



## Germany: Water Distribution and Supply Equipment

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### Summary

Although the German water distribution and supply market appears to have reached saturation as far as expansion of existing or construction of new networks is concerned, and although Southern and Eastern Europe are presently experiencing the largest growth rates in Europe, Germany remains the largest European market for water distribution and supply products and services. Driven by an environmentally conscious population and strict ordinances that go beyond the quality requirements of the European Commission, the German water supply and distribution market is among the most advanced in the world, and Germany trails only the United States as the second-largest exporter worldwide. With annual investments of EUR 8 billion, the water equipment and services sector remains an attractive market, despite its maturity.

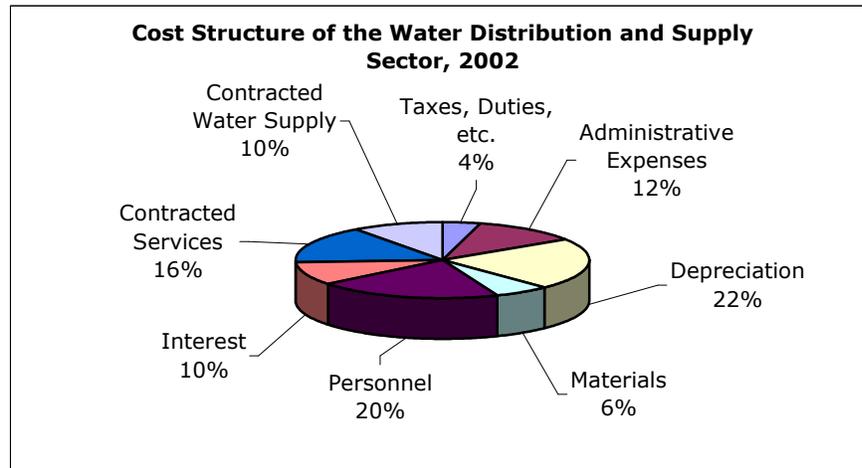
Due to the fragmentation and localization of the German market, which has led to the dominance of domestic companies, the German market may prove difficult for new entrants to penetrate. Neither American nor other foreign companies have significant import share, and companies planning to enter the market or expand their presence are advised to seek partnerships with German companies with connections to municipal markets. Greater opportunities may be found in Eastern Germany, where water pipelines and equipment are less advanced than in the West. Best prospects include membrane technologies, refurbishment and upgrades. E-business and IT solutions are also likely to grow as businesses shift their focus from expansion of pipelines and services to cost efficiency.

### Market Overview

The German water industry, with annual investments of approximately EUR 8 billion, is one of the largest contractors of private business in the country. With roughly 6,500 water supply companies operating nearly 18,000 water works, it is also highly decentralized. Although connecting 99 percent of the population to public water networks, this high number of operating firms has been blamed for inefficiencies and high water prices – at EUR 1.81 per cubic meter; German prices are among the highest in Europe.

The German water market has; however, managed to fulfill high standards across a spectrum of services: Over 98 percent of German drinking water meets federal standards, and German water losses in the distribution process (7.3% of total distributed water) are the lowest in Europe.

The drinking water sector has made investments of EUR 2.5 billion annually for the last fifteen years, of which 65 percent are spent on pipelines and 10 percent are dedicated to supply and filtration. Water consumption per person per day has stabilized at approximately 127 liters (contrasted to 295 liters in the United States), down by 14 percent since the 1990s. Consumption is even lower in eastern Germany, with around 100 liters per person per day. Consequently, many pipelines face problems of underutilization, and need to be adapted to reduced water flows. The focal point for the water industry has, therefore, shifted from expansion of pipelines and capacity to economic concerns of cost efficiency and prices.



(Source: Statistisches Bundesamt [Federal Statistics Office], Fachserie 4, Reihe 6.1, 2002)

## Market Trends

Private households and small businesses make up a growing percentage of consumers of water from public networks (79.6%), as industry (14.4%) increasingly shifts to environmentally friendly production processes and chooses to supply itself. German industry now covers 96 percent of its water requirements through its own water production.

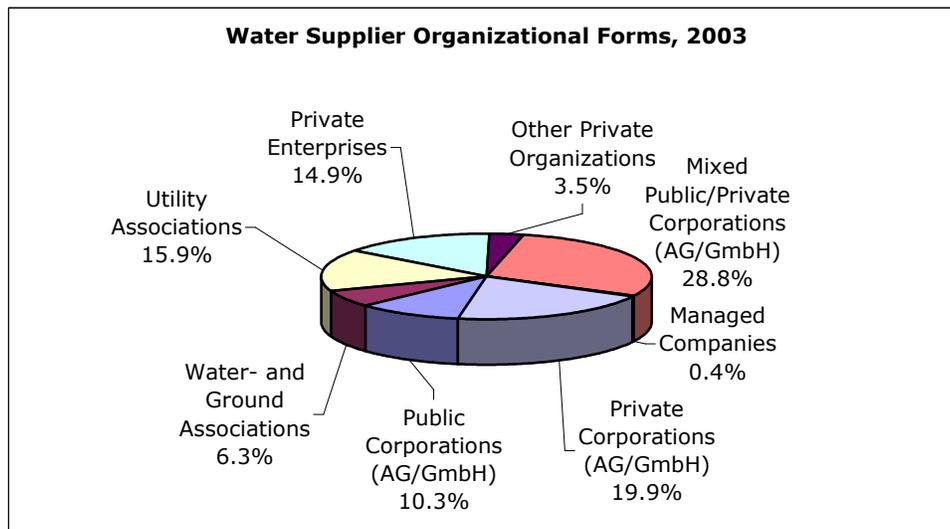
German industry continues to consume approximately 9 billion cubic meters of water for cooling, transportation, or as solvent annually. The most important customers for water suppliers in 2004 were public and private waste disposal organizations (with 30 percent of sales), food, beverage and tobacco industries (14%), and the chemical, petrochemical and pharmaceutical industries (12%). Before use in industrial processes, untreated water generally must be treated (processes include filtration, ion exchange, membrane, UV and ozone systems), in particular in water-intensive industries – such as pharmaceuticals – which require pure water for processing. Accounting for nearly 70 percent of water industry sales, water treatment and industrial wastewater treatment are critical sectors for the water equipment industry. Overall, 200 to 250 companies are active in the industrial process water treatment market, which achieved sales of 900 million Euros in 2004, 45 percent of which was exported.

Water consumption per person per day of private households small businesses has stabilized. Prices continue to rise across many regions due to population shifts that leave many water and wastewater networks operating under capacity, with high maintenance costs. For the past fifteen years, water prices have increased by 1-2 percent annually and the comparatively high price of water has been drawing increasing attention from legislators.

## Competition

Although the German water distribution and supply market is highly fractured – with over 6,500 suppliers – approximately half of Germany's drinking water is distributed by only 100 companies. The abundance of German water companies is due to decentralized tendering processes, which take place at the municipal, rather than at the state or federal level. In much of Germany, therefore, there is a preponderance of small and medium enterprises in both water supply and distribution services, requiring technological and administrative solutions tailored to small economies of scale.

To overcome such obstacles, many smaller companies have joined forces and formed utility associations, thereby combining cost-effectiveness with competence. For details on the type of companies in the drinking water supply industry, see chart below.



(Source: BGW-Wasserstatistik)

The organization of the water industry has, in addition to the formation of utility associations, seen significant changes in the number of private corporations: their share of total suppliers has risen from 12.7 percent in 1986 to 30.2 percent in 2003. Even more dramatically, public-private partnership organizations have risen from only 3.3 percent of the market in 1986 to 28.8 percent in 2003 while the number of publicly owned water supply and distribution companies has decreased.

Despite the fragmentation of the industry, there are several international companies that are prominent in the German market – in particular, the German company, RWE, as well as the French companies Veolia and Suez, which together control 70 percent of the world's water services. As part of its water liberalization policies, Germany has privatized or partially privatized many of its water works. Berlin Waterworks was purchased by a joint venture of RWE and Veolia and achieved annual revenue of approximately EUR 1.1 billion in 2005.

Major water equipment manufacturers include Best Water Technology Group (BWT), Veolia Environment, VA Tech Wabag, Passavant-Roediger, Bamag Water, and Christ Water. In the membrane filter technology market, General Electric Infrastructure and SiemensAG are prominent manufacturers. Other competitors in membrane technology include Ondeo Industrial Solutions (a subsidiary of Suez), Hager+Elsässer, Linde-KCA-Dresden GmbH, Veolia Environment, and DHV Water. In the overall industrial process water treatment market, Ondeo Degremont, and BWT are market leaders.

Potential exporters to Germany face the challenge of having to succeed in a highly competitive, technologically sophisticated and mature market. With 16.3 percent of the export market, Germany is presently the second-largest exporter of water and wastewater technology in the world, after the United States (with a 20.1 percent market share). In 2003, Germany's water and wastewater technology exports valued at EUR 370 million, products and services worth EUR 29 million went to China. Significant sales were also made to more technologically sophisticated markets such as the UK and Switzerland.

## Best Prospects

### *Membrane Filter Technologies*

Membrane technologies (ultrafiltration and microfiltration) have become increasingly significant in water treatment. Although predominantly used in wastewater treatment, membrane filtration technology is also becoming more common in drinking and industrial water preparation. In 2005, Germany constructed the

country's largest ultrafiltration water supply station in Roetgen, with a filtration capacity of 6,000 cubic meters of water per hour. According to the German federal research group, Networks Group, membrane technology has an expected growth rate of up to 20 percent, particularly as filter technology continues to develop. It offers SMEs a cost-effective alternative to expensive chemical treatment methods.

### *IT Solutions*

A recent set of guidelines, or "*Leitfaden*," released by the federal government identified e-business and IT business solutions as a critical for German water suppliers and distributors to remain internationally competitive. E-business, with its ability to lower costs through process optimization and increase competitiveness through information exchange, requires custom-tailored solutions, from administrative to operational functions. Necessary IT solutions include water-industry e-procurement, supply chain management and data analysis software.

### *Refurbishment and Upgrades*

According to the German Association for Gas and Water (BGW), water pipelines have a life expectancy of 100 years, which translates into a necessary annual replacement rate of 0.91 percent. Consequently, nearly 4,550 km of Germany's estimated 500,000 km of water pipelines must be renewed annually. Of the EUR 2.5 billion the water sector invests annually, 65 percent (or 1.6 billion Euros) are dedicated to maintenance and expansion of water pipelines. Another ten percent (250 million Euros) is spent on expanding water supplies and treatment, upgrading and refurbishing of pipes and treatment facilities - continuously large investment areas.

## **Market Access**

### *Government Bodies/Municipalities Correspondence*

All correspondence between companies and government bodies and purchasing agents must be conducted in German. Additionally, all literature and labels for products must be printed in German, although labels printed in multiple languages are also permitted.

### *Standards*

Hazardous or toxic substances listed in the European Union toxic substance reference list must be labeled toxic. Even if the import is not on the list but known to be toxic, the product must be labeled accordingly. All imported chemical and biological substances must be listed in the EINECS (European List of Existing Chemical Substances) or ELINCS (European List of New Chemical Substances) inventory guide.

Electrical and electronic equipment that is dependent on electric currents or electromagnetic fields and equipment that generates, transfers or measures currents and fields with a voltage not exceeding 1000 volts for alternating and 1500 volts for direct voltage is subject to the Waste from Electrical and Electronic Equipment (WEEE) and the Restriction of the Use of Certain Hazardous Substances (RoHS) directives. For further information on WEEEs and RoHS, see [http://www.buyusa.gov/germany/en/weee.html#\\_section4](http://www.buyusa.gov/germany/en/weee.html#_section4)

### *Certification and Permits*

Since 1997, all electrical equipment exports to members of the European Union must bear the CE ("conformité européenne") mark, which indicates compliance with European Union standards. Import permits are only necessary for specific categories or certain countries not listed on Import List. Those products that require permits are typically those subject to quotas, for example steel products. The import of industrial goods to Germany, however, is almost completely liberalized, and no import permit or declaration is typically required.

Products that require import permits (and some that do not) also require a certificate of origin if stipulated in the Import List or in the import permit. Such certificates must be issued by an official body of the country of origin.

EU-wide patents can be obtained by filing an application with European Patent Office in Munich. Patents in the European Union are valid for 20 years, but extensions can be granted for products that require long periods of time for approval.

### *Duties*

As a EU Member state, Germany applies the "Common Customs Tariffs of the EU" (CCT), which is supplemented by the German Customs Tariff Ordinance. The Common Customs Tariffs of the EU generally takes the form of ad valorem duty rates, where there are six methods for determining the value of a product. The most typical method used is the "transaction value" method, which uses the actual price paid or payable for the goods. Because Germany uses the Harmonized System (HS) to classify internationally traded goods, all products must have an HS number, so as to determine the duty.

Import of goods into Germany from non-EU countries is subject to the German import turnover tax (*Einfuhrumsatzsteuer*), which is part of the German value added tax (VAT) system.

### *Standards*

German requirements for safety and reliability of equipment, plants, technology and products are set by more than 200 technical standards and rules. Important marks include the "Verband Deutscher Elektrotechniker" (VDE) mark for electrical components and the "Geprüfte Sicherheit" (GS) mark for mechanical products. Conformity with GS mark requirements is tested by the TÜEV Rheinland Group, which provides a variety of international certification services for machinery and electrical equipment, including the CE ("conformité européenne") mark and Environmental Management Systems (EMS) certification (ISO services for machinery and electrical equipment, including the CE services for machinery and electrical equipment, including the CE ("conformité européenne") mark and Environmental Management Systems (EMS) certification (ISO 14001); their North American offices can be found online at <http://www.us.tuv.com/>. Underwriters Laboratories (UL), a global company based in the United States, also tests conformity with CE requirements and can be found online at <http://www.ul.com>. German agencies responsible for standardization include the Deutsches Institut für Normung e.V. (all products) and the Deutsche Vereinigung des Gas- und Wasserfaches e.V. (specifically for water and gas).

For information concerning water quality standards, see the Ordinance Amending the Drinking Water Ordinance of 21 May 2001: [http://www.bmg.bund.de/nr\\_603282/SharedDocs/Gesetzestexte/Umwelt/2-Trinkwasserverordnung-englisc-templateld=raw.property=publicationFile.pdf/2-Trinkwasserverordnung-englisc-.pdf](http://www.bmg.bund.de/nr_603282/SharedDocs/Gesetzestexte/Umwelt/2-Trinkwasserverordnung-englisc-templateld=raw.property=publicationFile.pdf/2-Trinkwasserverordnung-englisc-.pdf)

For a general handbook on investment in Germany, including company law, importing, and taxation, see <http://www.invest-in-germany.de/en/>, a service by the federal agency Invest in Germany GmbH.

## **Key Contacts**

### *Technical Regulations Agencies*

Deutsches Institut für Normung – DIN  
(German Standards Institute)  
German Information Centre for Technical Rules (DITR)  
10772 Berlin  
Tel: +49 (0)190 882600  
Fax: +49 (0)30 2628125  
Internet: <http://www.din-katalog.de/>

Email: walser@aoe.din.de

Verein Deutsche Ingenieure e.V.  
(Society of German Engineers)  
P.O. Box 10 11 39  
40002 Duesseldorf  
Tel: +49 (0)211-62140  
Fax: 0211-6214575  
Internet: <http://www.vdi.de/>  
Email: vdi@vdi.de

VDE – Verband der Elektrotechnik Elektronik Informationstechnik e.V.  
(Association of Electrical Engineering Electronics and Information Technology)  
Stresemannallee 15  
60596 Frankfurt am Main  
Tel: +49 (0) 69-63080  
Fax: +49 (0) 69-6312925  
Internet: <http://www.vde.com/>  
Email: service@vde.com

For safety information and testing also see "Technische Überwachungsvereine" (TÜV), or technical control boards (Internet: <http://www.tuevs.de/>).

#### *Other Important Agencies*

DVGW: Deutsche Vereinigung des Gas- und Wasserfaches e.V.  
(German Technical Association for Gas and Water)  
Josef-Wirmer Strasse 1-3  
53123 Bonn  
Tel: +49 (0) 228 91 88-5  
Fax: +49 (0) 228 91 88-990  
Web: <http://www.dvgw.de/>  
Email: info@dvgw.de

DWA: Deutsche Vereinigung fuer Wasserwirtschaft, Abwasser und Abfall e.V.  
Theoder-Heuss-Allee 17  
53773 Hennef  
Tel: +49 ((0) 2242 8720  
Fax: +49 (0) 2242) 872135  
Web: <http://www.dwa.de/>  
Email: info@dwa.de

## **Trade Promotion Opportunities**

### Trade Shows

Germany hosts leading international trade events in virtually every industry sector, attracting buyers from around the world. Over 90% of products and technologies are introduced into the German market via trade fairs. U.S. exhibitors should be prepared to take full advantage of the business opportunities presented at these events. While U.S. exhibitors and visitors can conclude transactions, all attendees can use trade fairs to conduct market research, see what their worldwide competition is doing, and test pricing strategies. Upcoming trade fairs include:

IFAT – International Trade Show for Water, Wastewater, Waste, Recycling  
(Internationale Fachmesse für Wasser, Abwasser, Abfall, Recycling)  
May 5-9, 2008  
Neue Messe Munich  
U.S. representative: Anke Gruening  
Munich International Trade Fairs  
German American Chamber of Commerce, New York  
12 East 49th Street, 24th Floor  
New York, NY 10017  
Tel: 646-437-1014  
Web: <http://www.ifat.de/>  
Email: [agruening@munich-tradefairs.com](mailto:agruening@munich-tradefairs.com)

Water Berlin – International Trade Show and Convention  
(Wasser Berlin – Internationale Fachmesse und Kongress)  
March 30-April 3, 2009  
Messegelände Berlin  
Tel: +49 (0) 30-3038-2148  
Fax: +49 (0) 303038-2079  
Web: <http://www.wasser-berlin.de/>  
Email: [wasser@messe-berlin.de](mailto:wasser@messe-berlin.de)

**The U.S. Commercial Service in Germany provides counseling, market research, and other support services to U.S. exhibitors before, during and after trade shows. Please let me know how we may be of assistance to your business objectives, whether or not specifically related to any of the above trade fairs.**

#### **For More Information**

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Consulate General of the United States  
Alsterufer 27-28  
D-20354 Hamburg  
Tel. +49-40-411 71-306  
Fax. +49-40-410 6598  
Web: [www.buyusa.gov/germany/en/hamburg.html](http://www.buyusa.gov/germany/en/hamburg.html)  
E-mail: [Birgit.Dose@mail.doc.gov](mailto:Birgit.Dose@mail.doc.gov)

The U.S. Commercial Service Germany can be contacted via e-mail at: [hamburg.office.box@mail.doc.gov](mailto:hamburg.office.box@mail.doc.gov),  
website <http://www.buyusa.gov/germany/en/>.

You can locate your nearest U.S. Export Assistance Center, as well as Commercial Service offices overseas by visiting [www.buyusa.gov](http://www.buyusa.gov).

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