

## Danish Gas Technology Centre

DGC is a consultancy and development company in the fields of energy and the environment. DGC's main focus area is gas and gas utilisation. DGC undertakes analyses, measurement assignments, laboratory experiments and tests, verifications, field measurements, training and certification for the gas industry, energy companies, suppliers, public authorities and other energy players.

DGC works with all forms of gas, such as natural gas, town gas, biogas, gasification gas and hydrogen, as well as with gas combined with renewables and other forms of energy.

DGC's laboratory is accredited under DANAK (The Danish Accreditation and Metrology Fund) for measurement and safety testing of equipment and installations for gas utilisation, and it is also accredited for gas analyses. The Test Centre for Green Gases undertakes analyses and measurements of biogas, gasification gas and hydrogen and other green gases.

DGC is Notified Body for gas boilers and other gas-fired appliances. DGC carries out verification of CO<sub>2</sub> emission from cogeneration plants.

DGC is a public limited company, established in 1988 and is now owned by HMN Naturgas, DONG

Energy, Energinet.dk, NGF Nature Energy and HOFOR. In 2014 DGC had 30 employees and generated annual revenue of DKK 32 million.

### DGC's work areas

#### Domestic boilers and small-scale gas appliances

*Karsten V. Frederiksen, kvf@dgc.dk*

Energy consultancy, measurements, energy labelling, testing of domestic equipment. Troubleshooting and optimisation of heating systems. Optimisation of natural gas utilisation and combination with renewable energy systems (e.g. heat pumps or hybrid solutions with electrical heat pumps or solar). Specifications, consulting services for builders and developers, project engineering. Consultancy relating to Gas Regulations and other regulatory matters. Consultancy relating to operation and service.

#### Cogeneration, large boiler plants and industrial gas utilisation

*Jan de Wit, jdew@dgc.dk*

Consultancy on concepts, regulatory matters, environmental and safety matters, regulations, assessment of the impact of gas quality, consultancy relating to operation and service in the area of micro CHP, fuel cells.

#### Environment and combustion

*Per G. Kristensen, pgk@dgc.dk*

Mapping, modelling of combustion

processes, environmental documentation, assessment of fuels, including gas quality variations, regulatory and authority matters, emission abatement actions. Calculation of gas properties, gas chromatography, interaction with other fuels. Development and testing of environmental technology.

### **Biogas, renewables and biogas**

*Niels Bjarne Rasmussen, nbr@dgc.dk*  
Consultancy relating to upgrading of biogas to natural gas quality, comparison of fuels and technologies, expanders on the natural gas grid. Testing grid injection of hydrogen and biogas, testing equipment with hydrogen and biogas. Consultancy relating to methanation of gasification gas for the natural gas grid.

### **Gas grid service and consultancy**

*Jan K. Jensen, jkj@dgc.dk*  
Consultancy and project assignments regarding odourisation, new gas qualities transported via the natural gas system, gas measurements and analyses. Coordination of energy saving activities and of updating the gas companies' technical manuals and specifications.

### **Certification and safety advice**

*Torben Kvist, tkv@dgc.dk*  
CE certification, approval of equipment, CO<sub>2</sub> verification, technical audits. Advice on regulatory matters, safety analyses, troubleshooting, random testing, breakdown studies, expert surveys.

### **Courses and training**

*Michael Larsen, mla@dgc.dk*  
Course programme for employees in the gas industry, tailor-made courses for operating personnel, conferences, special arrangements, external courses in Denmark and abroad.

### **Other services**

Renting of equipment, secretariat services, sale of software and publications, design of websites, webvideos and campaign material.

### **Laboratory and measurements**

DGC's laboratory is accredited under DANAK for environmental measurements, safety testing of gas appliances, and it is also accredited for gas analyses.

- Nationwide energy and environmental measuring service for natural gas, biogas, oil and solid fuel plants. Emission measurements of O<sub>2</sub>, CO, NO, NO<sub>2</sub>, UHC, formaldehyde, ammonia, ethylene and odour.
- Analyses of natural gas samples for determination of composition, calorific value, CO<sub>2</sub>, emission factor etc.
- Green Gas Test Centre: Measurements of main components and trace elements in biogas, gasification gas and hydrogen; control and validation of measuring equipment; support for research and development projects.
- Natural gas sampling.
- Testing, adaptation and optimisation of all kinds of gas appliances.
- Safety testing in connection with CE marking of appliances and plants for gas utilisation.
- Temperature and flow measurements, performance measurements.

### **Further information**

Contact DGC at +45 2015 9600, [dgc@dgc.dk](mailto:dgc@dgc.dk), or [www.dgc.eu](http://www.dgc.eu). Order or download our detailed product sheets from the website.