

FAC 8415 Desalinization Plant

RUC: \$7,577.48 KG

Source: In V12, Tri-Service and USACE PAX Newsletter values were updated while all other values were inflated only.

Original Source: Calculation of RCF and SCF follows:

SUC: \$145.07 KG

Source: Actual inflation using ENR-based index applied through FY-08
Projected to FY-09 using Green Book Table 5-6 (O&M less DHP)
Original Source: CA Coastal Commission, CA Energy Commission, and Kuwait University.
In V12, values were inflated only.

FAC 8415
Desalination Plant
California Energy Commission Study

FAC 8415, Desalination Plant

The literature suggests 3 important facts about this technology - first, that the technology is rapidly improving causing costs to rapidly declining; second, the cost of small plants (< 1 MGD) are higher than the cost of larger plants (1-10 MGD, and >10MGD); third, the cost of seawater desalination is much higher than brackish water desalination. This estimate was prepared assuming seawater plant.

CCF

California Saltwater Desalination Plants 2002 Proposed for 03 Construction	MGD	Capital Cost \$million	Cost \$/Ga	Cost \$/KG	Source
West Basin	20	130	6.500	\$6,500	1
SDCWA	50	272	5.440	\$5,440	1
Orange County	25	127	5.080	\$5,080	1
Long Beach Water District	9	77	8.556	\$8,556	1
LADWP	12	70	5.833	\$5,833	1
Kuwait Univ/IAEC Study	7.13	40	5.610	\$5,610	2
		Average		\$6,170	

CCF, Escalated 2002 to 2005	\$6,475
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Sustainment

Cost per KG (2003), Assumes seawater	\$2.7300 for 5.3 MGD, seawater RO	3
Maintenance and Parts (7%)	7%	1
Membrane Replacement (5%)	5%	1
Total Maintenance (12%)	12%	1
Annual Sustainment	\$0.3276 per 1000 GA produced	
Annual Sustainment Cost		
Capacity	5.3 MGD	
Capacity in KG	5300.00 KGD	
	365.00 Days	
	1934500.00 KG per year	
Sustainment per KG x KG/yr	\$633,742 Per year	
Per Plant Capacity	\$119.57 Per year	2003

SUC, Escalated, 2003 to 2005	\$124.95	FY-05
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Sources

- 1, *Unit Cost of Desalination*, Shahid Chaudhry, California Energy Commission. 2003
- 2, *Evaluating the Economics of Desalination*, Kuwait University and International AEC, 2002
- 3, *Seawater Desalination and the Californian Coastal Act*, California Coastal Comm, March 2004

	<i>FY-02</i>	<i>FY-03</i>	<i>FY-05</i>
<i>DOD Deflators - BA, Table 5-6, Green Book</i>	95.29	95.7	100
	MCON	O&M	