

2002 Activities Report

I. General Matters

- Dr L Gorospe of Gas Natural SDG was President of GERG during 2002. Dr Gorospe stood down as President of GERG at the end of 2002.
- Dr E Aceto replaced Dr Gianfranco Bella of Italgas (retired), as Vice-President of GERG in January 2002; he became President of GERG in January 2003.

II. Programme Committees

- The Programme Committees met twice in 2002; a list of their current and proposed projects is attached as an appendix to this report. They were chaired as follows:
 - PC General Studies Dr K Altfeld, Ruhrgas
 - PC Transmission & Storage Dr V Pistone, SNAM
 - PC Distribution Mr J-P Capdevielle, Gaz de France
 - PC Utilisation Mr W J Th van Gemert, Gasunie.

III. GERG Secretariat

- Mr D Pinchbeck was Executive Secretary of GERG; his title was changed to General Secretary of GERG in October 2002, better to reflect his role.
- Mr P G Claus acted as Honorary Secretary of GERG until his retirement from Eurogas in September 2002. He was replaced in October by Mr J-M Devos.

III.1 Highlights

- Mr P I Hinstrup continued to serve as a member of the European Commission's Expert Advisory Group for the Energy Key Actions in the Fifth RTD Framework Programme.
- The Secretariat has continued its activities as part the Fifth RTD Framework projects:
 - MICROMAP - a review of mini and micro-CHP in Europe - *complete*;
 - GIGA - development of a ground-probing RADAR system - *current*.
- The Secretariat was active, and successful, in proposing modifications to the Work Programmes for the proposed Sixth Framework Programme (FP6).
- The Secretariat, on behalf of the GERG Board, has been involved in setting up the NATURALHY integrated project, led by Gasunie, in time for the start of the Sixth Framework Programme.

III.2 Events

- The GERG Board met twice during 2002:
 - Spring : - Berlin;
 - Autumn : - Brussels.

III.3 Members – 2002

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|----------------------------------|-----------------|
| • Advantica Technologies | U.K. |
| • ARGB | Belgium |
| • BP | U.K. |
| • Danish Gas Technology Centre | Denmark |
| • Gas Natural | Spain |
| • Gasunie Research | The Netherlands |
| • Gaz de France | France |
| • Italgas | Italy |
| • Polish Oil and Gas Corporation | Poland |
| • Ruhrgas | Germany |
| • Snam Rete Gas | Italy |
| • Statoil | Norway |

Appendix

GERG Activities Report - 2002

1. GERG PROGRAMME COMMITTEE TOPICS: Current

Programme Committee:- General Studies for the Gas Industry
Projects in execution:
1. Prediction of PHLC in natural gas (Phase 3)
2. Reference equation for calorific properties
3. Rapid gas chromatography
4. Determination of sulphur content in natural gas
5. Reference calorimeter
6. Elemental sulphur in natural gas
7. General calculation programme for GERG reference equation
8. Handling of calibration gases
Projects in preparation:
1. Measurement of dew point
2. State of art in Coriolis meters

Programme Committee:- Transmission and Storage
Projects in execution:
1. Remote sensing "PRESENSE"
2. Multi-path ultrasonic meters : Phase III
3. Procedure for diagnosis of gas impurities
4. Inspection methods for short pipeline sections (non-piggable)
Projects in preparation:
1. Methodologies and techniques for buried pipeline corrosion diagnoses
2. Evaluation of external damage pipeline resistance
3. SECURE PIPE™ evaluation

Programme Committee:- Distribution
Projects in execution:
1. Service life of hose-lined pipes
2. Wider use of PE X
3. Condition dependent maintenance of pipes
4. Prediction of noise level for the design of pressure regulating stations
5. DIGBUILD - New installations in buildings
6. VOGUE - Remote leak detection
7. GIGA - Ground penetrating radar for pipe location
Projects in preparation:
1. Accelerated Lifetime Test for Synthetic Diaphragm Domestic Gas Meters
2. Rapid Crack Propagation
3. Gas-balance model

1. GERG PROGRAMME COMMITTEE TOPICS: Current (Cont.)

Programme Committee:- Utilisation	
Projects in execution:	
1.	Mini & micro-CHP - Small-scale cogeneration and micro-cogeneration (<10kWe)
2.	DEO - Demonstration of optimum energy infrastructure in houses
3.	CONRAD - Confined Radiant Burner
4.	Ultrafine particulates from gas cooking
5.	EnerBuild RTD - Thematic Network on energy efficiency in buildings
6.	MICROMAP - Review of mini and micro-CHP technology and markets
7.	LABNET - Laboratory network for solving measurement problems on domestic appliances
8.	COMBO - Development of compact boiler modules based on radiant burners
Projects in preparation:	
1.	NATURALHY - Integrated Project to assess the feasibility of adding hydrogen to the natural gas network

2. APPROXIMATE VALUE OF GERG PROGRAMME - BY PC, OCTOBER 2002

PC	Value (k€)	EC funding (k€)	% of total
General Studies	2,324	0	0
Transmission & Storage	4,711	2,095	44.5
Distribution	8,408	3,692	43.9
Utilisation	10,472	5,217	49.8
Secretariat	105	105	100
Totals	26,020	11,109	42.7

3. GERG PROJECTS COMPLETED DURING 2002

3.1 PC General Studies

Improved reference equation for calorific properties

- a very successful development of an improved reference equation for gas properties applicable both to LNG and at high pressure. The next objective is to establish the new equation with ISO to enable its use on a worldwide basis.

3.2 PC Transmission & Storage

Abandonment of Pipelines

- compared and analysed methods used for abandoning gas pipelines, on the issues of technique, cost and environmental impact. Its results can serve as a basis in case a future revision of EN1594 would try either to make a more detailed description of how to treat out-of-service pipelines or to insert criteria based on this study.

Pipe Flow Tables

- investigated flows through piping components (bends, diffusers, valves, etc.) using computational fluid dynamics (CFD). Numerical results compared well with experimental data and simulations carried out by project partners have proved the reliability of the codes.

Influences of Coating Degradation on the Corrosion Protection of Ageing Pipelines

- a very successful project which has highlighted the importance to the experts of a continuing dialogue. Consequently, the working group will prepare new proposals on the topic of analysis and evaluation of corrosion in field and how to plan pipeline inspection intervals according to corrosion growth.

3.3 PC Distribution

Service life of hose-lined pipes

- determines the capabilities of fabric hoses already on the market for the rehabilitation of transmission pipelines operating at pressures from 4 to 30 bars. The work involved laboratory tests to evaluate the components (reinforced liners and adhesives) and investigations on the lined test pipes and pipeline sections to examine all steps of the actual rehabilitation processes.

3.4 PC Utilisation

Micromap

- is an objective evaluation of products, markets and players in the micro and mini CHP arena. It also provides a reference framework for policy makers in EU and National Governments to understand how to stimulate the growth of mini and micro-CHP and to maximise the environmental, social and commercial benefits.

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