

Supplementary Material

Cost Estimation of Landfill Leachate Treatment by Reverse Osmosis: Case Study

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Table 2S CAPEX componentes costs (MRC = 10% equipment costs; R = 71%)

Components	US\$
Membranes and housings	16,229.94
Peripherals and pumps	372,743.14
Peripherals	316,483.90
Pumps	56,259.24
Construction costs	77,794.62
Start-up	37,341.42
Indirect capital costs	841,862.23
RO pretreatment	67,298.57
CAPEX	1,413,269.93

Table 3S MRC at different percentages of equipment costs

% Equipment costs	MRC (US\$ year ⁻¹)
5%	132,250.85
6%	158,701.02
7%	185,151.19
8%	211,601.36
9%	238,051.53
10%	264,501.70

Table 4S STC at different operational time of RO-plant and recovery (MRC corresponding 10% of equipment costs).

n (years)	STC (US\$ m ⁻³)				
	15	20	25	30	35
R (%)					
70	10.11	9.45	9.05	8.79	8.60
75	10.01	9.36	8.96	8.70	8.51
80	9.93	9.28	8.89	8.62	8.44
85	9.85	9.21	8.82	8.56	8.37
90	9.78	9.14	8.76	8.50	8.32
95	9.72	9.09	8.70	8.45	8.26

Table 5S STC, CAPEX and specific OPEX at different leachate flowrate (full-scale RO operating time corresponds to 15 years).

Leachate flowrate (m ³ h ⁻¹)	STC (US\$ m ⁻³)	CAPEX (MUS\$)	OPEX m ⁻³ (US\$)
5.40	10.09	1.413	7.44
6.00	9.95	1.547	7.33
7.00	9.76	1.771	7.20
8.00	9.62	1.995	7.09
9.00	9.51	2.219	7.01
10.00	9.42	2.443	6.95
15.00	9.16	3.562	6.75
20.00	9.03	4.681	6.66
25.00	8.95	5.800	6.60
30.00	8.90	6.920	6.56
35.00	8.86	8.036	6.53
40.00	8.83	9.159	6.51
45.00	8.81	10.279	6.49
50.00	8.79	11.398	6.48
55.00	8.78	12.517	6.47