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NEW Industry forecasts for 2013 & 2018

World Water Desalination

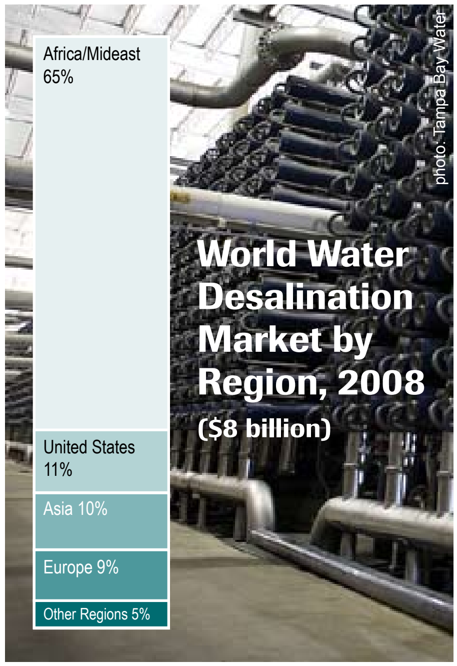
Study # 2523 | July 2009 | $5700

Continued rapid growth anticipated through 2013

The very word "desalination" usually triggers thoughts of oil-rich, water-poor countries in the Middle East. And while it is true that several such countries -- Saudi Arabia, the United Arab Emirates and Kuwait -- are among the largest markets for desalination, there are desalination facilities in more than 100 countries. The continued proliferation of desalination facilities has created a global market of more than $8 billion, with continued rapid growth anticipated.

Thermal processes limited to energy-rich markets

The most traditional techniques for desalination have involved thermal processes. The most common contemporary thermal processes, multi-stage flash (MSF) distillation and multiple-effect distillation (MED), are highly reliable and capable of producing remarkably pure water from the saltiest seawater sources. However, these techniques -- especially MSF -- consume large amounts of energy. These techniques tend to be economically viable only when water shortages are most severe and when local energy supplies are abundant -- such as in Saudi Arabia, the UAE, Kuwait and a few other countries in the region. Elsewhere, shortages of quality water can also be daunting. This is true in China, Spain, Australia and parts of the United States -- where populations have outgrown native water supplies or local water supplies contain so much salt and other dissolved solids that they are not fit for use. These difficulties are perhaps most severe in Middle Eastern and North African nations not endowed with plentiful oil and gas reserves but beset with similarly arid conditions and lack of indigenous water supplies.



Membrane-based methods to outpace other techniques

Membrane-based technologies are growing more rapidly than the overall fast-growing desalination market. Membrane systems have been the technology of choice for brackish water desalination in the US, Europe and elsewhere. Seawater reverse osmosis (SWRO) is expected to be one of the fastest growing niches in the global desalination market for a number of key reasons. First, the US, Spain, China, Australia and several other countries are using more seawater as the source water for desalination processes. Most of the largest municipal facilities in these countries will be using membrane-based techniques. Second, many countries in the Africa/Mideast region -- such as Algeria, Israel and Saudi Arabia-- are relying on membrane desalination to supply their growing water needs.

RO, MED desalination to register fastest growth

Overall, RO (reverse osmosis) and MED techniques are expected to account for a large majority of new capacity, and the products used in conjunction with these technologies are projected to register the fastest growth. Technological improvements to membranes extending their functional lives and reducing their vulnerability to fouling will drive demand for RO systems, and for the membranes, pretreatment filters, chemicals and other products used in these systems. Growth for MED systems -- including evaporators, pumps and other products -- will be driven by improved energy efficiency, especially when compared with MSF. Energy cost reductions via the use of energy recovery systems and plants designed to use power plant waste energy will also serve to make desalination systems more economically feasible.

Study coverage

This new Freedonia industry study, ***World Water Desalination***, is priced at $5700. It presents historical demand data (1998, 2003, 2008) plus forecasts for 2013 and 2018 by application, product, market, world region and for 16 countries. The study also considers market environment factors, assesses industry structure, evaluates company market shares and profiles industry competitors.

CONTENTS/TABLES/CHARTS
historical data (1998, 2003, 2008)
plus forecasts for 2013 and 2018

INDUSTRY STUDY WITH FORECASTS FOR 2013 & 2018

World Water Desalination

INDUSTRY STRUCTURE

Company Profiles

OTHER REGIONS

Unlike most of the countries in the region, including many of the world's largest desalination markets, Israel is home to a number of companies active in the desalination market. IDE Technologies, a joint venture between Delek Group and Israel Chemicals, is involved in the design, construction and operation of several types of desalination plants. IDE Technologies operates the RO plant in Ashkelon, Israel's largest. The company is also constructing a plant of comparable size (330,000 m3/day) in Hadera, which is expected to become operational in 2010. IDE is also active in other regions, with active or planned plants in such locations as the Hovensa refinery in the US Virgin Islands, Spain, India, Kazakhstan, China, Italy and Turkmenistan.

TABLE IV-10

ISRAEL: DESALINATION PRODUCT DEMAND BY TYPE (million dollars)

Item	1998	2003	2008	2013	2018
Desalination Market					
% products					
Desalination Product Demand					
Membranes					
Membrane Equipment					
Pumps					
Filters					
Chemicals					
Other					

SAMPLE TABLE
Historical data for 1998, 2003 and 2008 as well as Freedonia forecasts for 2013 and 2018; data illustrated with the aid of more than 100 tables and charts

Israel: Applications, Technologies

Over the past ten years, new constr share of demand in the Israeli desalinatio desalination capacity. This will remain t but going forward it is expected that the r register faster growth. Demand is forecas

OVERVIEW

Membranes

World demand for membranes used in water desalination is projected to increase nearly ... lion in 2013. Although the Mid ... salination ma in the world, it is ... hrough 2013 to the fact that a l ... e region will on membrane tech

SAMPLE PAGE
Explanations that support each table's data and forecasts

Across the ... as a large majority of new c ... nological improvements to membranes extending their functional lives and reducing their vulnerability to fouling will prompt cost reductions encouraging the use of membranes. This is true in areas where membranes have long been the dominant desalination technique (e.g., the US and Europe), and in areas moving away from thermal techniques (e.g., the Middle East and Northern Africa). To some extent, however, gains will be limited by the fact that most of the very largest plants in operation -- such as those in Saudi Arabia, the UAE and Kuwait -- will continue to use thermal processes. Additionally, greater use of membranes in pretreatment stages of desalination processes will also boost demand.

Reverse osmosis (RO) membranes, one of the most selective membrane types, are the main membrane type used in desalination. Most typically, spiral wound membranes are used in desalination plants, although the plate and frame format finds use in some smaller plants. However, nanofiltration membranes are used in some settings, and less selective ultrafiltration and microfiltration are widely used in pretreatment options in RO systems. Reverse osmosis membranes are used in desalination systems that treat seawater, brackish water or other poor groundwater. Reverse osmosis membranes generally compete favorably with thermal distillation systems since distillation systems require more floor space, a larger initial capital investment and more energy to operate. Even in countries with abundant energy supplies and serious water shortages, membranes are accounting for increasing shares of new desalination capacity.

Freedonia's methods involve:

- Establishing consistent economic and market forecasts
- Using input/output ratios, flow charts and other economic methods to quantify data
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- Interviewing key industry participants, experts and end users
- Researching a proprietary database that includes trade publications, government reports and corporate literature

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Filters

The US filter industry is analyzed in this study. It presents historical demand data for 1998, 2003 and 2008, and forecasts for 2013 and 2018 by filter product (e.g., fluid power, oil, air intake, fuel, cabin air, emissions, panel and pocket air, fabric air pollution), and market (e.g., motor vehicles, utilities, consumer). The study also considers market environment factors, details industry structure, evaluates company market share and profiles manufacturers competing in the US filters market.

#2524.................. 08/2009..................... $4800

World Membrane Separation Technologies

Global membrane demand is projected to grow 8.6% annually through 2012, driven in part by concerns about water quality and waste stream disposal. Large, developing countries with stressed local water resources will be the fastest growing markets. North America will remain the largest outlet and post strong advances. This study analyzes the $10 billion world membrane industry, with forecasts for 2012 and 2017 by product, market, world region and for 18 countries. It also evaluates market share and profiles industry players.

#2468.................. 04/2009..................... $5700

World Water Disinfection

Global water disinfection product demand will grow 7.4% yearly through 2012. Markets in China, India and other developing countries with large industrial sectors will grow the fastest. In mature markets like North America, growth will be driven by upgrades to better performing specialty chemicals. This study analyzes the $5.2 billion world water disinfection industry, with forecasts for 2012 and 2017 by product, market, world region and for 17 major countries. It also evaluates company market share and profiles industry players

#2412.................. 10/2008..................... $5700

Filters in China

Demand for filters in China will jump 14.4% annually through 2011. Air filters will post the fastest gains, spurred by rising output of products that include filters or are made in clean-air factories. The motor vehicle market will remain dominant while the water and waste treatment segment of the utilities and consumer markets grows the fastest. This study analyzes the ¥20.9 billion Chinese filter industry, with forecasts for 2011 and 2016 by product and market. It also evaluates company market share and profiles major players

#2310.................. 05/2008..................... $5100

Water Treatment in China

Demand for water treatment products in China will soar 15.5% annually through 2012. Filters and membranes will be the fastest growing segments, although all types will see double-digit gains. The industrial sector will remain the largest market, but will be outpaced by municipal and other end uses. The study analyzes the ¥20.4 billion water treatment product industry in China, with forecasts for 2012 and 2017 by product, market and region. It also evaluates company market share and profiles leading industry players.

#2329.................. 04/2008..................... $5100

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