



Altela, Inc.

Treating water naturally.

UNM Water Resources Program and MRG Water Assembly Presentation

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Economics of Deep Water Concentrate

Altela has developed new desalination technology:

- Energy reuse; 3 gallons for energy of 1 gallon
- Not RO: all contaminants removed; no chemicals added
- Evil Twin #1: we reduce the concentrate even further (80%)
- Evil Twin #2: we use waste heat or solar – no electricity
- Why put half of the water back down in the ground, never to be seen again? Get more from each gallon pumped.
- Use inexpensive plastics, instead of high pressure pumps and exotic metals
- “It’s all about the economics, stupid” ...

Economics of Water

What is water worth?

- \$1,000,000/gal to a millionaire dying of thirst
- \$25/acre-foot to an agricultural irrigator (\$0.00008/gal)
- Bottom line: the 'worth' of water spans a HUGE spectrum (10^{10th}, or a span of 10,000,000,000 times)

Economics of Water

What does water cost?

- \$0.003/gal for U.S. city residential (use as baseline)
- \$0.00008/gal for agricultural (0.025 times as much)
- \$0.12/gal for Oil & Gas produced water disposal (40 times as much)
- \$8.00/gal for bottled drinking water (2,600 times as much)
- Bottom line: the 'cost' of water also spans a HUGE spectrum (10^{5th}, or a span of 100,000 times)

Economics of Water

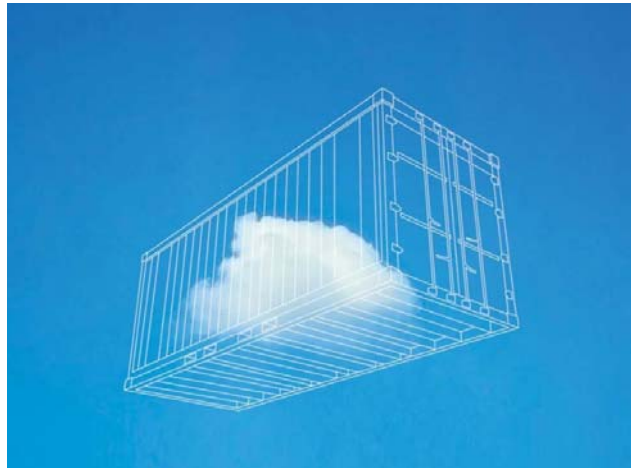
Water Use	\$/gal	\$/1,000 gal	\$/bbl	\$/acre-foot	X times Municipal
Irrigation water	\$0.00008	\$0.08	\$0.003	\$25	0.025 X
Irrigation water	\$0.0008	\$0.80	\$0.03	\$250	0.25 X
Municipal water	\$0.003	\$3.00	\$0.13	\$1,000	1.0 X
Low TDS water	\$0.006	\$6.00	\$0.26	\$2,000	2.0 X
'Deep Water'	\$0.024	\$24.00	\$1.00	\$8,000	8.0 X
'Produced Water'	\$0.12	\$120.00	\$5.00	\$40,000	40 X
High Cost PW	\$0.60	\$600.00	\$25.00	\$194,000	194 X
"Oil Equivalent"	\$1.90	\$1,900	\$80.00	\$621,000	620 X
Bottled water	\$8.00	\$8,000	\$336.00	\$2,608,000	2,608 X

Economics of Water

The cost of desalination is very dependent on TDS

- \$0.006/gal to RO potable water (2 times as much)
- \$0.012/gal to RO sea water (4 times as much)
- \$0.024/gal to RO deep brackish water (8 times as much)
- \$0.12/gal for Oil & Gas produced water disposal (40 times as much)
- Bottom line: the 'cost' of water desalination also spans a HUGE spectrum (a span of 20 times)

Our technology.
It's about 4.5 Billion years old.



Treating produced water is a highly complicated and expensive problem.
For our competitors.

