

On Being the Vice Chairman of the IGU's Working Committee 5 on Gas Utilization

Tatsuo Kume

Osaka Gas Co., Ltd.



Mr. Tatsuo Kume

For three years from 2006 to 2009, Japan is serving as the Vice Chair Country in the IGU's Working Committee 5 (WOC5) on gas utilization. This committee is addressing the important topic of gas utilization, which is located at the downstream end of the gas chain and therefore holds the key to increasing the use of gas in the future. As the risks of global warming grow, it is crucial that we help end users to use gas efficiently. Natural gas can deliver substantial energy savings in partnership with renewable energy resources. Natural gas fired generation is particularly promising as it produces less CO₂ emissions and compensates for the instability of power generation from renewable energies such as wind and solar power. In the transportation sector, there are high hopes for natural gas vehicles (NGVs) capable of reducing CO₂ emissions, and so it is necessary to expand the use of NGVs, along with introducing renewable energies such as biogas, bio-diesel fuel and bio-ethanol. In the residential sector, technological trends concerning electric power generation by small gas engines and the development of small fuel cells will determine the future of the natural gas energy market.

Japan will support the WOC5 Chair Country, Denmark, in a joint effort to vitalize and promote the growth of the gas utilization committee. Japan will continue to provide gas companies and stakeholders around the world with the latest information from Japan, including: technical developments by Japanese manufacturers of highly-efficient appliances for residential use, small gas engines and fuel cells; information from the manufacturers of NGVs and fuel cell vehicles; information on energy-saving techniques used in the industrial sector; and so on.

The first meeting of the committee was held in October last year in the Chair Country, Denmark. The second meeting will be held on April 19 and 20 this year in Tokyo, Japan.

WORKING COMMITTEE 5: Gas Utilisation

Introduction

The overall objective of the WOC5 will be to describe the situation in the diverse areas of gas utilisation, identifying the trends, tendencies, technologies and practices, and evaluate and propose actions for further market development.

This working committee will divide the work into three groups:

1. Industrial utilisation
2. Domestic and commercial utilisation
3. Natural gas vehicles (NGV)

Study Group 5.1 Industrial utilisation

The group will present several case studies with success stories on

1. Fuel switching: electricity or oil to gas, providing energy efficiency indicators when possible to enable comparison between gas and other energy sources
2. Integration of CHP in the industry
3. Combination gas & renewables. Biogas: case studies
4. Gas quality variation impact on utilisations. EASEE gas proposal & consequences
5. Comparison in tariff, regulations, etc. by areas like EU and Asia
6. Hydrogen, a summary of the present situation for utilization

Study Group 5.2 Domestic and commercial utilisation

This group will continue the action carried out during the last triennium on evaluating the market penetration of innovative use and new technologies related to the use of natural gas in domestic and commercial segments. This market evaluation will include:

1. Distributed Generation(DG), Micro co-generation, chances & challenges
2. Appliances data base (this will consist of tables (excel sheets) of data by appliance showing the number of appliances installed, the sales etc.)
3. Efficiency indicators
4. Home fuelling survey
5. Gas quality variation impact on utilisations. EASEE gas proposal &consequences
6. Energy services a way to keep the gas in the domestic sector? (by delivering heat, cooling, electricity produced in small units for a group of houses/buildings (case studies- success stories)

Regarding the review on technologies, the study will encompass:

1. DG, Micro co-generation technologies: micro-grids and larger projects
2. Cooling
3. Garden application (grill, patio heater, gas light)
4. Solar & Biogas + gas case studies / success stories

Study Group 5.3 Natural Gas Vehicles (NGV)

The comprehensive and thorough study of this topic carried out during the last triennium will be continued and updated. The study will include:

1. Global NGV analysis & integrated Global NGV strategy (including market / vehicle match up, regulations, standards etc.)
2. Identification and/or development of decision tools and models to support commercialisation, fuelling station models
3. Listing all NGV models in the world by types such as passenger cars, buses, and trucks
4. NGV and biogas