

Note This spread sheet is limited to water with a TDS of less than 4000 mg/L and does not include ancilliary civil works i.e. intake and concentrate disposal.

Location Factor 1.0 Note: 1 if in built up area up to 1.5 ui remote

NOTE: All Yellow Blocks Can Be Changed

INPUT

OUTPUT

7.10% Interest
2.50% Inflation
25 Term (Years)
30.00% Corporate Tax Rate
0.9 AU\$/US\$ Exchange Rate

Capacity (MGD)	Capacity (ML/day)	Production (MG/year)	Production (GL/year)	SEC (kWh/kL)	SEC (kWh/kgal)	Power Cost (\$/kWh)	Avaiability (%)	Capex (\$)	Annual O&M (\$/year)	Annual Power (\$/year)	Total Operating (\$/year)	Unit Capex (\$/kL)	Unit Capex (\$/kgal)	Unit Operating (\$/kL)	Unit Operating (\$/kgal)	Unit Cost (\$/kL)	Unit Cost (\$/kgal)
3.5	13.2	127.75	4.55	0.7	2.8	0.1	94%	15,799,520	1,826,607	338,951	2,165,557	0.24	0.92	0.43	1.62	0.67	2.54

85% recovery with feed water @ 1000 mg/L Do not use less than 50% Recovery

Feed = 15.59 ML/day
Reject = 2.34 ML/day @ 6667 mg/L
Product = 13.25 ML/day @ 200 mg/L

Temperature of feed water in winter = 80 Degrees F 26.7 degrees C

Power of plant = 404.1 kW
Feed Pressure = 227.4 psi 15.7 bar
Specific Energy Consumption (kWh/kgal) 2.8 kWh/kgal

2.5	9.5	11,975,075
5	18.9	21,195,158
7.5	28.4	29,599,408
10	37.9	37,514,145
12.5	47.3	45,083,729
15	56.8	52,389,159
17.5	66.2	59,481,991
20	75.7	66,397,766
22.5	85.2	73,162,375
25	94.6	79,795,471
27.5	104.1	86,312,441
30	113.6	92,725,639
32.5	123.0	99,045,188
35	132.5	105,279,522
37.5	142.0	111,435,768
40	151.4	117,520,024
42.5	160.9	123,537,560
45	170.3	129,492,974
47.5	179.8	135,390,310
50	189.3	141,233,151
52.5	198.7	147,024,691
55	208.2	152,767,793
57.5	217.7	158,465,038

Plant Capacity (ML/day) =

13.2

Location Factor =

1

AU \$

UF System	\$3,501,868	22.2%
RO System	\$3,028,502	19.2%
Buildings	\$2,769,177	17.5%
Site Work And Ancilliary Works (pipes etc)	\$2,168,983	13.7%
Electrical	\$1,150,811	7.3%
Instumentation	\$717,154	4.5%
Miscellaneous (incl Non Direct Costs)	<u>\$2,463,025</u>	<u>15.6%</u>
	\$15,799,520	100.0%