

# **Solar Water Desalination Plant Market – Global Industry Size, Share, Trends, Opportunity, and Forecast, 2018-2028 Segmented By Membrane Process (Ultrafiltration Systems, Vacuum Evaporation and Distillation, Reverse Osmosis Systems, Paper Bed Filters, Solid Bowl Centrifuges, Tramp Oil Separators, Vacuum Filters, And Others), By Method (Solar-powered Humidification-Dehumidification (HDH) Desalination, Solar Diffusion Driven Desalination, Solar Membrane Distillation, Concentrated Solar Power (CSP)- based Desalination, and Solar Pond Desalination), By Industry (Industrial, Agriculture, Domestic, Municipal, and Commercial), By Region**

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## **Abstracts**

Global Solar Water Desalination Plant Market is anticipated to develop rapidly during the forecast period, 2024-2028.

A solar water desalination plant converts sunlight into heat to produce potable water from saline water, brackish water, and wastewater via direct or indirect desalination. Water desalination can help to alleviate global concerns about climate change, carbon emissions, and freshwater contamination. Rising awareness about the benefits and properties of solar water desalination plants, such as technical simplicity, low

maintenance requirements, cost-effectiveness, and ease of operation, is expected to drive market revenue growth over the forecast period.

Rising concerns about water stress levels, environmental degradation, and rising demand for fresh and clean water are key factors expected to drive market revenue growth over the forecast period. Rising demand for potable water, which is widely used for domestic and industrial purposes, is expected to drive revenue growth in the global solar water desalination plant market during the forecast period.

### Increasing Government Regulations

Population and economic growth have led to an exponential increase in demand for water resources, with 36% of the world's population being in water-scarce areas. Therefore, the government is highly focused on solar water desalination plant from industries and manufacturing plants. Some of the government initiatives are:

To meet the rising demand for water and lessen reliance on water from the Nile River, the Egyptian government allocated USD 2.5 billion in private investment by 2025 to build 17 solar-powered seawater desalination plants.

### The Municipal Industry Contributes to a High CAGR

The municipal industry has a high CAGR contribution to the solar water desalination plant. Due to urbanization and the resulting expansion of urban infrastructure, which has increased demand for resources such as water and electricity, the municipal segment is anticipated to experience a strong revenue growth rate over the forecast period. Water that is fit for human consumption is provided to the world's urban population by the municipal sector. Moreover, it is expected that the municipal sector will experience an increase in demand for solar water desalination plants due to the falling cost of desalinated water and the rising cost of surface water in urban areas.

### The High Cost Required for Setting Up Treatment Plants

High costs are required for setting up solar water desalination plant. Solar water desalination plant requires excessive sludge production, large energy, and high operational costs. Moreover, it demands specialized knowledge and abilities and before the desalination process, chemicals such as hydrogen peroxide, chlorine, and hydrochloric acid are used as byproducts. Environmental pollution results when these

chemicals are discarded after they no longer have their intended purposes. Large amounts of brine are also flushed into the ocean or sea from saline water desalination plants. This brine contains chemicals such as anti-scaling agents from pre- and post-treatment in addition to concentrated salt. As a result, brine disposal is an issue that could slow the adoption rate of all desalination processes. A solar water desalination plant's installation is also very expensive and energy-intensive, making small-scale installations impractical. These are critical factors that could stymie global market growth.

## Market Segmentation

The Global Solar Water Desalination Plant Market is divided on the basis of membrane process, method, industry, regional distribution, and competitive landscape. Based on membrane process, the market is further segmented into ultrafiltration systems, vacuum evaporation and distillation, reverse osmosis systems, paper bed filters, solid bowl centrifuges, tramp oil separators, vacuum filters, and others. On the basis of method, the market is further divided into solar-powered humidification-dehumidification (HDH) desalination, solar diffusion driven desalination, solar membrane distillation, concentrated solar power (CSP)- based desalination, and solar pond desalination. On the basis of industry, the market is further split into industrial, agriculture, domestic, municipal, and commercial.

The demand for clean water resources is fueling the market for Solar Water Desalination Plant Market and is expected to register a robust compound annual growth rate (CAGR) during the forecast period.

## Market Players

The major players in the Global Solar Water Desalination Plant market are Elemental Water Makers B.V., F Cubed Limited, Photon Energy Systems Limited, Sinovoltaics Group, Solar Water Solutions Ltd., Sterlitech Corporation, Trunz Water Systems AG, Waaree Energies Ltd., ACCIONA, Water Office, and many more.

## Report Scope:

In this report, the Global Solar Water Desalination Plant Market has been segmented into the following categories, in addition to the industry trends, which have also been detailed below:

## Solar Water Desalination Plant Market, By Membrane Process:

Solar-powered Reverse Osmosis

Membrane Distillation

Electro-dialysis and Electro-dialysis Reversal

Nano Filtration

Others

## Solar Water Desalination Plant Market, By Method:

Solar-powered Humidification-Dehumidification (HDH) Desalination

Solar Diffusion Driven Desalination

Solar Membrane Distillation

Concentrated Solar Power (CSP)- based Desalination

Solar Pond Desalination

## Solar Water Desalination Plant Market, By Industry:

Industrial

Agriculture

Domestic

Municipal

Commercial

## Solar Water Desalination Plant Market, By Region

North America

United States

Canada

Mexico

Asia-Pacific

India

Japan

South Korea

Australia

China

Europe

Germany

United Kingdom

France

Italy

Spain

South America

Brazil

Argentina

Colombia

Middle East

Saudi Arabia

South Africa

UAE

Competitive Landscape

Company Profiles: Detailed analysis of the major companies present in the Global Solar Water Desalination Plant Market.

Available Customizations:

With the given market data, Tech Sci Research, offers customizations according to a company's specific needs. The following customization options are available for the report:

Company Information

Detailed analysis and profiling of additional market players (up to ten).

## Contents

### 1. PRODUCT OVERVIEW

### 2. RESEARCH METHODOLOGY

### 3. IMPACT OF COVID-19 ON THE GLOBAL SOLAR WATER DESALINATION PLANT MARKET

### 4. EXECUTIVE SUMMARY

### 5. VOICE OF CUSTOMERS

### 6. GLOBAL SOLAR WATER DESALINATION PLANT MARKET OUTLOOK

#### 6.1. Market Size & Forecast

##### 6.1.1. By Value

#### 6.2. Market Share & Forecast

6.2.1. By Membrane Process (Solar-powered Reverse Osmosis, Membrane Distillation, Electro-dialysis and Electro-dialysis Reversal, Nano Filtration, Others)

6.2.2. By Method (Solar-powered Humidification-Dehumidification (HDH) Desalination, Solar Diffusion Driven Desalination, Solar Membrane Distillation, Concentrated Solar Power (CSP)- based Desalination, and Solar Pond Desalination)

6.2.3. By Industry (Industrial, Agriculture, Domestic, Municipal, and Commercial)

6.2.4. By Region

#### 6.3. By Company

#### 6.4. Market Map

### 7. NORTH AMERICA SOLAR WATER DESALINATION PLANT MARKET OUTLOOK

#### 7.1. Market Size & Forecast

##### 7.1.1. By Value

#### 7.2. Market Share & Forecast

7.2.1. By Membrane Process

- 7.2.2. By Method
- 7.2.3. By Industry
- 7.2.4. By Country
- 7.3. North America: Country Analysis
  - 7.3.1. United States Solar Water Desalination Plant Market Outlook
    - 7.3.1.1. Market Size & Forecast
      - 7.3.1.1.1. By Value
    - 7.3.1.2. Market Share & Forecast
      - 7.3.1.2.1. By Membrane Process
      - 7.3.1.2.2. By Method
      - 7.3.1.2.3. By Industry
  - 7.3.2. Canada Solar Water Desalination Plant Market Outlook
    - 7.3.2.1. Market Size & Forecast
      - 7.3.2.1.1. By Value
    - 7.3.2.2. Market Share & Forecast
      - 7.3.2.2.1. By Membrane Process
      - 7.3.2.2.2. By Method
      - 7.3.2.2.3. By Industry
  - 7.3.3. Mexico Solar Water Desalination Plant Market Outlook
    - 7.3.3.1. Market Size & Forecast
      - 7.3.3.1.1. By Value
    - 7.3.3.2. Market Share & Forecast
      - 7.3.3.2.1. By Membrane Process
      - 7.3.3.2.2. By Method
      - 7.3.3.2.3. By Industry

## **8. ASIA-PACIFIC SOLAR WATER DESALINATION PLANT MARKET OUTLOOK**

- 8.1. Market Size & Forecast
  - 8.1.1. By Value
- 8.2. Market Share & Forecast
  - 8.2.1. By Membrane Process
  - 8.2.2. By Method
  - 8.2.3. By Industry
  - 8.2.4. By Country
- 8.3. Asia-Pacific: Country Analysis
  - 8.3.1. China Solar Water Desalination Plant Market Outlook
    - 8.3.1.1. Market Size & Forecast
      - 8.3.1.1.1. By Value



- 8.3.1.2. Market Share & Forecast
  - 8.3.1.2.1. By Membrane Process
  - 8.3.1.2.2. By Method
  - 8.3.1.2.3. By Industry
- 8.3.2. India Solar Water Desalination Plant Market Outlook
  - 8.3.2.1. Market Size & Forecast
    - 8.3.2.1.1. By Value
  - 8.3.2.2. Market Share & Forecast
    - 8.3.2.2.1. By Membrane Process
    - 8.3.2.2.2. By Method
    - 8.3.2.2.3. By Industry
- 8.3.3. Japan Solar Water Desalination Plant Market Outlook
  - 8.3.3.1. Market Size & Forecast
    - 8.3.3.1.1. By Value
  - 8.3.3.2. Market Share & Forecast
    - 8.3.3.2.1. By Membrane Process
    - 8.3.3.2.2. By Method
    - 8.3.3.2.3. By Industry
- 8.3.4. South Korea Solar Water Desalination Plant Market Outlook
  - 8.3.4.1. Market Size & Forecast
    - 8.3.4.1.1. By Value
  - 8.3.4.2. Market Share & Forecast
    - 8.3.4.2.1. By Membrane Process
    - 8.3.4.2.2. By Method
    - 8.3.4.2.3. By Industry
- 8.3.5. Australia Solar Water Desalination Plant Market Outlook
  - 8.3.5.1. Market Size & Forecast
    - 8.3.5.1.1. By Value
  - 8.3.5.2. Market Share & Forecast
    - 8.3.5.2.1. By Membrane Process
    - 8.3.5.2.2. By Method
    - 8.3.5.2.3. By Industry

## **9. EUROPE SOLAR WATER DESALINATION PLANT MARKET OUTLOOK**

- 9.1. Market Size & Forecast
  - 9.1.1. By Value
- 9.2. Market Share & Forecast
  - 9.2.1. By Membrane Process

- 9.2.2. By Method
- 9.2.3. By Industry
- 9.2.4. By Country
- 9.3. Europe: Country Analysis
  - 9.3.1. Germany Solar Water Desalination Plant Market Outlook
    - 9.3.1.1. Market Size & Forecast
      - 9.3.1.1.1. By Value
    - 9.3.1.2. Market Share & Forecast
      - 9.3.1.2.1. By Membrane Process
      - 9.3.1.2.2. By Method
      - 9.3.1.2.3. By Industry
  - 9.3.2. United Kingdom Solar Water Desalination Plant Market Outlook
    - 9.3.2.1. Market Size & Forecast
      - 9.3.2.1.1. By Value
    - 9.3.2.2. Market Share & Forecast
      - 9.3.2.2.1. By Membrane Process
      - 9.3.2.2.2. By Method
      - 9.3.2.2.3. By Industry
  - 9.3.3. France Solar Water Desalination Plant Market Outlook
    - 9.3.3.1. Market Size & Forecast
      - 9.3.3.1.1. By Value
    - 9.3.3.2. Market Share & Forecast
      - 9.3.3.2.1. By Membrane Process
      - 9.3.3.2.2. By Method
      - 9.3.3.2.3. By Industry
  - 9.3.4. Italy Solar Water Desalination Plant Market Outlook
    - 9.3.4.1. Market Size & Forecast
      - 9.3.4.1.1. By Value
    - 9.3.4.2. Market Share & Forecast
      - 9.3.4.2.1. By Membrane Process
      - 9.3.4.2.2. By Method
      - 9.3.4.2.3. By Industry
  - 9.3.5. Spain Solar Water Desalination Plant Market Outlook
    - 9.3.5.1. Market Size & Forecast
      - 9.3.5.1.1. By Value
    - 9.3.5.2. Market Share & Forecast
      - 9.3.5.2.1. By Membrane Process
      - 9.3.5.2.2. By Method
      - 9.3.5.2.3. By Industry

## **10. SOUTH AMERICA SOLAR WATER DESALINATION PLANT MARKET OUTLOOK**

### 10.1. Market Size & Forecast

#### 10.1.1. By Value

### 10.2. Market Share & Forecast

#### 10.2.1. By Membrane Process

#### 10.2.2. By Method

#### 10.2.3. By Industry

#### 10.2.4. By Country

### 10.3. South America: Country Analysis

#### 10.3.1. Brazil Solar Water Desalination Plant Market Outlook

##### 10.3.1.1. Market Size & Forecast

###### 10.3.1.1.1. By Value

##### 10.3.1.2. Market Share & Forecast

###### 10.3.1.2.1. By Membrane Process

###### 10.3.1.2.2. By Method

###### 10.3.1.2.3. By Industry

#### 10.3.2. Argentina Solar Water Desalination Plant Market Outlook

##### 10.3.2.1. Market Size & Forecast

###### 10.3.2.1.1. By Value

##### 10.3.2.2. Market Share & Forecast

###### 10.3.2.2.1. By Membrane Process

###### 10.3.2.2.2. By Method

###### 10.3.2.2.3. By Industry

#### 10.3.3. Colombia Solar Water Desalination Plant Market Outlook

##### 10.3.3.1. Market Size & Forecast

###### 10.3.3.1.1. By Value

##### 10.3.3.2. Market Share & Forecast

###### 10.3.3.2.1. By Membrane Process

###### 10.3.3.2.2. By Method

###### 10.3.3.2.3. By Industry

## **11. MIDDLE EAST & AFRICA SOLAR WATER DESALINATION PLANT MARKET OUTLOOK**

### 11.1. Market Size & Forecast

#### 11.1.1. By Value

- 11.2. Market Share & Forecast
  - 11.2.1. By Membrane Process
  - 11.2.2. By Method
  - 11.2.3. By Industry
- 11.3. Middle East & Africa: Country Analysis
  - 11.3.1. Saudi Arabia Solar Water Desalination Plant Market Outlook
    - 11.3.1.1. Market Size & Forecast
      - 11.3.1.1.1. By Value
    - 11.3.1.2. Market Share & Forecast
      - 11.3.1.2.1. By Membrane Process
      - 11.3.1.2.2. By Method
      - 11.3.1.2.3. By Industry
  - 11.3.2. South Africa Solar Water Desalination Plant Market Outlook
    - 11.3.2.1. Market Size & Forecast
      - 11.3.2.1.1. By Value
    - 11.3.2.2. Market Share & Forecast
      - 11.3.2.2.1. By Membrane Process
      - 11.3.2.2.2. By Method
      - 11.3.2.2.3. By Industry
  - 11.3.3. UAE Solar Water Desalination Plant Market Outlook
    - 11.3.3.1. Market Size & Forecast
      - 11.3.3.1.1. By Value
    - 11.3.3.2. Market Share & Forecast
      - 11.3.3.2.1. By Membrane Process
      - 11.3.3.2.2. By Method
      - 11.3.3.2.3. By Industry

## **12. MARKET DYNAMICS**

- 12.1. Drivers
- 12.2. Challenges

## **13. MARKET TRENDS & DEVELOPMENTS**

## **14. COMPANY PROFILES**

- 14.1. Elemental Water Makers B.V.
  - 14.1.1. Business Overview

- 14.1.2. Key Revenue and Financials (if available)
- 14.1.3. Recent Developments
- 14.1.4. Key Personnel
- 14.1.5. Key Product/Services
- 14.2. F Cubed Limited
  - 14.2.1. Business Overview
  - 14.2.2. Key Revenue and Financials (if available)
  - 14.2.3. Recent Developments
  - 14.2.4. Key Personnel
  - 14.2.5. Key Product/Services
- 14.3. Photon Energy Systems Limited
  - 14.3.1. Business Overview
  - 14.3.2. Key Revenue and Financials (if available)
  - 14.3.3. Recent Developments
  - 14.3.4. Key Personnel
  - 14.3.5. Key Product/Services
- 14.4. Sinovoltaics Group
  - 14.4.1. Business Overview
  - 14.4.2. Key Revenue and Financials (if available)
  - 14.4.3. Recent Developments
  - 14.4.4. Key Personnel
  - 14.4.5. Key Product/Services
- 14.5. Solar Water Solutions Ltd.
  - 14.5.1. Business Overview
  - 14.5.2. Key Revenue and Financials (if available)
  - 14.5.3. Recent Developments
  - 14.5.4. Key Personnel
  - 14.5.5. Key Product/Services
- 14.6. Sterlitech Corporation
  - 14.6.1. Business Overview
  - 14.6.2. Key Revenue and Financials (if available)
  - 14.6.3. Recent Developments
  - 14.6.4. Key Personnel
  - 14.6.5. Key Product/Services
- 14.7. Trunz Water Systems AG
  - 14.7.1. Business Overview
  - 14.7.2. Key Revenue and Financials (if available)
  - 14.7.3. Recent Developments
  - 14.7.4. Key Personnel

14.7.5. Key Product/Services

14.8. Waaree Energies Ltd.

14.8.1. Business Overview

14.8.2. Key Revenue and Financials (if available)

14.8.3. Recent Developments

14.8.4. Key Personnel

14.8.5. Key Product/Services

14.9. ACCIONA

14.9.1. Business Overview

14.9.2. Key Revenue and Financials (if available)

14.9.3. Recent Developments

14.9.4. Key Personnel

14.9.5. Key Product/Services

14.10. Water Office

14.10.1. Business Overview

14.10.2. Key Revenue and Financials (if available)

14.10.3. Recent Developments

14.10.4. Key Personnel

14.10.5. Key Product/Services

## **15. STRATEGIC RECOMMENDATIONS**

## **16. ABOUT US & DISCLAIMER**

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