



25th world gas conference
"Gas: Sustaining Future Global Growth"

IGU WOC 5.2 The Beginners Guide to New Gas Technologies

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Switzerland

Venue: KL Convention Centre, Level 3, 302/3



Patron



Host



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■ The Sessions Motto/Program Title IGU WOC 5.2

Gas Power Packages

Efficient domestic and small commercial uses for sustainable gas markets

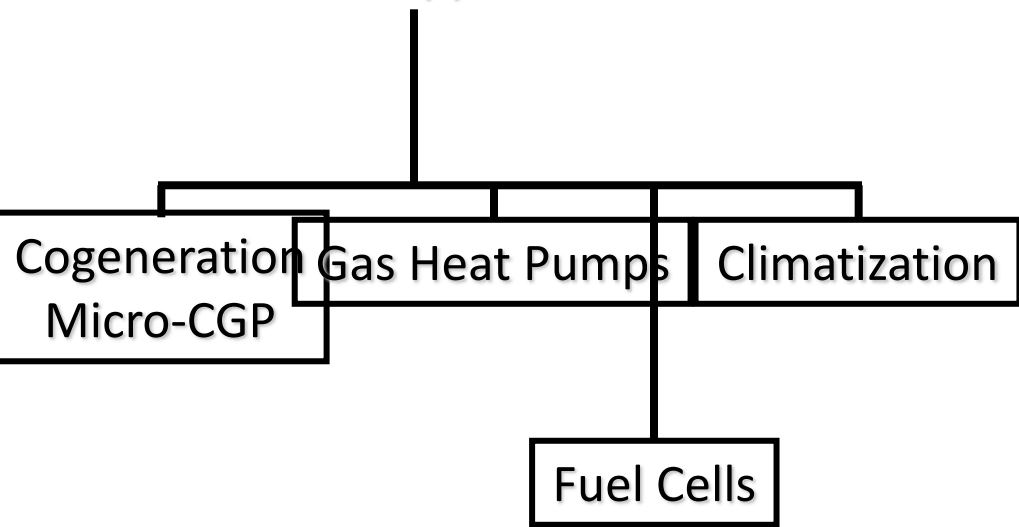
- Enabling technologies for sustainable gas
- Opportunities..., Road Map..., Vector..., Highway to....
 - Yes- for domestic gas
 -

- The Working Program of IGU WOC 5.2

Technologies, Appliances, Business Models

Natural Gas in Combination with Renewables
(e.g. solar, biogas, naturalgas-hydrogen mixtures...)

New Appliances

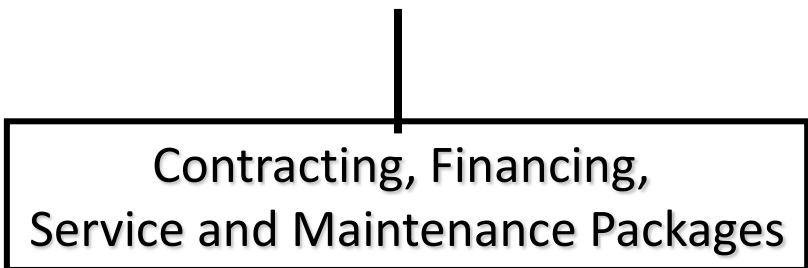


Gas Quality

Smart Metering



Energy Services



GENERAL THEMES	DETAILS TO THE SUBJECTS
Renewables	General theme for all technologies and issues, mainly grid based biogas and combinations of technologies with solar sanitary hot water production
New Appliances	Micro-CHP, gas driven heat pumps, fuel cells, climatization. Technology, packaging, installation, product life cycle, grid connection
Smart Metering	Appliance based issues, e.g. for micro-chp
Appliance Labeling	Eco-design model, efficiency indicators, CO ₂ -emission factors
Energy Services	Enabling new technologies, assistance for market introduction
Gas Quality	Results of European experiences. Appliances facing changing gas quality

- Not really touched as a subject or enabler technology for new technologies
- Discussions on the impact of improved electronic gas meters with extended communication interfaces
- Visualization of energy consumption parameters in a comprehensible form for the customer



- Fully electronic gas meters
- Temperature compensated
- Direct energy reading
- Direct tariff indication
- Bidirectional communication

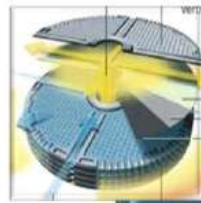


Impact of gas quality changes on all new gas technologies



Natural Gas Vehicles

- calorific value
- Methane number
- optimized combustion process for higher power and efficiency



Fuel Cells

- air/fuel ratio
- gas quality control for higher efficiency and life time extension



Co-Generation

- detection of extreme variation in fuel composition
- higher efficiency
- higher revenues

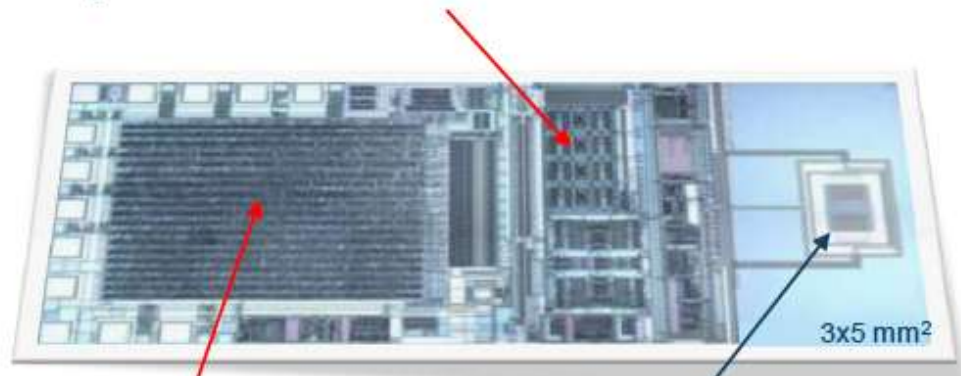


Gas distribution networks

- input for gas network reconstruction
- calorific value

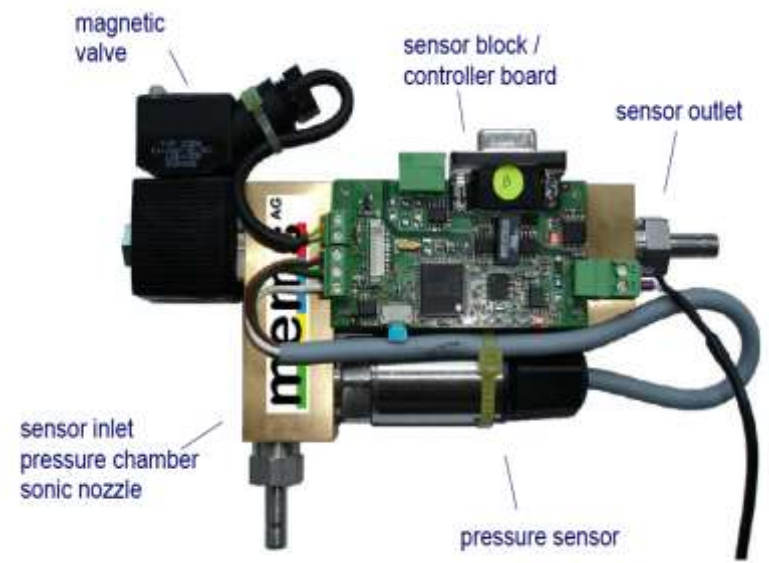
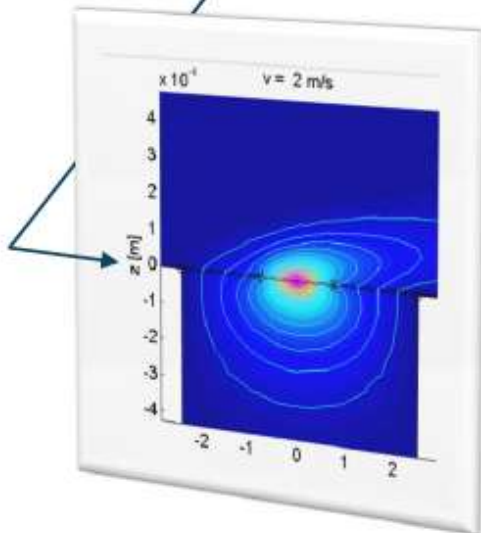
Appliance level sensor: Microthermal Sensing Technology

Amplification & AD-Conversion



Digital Part

Sensor membrane



The Rainbow of New Gas Appliances



The Program

SUBJECT	COMPANY	PRESENTATION TITLE	SPEAKER
Introduction	SVGW	Introduction	Martin Seifert
Gas applications: Road Maps of the future/ two views energy trader/ manufacturers association	Gasterra	Positioning, profiling, promoting new gas appliances	Henk Ensing
	French Union of gas boiler manufacturers UNICLIMA	How to combine the evolution of the thermal regulation and the industrial tool of the manufacturers	Jérôme Maldonado
	GDF SUEZ UNICLIMA	Products and energy systems - Technology Road Map 2010-2020 on the French residential market	Frédéric Aguilé
Micro-CHP : Road Map programs by energy suppliers	EON Rhurgas	Micro-CHP	Martin Wilmsmann
	Osaka Gas	Increasing spread of Micro-CHP and improvement of added value as secure power supply system	Hiroaki Ishida
Low power modulating boiler : from concept to markets	GDF SUEZ	Low power modulating boiler: a new gas technology for a still better energy efficiency	Frédéric Pastier
Heat pumps with gas: gas driven heat pumps and hybrid modulating boilers	GDF SUEZ	Hybrid heat pump: an efficient gas technology to compete against electricity	Frédéric Pastier
	Robur	Benefits of GAHP technology applied to natural gas grids: results from real case application	Gianmarco Peretti

The Program

Fuel Cell : the future of Micro-CHP	Tokyo Gas	Development of a new model of residential PEM fuel cell CHP system	Kunihiro Nishizaki
	Osaka Gas	Development of residential SOFC CHP-systems	Katsuki Higaki
	Envestra	Opportunities for natural gas networks in Australia - Fuel cell technology	Andrew Staniford
Energy Services	ENI	Energy Services – a new challenge for domestic & small commercial market	Egidio Adamo
Questions and answers	SVGW		Martin Seifert