

Deutscher Verein des  
Gas- und Wasserfaches e.V.



➔ [www.dvgw.de](http://www.dvgw.de)

# DVGW Annual Report 2010



## Editorial information

### **Publisher**

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### **Graphics**

mehrwert intermediale kommunikation GmbH,  
Cologne, Germany  
[www.mehrwert.de](http://www.mehrwert.de)

### **Printing**

Schaffrath DruckMedien GmbH & Co. KG,  
Geldern, Germany  
[www.schaffrath.de](http://www.schaffrath.de)

### **Photos**

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# Foreword

As a technical association with a long tradition, DVGW has for many years been synonymous with quality, safety, environmental protection and innovation in German gas and water supplies. We see systematic contributions to the future-oriented development of our sector as a motivation and as the guiding principle of our work in a technical and scientific organization.

The discussion currently in progress concerning a more rapid transformation of our energy supplies directly affects our work. The first results of the innovation campaign initiated by DVGW underline the fact that natural gas has the potential to play a key role in this transformation from a technical standpoint. In the water sector too, the fact that DVGW always welcomes new developments at the same time as analysing and assessing the risks connected with them in a holistic and dispassionate way is now paying dividends. These aspects are the strengths that characterize DVGW as an impartial technical standardization body and will continue to define its work in the future.

In many areas, DVGW made significant contributions last year, bringing considerable benefits to its members and the entire gas and water industry. This achievement was only possible as a result of the considerable dedication of the volunteers on our technical committees, our extensive network of experts and the confidence placed in the association by the relevant authorities. Sincere thanks are due to everyone concerned for their support.

This Annual Report gives an overview of our achievements in 2010.

Bonn, May 2011  
Dr.-Ing. Walter Thielen



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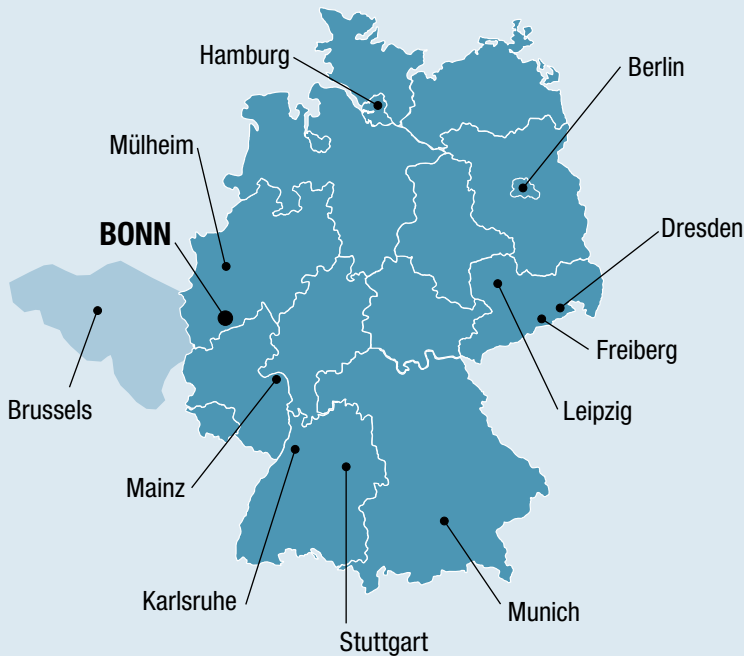
## DVGW at a glance

### DVGW – efficient and effective

DVGW (Deutscher Verein des Gas- und Wasserfaches e.V. – Technisch-wissenschaftlicher Verein – German Technical and Scientific Association for Gas and Water) has been providing technical and scientific support for the German gas and water industry since 1859. All the activities of DVGW focus on safety, hygiene and environmental protection, taking efficiency and cost-effectiveness into consideration.

As a technical standardization organization, DVGW promotes technological development in its sector. The production, transportation, distribution and use of energy and drinking water always call for technical processes and plant. The technical standards of DVGW lay the foundations for technical self-regulation under the responsibility of the German gas and water industry and ensure safe gas and water supplies at the highest international levels.

### → Locations

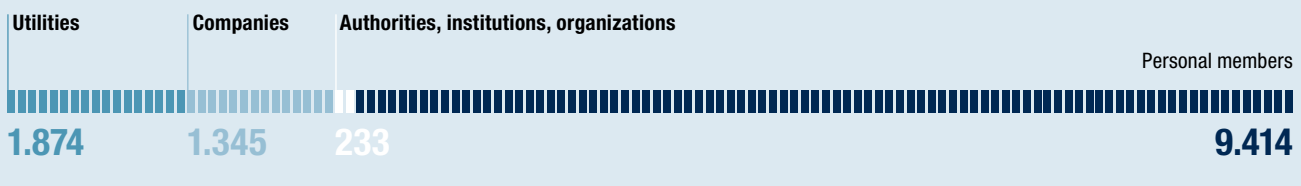


### → International cooperation\*

\* cooperations on the basis of agreements

- Albania
- Austria
- Bosnia and Herzegovina
- China
- Croatia
- Czech Republic
- Egypt
- Hungary
- Latvia
- Macedonia
- Romania
- Russia
- Serbia
- Slovakia
- Slovenia
- Switzerland
- Vietnam

### → Membership as of 31 December 2010



**12,866 members (total)**

## ➔ Areas of activity



### Standardization

**456** DVGW Codes of Practice currently valid,  
**41** new Codes of Practice issued in 2010 + participation in DIN, EN and ISO standards.

### Inspection and certification

Total number of certificates valid in 2010: for products **6869**, companies **1457**,  
 experts **178**, management systems **179** and prequalifications **449**



### Professional development and qualifications

**25,000** participants trained in approx. **800** events,  
**104** gas and water master craftsmen trained.

### Research and development

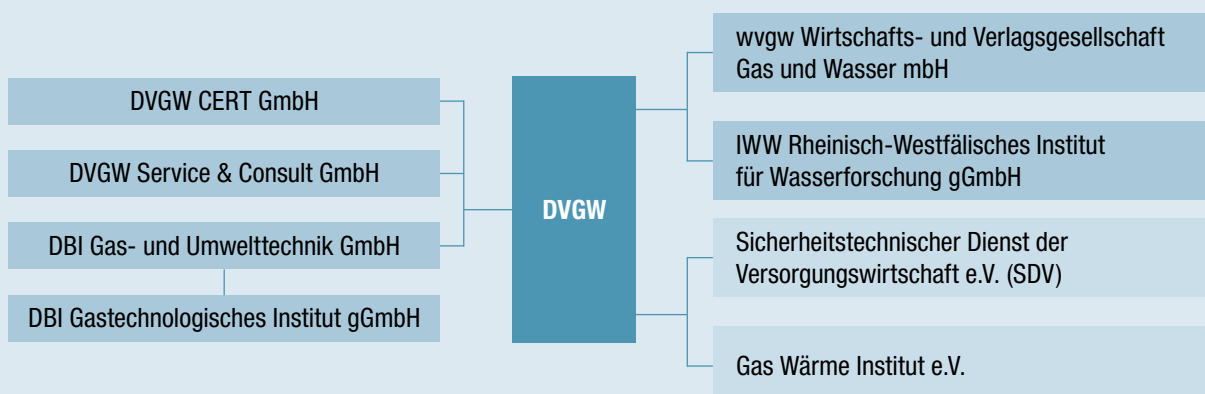
**64** research projects in progress; **15** gas, **7** water and **2** gas/water  
 projects completed in 2010.



### Information and communications

About **15,000** copies per month of the specialist journal DVGW energie/wasser-praxis, specialist  
 publications and specialist information bulletins; **601,000** pages per month called up on the  
 DVGW homepage.

## ➔ DVGW shareholdings



# Gas and water in the spotlight

**By establishing uniform standards, the Codes of Practice issued by DVGW make work considerably easier for public bodies, gas and water companies, contractors and industry. The state defines the objectives of standardization and these are then fleshed out by the drafting and responsible application of DVGW Codes of Practice. For more than 150 years, DVGW has been a reliable partner for its members, authorities, government and above all consumers for whom water and gas are essential for their everyday lives.**





## Providing impetus for the future-oriented development of the industry

In addition to technical and scientific criteria, the requirements for sustainable gas and water supplies are increasingly shaped by energy and environmental policy, economic and social conditions. DVGW has already been active in these areas for more than 150 years and its objective has always been to develop the gas and water industry in a future-oriented way. In 2010, the activities of DVGW focussed on current challenges: the liberalization of energy markets, the debate concerning the modernization of the water industry, climate change and climate protection, and the climate policy objectives of the German government.

### Convincing DVGW innovation campaign

The broad-based debate on the more rapid transformation of energy supplies calls for innovative approaches and solutions in interaction between existing and new structures. DVGW recognized the potential of gas as a fuel at an early stage; within its innovation campaign, the association is investigating the potential role of gas in future energy systems in cooperation with companies from the German gas industry, research institutes and equipment manufacturers. The expansion of the technical foundations for natural gas is being studied in a number of research projects with reference to climate protection, energy efficiency and innovation. These projects cover such exciting topics as

the utilization of existing gas infrastructure for the storage of energy from renewable sources, the assessment of energy supply chains with reference to energy, environmental and economic aspects, the testing of new applications technology or the development of innovative heating systems in combination with renewable energies. In 2010, the main emphasis was on work in the individual research clusters and on targeted information for multipliers from politics, industry and the installation trade. DVGW was able to provide essential impetus in this area (further information on the innovation campaign is given in the “Research and Technology” section).

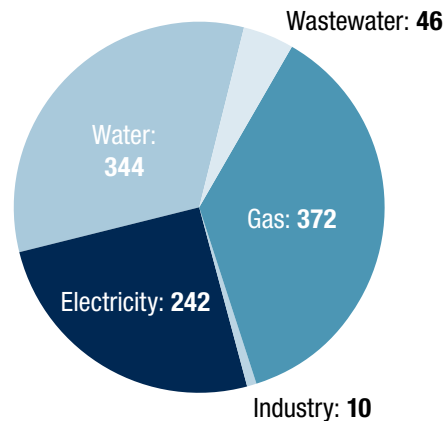
### Benchmarking: comparability of water companies with reference to structural and process criteria

In view of the wide variety of factors affecting each individual water company, it is not possible simply to assess companies and their services solely on the basis of one parameter, such as the water price. More than other utility services, water supply is strongly affected by regional conditions. This applies especially to structural conditions, including natural, geological, settlement and demographic factors. In effect, each water company is individually tailored to meet these conditions. From the technical point of view, it is evident that structural differences also lead to differences in the technical, human and financial resources required.

To allow a transparent, fair comparison of service levels, DVGW initially identified the decisive structural features of water supplies which are required for characterizing the structural conditions faced by water companies. The objective is to lay the technical and scientific foundations for structural comparisons of the main water supply processes, giving equal consideration to the five main characteristics of safety, quality, customer service, sustainability and economics in water supply.

### Valid TSM certificates (by sector)

Total: 1014



#### TSM – an effective tool for technical self-regulation

In the context of incentive regulation, the DVGW technical safety management system (TSM) is playing an increasingly important role. In the gas sector, the TSM system already meets the quality requirements connected with incentive regulation. The TSM system identifies these requirements and ensures compliance at the same time as covering safety aspects.

In 2010, the DVGW TSM manuals for self-assessment were revised and adapted to reflect current developments in the industry. As regards the water sector, the revisions mainly concerned the integration of risk management in normal operation (DVGW Technical Note W 1001) into safety management. Initially, the following questions were added to the questionnaire:

- How are risks to security of supplies determined in the supply area (aspects: quality, quantity, hygiene, and aesthetics)?
- What are the results of the classification of identified risks in the context of risk analysis and assessment (extent of damage, probability of occurrence)?
- How are risks dealt with in the supply system?
- How is the achievement of security of supplies objectives documented?

- How is the traceability of decisions ensured in the context of risk-based, process-oriented management?
- What decisions have been adopted concerning the repeated application of the risk-management method?

In addition, preparations were made for expanding the range of services:

- A TSM system for LPG plants supplying local distribution networks was developed in cooperation with Deutscher Verband Flüssiggas e.V. (DVFG)
- In response to the initiative of state energy regulatory authorities, DVGW is developing, in cooperation with Fachverband Biogas e.V., a TSM system for biogas plant operators covering systems from the production plant through to injection into the public gas supply system.

The two TSM systems are to be used for the first time in 2011.

## Activities in Europe and throughout the world

The everyday international activities of the gas and water industry in Europe and throughout the world are becoming increasingly intensive. European legislation and the intended opening of markets are resulting in marked changes to national regulatory frameworks and specialist discussions. DVGW activities in Europe and other countries are being expanded with the express support of the Board of Directors. With its members, DVGW is committed to contributing tried and tested German technologies and experience to European and international CEN and ISO standards. DVGW is an active participant in the European associations for gas engineering (Marcogaz) and the water industry (EUREAU), helping to shape international specialist discussions and policies. In addition to technical topics, key areas in 2010 were the analysis and standardization of asset management and infrastructure safety across the boundaries of industrial sectors, preventive water protection, the introduction of pesticides, biocides and other chemicals to the market (REACH) and discussions concerning the implementation of the WHO Water Safety Plan.

Internationally, DVGW has played an active role in the IGU (International Gas Union) and the IWA (International Water Association) for many decades.

### DVGW office in Brussels

In a European Union with 27 or more members, European associations will have an increasingly important role to play. The European Commission and the European Parliament are scarcely in a position to process the large number of submissions concerning European legislative proposals received from national associations. This is why European institutions strongly encourage the development of opinions within European associations and it is becoming increasingly necessary to play an active role in shaping opinions in these associations. DVGW has given a further clear signal of its commitment to Europe by establishing an office in Brussels. This office will ensure that the association is more directly involved in information flow to and from the EU Commission and can intensify existing contacts and develop new contacts in a targeted way. In addition, the office allows the DVGW to state its opinion to European institutions more effectively.

DVGW energie | wasser-praxis now includes regular reports on topics, proposals and trends from Brussels with a view to covering the key issues, consequences, operations and adaptation strategies that are important for the day-to-day work of DVGW members. The latest information on all the key issues is also available on the European platform in the members' section of the DVGW website.

### Standards activities in Eastern Europe

Cooperation within Europe and especially with Eastern European countries remains one of the main areas of DVGW activities. Work continues on the implementation of DVGW Codes of Practice with adaptations reflecting the regulatory framework of the region in the South-East European gas industry (Bosnia and Herzegovina, Croatia, Serbia, Montenegro and the FYR of Macedonia) with training and the introduction of the DVGW Technical Safety Management (TSM) system.

The Slovenian Gas Association translated the Code of Practice for Gas Installations (TRGI) into Slovenian under a licence agreement in 2010 and is supporting the introduction of the Code of Practice in the country. Other Codes of Practice are due to follow.

Contacts with Latvia were reinforced by continuous know-how transfer. There are plans to establish a Romanian standards system in cooperation with the Romanian regulatory authority and gas companies in Romania. On the basis of membership of DVGW, the association is supporting both Serbia and Croatia in the development of water industry standards for their countries based on the DVGW model.

### DVGW in the Far East

Contacts with CUWA (Chinese Urban Water Association) and the Chinese Gas Association (CGA) were intensified in 2010. DVGW President Dr. Bernhard Horsgen played a key role in shaping the opening session of the CUWA annual convention and conducted discussions with the competent Chinese ministry concerning the introduction of the TSM system for the water sector in China. In the gas sector, a delegation headed by Prof. Dr. Matthias Krause, once again visited CGA in Beijing. There is also considerable interest in the introduction of a TSM system for the gas industry, especially since the Ministry of Housing and Urban-Rural Development is responsible for both gas and water supply. A delegation from China is due to visit Germany in mid-2011.



## Major conventions and conferences

At the annual gas and water industry conferences (gat and wat), specialists meet to discuss the latest developments and to maintain their personal networks and contacts within the industry. As a result of the 150th anniversary conference in 2009, wat 2010 was already held in September 2009.

### **gat 2010 in Stuttgart**

At the end of November 2010, about 3,000 experts from the gas industry and 200 exhibitors met to discuss the future of natural gas as a fuel. With its innovation campaign, which was the main focus of the specialist programme, DVGW provided the gas industry with major impetus for the future orientation of natural gas. Promising options for solutions were indicated and discussed in a large number of presentations and platform discussions. With information on the latest energy policy and technical developments, gat 2010 once again provided a platform for effective dialogue between politicians, industry and engineers. Added benefits at the 2010 event included the extension of the conference to two full days, the generous breaks and the new pre-conference evening event, which was very popular. The overall package of presentations, exhibitions and get-togethers was very well-received by participants and exhibitors.

### **DVGW DISKURS 2010**

DVGW DISKURS 2010, held at the beginning of June 2010 at the German Aerospace Center in Cologne, also focussed on the innovation campaign. About 100 board members from DVGW member companies and decision-makers from companies, ministries and associations contributed to animated discussions on the topic of climate change and gas supplies. The conference concentrated on the major ecological and technical potential of public gas supply and on the sustainable use of existing infrastructure.

# DVGW Codes of Practice

**For over 150 years, high technical, safety and quality standards adopted to protect consumers have been based on DVGW Codes of Practice. The technical standards, developed in a clear and transparent process, represent a consensus on technical and organizational solutions for product, services, systems and processes. The Codes of Practice are not an end in themselves but a key tool for ensuring the safe and environmentally compatible use of technology in line with the requirements of legislative bodies, companies and consumers.**





## DVGW technical standardization work

The quality of water supplies in Germany is exceptionally high. The very low number of incidents connected with gas systems compared with other countries also bears witness to the high standard of gas supply systems and technical safety in Germany. The Codes of Practice for the water and gas industries, which are continually being developed and improved by the DVGW technical committees, lay the foundations for these high levels of quality and safety. The work of these committees is essential for technical interchange and for the drafting and updating of Codes of Practice. In all, more than 200 technical committees are involved. The specialist expertise and practical experience of a large number of independent experts are used to produce documents that really set standards throughout the world.

The five gas and water steering committees (SC) are responsible for controlling and monitoring the work of the technical committees by agreement with the Board of Directors and the Executive Board. Each of the technical committees (TC) deals with a specialist area and implements the program of work agreed with the responsible SC. Project working parties (WP), which are formed on a temporary basis to deal with specific issues, work on projects initiated by the higher-level committees. DVGW employees coordinate the work of the committees and present the work of the association to national and international specialists.

A few key issues dealt with by the steering committees in 2010 are presented below as examples of their work. Further information on the latest DVGW Codes of Practice is available on the internet at [www.dvgw-regelwerk.de](http://www.dvgw-regelwerk.de).

## Gas Supply SC



*“As a result of the growth in power generation from renewable energy sources, flexible, effective energy management has simply become essential. The existing natural gas network has an essential role to play in the achievement of energy policy objectives. The greatest challenges we face over the next few years are effective interaction between power and gas systems and the transformation of these systems into one intelligent network. DVGW is playing an active role in technical implementation.”*

**Chairperson of the Gas Supply SC: Dr. Ulrich Wernekinck**

### **Amended Energy Industry Act (EnWG) and new Gas Network Access Ordinance**

The German Energy Industry Act (EnWG) is to be amended, probably in 2011, to incorporate the European legislative requirements stated in the Third EU Energy Package. The Federal Ministry of Economics and Technology has now drawn up a first draft for the amended act. The proposed amendments mainly concern the further unbundling of gas transmission and distribution system operators as well as new provisions regarding site networks, gas storage facilities and the independence of the regulatory authorities. The main amendments are:



- ➔ Implementation of the EPCIP Directive – initially only for electricity (Section 12a, EnWG)
- ➔ Authorization for the High-Pressure Gas Pipeline Ordinance (Section 49 (4) and (4a), EnWG)
- ➔ Implementation of the Security of Gas Supply Directive (Section 54a, EnWG)

The Gas Network Access Ordinance (GasNZV), which came into force on 3 September 2010, is intended to improve general conditions for nation-wide competition in the gas industry. In detail, the objectives of the ordinance are:

- ➔ To limit the share of capacity available for long-term booking at border crossing points and market area interconnection points
- ➔ To reduce the number of group L gas and group H gas market areas to one in each case by 1 August 2013
- ➔ To provide greater planning and investment security for operators of new storage and production facilities as well as new gas-fired power stations by granting a right, for a limited period, to book the capacities required on the network for the duration of one year for a fee, provided that the capacities required are within the technical capacity of the system.

DVGW has contributed intensively to the liaison process between associations and authorities as regards technical matters.

#### **New structural data recording in the gas industry – basis for quality monitoring**

DVGW has initiated discussions within the industry and with the Federal Network Agency and energy regulatory authorities with a view to developing a concept for quality monitoring within the gas industry. In view of the relatively low duration of supply interruptions in German gas supplies, a bonus/penalty analysis in the sense of the Incentive Regulation Ordinance (ARegV) would not appear to be appropriate for the gas industry. On the contrary, the development of a new quality monitoring database without any financial quality

regulation sanctions would be a more beneficial approach.

DVGW will entirely revise the structure of the damage and incident statistics maintained to date in line with the data recording criteria of the present technical and regulatory requirements. This data structure will be laid down in the new DVGW Code of Practice G 410: “Gas System and Damage Data Recording”. The use of this data structure will then become mandatory for DVGW member companies.

#### **Electronic data interchange and code databases**

As a result of the increasing refinement of process segments on the basis of the cooperation agreement between gas network operators in Germany, the modelling and implementation of market processes on existing computer systems is becoming increasingly important. For the companies concerned, this poses considerable challenges in terms of equipment and human resources.

In 2008, the decision by the Federal Network Agency concerning the “Basic Model for Balancing Services and Rules for the German Gas Market” (GABi Gas), established an entirely new network access regime for the German gas industry. The decision “Change Processes in the Metering Sector” (WiM) published in 2010 has laid down a legally binding market model. In view of the large number of IT systems available on the market which are used for energy data manage-



ment and invoicing, the use of a secure, standardized electronic data interchange procedure for business messages is even more important.

As a result of its extensive experience with gas transmission management, balancing group management (for biogas) and the transmission of data on quantity deficits and surpluses, DVGW is playing a key role in the national and international standardization of automated data interchange.

DVGW Service & Consult also operates a public database for the identification of market partners on the basis of standard codes, which is a prerequisite for electronic data interchange. Quality-assured access to the database is ensured on an impartial, non-discriminatory and open basis.

#### **Support for the presentation and reporting of physical gas flows**

In order to meet national requirements for the submission of data to the International Energy Agency (IEA) and the European Commission (EUROSTAT), physical gas flows at border crossing points, storage and production facilities and market area interconnection points must be presented and recorded in the form of statistics.

Because of its specialist expertise, DVGW is cooperating with the Federal Network Agency on the development of a concept for the interchange of hourly flow data between gas transmission system operators and the Agency on a fully automated basis using standardized protocols. For the first time, data transfer is to be in line with an XML-based data specification already used successfully when establishing the ENTSOG transparency database.

By adopting this approach, DVGW is ensuring that the data to be exchanged in connection with the mass processes of gas quantity balancing are provided on the basis of recognized standards using secure transmission techniques.

#### **Technical support for smart gas metering**

DVGW started investigations concerning the implementation of Section 21b (3a/3b), Energy Industry Act, at an early stage and described a pragmatic approach to compliance with statutory requirements until the communications technologies required had been introduced in a specification of 21 October 2009.

Far-reaching changes in the technical and regulatory conditions took place in the course of 2010. The revised specification for smart gas meters, V 2.0, which appeared in 2010 presents a new generation of gas meters allowing the transmission of meter readings for billing. DVGW continues to provide intensive support in connection with the data protection aspect of this topic and for the preparation of a safety-critical application concept (protection profile).

## Gas Applications SC



*“Natural gas is not just a transitional stop-gap, but part of the solution. Renewable energy sources can only be integrated sustainably into our energy system if we make use of existing gas infrastructure and innovative gas utilization technologies. The DVGW innovation campaign is investigating and developing this approach.”* Chairperson of the Gas Applications SC: Dr.-Ing. Bernhard Klocke

### A holistic approach to biogas

The market for biogas plants is set to grow dramatically as a result of the amendment of the Renewable Energies Act (EEG). The treatment of biogas to obtain gas of natural gas quality is especially promising. If biogas is fed to the natural gas system, it can be converted into bio-heat, bio-power or biofuel at practically any location. From the beginning of biogas activities, DVGW has considered the entire process chain from biogas production through to injection. Discussions have focussed on the potential for biogas, sustainable biomass production and aspects of gas treatment and conditioning.

In Germany, DVGW, DWA, the occupational health and safety bodies and Fachverband Biogas are cooperating closely to avoid duplication of effort and the development of competing standards for biogas systems. A working party of the biogas project committee has prepared a draft inspection standard (VP 265-2) for the operation and maintenance of biogas production plants. As the next step, work is due to start on a Code of Practice for the construction of gas production plants (fermenters).

### Reducing the sulphur content of natural gas

Natural gas faces competition from other energy sources not only as a motor fuel but also on the heat energy market. In the wake of discussions on reducing the sulphur content of natural gas to 10 mg/kg in line with the 10th Federal Pollution Control Ordinance and DIN 51624, it became necessary to revise Code of Practice G 260. The objective of the draft is to ensure that natural gas is perceived as an environmentally compatible source of energy in comparison with other fossil fuels and to ensure its future.

Other points under discussion in connection with the revision of G 260 are as follows:

- ➊ It may be necessary to revise the oxygen concentration specified for natural gas as the current European harmonization proposal for gas transmission systems and connected underground storage facilities deviates from the present value stated in Code of Practice G 260, although this value applies only to dry gas distribution systems.
- ➋ It has been proposed that the moisture content, hydrocarbon content and hydrocarbon dew point should be indicated in figures in order to make the presentation easier to understand for the general public. As new players enter the gas market, the Code of Practice will not be used only by gas industry specialists.

- ➌ In line with the practice in other European countries, the energy value is to be indicated first in MJ and then in kWh.

### Support for sulphur-free and low-sulphur odorants

As natural gas is odourless and would otherwise not be noticed in the case of a leak, odorants are added to natural gas supplied to distribution systems. Various activities have been initiated with a view to reducing the sulphur content of odorants, including the use of sulphur-free or low-sulphur odorants, the keeping of odour statistics and the replacement of the present odour cards by odour tubes which reflect the actual odours of odorants more precisely.

A timetable for the transition to sulphur-free or low-sulphur odorants gives companies wishing to make the changeover an indication of a cost-effective, efficient approach. In connection with these efforts, DVGW Code of Practice G 280-1 “Odorizing” is to be revised and the minimum quantities of odorants required are to be recalculated in the near future. The draft is due to appear in the first quarter of 2011.

### Natural gas as a motor fuel

In view of the growing number of natural gas refuelling stations in Germany, natural gas is now regarded as a normal motor fuel and is therefore subject to the requirements of the 10th Ordinance issued under the Federal Pollution Control Act (10. BImSchV). An administrative regulation issued under the Ordinance calls for standardized, comprehensible, transparent procedures for fuel sampling at refuelling stations and practicable analytical procedures for determining the key parameters of fuels.

Code of Practice G 264 contains instructions for representative sampling at natural gas refuelling stations so that the composition of natural gas used as a motor fuel can be officially monitored. In addition analysis methods for the determination of the methane or octane number, the main parameter which defines the minimum requirements for natural gas as a motor fuel, are described.

Taking Code of Practice G 651 as a basis, a draft DVGW Code of Practice G 652 for the construction of natural gas refuelling equipment and stations was prepared and published.

## Water Industry/Water Quality/Waterworks SC

### Micro-CHP plants

Natural gas-fired plants for the combined generation of heat and power (CHP) help reduce CO<sub>2</sub> emissions and therefore make a contribution to climate protection. The decisive advantage of the combined generation of heat and power as opposed to separate generation is the high overall efficiency of the process, allowing a primary energy saving in excess of 10 %.

A number of national (DIN, DKE/DVGW and VDI), European (CEN/CENELEC, CEN/CEN/CEI) and international (IEC) institutions have focused on standardization for micro-CHP plants. Micro-CHP plants may be included in the scope of the EU Gas Appliance and Ecodesign/Labeling Directives.

### Quality assurance of gas installations

DVGW Code of Practice G 1020 "Quality Assurance in the Design, Construction, Modification, Maintenance and Operation of Gas Installations" defines interfaces and the responsibilities of the persons and companies connected with customers' installations (domestic gas installations). Code of Practice G 100 and the Codes of Practice concerning TSM (G 1000 and G 1010) therefore cover quality assurance in the entire supply chain from the transfer of natural gas to a transmission or distribution system through to domestic or industrial utilization. As part of the DVGW system, Code of Practice G 1020 helps ensure that operators (customers) comply with their responsibility to keep their systems safe and that the requirements of the regulatory authorities (energy and construction authorities) concerning the safety of gas installations are met.



*"The chemicals used in our everyday lives find their way into the environment and into our water resources sooner or later. The toxicological relevance of chemicals in water resources to human beings must be assessed by a competent central body. This is the only way of ensuring that the public health authorities in Germany are in a position to react in a uniform way throughout the country and to implement the Drinking Water Ordinance."*

**Chairperson of the Water Industry/Water Quality/Waterworks SC**

**Prof. Dr.-Ing. Hans Mehlhorn**

### Surface water memorandum issued by industry associations

The memorandum "Requirements for the protection of rivers, streams and reservoirs in order to safeguard drinking water supplies" states targets for maintaining or ensuring the good ecological condition of rivers, streams and reservoirs and allowing the safe treatment of drinking water using simple, natural procedures. Apart from DVGW, the memorandum is also supported by ARW, ATT, AWBR, AWE and AWWR.

### Avoiding pesticide contamination of drinking water resources

Mit der The signature of the agreement "Safeguarding the future together – cooperation between the water supply and agrochemicals industries in Germany" was a key step towards constructive dialogue between the water industry (BDEW, DVGW and VKU) and pesticide producers (IVA Industrieverband Agrar).

The agreement is future-oriented and lays the foundations for joint activities in the future. These include the establishment of a raw water database for water supply and the clarification and prompt initiation of measures in connection with the results of targeted monitoring.

### Protection of surface water and groundwater

DVGW, BDEW and VKU submitted comments on several drafts for the new Groundwater Ordinance in 2010, focussing especially on the changes which were required from the point of view of water supply. The objective of the new ordinance is to ensure comparable levels of protection for groundwater throughout Germany, in contrast to the 16 state ordinances currently in force.

In the opinion of DVGW, the current draft for a Groundwater Ordinance does not pay sufficient attention to safeguarding drinking water resources. The improvements which are required include, for example:

- ➔ Prohibition of the deterioration of resources with a view to minimizing the treatment required in the production of drinking water.

- The development of uniform, transparent methods for analysing the risk of new pollutants in bodies of surface water.
- The integration of measures to be taken if environmental quality limits are exceeded.

### Biogas production and water protection

Energy crops may be associated with hazards for groundwater and bodies of surface water as the increasingly widespread growing of energy crops is associated with a more intensive form of agriculture. DVGW water information bulletin no. 73, "The production of biomass for biogas production taking soil and water protection into consideration", offers agricultural advisers a basis to provide constructive support to farmers in the selection of crop sequences, farming practice and the use of fermentation residue with respect to soil and water protection aspects.

### Water supply and climate change

The national and state governments in Germany are currently working on strategies and measures for adaptation to climate change. The national government adopted a climate change adaptation strategy in 2008 and intends to draw up a plan of action with the involvement of water industry players among others by early 2011. However, there is still considerable uncertainty in the water production and supply industry as regards the specific effects of these measures and the action which will be required. The information bulletin "Climate change and water supply" outlines some options in the areas of water management, resource protection, production, treatment and network operation on the basis of the information currently available. The intention is to allow all the organizations concerned with water supply to adapt to changing conditions.

### Amended Drinking Water Ordinance

On 26 November 2010, the second chamber of the German parliament approved the First Ordinance Amending the Drinking Water Ordinance, bringing to a preliminary conclusion a process which had taken many years and had been intensively supported by DVGW. In overall terms, DVGW welcomes the new Ordinance. The clear definition of certain key terms and the precise use of terms in the assignment of rights and obligations have made the Drinking Water Ordinance clearer. Major new provisions on the protection of consumers' health have been included. An important change is the additional emphasis given in Section 17 and other provisions to the generally accepted rules of technology, already introduced in the 2001 Drinking Water Ordinance.

## Water Supply Systems SC



*"The maintenance of buried pipeline systems accounts for more than 60 % of investments by water supply companies. The new DVGW Codes of Practice on network and damage statistics and the rehabilitation of water systems help companies use these funds effectively. At the same time, the security of supplies is enhanced."*

**Chairperson of the Water Supply Systems SC**

**Dipl.-Ing. Dietmar Bückemeyer**

### Decision-making aids for the rehabilitation of water systems

The pipeline system is by far the most valuable asset of a water supplier. The long service lives of distribution systems, extending over several generations, and the ageing processes in networks call for a proactive strategic approach to maintenance, in order to achieve solutions that remain technically feasible and economically viable in the long term. In this context, DVGW has developed new practical guidelines for water companies. These are based on well-founded representative data of system inventories and conditions and include practical decision-making aids for network rehabilitation. The new DVGW guidelines combine system safety and high levels of economic viability for future generations, two aspects which are inseparably linked in current discussions concerning affordable high-performance water supply systems.

### What does quality of service mean with reference to networks?

In water supply throughout Germany and Europe, quality of service is becoming an increasingly important decision-making factor for customers. For this reason, the aspect of quality of supply with reference to networks is being precisely defined. In this context, the importance of continuity of service is also growing. Even very short interruptions to supplies have a considerable impact when assessing the quality of service. Compared with other European countries, Germany has reached a very high standard thanks to the DVGW Codes of Practice.



**DVGW W 1002 “Crisis management” established throughout Europe**

The results of European standardization efforts are often a compromise reached at a low level. It is therefore difficult to secure acceptance for DVGW Codes of Practice at the European standardization level because of the high standards set. Thanks to DVGW’s European commitment, it was possible to establish Code of Practice W 1002 “Crisis management” as a CEN standard, largely with identical content. European standard EN 15975-1 is due to be issued in the near future. As a result, the DVGW philosophy on the organization and implementation of crisis management for water suppliers will be established throughout Europe.

**Position on the use of thermal energy from drinking water**

Over the past few years, various systems for the utilization of thermal energy from drinking water in a number of different processes have been developed. However, the questions of the overall environmental benefit and the additional risks to drinking water have often been neglected. After reviewing this topic, DVGW recommends that drinking water should not be used in thermal energy utilization systems in view of the hygiene risks which are still involved despite all the precautions which can be taken.

**Integrated digital network documentation**

Increasingly, companies are documenting their networks on an integrated basis covering different utility systems. The availability, currency and accuracy of the data are becoming increasingly important. The new DVGW Code of Practice GW 120 firmly anchors digital network documentation in the DVGW standards system and adopts a consistent approach to increasingly stringent requirements.

**Cost reduction through standardized components**

The wide variety of manufacturer-specific manual actuators for buried valves results in unnecessary complexity and additional cost. DVGW is committed to the standardization of components through

its Codes of Practice, for example the new codes of practice GW 336, Parts 1 and 2, helping reduce the cost of parts inventories and maintenance work. This approach also makes components less costly.

**Current Codes of Practice for DVGW product certification**

Innovations and continuous development in the area of drinking water system components call for repeated amendments to the DVGW Codes of Practice. This approach ensures that the fitness for purpose, safety and hygiene of DVGW-certified products are always tested in accordance with the latest requirements and up-to-date conditions, a service which is of considerable benefit to users. In 2010, new inspection standards were developed for plastic pipe connectors and cast iron system components with the DN/OD pipe diameter system. Inspection standards for metal valves, polyethylene valves and plastic pipes and fittings are currently being revised.

## Water Use SC



*“In view of the success of the DVGW Code of Practice for Gas Installations, users are increasingly calling for the introduction of a uniform Code of Practice for Water Installations. DVGW and its partner organization DIN are responding to these calls with a new compendium which includes all the complex standards and codes of practice required and provides users with a major tool for their day-to-day work.”*

**Chairperson of the Water Use SC:**

**Dipl.-Ing. Wolfram Wollgam**

### **Quality assurance at the water tap**

Domestic drinking water piping is characterized by special operating conditions including exposure to hot and cold water, intermittent operation, high ambient temperatures, the use of a wide variety of materials and unfavourable surface/volume ratios. Nowadays, drinking water installations supplying water to the public are already monitored by the public health authorities. In future, the statutory provisions concerning private drinking water systems will also become clearer and more precise. The point where quality will be assessed is the discharge point, i.e. the consumer's water tap.

As a technical standardization body, DVGW plays its part in ensuring compliance with quality requirements at the water tap by issuing and updating Codes of Practice for drinking water installations. To a large extent, the process of European standardization has already been completed for many components, parts, equipment items and valves. This means that the first step towards the free movement of goods within the EU has already been taken even though additional European requirements still need to be established with regard to the fitness for purpose of materials. In this context, the DVGW Codes of Practice ensure that the special features of materials and construction conditions are taken into account. The Codes of Practice also form the basis for the national certification of products.

### **Materials in the spotlight**

Drinking water installations are not just a means of transporting water. They are, as it were, the packaging of a material that is essential for life. The material of pipes, valves and fittings is in continuous contact with drinking water. The internal corrosion section of DVGW has made a key contribution to safeguarding the quality of drinking water by supporting a large number of research programmes, processing and revising Codes of Practice and issuing technical publications. The experts concerned are committed to the use of high-grade materials. Work is in progress on a recommended list of suitable materials in cooperation with the Federal Environment Agency.

### **Optimizing microbiological conditions**

Not only the chemical properties of drinking water may be impaired. Unfavourable conditions can promote the growth of micro-organisms, especially if unsuitable materials are used or ambient temperatures are unfavourable. This is why DVGW committees are also working on Codes of Practice to optimize microbiological conditions with a view to safeguarding drinking water quality. Quality problems are mainly registered if water installations are in poor condition. This is why work is also in progress on requirements for the rehabilitation of drinking water installations. The latest Codes of Practice focus on the aspects of temperature, time and consumer behaviour.

### **TRWI compendium and commentary**

Some time ago, DVGW and DIN agreed to produce a compendium of the current codes of practice and standards for drinking water installations. This compendium is also to include a commentary. The objective of the compendium is to meet users' requirements for a clear, self-contained body of standards. The compendium is divided into the three parts, "Design", "Construction" and "Operation". Work on the supplementary standards to DIN 1988 or DIN EN 806 is due to be completed by the end of 2011 at the latest. In addition, an intensive dialogue is in progress between DVGW and industry bodies (figawa, VDMA) concerning the preparation of a joint supplementary commentary to the compendium for the benefit of users.

# Research and technology

**Technological progress and innovation are key factors in our economy. DVGW makes a key major to maintaining and reinforcing the high technical and scientific standards reached by Germany in an international context both through its research institutes and through its support for research and development work in the gas and water sectors. Safety, hygiene and environmental protection remain the top priorities in research work. This ensures safe, reliable and environmentally compatible supplies of gas and water for consumers.**





## Successful networking

In 2010, major projects were brought to a successful conclusion as a result of cooperation between DVGW and its own and external research institutes. Projects covered the entire supply chain in the gas and water sectors, from production through distribution to domestic installations on the water side and from systems analysis through to utilization technology on the gas side.

Links between DVGW research activities and European partners were expanded. Membership of GERG, the European Gas Research Group, and WSSTP, the European Water Supply and Sanitation Technology Platform, laid the foundations for these activities. As a result, DVGW is now in a position to make strategic contributions to EU framework research programmes. DVGW is also intensifying international research cooperation with a view to benefiting from synergy effects. Here, the association cooperates with IGU (International Gas Union).

### Gas technology innovation campaign successfully launched

The climate policy targets of the German government have laid the foundations for a fundamental transformation of energy supply systems. By 2050, CO<sub>2</sub> emissions in Germany are to fall by at least 80 percent and primary energy consumption by 50 percent. The political agenda is dominated by the expansion of renewable energy sources, energy saving and the enhancement of energy efficiency. The gas industry needs to adapt to this energy policy orientation and faces a far-reaching transformation. The industry is determined to help shape this process. The innovation campaign was presented to the public for the first time at gat 2010 and was discussed intensively, with a positive response. The main features of the campaign are:

- ➊ Strengthening the role of renewable gaseous fuels in existing gas infrastructures (the greening of gas)
- ➋ The development of processes and technologies for optimizing distribution networks (smart grids)
- ➌ Support for the introduction of innovative gas applications (gas-plus technologies)

In addition, the potential of gas as a partner to renewable energies is to be highlighted and the technological foundations for this approach are to be laid. One key topic is the generation, storage and injection into the existing gas grid of hydrogen and methane produced using power from renewable sources (power to gas) and the associated possibility of using the energy stored in this way later in the form of eco-power, renewable heat or biofuel (gas to power).

Another key emphasis is the reinforcement and development of innovative conversion and application technologies with a view to tapping previously unused energy potentials in private households and the public sector. Many of these high-efficiency technologies are already ready for introduction and could be used immediately for reducing carbon dioxide emissions at reasonable cost. Especially gas-plus technologies, including the combination of condensing boilers and solar systems, the gas heat pump and the combined generation of heat and power in decentralized CHP plants have good prospects of making a greater contribution to energy efficiency and climate protection in the heating and power generation sectors.



In 2010, 20 research projects were launched: the individual projects form five thematic clusters.

🔗 **Systems analysis:** Systems analysis is to play a key role in the innovation campaign. The entire process chains involved in energy supply will be analysed with reference to energy, environmental and economic aspects, allowing a completely impartial comparison of supply chains for the first time.

🔗 **Gas production and treatment:** This thematic cluster focuses on the production of gaseous fuels from renewable raw materials, for example biogenic waste, such as materials from household organic waste bins or the food industry, and with the production of synthesis gas from biomass (gas from wood waste), including the injection of these fuels into gas systems.

🔗 **Network management:** This cluster is concerned with the increasingly complex requirements of gas distribution and interaction with electric power systems. New tasks on the way to the “smart grid” include the development of decentralized injection points for biomethane and other gaseous fuels, flow reversal, the implementation of more stringent requirements for dispatching and the creation of high-performance IT systems.

🔗 **Application technologies:** The fourth research cluster focuses on the introduction of energy-efficient gas applications, the “gas-plus” technologies. In addition to established condensing boiler technology with support from solar energy, the projects deal with gas heat pumps, the combined generation of heat and power and fuel cells.

🔗 **Cooperation and communication:** This cluster is of crucial importance for linking the DVGW innovation campaign with other organizations in the gas industry. The external communication structures required will be coordinated within this cluster.

The normal DVGW R&D programme continued in addition to the innovation campaign. Some of the main emphases are highlighted below.

### **A holistic analysis of biogas injection**

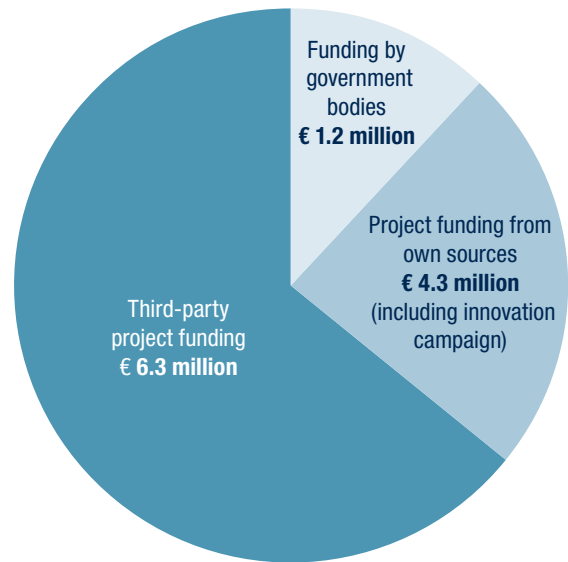
A study carried out with DVGW support analysed the effects on soil, plants, air and water of biogas injection into natural gas systems. The entire process chain, starting with biogas production and continuing through to processing, injection and water disposal, was considered by the DVGW Water Technology Centre and the DVGW research unit of the Engler-Bunte institute at Karlsruhe University. The uncontrolled use of biogas may entail significant environmental risks. However, provided that the relevant statutory provisions are amended appropriately, the environmental benefits of industrial biogas production in terms of sustainability outweigh the potential risks to the environment. Nonetheless, further research is still needed on water protection aspects, especially in view of the insufficient data available on the pollutant contents and microbiological contamination of fermentation residues.

### **Biogas collection**

If biogas is treated to natural gas quality, it can be used in advanced gas appliances with considerably higher overall efficiency values. Normally, treatment and injection is only viable from an untreated gas flow rate of about 500 m<sup>3</sup>/h. However, most of the biogas plants currently in operation in Germany produce significantly less untreated gas and direct treatment followed by injection into the gas system would therefore not be economically viable. Flow rates significantly higher than 500 or 1,000 m<sup>3</sup>/h can be obtained by linking several biogas plants. A biogas gathering line carries the crude biogas from the production plant to the central treatment and injection facility. The location of the facility can be selected to ensure injection at the ideal point for the network operator and year-round gas supply without any problems.

High maintenance and repair costs can be avoided by the proactive design of untreated biogas pipelines. The experience with the operation of gas systems recorded in the DVGW codes of practice suggests possible approaches. However, further development work will be needed.

**Funding for DVGW research institutes**  
Total: € 11.8 million



Funding for DVGW research institutes amounted to € 11.8 million, more than doubling the contribution made by DVGW members.

**New water research programme**

In 2010, the Water Research Committee started work on the revision of the current water research programme. A revision had become necessary because of changing conditions in many areas of water supply and new developments in fields such as renewable energies, trace substances and cost-effective network management. The future development of water research will be based on the following principles:

- Stronger orientation for the water research programme from the Research Committee, creation of a strategic framework for water research
- High degree of involvement of DVGW and the association's bodies
- Development of networks with other national and European water research organizations
- Establishment of a far-sighted approach to water research, indication of future prospects and visions

Following a survey of the Technical Committees, five research clusters were developed:

- Sustainable protection of water resources
- Safeguarding drinking water quality
- Environmentally compatible, resource-conserving operation of water supply systems
- Management and operation of high-performance, efficient supply systems
- Adaptation of supply systems to changing conditions

Priorities are to be assigned to these clusters by agreement with the DVGW members and a new research programme is to be published in 2011 following the General Meeting.

**Optimized flushing plans for drinking water distribution**

Flushing for the removal of deposits is a key measure for safeguarding the water quality in distribution systems. Sediments may cause brown water, microbiological impairments and higher incidences of micro-organisms. In a project carried out at the DVGW Water Technology Centre, a model for determining optimized flushing intervals was developed. The objective is to use the resources available for network maintenance as efficiently as possible. In addition, the model allows rapid risk analysis in connection with changes in the distribution system, so that targeted measures can be taken to prevent water quality impairments.

**Quality assurance in drinking water treatment**

The use of treatment agents is an essential part of many drinking water treatment processes. Section 11 of the Drinking Water Ordinance contains a list of approved treatment agents and lays down maximum dosage limits



with a view to minimizing the specific concentrations of these agents. A study conducted by IWW Rheinisch-Westfälisches Institut für Wasser for DVGW showed that water companies comply with the limits laid down in Section 11 in practice and the low average dosages reflect the requirement, accepted by water companies, to minimize concentrations. However, too many different products of questionable conformity to the standard and purity are used. In future, the deficits identified could be reduced by compliance with DVGW Code of Practice W 204, leading to the implementation of quality assurance in day-to-day work.

## **DVGW awards for outstanding theses**

Each year, the DVGW offers prizes of 5,000 euros each to young scientists in the gas and water sectors. The awards are made for outstanding diploma, bachelor's and master's theses on relevant subjects. Prizes for outstanding young scientists in the gas sector were presented at the gat conference in November 2010. The latest awards in the water sector were made at wat+WASSER BERLIN INTERNATIONAL in Berlin on 5 May 2011.

Further information on award conditions and deadlines is available on the Internet at [www.dvgw.de](http://www.dvgw.de)

# Testing, inspection and certification

**DVGW CERT GmbH guarantees safety and quality in gas and water supplies with testing, inspection and certification procedures of a recognized high standard. The range of services is being steadily expanded and many customers already benefit from the synergy effects offered by a combination of several certification procedures. Work on global certification projects and interchange with DVGW standardization activities ensure that the latest developments are rapidly put into practice.**





## DVGW CERT GmbH – customer satisfaction is the key to growth

At DVGW CERT GmbH, business developments in 2010 were once again positive, with a gratifying further increase in income from EU product certification. Various projects are planned for the next few years in the light of new developments:

- ➔ Certification of biogas experts
- ➔ Certification of smart metering components
- ➔ Plant inspections for the dena biomethane register
- ➔ Certification for all types of pipeline construction work (in cooperation with Güteschutz Kanalbau, the quality assurance association for sewer construction)
- ➔ Accreditation of DVGW expert certification
- ➔ Lists of installation contractors as a service for network operators

### Satisfied customers

Customer satisfaction was further improved by a number of measures. The first stage of the Internet customer portal “myCERT”, with access to customer data, procedures and certificates, was completed. Up-to-date certification lists down to the individual product level are now available to customers and subscribers on the Internet. The new representative for the Italian market is now well-established and is making a considerable contribution to improving customer satisfaction in the most important foreign market of DVGW CERT. In addition, an office is being established in Berlin for business development, audits, inspections and the processing of applications by specialist contractors and prequalification procedures, especially in the Berlin region and eastern Germany.

### New accreditation procedures

Accreditation has become even more important as a result of the introduction of a German Accreditation Act and the establishment of a National Accreditation Body as of 1 January 2010. This act is intended to ensure uniform accreditation of comparable quality throughout Europe. Accredited certifications will then be considered to be equivalent and will be mutually recognized throughout the Single European Market. Last year, the process of changing all the accreditations over to the new German National Accreditation Body (DAkkS) started. In this context, several review processes will be required. These are being carried out in cooperation with the state approval bodies ZLS, DIBt and BLE. Almost 50 percent of the certifications of specialist contractors have already been changed over to accredited procedures.

### Gas products

Following a marked fall in the previous year, applications for European certification procedures (including applications under the Gas Appliances Directive) once again increased. National certification procedures for gas sector products continued to develop well. Separate accreditation is now offered for the statutory GS (equipment safety) mark. The scope of accreditation under the EU Construction Products Directive was extended to include gas installation components. Preparations for the certification of smart metering components were made in cooperation with the Figawa OMS working party and the Gas Supply Section.



- Work on the preparation of a joint inspection standard started in cooperation between DVGW, VDE-FNN and the OMS working party of Figawa/ZVEL.
- The inspection specification prepared by the OMS working party is already being evaluated by the EBI inspection body in cooperation with two manufacturers.
- DVGW CERT is making preparations for a special conformity certificate with OMS label.

In the European GASQUAL project, a broad-based European study on the effects of gas quality changes on safe appliance operation, DVGW CERT was responsible for work package 2 (Actual Certification Practice). This package has been successfully completed, laying a firm foundation for further stages of the project.

### Water products

For products to be connected to drinking water supply systems (washing machines, dishwashers, medical devices, etc.), DVGW CERT has prepared, in cooperation with the water section, a new inspection standard (W 540) and a new mark to indicate connection approval under the standard. The first certificates have already been issued. Further certifications on the basis of the following inspection standards are expected during the coming year:

- W 571: Drinking water preheaters  
(in conjunction with DIN 4753)
- W 534: Pipe connectors (revised)
- W 543: Flexible hoses (new edition)
- DIN 2002-2: Mobile drinking water systems
- W 516: Water carbonation systems  
(DIN 6650 refers to DVGW)

### Specialist contractors

Despite increasingly tough competition, the number of certified pipeline construction contractors remained almost unchanged, at about 960. The new Code of Practice GW 301, states considerably more specific requirements for the future, including the implementation of an operations management system. Operations management system audits have been completed in the meantime and all the companies certified by DVGW CERT in connection with accreditation now already meet the requirements of the new Code of Practice GW 301.

As regards the revision of Codes of Practice GW 301, GW 11, W 120 and W 316, the question arises as to whether the procedural requirements for accreditation should be included in the relevant DVGW Codes of Practice or dealt with in separate standards, which would need to be submitted to the National Accreditation Body as a joint certification programme and then adopted by the Accreditation Council of the National Accreditation Body.

To date, the accreditation procedure for specialist contractors is not based on a certification programme agreed between all market players. For this reason, DVGW CERT and its competitors were assessed on the basis of their individual certification programmes. Although these include the DVGW Codes of Practice as a technical basis, the procedure was implemented on the basis of the different conditions of the certification bodies, which led to different certification results. However, it will only be possible to develop a uniform, comparable certification procedure if the National Accreditation Body can use a standard accreditation programme as a basis. For this purpose, the procedures of all the certification bodies active in this field would need to be harmonised.



Such a harmonized accreditation programme is therefore to become part of the relevant DVGW Codes of Practice.

As a result of cooperation with Güteschutzgemeinschaft Kanalbau (the quality assurance association for sewer construction), integrated certification for the construction of gas and water pipelines, district heating systems and sewers is to become possible.

The necessary preparations were made and contracts concluded for maintaining a list of installation contractors as a service for network operators. This service is to be offered throughout Germany in the future.

### Management systems

About 30 percent of QM customers now take advantage of the possibility of simultaneous verification of conformity with the requirements of Codes of Practice G 1000, W 1000, FW 1000, M 1000 or S 1000. In some cases, a full TSM audit is also conducted, although this requires the participation of special TSM experts.

A management system assessment will probably need to be carried out for a European biogas project. The foundations for this project were laid on the basis of previous experience in cooperation with the specialist auditors of DVGW CERT GmbH. The biogas project, initiated by Gasunie of the Netherlands, aims to establish a trading platform for biogas, in contrast to the German dena register. In cooperation with Dutch colleagues, the objective is to identify synergy effects (requirements shared by the two platforms) with a view to allowing customers to join both the European platform and the dena register.

DVGW CERT GmbH has applied for approval as an inspection organization for the dena biogas register and has concluded contracts with accredited EMAS auditors meeting the relevant requirements. A detailed inspection program was developed for plant assessments in connection with the dena register. The first assessments are due to take place in 2011.

### Prequalification

Many public bodies use the list of prequalified construction contractors available at [www.pq-verein.de](http://www.pq-verein.de) to search for suitable companies for the award of contracts under VOB (the standard terms of contracts for public-sector projects). This central platform for prequalified companies saves both clients and contractors time and money. Key general documents which apply to all projects are already submitted centrally to the prequalification body in the course of prequalification. These are assessed and then released for publication on the internet. DVGW CERT GmbH offers prequalification under VOB for all companies covered by the guidelines of the Federal Ministry of Transport, Building and Urban Affairs. By the end of 2010, about 400 companies had been prequalified by DVGW CERT GmbH.



### Experts

In accordance with the amended High-Pressure Gas Pipeline Ordinance, only experts with accredited certification will be recognized by the authorities in the future. DVGW CERT has therefore applied for accreditation as a personal certification body. In connection with this procedure, it is necessary to form a programme committee to define the certification programme. This committee has since been founded and the harmonized certification programme developed by the committee is to be submitted to the National Accreditation Body as a standard. Currently, 180 DVGW experts are certified by DVGW CERT; of these, 111 are recognized by the authorities.

Accreditation as a personal a certification body for cathodic protection specialists in accordance with EN 15257 was included in the accreditation procedure. The Cathodic Protection Specialist Committee is already active in this area. DVGW CERT GmbH has agreed on cooperation with a specialist training institute which has the examination facilities required for this purpose.

# Professional development and communications

Every year, some 25,000 people take part in the DVGW vocational and advanced training programme. As a result of changes in the gas and water supply sectors, employees require increasingly broad-based knowledge in their fields. DVGW provides companies with intensive support to obtain the qualifications required. The internet-based personal development tool QUA-SI provides participants and members with a source of information on all topics related to the gas and water sectors which is updated almost on a daily basis. In 2010, the specialists and managers taking part once again assessed the 800 or so information events, seminars and specialist conventions as up-to-date, practically oriented and well organized.





## Ensuring qualifications in the gas and water sector

Gas and water companies have adapted their structures in response to new market conditions. The resulting changes in the requirements faced by managers and staff call for qualified, structured training at all levels. DVGW has therefore adapted its entire professional training programme to the changed requirements of the industry and continued further development of its modular training system. The DVGW training programme takes account of all relevant developments and innovations in technology and standards and ensures that the latest changes are covered competently in its courses.

DVGW forums effectively supplement training in areas not related to Codes of Practice. In future, DVGW will focus more strongly on the interests of its member companies with forums on topics such as “The future of gas: a controlled retreat or a technology offensive” (presentation at E-World) or “Water technology infrastructure in extreme situations.”

### Part-time post-graduate qualifications for network engineers in the gas, water or power supply sector

Increasingly, engineers working in energy and water supply in integrated utilities need to qualify for specialist and managerial tasks in another sector in order to meet the requirements for TSM (Technical Safety Management). For these people, DVGW offers part-time post-graduate courses allowing them to qualify as network engineers in the gas, water or power supply sector in cooperation with ZIW, the Centre for Innovation and Advanced Training at Trier University of Applied Sciences.

In the 2009/10 academic year, a total of 18 engineers were awarded certificates as network engineers in the gas and water supply sectors. In 2010/11, some 35 students are currently preparing for their final examinations in the gas, water and power modules in the spring.

The course has been led very successfully by Prof. Dr.-Ing. Manfred Schlich from the gas supply sector, Prof. Dr.-Ing. Stefan Wilhelm from the water supply sector and Prof. Dr. Burkhard Fromm, all of Trier University of Applied Sciences. The examinations board includes representatives of the professional associations concerned and professors with practical experience. The courses are organized and held with the support of DVGW.

### Training for industrial gas customers

Safety is also the top priority in the operation and maintenance of industrial natural gas systems and equipment such as furnaces and generators. Under the Energy Industry Act, energy systems of this type must be constructed, operated and maintained in accordance with the “generally accepted rules of technology”. This requirement is considered to have been met if DVGW Codes of Practice are applied.

With a view to supporting the large number of commercial and industrial gas customers in the performance of their organizational duties, DVGW has developed special training modules, which it offers at regional centres, for the technical personnel of industrial gas customers and for employees of service providers. The objective of training is to place the technical personnel responsible for operational and plant safety in connection with gas supplies in a position to assess their



own organization and to heighten their sensitivity to the initial and advanced training of their staff. Demand for such training is growing.

### **Current lead professions in the power, gas and water sectors**

The restructuring of vocations and courses of study in the energy and water sectors has led to generally recognized standards for vocational qualifications. Qualification standards for operations personnel at all qualification levels from skilled worker to master craftsman and engineer have been formulated. Training experts from utilities and associations have actively contributed to innovations in the structure of training in line with the new possibilities offered by the Bologna process and the new Vocational Training Act.

The lead professions are defined in the four basic standards DIN-VDE 1000-10, S 1000, G 1000 and W 1000. These lay down requirements for persons working in the fields of electrical engineering, energy supply systems, gas systems and drinking water supply systems. The DVGW Codes of Practice also include company organization requirements.

Prof. Lendt from the Ostfalia University of Applied Sciences developed the master's degree course for gas, water and power network engineers on behalf of DVGW and the industries concerned. In the development process, Prof. Lendt received support from Esslingen and Trier Universities of Applied Sciences. The curriculum is based closely on the tasks and activities of technical managers, as stated in the relevant standards. The master's degree course, which is currently in the final stages of accreditation, will probably be offered for the first time in 2011.

### **DVGW Academy increasingly popular**

In 2010, the DVGW Academy was successful, with 170 seminars and about 1,900 participants. The Academy systematically develops skills in the areas of organization/law, business administration, employee management, customer orientation and secretarial/assistance services.

The DVGW Academy continually optimizes its range of services and develops new



courses in line with demand. All the courses offered are specially tailored to meet the requirements of the gas and water sectors and are increasingly provided in-house for customers. In 2010, the areas with the highest demand were customer orientation, employee management and business administration.

The trend towards individually tailored training courses continued in 2010. Apart from individual training, the emphasis is increasingly on concepts for systematic employee development.

Further courses in personnel development were added to the Academy's programme in 2010. The changes in the energy and water sectors over the past few years have meant that personnel development is likely to become a key element in ensuring the competitiveness of companies in the future. With the long-term experience of the Academy instructors and advisers in the gas and water sectors and the many successful training systems implemented by DVGW over the past few years, the Academy is in a position to offer companies comprehensive consultancy services from analysis through to conceptual design and implementation.

#### **Central and regional – the DVGW offering**

Apart from centrally organized courses, the many events organized at the regional and local level play a key role in the DVGW information and training system. The local groups mainly offer brief information events on topical themes which are dealt with in more detail by the professional training events available. The regional groups concentrate on specialist information with a regional focus. All in all, more than 12,000 participants attended over 400 events organized at the regional or local level in 2010.

#### **The right training with QUA.SI**

QUA.SI is a free-of-charge Internet-based service offered by the DVGW to ensure that employees of utilities receive precisely the training they need for the efficient performance of their present and future work.

QUA.SI assists the manager responsible to plan, manage and document the training required for technical personnel.



## Media for members and other specialists

In processing and providing up-to-date specialist information, the classical print media and electronic media supplement each other as appropriate, depending on the target group and topic in each case.

### **DVGW internet presentation expanded**

Up-to-date specialist information, broken down by topics and services for specialist visitors and members, is available via the comprehensive DVGW information portal. The main emphasis is on DVGW activities and services, which are continually expanded.

### **DVGW Codes of Practice go online**

In 2010, DVGW developed “Regelwerk Plus”, an online version of its Codes of Practice, which recently became available in addition to the printed and DVD versions. The online version features a wide variety of benefits and unlimited access via the Internet. DVGW Regelwerk Plus not only offers users the latest editions of DVGW Codes of Practice and relevant DIN standards but also links from the website to related data such as DVGW bulletins, relevant training schedules, contact persons and technical information. Convenient search and hit list functions ensure that the site is easy to use at any place and time. A demonstration version is available at: [www.dvgw-regelwerk.de](http://www.dvgw-regelwerk.de).

The list of DVGW Codes of Practice on the DVGW website has also been optimized. Users can now call up the preface, table of contents and scope of each individual Code of Practice, which makes selection considerably easier. In many cases, articles concerning the publication of a new Code of Practice are also available. Occasional

users who only need access to individual Codes of Practice can order and pay for them online and then download them immediately as PDF files.

### **DVGW energiewasser-praxis – a high-profile specialist journal**

“DVGW energie|wasser-praxis”, published by DVGW via its affiliate wvgv as a specialist journal and the association magazine, is now the leading specialist journal in the sector, with a circulation of about 13,500 copies. In addition to the 11 normal issues published each year, special issues are also published on individual topics such as “university courses and professions” and for special events such as IFAT or WASSER BERLIN INTERNATIONAL. Key articles are also published in advance in the members’ section of the DVGW website.

# The association

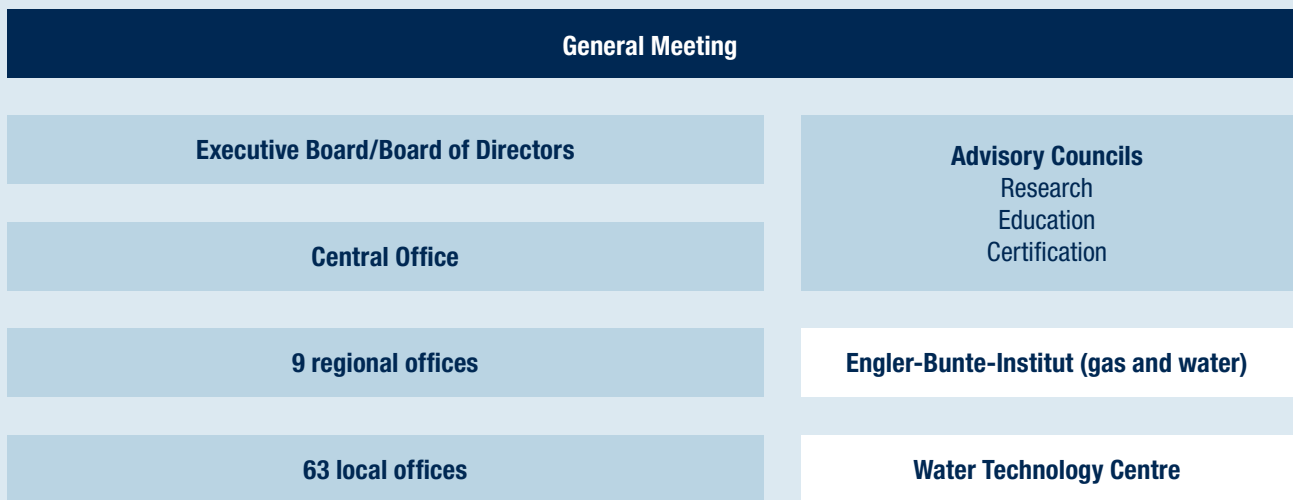
## Introduction

For 150 years, DVGW has been setting safety and quality standards for the gas and water industries. The association is committed to the successful technical self-regulation of the gas and water sectors. German laws define general protection and safety objectives, while more detailed requirements are developed by DVGW experts.

The Central Office, the regional and local offices, certification and testing bodies, research and training institutes and specialist committees of DVGW all work together closely and maintain intensive dialogue within the industry. Close contacts with ministries, authorities and other associations are also essential as a basis for decisions on

the future-oriented further development of the German and European gas and water industries.

Members can directly influence developments in their industry via the General Meeting, the various bodies of the association and active participation in the DVGW specialist committees. The networked, decentralized structure of DVGW ensures a rapid, comprehensive flow of specialist information.



Stand Juni 2010

## Board of Directors/Executive Board

The DVGW Executive Board consists of about 40 members elected at the General Meeting for a period of office of four years. The Executive Board Members are prominent representatives of the water and gas industry from gas and water companies, industry, the authorities, higher education and the trades. The Executive Board determines the guidelines for the association's activities and elects a President and three Vice Presidents to act as the Board of Directors for one year. Responsibility for the day-to-day business of the association is delegated to the Central Office.

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Technischer Vorstand Berliner Wasserbetriebe AöR  
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**Prof. E.h. (RUS) Bernd H. Schwank**

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Direktor Betrieb/Technologie – Verbundnetz Gas Aktiengesellschaft, Leipzig

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OTWA Ostthüringer Wasser und Abwasser GmbH, Gera

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Umweltministerium Baden-Württemberg, Abt. Wasser  
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Vice-President, Water of DVGW

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KG, Chemnitz

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Vorsitzender der Geschäftsführung Thyssengas GmbH,  
Dortmund

**Dr.-Ing. Bernhard Hörsgen**

Mitglied des Vorstandes Gelsenwasser AG, Gelsenkirchen  
President of DVGW

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Geschäftsführer Stadtwerke Halle GmbH, Halle/Saale  
Vice President of DVGW

**Dipl.-Ing. Klaus Küsel**

BIS Heinrich Scheven GmbH, Erkrath  
Präsident des rbv

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E.ON Ruhrgas AG, Essen  
Vice President, Gas of DVGW

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Bodensee-Wasserversorgung, Stuttgart  
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Geschäftsführer WVV Wasser- und Energieversorgung  
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**Dipl.-Ing. Michael Riechel**

Mitglied des Vorstandes Thüga Aktiengesellschaft,  
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Geschäftsführer Spreewasser Gesellschaft für Wasser-  
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Schwank GmbH, Köln  
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**Dr.-Ing. Markus Ulmer**

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**Dr.-Ing. Gerhard Weissmüller**

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AG, Ludwigshafen

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GmbH, Recklinghausen

**Dipl.-Ing. Wolfgang Wollgam**

W-A-B Wasser- und Abwasserberatungsbüro, Kolkwitz

**Dipl.-Ing. (FH) Friedrich Zapf**

Werkleiter Zweckverband zur Wasserversorgung der  
Reckenberg-Gruppe, Gunzenhausen

**Dipl.-Phys. Joachim Zientek**

Mitglied des Vorstandes Mainova AG, Frankfurt  
am Main

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### **Dr.-Ing. Rolf Albus**

Geschäftsführender Vorstand  
GWI Gaswärme-Institut e.V., Essen

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Leiter Bereich Verbrennungstechnik KIT – Karlsruher  
Institut für Technologie Campus Süd, Karlsruhe

### **Prof. Dr. rer. nat. Fritz Frimmel**

Leiter Bereich Wasserchemie DVGW-Forschungsstelle  
am Engler-Bunte-Institut der Universität Karlsruhe,  
Karlsruhe

### **Dr. rer. nat. Josef Klinger**

Geschäftsführer DVGW-Technologiezentrum Wasser  
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Geschäftsführer KGE-Kommunale Gasspeichergesellschaft  
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### **Prof. Dr.-Ing. Thomas Kolb**

Institutsleiter DVGW-Forschungsstelle am Engler-Bunte-  
Institut des KIT – Karlsruher Institut für Technologie,  
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Geschäftsführer DBI Gas- und Umwelttechnik GmbH,  
Leipzig

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Leiter Kompetenz Center Gastechnik E.ON Ruhrgas AG,  
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Stadtentwässerungsbetriebe Köln AöR, Köln  
Präsident der DWA

### **Dr.-Ing. Anke Tuschek**

Mitglied der Geschäftsführung BDEW Bundesverband  
der Energie- und Wasserwirtschaft e. V., Berlin

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Technischer Geschäftsführer Open Grid Europe GmbH,  
Essen

### **Dipl.-Volksw. Martin Weyand**

Hauptgeschäftsführer Wasser/Abwasser BDEW Bundes-  
verband der Energie- und Wasserwirtschaft e. V., Berlin

### **Dipl.-Kfm. Ewald Woste**

Präsident BDEW Bundesverband der Energie- und  
Wasserwirtschaft e.V., Berlin

## Advisory Councils

### **Gas Resesarch**

Chair: Dr.-Ing. Jürgen Lenz

### **Water Resesarch**

Chair: Dr.-Ing. Georg Grunwald

### **Education**

Chair: Prof. Dr.-Ing. Matthias Krause

### **Steering Committee of the DVGW Certification Body (CERT-Advisory Council)**

Chair: Prof. Dr.-Ing. Gerhard Schmitz

## Central Office

### **DVGW Deutscher Verein des Gas- und Wasserfaches e. V. – Technisch-wissenschaftlicher Verein**

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D-53123 Bonn  
Tel.: +49 228 9188 -5  
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www.dvgw.de  
info@dvgw.de

#### **Managing Director Dr.-Ing. Walter Thielen**

#### **Gas Supply Dipl.-Ing. Alfred Klees**

#### **Gas Utilization Dipl.-Ing. Dieter Vass-Wolff**

#### **Water Dipl.-Geol. Berthold Niehues**

#### **Vocational Training and Communication Dipl.-Ing. Reinhold Krumnack**

#### **Research and Subsidiary Management Dipl.-Ing. Dipl.-Wirts.-Ing. Frank Gröschl**

#### **Finance/Organization Dipl.-Betriebsw. Michael Radzuweit**

#### **Berlin Office Robert-Koch-Platz 4 10115 Berlin Telefon: +49 30 794736-50 Fax: +49 30 794736-90 hgfr@dvgw.de**

#### **Brussels Office Avenue Palmerston 4 1000 Brüssel, Belgien Tel. 0032 2 2371134, Fax 0032 2 2304480 wetzels@dvgw.de**

#### **DVGW-Academy Robert-Koch-Platz 4 10115 Berlin Telefon: +49 30 794736-61 Fax: +49 30 794736-69 akademie@dvgw.de**

You will find a full organizational chart at [www.dvgw.de](http://www.dvgw.de)

## Regional Offices

DVGW has nine regional offices distributed throughout Germany. The tasks of these offices are in line with the fields of activity of DVGW, but also include topical regional issues. In organizing events, support for members and certification work, nearness to the members ensures that individual contacts are available and support is provided as and when it is required at the same time as generating new impetus for the association's work. The activities of the regional offices are rounded off by regular contacts with the ministries and authorities of Germany's federal states, including discussions with parliamentary representatives. One of the main focuses is on cooperation on the DVGW Technical Safety Management (TSM) system.

#### **Baden-Württemberg Chairman: Dr.-Ing. Karl Roth Managing Director: Dipl.-Ing. (FH) Th. Anders**

#### **Bayern Chairman: Prof. Dr. Norbert F. Menke Managing Director: Dipl.-Ing. (FH) Jörn-Helge Möller**

#### **Berlin/Brandenburg Chairman: Ulf Altmann Managing Director: Dipl.-Geol. Ralf Wittmann**

#### **Hessen Chairman: Dipl.-Phys. Joachim Zientek Managing Director: Dipl.-Ing. (FH) Heinz Flick**

#### **Nord Chairman: Ass. Jur. Renke Droste Managing Director: Dr.-Ing. Torsten Birkholz**

#### **Nordrhein-Westfalen Chairman: Dipl.-Ing. Dietmar Bückemeyer Managing Director: Dr. jur. Wolfgang van Rienen**

#### **Mitteldeutschland (Sachsen, Sachsen-Anhalt, Thüringen) Chairman Water: Dipl.-Ing. (FH) Peter Podzimski Chairman Gas: Prof. Dr.-Ing. Matthias Krause Managing Director: Dipl.-Ing. Reinhard Rauh**

#### **Rheinland-Pfalz Chairman: Dr.-Ing. Peter Missal Managing Director: Dipl.-Ing. (FH) Heinz Flick**

#### **Saarland Chairman: Dr.-Ing. Joachim Meier Managing Director: Dipl.-Ing. (FH) Stefan Neuschwander**

## Local Offices

The 63 DVGW/DELIWA local offices provide the infrastructure required for information transfer ranging from regional contacts to work on Codes of Practice. As a multiplier for the DVGW, the local offices pass on specialist knowledge and foster a mutual interchange of information. This means that all the individual members find out rapidly and reliably about what is happening in the industry. This local strategy is the key to success in information distribution. Outstanding regional contacts and considerable voluntary commitment lay a firm foundation for the attractive range of activities offered by the local offices. The main focuses of work with members include information events, specialist training, excursions and local exchanges of experience. The over 300 events organized by the local offices each year mean that the individual members keep abreast of the latest developments in their industry. The DVGW/DELIWA local offices are assigned to the regional offices for organizational purposes. Their work is coordinated by six regional coordination groups:

### **Chairpersons of the Coordination Groups**

#### **Dr. Markus Ulmer**

Chairperson of the Southern Coordination Group  
Stadtwerke Karlsruhe GmbH  
Daxlander Straße 72  
76185 Karlsruhe

#### **Hans-Jürgen Pütz**

Chairperson of the Northern Coordination Group  
Energieversorgung Hildesheim  
Römerring 1  
31137 Hildesheim

#### **Dipl.-Ing. Johannes Niggemeier**

Chairperson of the Western Coordination Group  
Stadtwerke Brilon  
Keffelker Straße 27  
59929 Brilon

#### **Dipl.-Ing. Thomas Braun**

Chairperson of the South-Western Coordination Group  
Stadtwerke Sulzbach/Saar GmbH  
Sulzbachtalstraße 20  
66280 Sulzbach/Saar

#### **Hans-Joachim Collier**

Chairperson of the Eastern Coordination Group  
OTWA Ostthüringer Wasser und Abwasser GmbH Gera  
Gaswerkstraße 10  
07546 Gera

#### **Dipl.-Ing. Siegmund Rothe**

Chairperson of the Berlin/Brandenburg Coordination Group  
Spreewasser Gesellschaft für Wasserwirtschaft mbH  
Karl-Marx-Straße 17  
15517 Fürstenwalde

Further information on the individual local offices is available at <http://bgi.dvgw.de> (in German only).

## Membership

DVGW members come from all areas of the gas and water industry interested in the association's work, including gas and water companies, industry, higher education and research authorities and the relevant institutions. In addition, the almost 9,500 individual members are key multipliers within their companies. In 2010, the positive trend in membership continued.

## Honours

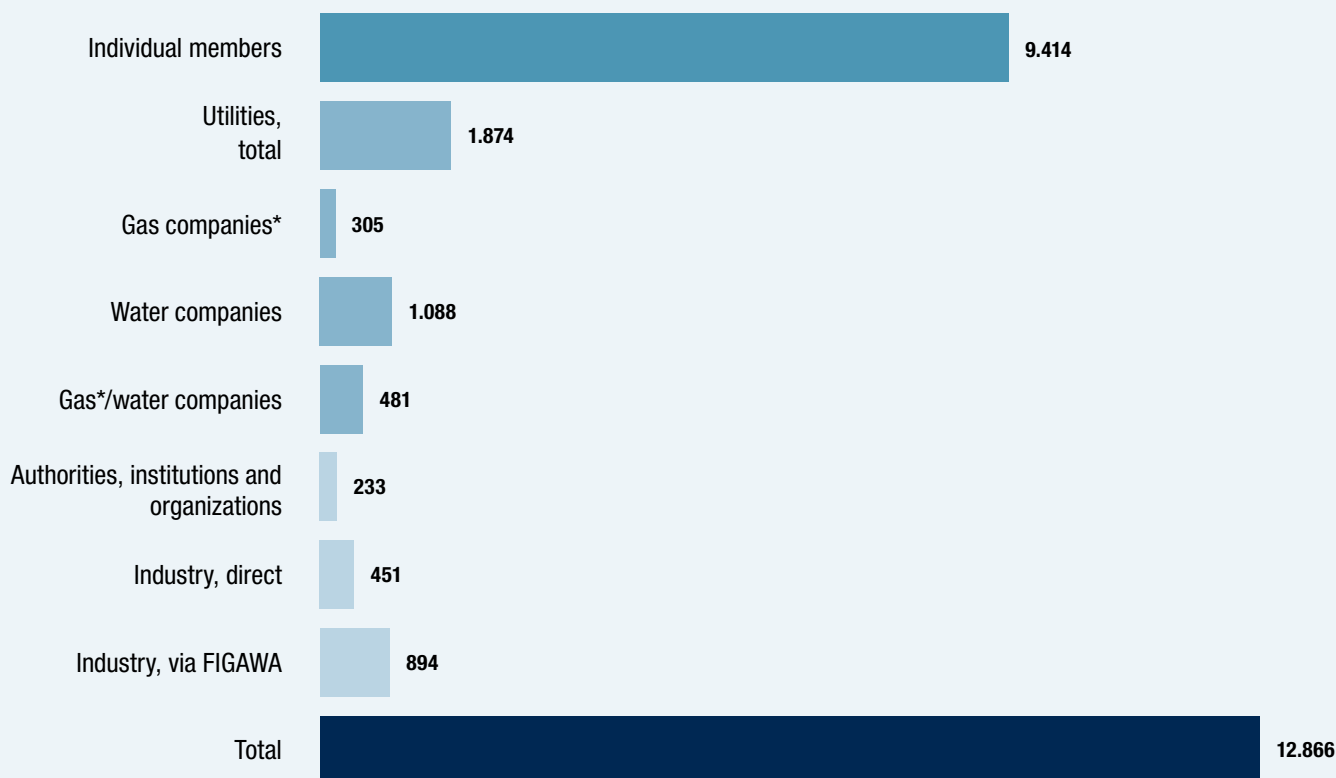
Honorary DVGW membership and the DVGW ring of honour are presented at the General Meeting. The next General Meeting is due to be held in Bonn on 6 July 2011.

Since 2003, the DVGW badge of honour has been presented in recognition of outstanding commitment to the work of DVGW. In 2010, the following persons were honoured:

### DVGW badge of honour

- Dipl.-Ing. (TH) Albert Schücker, Menden**
- Dipl.-Ing. Heinz Karskens, Königswinter**
- Dipl.-Ing. Heribert Kaesler, Bochum**
- Dipl.-Ing. Martin Stucht, München**

### Members as of 31 December 2010



\* Including network operators, suppliers, metering point operators, metering service providers, etc

## Deceased Members

DVGW mourns the death of the following members in 2010:

Walter Blattner, Waghäusel  
Dr.-Ing. E. h. Dr. Christoph Alexander Brecht, Essen  
Dipl.-Ing. Klaus Christen, Bad Salzuflen  
Bernd Czermak, Ingelheim  
Hans Damm, Baunatal  
Dipl.-Ing. Josef Dietz, Aschaffenburg  
Dipl.-Berging. Gerhard Ehlis, Essen  
Dr.-Ing. Dr. Horst Elsner, Gera  
Ing. (grad.) Richard Engel, Saarbrücken  
Winfried Faeth, Legau  
Dipl.-Ing. Reinhard Fischer, Starnberg  
Obering. Siegm. Förster, Heidenheim  
Helga Funk, Berlin  
Prof. Dr.-Ing. Prof. Dr. Baldefrid Hanisch, Stuttgart  
Prof. Dr. Prof. Dr. Ulrich Hässelbarth, Berlin  
Prof. Dr. rer. nat. Prof. Dr. Kurt Hedden, Rosdorf  
Dipl.-Chem. Günther Herbst, Gladbeck  
Prof. Dr.-Ing. habil. Prof. Dr. Wolfgang H. Höll, Ettlingen  
Josef Keil, Montabaur  
Franz Klein, Moschheim  
Dipl.-Ing. Martin Kleinfeldt, Hofheim  
Dr. rer. nat. Dr. Hans Kraus, Walluf

Manfred Leines, Mönchengladbach  
Dipl.-Ing. Peter Lipps, Trier  
Hans-Jürgen Luschgy, Düsseldorf  
Walfried Poggenwisch, Holzwickede  
Karsten Richter, Reinsdorf  
Karlheinz Roth, Kempen  
Dipl.-Ing. Ernst Sauer, Hösbach  
Alfons Scheloske, Marienrachdorf  
Dipl.-Ing. Harald B. Schumacher, Schwerte  
Paul Seefried, Pöttmes  
Wolfgang Seyffert, Hirschberg  
Gerd van Bergerem, Spessart  
Dipl.-Ing. Norbert Vester, Kirchheilingen  
Dieter Wächtler, Glauchau  
Matthias Warmuth, Glauchau  
Hermann Weiss, Kronburg  
Ing. Aloyse Wester, Esch-Sur-Alzette

# gat 2010

● Dr. Lenz presenting his opening address



● In his opening address, Dr. Jürgen Lenz stressed the fact that innovation and technology can provide gas with impetus for the future.



A performance artist promoting the new online Code of Practice system. ●



● Once again, the joint DVGW/BDEW stand was a centre of communications.



● Guests at the gala evening were entertained by performances and music.



🕒 Students touring the exhibition.



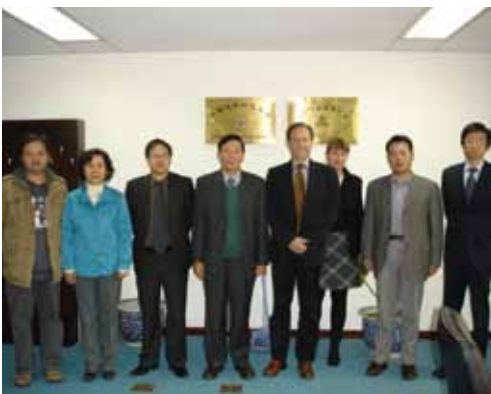
🕒 Platform discussion on "future gas technologies and climate protection".

## Awards and activities

Official group photo of participants in the first "German-Chinese Conference for the Safety of Urban Gas Supplies" in Beijing. 📷



📷 DVGW and EUREAU representatives discussing the revision of biocide law with Christa Klass (centre), Member of the European Parliament.



📷 Participants in cooperation discussions with the Chinese Gas Association (CGA) in Beijing, on the occasion of the "German-Chinese Conference for the Safety of Urban Gas Supplies".

📷 Participants in the IAWD/IAWR symposium in Vienna, which focussed on preventive water protection and risk management.

Martin Stucht (left) receiving the badge of honour and certificate from Dr. Walter Thielen at gat 📷



📷 Presentation of certificates to the instructors and training centre of EnBW in Stuttgart following GW 129 training in accordance with the BALSibau concept.



📷 On 13 September 2010, during IFAT in Munich, the Russian translation of DVGW's standard work "Water Supply Practice" was presented on the German government stand at the Munich exhibition centre in the presence of representatives from the Federal Ministry for the Environment.

Instructors and representatives of training establishments met for an exchange of experience at Rohr-Kloster in Southern Thuringia at the invitation of the BALSibau initiative. 📍



📍 TU-Bergakademie Freiberg und DVGW conclude a cooperation agreement for the gas sector: (from left to right) Dr. Jürgen Lenz, Prof. Dr. Dimosthenis Trimis, Dr. Walter Thielen.



📍 Presentation of the badge of honour to Albert Schücker and Heribert Kaester at gat.



📍 Representatives of the energis companies receive their TSM certificates from Dr. Walter Thielen (left) in the presence of Stefan Neuschwander (right).



📍 Induction ceremony for network and water master craftsmen in Lübeck.



📍 Herbert Dvorak, Wien-Energie-Gasnetz GmbH, Austria, receiving the certificate from Theo B. Jannemann at gat.



📍 Visit by the Leipzig local group to a construction site of Fernwasserversorgung Elbaue-Osttharz GmbH.



📍 On the occasion of their annual general meeting, members of the Potsdam local group visited the old gasworks in Neustadt (Dosse).



📍 Dr. Bernhard Hörsgen (left) with this year's winners of the thesis prizes in the gas sector at gat.

# Awards and activities



Participants in the Dresden local group excursion visited the Könnern biogas plant of Agri.capital GmbH.

Jürg Ziegelbald (left), chairperson of the pressure regulating station working party of DVGW Central Germany regional group, explaining the mode of operation of the MITGAS Bernburg/Peißen pressure regulating station to participants in an excursion of the Dresden local group.



Congratulations card for the 50th anniversary of Geretsried gas training centre.

19th exchange of experience for master craftsmen of DVGW Northern regional group in Travemünde



A delegation from the Bavarian Ministry for Economic Affairs, the DVGW Bavaria regional group and IEK visited a demonstration plant for methane production using power from renewable sources at the Centre for Solar Energy and Hydrogen Research in Stuttgart.

Erdgas Südwest and Erdgas Südwest Netz receive their TSM certificates following a successful audit.

Dr. Josef Klingner succeeds Prof. Dr.-Ing. Wolfgang Kühn (left) as Head of the Water Technology Centre.



DVGW presents TSM certificates to ENRW Energieversorgung Rottweil



At DVGW Diskurs 2010, held in Cologne, which focussed on the innovation campaign, about 100 participants held an animated discussion on climate change and gas supplies

Presentation of a TSM (Technical Safety Management) certificate to Stadtwerke Duisburg Netzgesellschaft mbh.