

# Gas quality & flow training courses

KEMA Academy



Proper measurement of natural gas is of great value to gas grid owners and gas customers all around the world. For custody transfer purposes, every party involved has to be sure that the energy content (flow and quality) has been measured correctly, as any inaccuracies can have major financial implications.

Since the Netherlands switched to natural gas in the 1960s, KEMA Gas Consulting & Services has been at the forefront of developments in natural gas custody transfer, improving measurement accuracy and reducing overall costs.

Our Gas Quality and Flow team has the expertise to advise grid owners on issues such as gas reconciliation or balancing within networks. Our team can assist in defining a metering policy in which design and operational measures can be related to financial risks.

With our technical knowledge, analytical tools and practical experience, we are able to help clients to eliminate (systematic) measurement errors and improve metering design and maintenance practices. Members of our team often work as independent experts (moderators), clarifying and resolving metering issues. Last but not least, our team has considerable experience assisting international companies with all aspects of the design and operation of natural gas metering and calibration stations.

For a current overview of our training program and to register, please visit [www.kema.com/academy](http://www.kema.com/academy).



In-company & customized training courses

At the client's request KEMA can also provide in-company and customized training courses. The course can then, for example, deal with actual cases from your business operations, or future scenarios sketched out by you. We are flexible in this.

## Overview of gas quality & flow training courses

Course	Description	Subjects	Result	Target Group
<p><b>Natural gas custody transfer</b></p> <p>three-day training course</p> <p>English and Dutch language</p>	<p>This training course helps you to design and operate accurate and reliable metering stations with low levels of measurement uncertainty. You will find out how to minimize systematic errors, learn to judge whether the company that measures your natural gas usage is generating accurate data and push your gas balance to equilibrium.</p>	<ul style="list-style-type: none"> <li>• Gas flow measurement</li> <li>• Gas quality measurement</li> <li>• Site visit</li> <li>• Metering policy</li> <li>• Calibration of gas meters for high pressure natural gas and flow conditions</li> <li>• Traceability to international standards</li> <li>• Innovation: tracer field check and turbine meter diagnostics</li> <li>• Q&amp;A</li> </ul>	<p>After attending, you will have gained both practical and theoretical knowledge. You will understand the principles of how to design and operate metering stations.</p>	<p>Metering managers, metering engineers, design engineers, station operators, service staff and inspectors of custody transfer stations.</p>
<p><b>Gas quality</b></p> <p>one-day training course</p> <p>Dutch language</p>	<p>The import of natural gas from abroad will increase significantly in the coming years. At the same time renewable gases such as biogas are being injected in the natural gas grid. This one-day course offers insight into the main effects of variable gas composition on the safety and effectiveness of use and end-use equipment.</p>	<ul style="list-style-type: none"> <li>• Overview of the composition of different gas types and their possible effects on the behavior of end-use equipment</li> <li>• Dutch and European development</li> <li>• Practical solutions for end-use equipment</li> </ul>	<ul style="list-style-type: none"> <li>• Insight into essential aspects of the 'new gases' in end-use equipment</li> <li>• A clear picture of the possible consequences of gas quality variations</li> <li>• Insight into solutions/ measures to maintain the safety and effectiveness of end-use equipment when supplied with 'new gases'</li> </ul>	<p>Industrial and commercial end users of natural gas, manufacturers, suppliers and installers of combustion equipment.</p>

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