

# SAMRA EXPANSION PROJECT - Financial Model

## Assumptions

### **Construction Period**

#### **Capital Expenditure**

Zarqa PS Expansion  
New Pipeline from Zarqa to Samra  
Rehabilitation existing 1200  
Samra WWTP Expansion  
Project Management Costs

#### **Total CAPEX**

#### **Financing**

Grant Amount  
Sponsors' Equity  
DSCR Margin  
Lending Interest Rate  
Loan Repayment Period  
Basic Senior Loan Amount  
Financial Interests during Construction  
**Total Senior Loan Amount (including Construction Fin. Interests)**

### Operation Period

#### **General Inflation**

#### **Flow Capacity for Expansion**

#### **Load Capacity for Expansion**

#### **Fixed Operation Expenditure**

Variable Fees Unit Price (Q)  
Variable Fees Unit Price (BOD)

#### **Variable Operation Expenditure**

#### **O&M Margin**

Renewals % of CAPEX

Renewals Profile

**Renewals**

**Tax Rate**

**Total Unit Price OPEX + Renewals (without Inflation)**

## **Key Financial Figures**

**Total Project Cost (during Construction)**

**Equity to Debt Ratio**

**Average Debt Service Ratio**

**Sponsors' IRR**

**Payback Period**

**Treatment Tariff**

Lenders

Sponsors

Operation

**Total Figures (Operation Period)**

Treatment Charges

Sponsors' Dividends

Loan Repayments + Interests

OPEX + Taxes

**Net Present Values Discount Rate (Operation Period)**

NPV Treatment Charges

NPV Sponsors' Dividends

NPV Loan Repayments + Interests

NPV OPEX + Taxes

		Year Quarter Year
		<p><b><u>Cashflow Construction Phase</u></b></p> <p><b>Financial Uses (CAPEX)</b>            Zarqa PS Expansion            New Pipeline from Zarqa to Samra            Rehabilitation existing 1200            Samra WWTP Expansion            Project Management Costs            Financial Charges</p> <p><b>Financial Sources</b>            Grant (MWI/MCC)            Equity (Sponsors)            Senior Loan (Lenders)</p>
		<p><b><u>Cashflow Operation Phase</u></b></p> <p><b>Revenues</b>            Fix F (Cap)            Fix (Cap)            Fix I (Cap)            Fix R (Cap)            Fix (Op)            Var (Op)</p> <p><b>Expenses</b>            Senior Loan Repayment            Senior Loan Interests            Renewals            Fixed OPEX            Variable OPEX</p>
		<p><b>Dividends payable to shareholders</b></p> <p><b>Tax</b></p> <p>Balance</p>

	<b>Cashflow</b>  <b>Cashflows Operation Period</b> Cashflow 1 (after OPEX + Renewals) Cashflow 2 (after senior debt) Cashflow 3 (after taxes)
	<b>Cashflow for Equity IRR</b>  <b>Sponsors IRR after Tax</b>  <b>DSCR Average</b>
	<b>Payback Period (years)</b>

<b>4</b>	Years
<b>10</b>	MUSD
<b>15</b>	MUSD
<b>5</b>	MUSD
<b>100</b>	MUSD
<b>5</b>	MUSD
<b>135</b>	MUSD
<b>0</b>	MUSD
<b>30</b>	MUSD
<b>200%</b>	
<b>10%</b>	
<b>12</b>	years
<b>105.00</b>	MUSD
<b>10.763</b>	MUSD
<b>115.76</b>	MUSD

<b>22</b>	Years
<b>3%</b>	
<b>150,000</b>	m3/day
<b>135,000</b>	KG BOD/day
<b>2.0</b>	MUSD / Year
<b>5</b>	Fils/m3
<b>15</b>	Fils/KG DBO5
<b>1.4</b>	MUSD/Year
<b>10%</b>	of OPEX

**Payment Profile**

20%	40%	35%
20%	40%	35%
20%	40%	35%
20%	40%	35%
20%	40%	35%

**Disbursement Profile**

20%	40%	35%
0%	0%	50%

**Loan Disbursement Profile**

0%	0%	50%
0.000	0.000	5.250

OK  
OK

15%
100%
0.920

MUSD / Year

10%
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61
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Fils / m3

OK

145.76
21%
1.18

MUSD

12.2%
13

Years

297
112
88
97

Fils/m3

Fils/m3

Fils/m3

Fils/m3

297 OK

505
150
191
164

MUSD

MUSD

MUSD

MUSD

505 OK

10%
213
40
116
57

MUSD

MUSD

MUSD

MUSD

213 OK

Grand Total (MUSD)	Total CAPEX (MUSD)	Total OPEX (MUSD)	2010 1	2011 2 0	2012 3 0
			<b>1.000</b>	<b>1.000</b>	<b>1.000</b>
<b>(145.763)</b>	<b>(145.763)</b>	<b>0.000</b>	<b>(27.000)</b>	<b>(54.000)</b>	<b>(52.500)</b>
(10.000)	(10.000)	0.000	(2.000)	(4.000)	(3.500)
(15.000)	(15.000)	0.000	(3.000)	(6.000)	(5.250)
(5.000)	(5.000)	0.000	(1.000)	(2.000)	(1.750)
(100.000)	(100.000)	0.000	(20.000)	(40.000)	(35.000)
(5.000)	(5.000)	0.000	(1.000)	(2.000)	(1.750)
(10.763)	(10.763)	0.000	0.000	0.000	(5.250)
<b>145.763</b>	<b>145.763</b>	<b>0.000</b>	<b>0.000</b>	<b>0.000</b>	<b>72.881</b>
0.000	0.000	0.000	0.000	0.000	0.000
30.000	30.000	0.000	0.000	0.000	15.000
115.763	115.763	0.000	0.000	0.000	57.881
<b>504.683</b>	<b>0.000</b>	<b>504.683</b>			
60.000	0.000	60.000			
212.231	0.000	212.231			
84.893	0.000	84.893			
28.951	0.000	28.951			
69.196	0.000	69.196			
49.412	0.000	49.412			
<b>(338.567)</b>	<b>0.000</b>	<b>(338.567)</b>			
(115.763)	0.000	(115.763)			
(75.246)	0.000	(75.246)			
(28.951)	0.000	(28.951)			
(69.196)	0.000	(69.196)			
(49.412)	0.000	(49.412)			
			<b>(27.000)</b>	<b>(54.000)</b>	<b>20.381</b>

			(27.000)	(81.000)	(60.619)
357.124	0.000	357.124			
166.116	0.000	166.116			
149.504	0.000	149.504			
<b>119.504</b>	<b>(30.000)</b>	<b>149.504</b>	<b>0.000</b>	<b>0.000</b>	<b>(15.000)</b>
<b>12.24%</b>			<b>0%</b>	<b>0%</b>	<b>0%</b>
<b>(1.18)</b>					
<b>13</b>					



**Total**

5%	100%	OK
5%	100%	OK
5%	100%	OK
5%	100%	OK
5%	100%	OK

**Total**

5%	100%	OK
50%	100%	OK

**Total**

50%	100%	OK
5.513	10.763	

**Flow & Load Profiles**

100%	100%	100%	100%	100%	100%	100%
100%	100%	100%	100%	100%	100%	100%

1.4	1.4	1.4	1.4	1.4	1.4
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100%	5%	5%	5%	5%	5%	5%
<b>0.920</b>	<b>0.9</b>	<b>0.9</b>	<b>0.9</b>	<b>0.9</b>	<b>0.9</b>	<b>0.9</b>



0.000	2.455	4.909	7.364	9.818	12.273	14.727
	23.950	22.986	22.021	21.056	20.092	19.127
	2.727	2.727	2.727	2.727	2.727	2.727
	2.455	2.455	2.455	2.455	2.455	2.455
<b>(15.000)</b>	<b>2.455</b>	<b>2.455</b>	<b>2.455</b>	<b>2.455</b>	<b>2.455</b>	<b>2.455</b>
<b>0%</b>	<b>0%</b>	<b>0%</b>	<b>0%</b>	<b>0%</b>	<b>0%</b>	<b>0%</b>
	<b>(1.13)</b>	<b>(1.13)</b>	<b>(1.14)</b>	<b>(1.15)</b>	<b>(1.16)</b>	<b>(1.17)</b>

100%	100%	100%	100%	100%	100%	100%	100%
100%	100%	100%	100%	100%	100%	100%	100%

1.4	1.4	1.4	1.4	1.4	1.4	1.4	1.4
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5%	5%	5%	5%	5%	5%	5%
0.9	0.9	0.9	0.9	0.9	0.9	0.9







100%	100%	100%	100%	100%	100%	100%	100%
100%	100%	100%	100%	100%	100%	100%	100%

1.4	1.4	1.4	1.4	1.4	1.4	1.4	1.4
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5%	5%	5%	5%	5%	5%	5%
0.9	0.9	0.9	0.9	0.9	0.9	0.9



53.464	65.469	77.474	89.479	101.484	113.489	125.494
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13.339	13.339	13.339	13.339	13.339	13.339	13.339
13.339	13.339	13.339	13.339	13.339	13.339	13.339
12.005	12.005	12.005	12.005	12.005	12.005	12.005

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<b>12.005</b>	<b>12.005</b>	<b>12.005</b>	<b>12.005</b>	<b>12.005</b>	<b>12.005</b>	<b>12.005</b>
<b>6%</b>	<b>8%</b>	<b>9%</b>	<b>10%</b>	<b>11%</b>	<b>11%</b>	<b>12%</b>

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<b>14</b>	<b>15</b>	<b>16</b>	<b>17</b>	<b>18</b>	<b>19</b>	<b>20</b>
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100%	100%
100%	100%

1.4	1.4
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5%	5%
0.9	0.9

2034	2035
25	26
21	22

<b>1.860</b>	<b>1.916</b>
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<b>22.066</b>	<b>22.328</b>
2.727	2.727
9.647	9.647
0.965	0.965
1.712	1.764
4.093	4.215
2.922	3.010

<b>(8.727)</b>	<b>(8.989)</b>
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(1.712)	(1.764)
(4.093)	(4.215)
(2.922)	(3.010)

13.339	13.339
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(1.334)	(1.334)
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12.005	12.005
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137.499	149.504
13.339	13.339
13.339	13.339
12.005	12.005
<b>12.005</b>	<b>12.005</b>
<b>12%</b>	<b>12%</b>
<b>21</b>	<b>22</b>