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A RISING TIDE FOR NEW DESALINATED WATER TECHNOLOGIES

Lux Research sees a wave of new technologies challenging incumbent reverse osmosis

Boston, MA – March 17, 2009 – The global desalinated water supply will grow at a CAGR of 9.5% over the next decade, reaching 54 billion m³/year (cubic meters per year) in 2020 – 54 trillion liters/year – or triple what it had been in 2008, according to a new report from Lux Research entitled “Desalination’s Future Champions.”

According to Lux’s analysis, the demand for desalinated water will foster a rising wave of new water treatment technologies, all aiming to challenge the incumbent reverse osmosis (RO) in desalination’s three market segments – seawater desalination, inland brackish water, and water recycling. RO dominated the desalination equipment market with a 54% revenue share as of 2008, and the relative success of its challengers will vary by market segment.

“The bottom line is that there are growth opportunities in brackish water and recycling,” said Michael LoCascio, a senior analyst at Lux Research and the report’s lead author. “But RO is so entrenched that its variations will dominate for 20 years, with new technologies coming to market only through RO hybridization.”

The report offers the first commercial analysis of emerging water treatment technologies, offering strategic insight to corporations, utilities, bulge-bracket banks and early stage investors looking to tap growth opportunities enabled by emerging desalination technologies.

To determine which technologies will succeed, the report establishes a benchmark with 13 criteria across two axes measuring each contender by its value and maturity. Because the factors for success differ so by market segment, Lux Research’s report weighted the criteria to come up with separate rankings for each segment. It then scored 18 current and future desalination technologies in this framework, learning that:

- **Forward osmosis (FO) and RO variants will win in the seawater segment.** Set to grow from 10.9 billion m³/year in 2008 to 38.4 billion m³/year (or 71% of total supply) in 2020, the seawater segment could see simpler technologies, like cloud-point and ammonium carbonate FO, beat RO on energy and cost.
- **The brackish water segment will fragment with nine successful technologies.** Increasing comparatively slowly from 6.4 billion m³/year (35% of total) in 2008 to 7.2 billion m³/year (13% of total supply) in 2020, brackish water’s widely varying operating conditions combined with the water market’s hyper-locality will foster nine sustainable technologies.
- **RO will go unchallenged in recycling.** The fastest-growing segment – increasing from 0.9 billion m³/year in 2008 to 8.4 billion m³/year in 2020 (16% of total supply) – the recycling

market's low energy needs and levels of brine waste minimize RO's weaknesses, securing its dominance in the segment for decades.

"Of particular interest are firms that build, own, and/or operate desalination facilities," said LoCascio. "Since they are technologically agnostic, these firms stand to benefit as the value of desalinated water continues to increase over the next 20 years, while the cost to produce it declines."

"Desalination's Future Champions" is part of the Lux Water Intelligence service. Clients subscribing to this service receive continuous research on water industry market trends and forecasts, ongoing technology scouting reports and proprietary data points in the weekly Lux Research Water Journal and on-demand inquiry with Lux Research analysts.

About Lux Research

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