The recent cost for replacing the server was $12,000.

  FMIT is not planning any building work or refurbishment over the second regulatory period.

- As the capital program included in the Water Plan includes only the major projects identified in the Master Plan, it does not include any expenditure related to renewals/replacement programs for meters, manholes, or any other ancillaries.

  FMIT charges new customers for meter installations. In 2005/06 it installed 320 50mm garden supply meters and 8 irrigation meters. In 2006/07 it installed 127 garden service meters and 8 irrigation meters, with the 2006/07 installations excluding meters in the 17th Street High Pressure Area.

  The garden metering program has now been completed, with a total of 1016 meters installed. Therefore, any replacements would be unlikely during the second regulatory period unless there are faults with the installed meters. At the present time FMIT does not have a meter replacement program based on throughput and/or age. This is something that it will need to develop during the second regulatory period as we would expect the installed garden meters to start to require replacement during the third regulatory period.

  Manholes are replaced as required and there is no program of replacement.

4.2.2 Capital Planning Processes

- The initial list of capital projects is derived from FMIT's Master Plan documents, the most recent version of which was completed by URS in January 2007. The projects that have been identified in the Master Plan as being needed are developed further as the proposed timeframe for their requirement approaches. The major water supply and drainage projects in the Master Plan are based on an options analysis approach based on a triple bottom line analysis to develop a preferred option to take forward to the more detailed design and costing stages.
- Preliminary budgets for the new capital projects included in the 2007 Water Plan have been taken directly from the Master Plan. However, as previously noted, the costs included in the Water Plan have not been inflated up to 2007 values.
- The review of the 2005 Water Plan concluded that whilst the information in support of the first regulatory period was reasonable, prudent and supported by detailed estimates, there was concern that the information reflected 'static' functional level information, and that current best practice would require support from elemental asset information with regular update processes as part of the asset management system. For the data included in the 2007 Water Plan the reliance on 'static' information is still a concern, although FMIT is in the process of improving its asset management systems, with an asset management system due to be implemented in early 2008.

4.2.3 Asset Management Systems and Processes

- FMIT acknowledges that historically there have been weaknesses with its asset register and its general asset management systems, resulting in the current improvements that re being made to its systems and processes. Whilst the previous systems have historically been viewed as being fit for purpose for a business the size of FMIT, they have fallen short of what would be considered best industry practice for asset management of a water business.
- Historically, FMIT's maintenance and replacement activities have been reactive rather than being based on a long-term strategic program and that there is a lack of long term historic maintenance records upon which an accurate assessment of asset condition can be maintained.
- FMIT is moving to a MYOB Asset Manager system, with this expected to be implemented in early 2008. FMIT is looking to use this system to manage its renewals and maintenance work, with work schedules automated within the

system and the associated costs for work activities being recorded and used to drive the future work programs.

- FMIT is in the process of breaking down pipe lengths into 300m sections so that it can look to use the asset management system to create a renewals program going into the future. As part of this it will create a renewals policy. It is also considering reassessing asst lives as part of the improvements.
- Although the improvements to the asset management system will not impact on the current Water Plan, we would expect that FMIT should have several year's work and associated cost data when preparing the Water Plan for the third regulatory period.

4.2.4 Capacity to Deliver the Capital Program

- Information provided by FMIT on the actual capital expenditure as against the budgeted capital expenditure ($ of the day) is as follows:

Table 4-13 FMIT Historical and Forecast Expenditure on Contractors ($m, 01/01/07)

Year	Budgeted Capex	Actual Capex	% of Budget Spent
2004/05	$5.558m	$0.532m	10%
2005/06	$8.690m	$3.980m	46%
2006/07	$8.412	$8.422m	100%

- Although there have been issues with delays to the capital projects included in the first regulatory period, the program for the second period is much smaller than any of the recent year's programs, although we consider that the costs should be higher than has been included in the Water Plan. However, even when the estimates have been increased to the level that we consider likely they are still lower that FMIT achieved during 2005/06 and 2006/07. The majority of the expenditure is for projects in 2009/10 and 2010/11 and there are adequate lead times to achieve the program satisfactorily.

4.2.5 Recommendations

- The costs included in the 2008 Water Plan have been taken directly from the 2005 Master Plan. No provision has been made to inflate the prices to 01/01/2007 prices and the Master Plan cost data has mistakenly been assumed to be in dollars of the day, meaning that it has been deflated back to 2007 prices. Using the Building Price Index and allowing for a regional factor for Mildura we would expect the costs to be at least 11% higher than those included in the 2005 Master Plan to bring them up to January 2007 costs.
- However, the program included in the Master Plan, which has been included in the Water Plan, has a table listing the asset, diameter, length of pipe and replacement cost. There is consistency between the cost/metre for replacement of pipes of the same diameter. Using the length of replacement and the total cost of replacement the following costs/metre can be calculated and compared to current costs, as shown in Table 4-14.

Table 4-14 Comparison of 2005 Master Plan and Current Pipeline Unit Rates

Pipe Diameter	Cost/Metre from FMIT's Master Plan	Approximate Current Brisbane Water Main Unit Costs	% Difference
225	$97	$249	156%
300	$125	$347	176%
375	$168	$461	174%
450	$253	$503	98%

Note: The FMIT Master Plan Costs include 40% contingency.
Note: Brisbane unit costs include 20% on costs and include for pipeline ancillaries. A factor of 0.75 has been used to adjust for rural areas.

- This would suggest that there are issues as to the robustness of the initial cost estimates that were included in the Master Plan, reinforced by the main capital projects in the first regulatory period coming in over budget. The cost estimates included in the 2005 Master Plan and the predicted actual spend (inclusive of the anticipated expenditure for 2007/08) are provided in Table 4-15.

Table 4-15 FMIT Historical and Forecast Expenditure on Contractors ($m, 01/01/07)

Project	2005 Master Plan Estimate ($)	Anticipated Total Capex ($)	% Difference
Benetook Water Storage	3,500,000	6,127,954	75%
17th Street Pipeline Replacement	3,052,700	6,442,239	111%

- Therefore, based on our analysis and FMIT's recent estimated and actual capital expenditure issues we recommend that each of the pipeline replacement projects included in FMIT's capital program for 2009/10 and 2010/11 be increased by a nominal 125% from the initial estimates included in the 2005 Master Plan.
- All of the capital projects include a contingency of 40%, including those related to pump and electrical works replacement. We recommend that these costs do not include this level of contingency but include a 15% contingency on cost estimates inflated up to 01/01/07 levels.
- The Master Plan highlighted the possibility of moving forward the $7.9m system replacement for the L South Sub-Area from the long term works program into the second regulatory period. However, FMIT have said that this would only happen if there was external funding for the project and so we consider that the original timeframe for the project of Years 7 to 16 (2013/14 to 2022/13) is sufficient based on the condition and performance information included in the Master Plan.
- Therefore, we recommend that FMIT's second regulatory period infrastructure capital program be revised as follows.

Table 4-16 Cardno Recommended Revised 2008/13 Capital Expenditure Forecasts

Project	Requirement	2008/09	2009/10	2010/11	2011/12	2012/13
		($ at 01/01/07 prices)				
K East Pipelines	Partial Replacement		520,000			
K West	Partial Replacement		83,025			
T South	Partial Replacement		412,200			
E Pipelines	Partial Replacement		501,300			
L South Sub-Area	Partial Replacement			3,614,000		
Benetook Pumps	Replace Electrical Works		153,200			
Drainage Pump Replacement	Pump, motor & switchboard replacement	52,000	52,000	52,000	52,000	52,000
Cardno Recommended Capex		**52,000**	**1,721,725**	**3,666,000**	**52,000**	**52,000**
FMIT Master Plan Infrastructure Capex		**67,940**	**941,540**	**1,674,000**	**67,940**	**67,940**
Difference from FMIT Master Plan		**-15,940**	**+780,185**	**+1,992,000**	**-15,940**	**-15,940**

- No provision has been made in the Water Plan capital expenditure for equipment or vehicles. The historic spend on additions for these assets during the year from 2004/05 to 2006/07, as included in FMIT's Financial Statements for each of the years, is as provided in the table below, together with the vehicle spend data for these years included in FMIT's fixed asset register.

Table 4-17 FMIT Recent Historical Expenditure on Equipment and Vehicles ($m, 01/01/07)

	2004/05	2005/06	2006/07	3 Year Average
Equipment and Motor vehicles - At Cost	$72,000	$51,000	$217,000	$113,000
Spend on new vehicles in Asset Register	$42,777	$28,549	$137,993	$69,773

Based on FMIT's Asset Register and the dates vehicles have been purchased, we would anticipate the majority of the current vehicle fleet to be replaced before the end of the regulatory period.

However, depreciation for the vehicles has been included in FMIT's opex forecasts, with the vehicles being depreciated at 15%/year, resulting in an asset life of just under seven years. The vehicle depreciation included in FMIT's opex forecasts during the second regulatory period has been forecast as follows:

Table 4-18 FMIT Depreciation for Vehicles included in Opex Forecasts ($m, 01/01/07)

	2008/09	2009/10	2010/11	2011/12	2012/13
Vehicle Depreciation	61,517	64,226	64,488	64,674	62,699

This roughly matches what would be expected to be spent on vehicles as capital expenditure, and essentially means that the capital expenditure on vehicles is operating more as a renewals annuity, with the expenditure written off in the year. Therefore, as with some of the other opex forecasts, as noted in Section 4.1.1, assuming the expenditure as an overall cashflow going forward, irrespective of whether it should be classed as operating or capital expenditure, the cashflow included for FMIT's vehicles is expected to be adequate going forward.

- With the capex forecasts in the 2008/13 Water Plan being deflated from the years that the work has been programmed for, our recommended changes to FMIT's Water Plan regulatory operating expenditure forecast are as follows:

Table 4-19 Recommended Changes to FMIT's Capital Expenditure for Regulatory Purposes

Item	Item/Description		$m				
			2008/09	2009/10	2010/11	2011/12	2012/13
1	K East Pipelines	Original Water Plan Forecast	-	0.212	-	-	-
		Recommended Revised Forecast	-	0.520	-	-	-
		Recommended Net Change	-	+0.308	-	-	-
2	K West	Original Water Plan Forecast	-	0.034	-	-	-
		Recommended Revised Forecast	-	0.083	-	-	-
		Recommended Net Change	-	+0.049	-	-	-
3	T South	Original Water Plan Forecast	-	0.168	-	-	-
		Recommended Revised Forecast	-	0.412	-	-	-
		Recommended Net Change	-	+0.244	-	-	-
4	E Pipelines	Original Water Plan Forecast	-	0.204	-	-	-
		Recommended Revised Forecast	-	0.501	-	-	-
		Recommended Net Change	-	+0.297	-	-	-
5	L South Sub-Area	Original Water Plan Forecast	-	-	1.430	-	-
		Recommended Revised Forecast	-	-	3.614	-	-
		Recommended Net Change	-	-	+2.184	-	-
6	Benetook Pumps	Original Water Plan Forecast	-	0.184	-	-	-
		Recommended Revised Forecast	-	0.153	-	-	-
		Recommended Net Change	-	-0.031	-	-	-
7	Drainage Pump Replacement	Original Water Plan Forecast	0.06	0.06	0.06	0.06	0.06
		Recommended Revised Forecast	0.052	0.052	0.052	0.052	0.052
		Recommended Net Change	-0.008	-0.008	-0.008	-0.008	-0.008
Total Recommended Net Change:			**-0.008**	**+0.862**	**+2.176**	**-0.008**	**-0.008**
Original Water Plan Total Regulatory Capex:			0.06	0.86	1.49	0.06	0.06
Recommended Revised Total Regulatory Capex:			0.052	1.722	3.666	0.052	0.052
% Change:			-13%	+100%	+146%	-13%	-13%

APPENDIX A

Major Projects Planned by FMIT

FMIT Major Capital Projects

Project	Justification of Need	Forecast Cost in period		Basis of cost estimate	Project timing	Potential for deferral
		($)	% total capex			
K East Pipelines	Partial Replacement to maintain existing service standards	230,700	8%	Preliminary. Costs based on preferred options included in the 2005 Master Plan.	2009/10	Limited. Project based on asset condition and asset age data included in the Master Plan. Any deferment would expect to lead to an increased in maintenance expenditure.
K West	Partial Replacement to maintain existing service standards	36,900	1%	Preliminary. Costs based on preferred options included in the 2005 Master Plan.	2009/10	Limited. Project based on asset condition and asset age data included in the Master Plan. Any deferment would expect to lead to an increased in maintenance expenditure.
T South	Partial Replacement to maintain existing service standards	183,200	7%	Preliminary. Costs based on preferred options included in the 2005 Master Plan.	2009/10	Limited. Project based on asset condition and asset age data included in the Master Plan. Any deferment would expect to lead to an increased in maintenance expenditure.
E Pipelines	Partial Replacement to maintain existing service standards	222,800	8%	Preliminary. Costs based on preferred options included in the 2005 Master Plan.	2009/10	Limited. Project based on asset condition and asset age data included in the Master Plan. Any deferment would expect to lead to an increased in maintenance expenditure.

Project	Justification of Need	Forecast Cost in period		Basis of cost estimate	Project timing	Potential for deferral
		($)	% total capex			
L South Sub-Area	Partial Replacement to maintain existing service standards	1,606,060	57%	Preliminary. Costs based on preferred options included in the 2005 Master Plan.	2010/11	Limited. Project based on asset condition and asset age data included in the Master Plan. Any deferment would expect to lead to an increased in maintenance expenditure.
Benetook Pumps	Replace Electrical Works to maintain existing service standards	200,000	7%	Preliminary. Costs based on preferred options included in the 2005 Master Plan.	2009/10	Limited. Project has been brought forward from when had been identified as being required in the 2005 Master Plan as a result of deterioration in performance and increased maintenance costs.
Drainage Pump Replacement	Pump, motor & switchboard replacement to maintain existing service standards	339,700	12%	Preliminary. Costs based on preferred options included in the 2005 Master Plan.	2008/13	Limited. Project based on asset condition and asset age data included in the Master Plan. Any deferment would expect to lead to an increased in maintenance expenditure.
TOTAL		**2.819**	**100%**			