



TESTING HYDROGEN ADMIXTURE FOR GAS APPLICATIONS

Workshop Workpackage 4



Standardization and
certification of gas
appliances in view of
H₂NG supply

Agenda

Time	What	Who
13h30	THyGA	
	Welcome	Patrick Milin / Kris De Wit
	THyGA project: general	Patrick Milin
	Current test program: what and why?	Jean Schweitzer
	Certification and standardization: impact of H ₂ addition	Kris De Wit
14h00	Status of standardization framework	
	Pre-normative project GERG	Robert Judd / Jean Schweitzer
	CEN/TC 238	Nourreddine Mostefaoui
	CEN/TC 109 WG1 AhG H ₂	Michel Oldenhof
	CEN/TC58	Martin Bergemann
	Questions	
15h00	BREAK	

Time	What	Who
15h10	Experience with testing and certification with H₂NG	
	KIWA – H ₂ NG testing prescriptions	Mindert van Rij
	DVGW – H ₂ NG testing prescriptions	Dennis Klein
	BDR Thermea	Sebastiano Temperato
	Electrolux	Maurizio Beghi
	Questions	
16h00	Other experience with testing and certification with H₂NG	
	KIWA – UK's experience & approach	Mark Crowther
	American Gas Association – US' experience & approach	Ted Williams
	Questions	
16h30	Discussion & conclusions	
17h00	END	



WP4 – Workshop 'standardization and certification of gas appliances in view of H2NG supply'

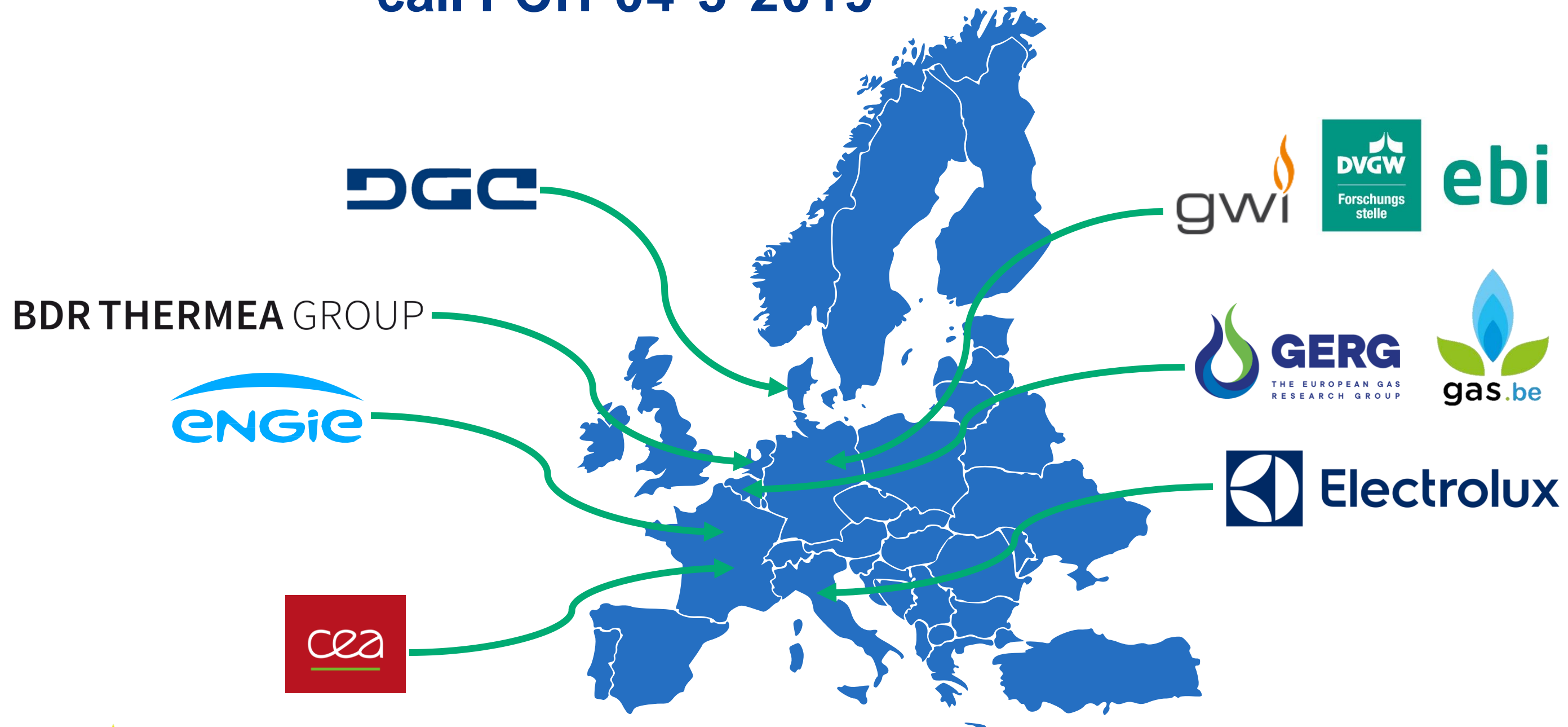
TESTING HYDROGEN ADMIXTURE FOR GAS APPLICATIONS

Project Outline



PROJECT CONSORTIUM

9 partners in response to the Horizon 2020
call FCH-04-3-2019



This project has received funding from the Fuel Cells and Hydrogen 2 Joint Undertaking under grant agreement No (No. 874983). This Joint Undertaking receives support from the European Union's Horizon 2020 research and innovation programme, Hydrogen Europe and Hydrogen Europe research.

PROJECT GOALS

The main goal of the project is to enable the wide adoption of hydrogen in natural gas blends by:

All public presentations and deliverables of the project will be available on the [project website](#)



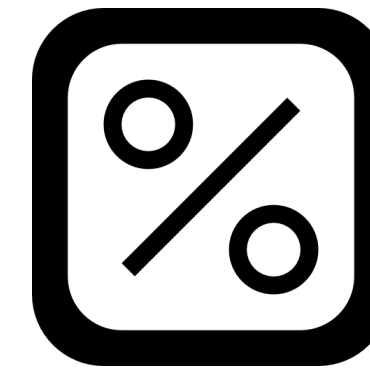
CLOSING KNOWLEDGE GAPS

Closing knowledge gaps regarding technical impacts on residential and commercial gas appliances.



IDENTIFYING ADAPTATION OF STANDARDS

Identify standards that should be modified or adapted to answer the needs for new appliances and proposals on test gases.



CLARIFYING THE ACCEPTABLE HYDROGEN PERCENTAGE

Clarify the acceptable hydrogen percentage that wouldn't compromise safety and performance.

WORK PACKAGES

**WP1
Project
management**
▪ project, FCH JU,
external partners)

ENGIE

**WP6
Communication
dissemination
exploitation**
▪ Workshops
▪ Green H2 roadmap

GERG
THE EUROPEAN GAS
RESEARCH GROUP

**WP2
Status of gas
utilisation
technologies**

gwi

**WP3
Experimental
work**

DGC

**WP4
Standardisation**

gas.be

**WP5
Recommendat
ion for
mitigation
measures**

ENGIE

Association
s, DSO,
research
centers

Technical
Committees

**Advisory
Panel group**
Challenge of the
processed results
and support
through wide
dissemination

Appliances,
burners,
controls,
sensors
manufactur
ers

WORK PACKAGES

SCREEN THE PORTFOLIO OF APPLIANCES

Screen and segment the portfolio of appliance technologies in the domestic and commercial sectors and assess the impact of hydrogen admixtures.

[All deliverables published](#)

13% of budget

TEST APPLIANCES

Test up to 100 residential and commercial gas appliances through a generic protocol with up to 60% H2 (Grant Agreement)

What happens on the field with H2 injection in NG?

53% of budget

CERTIFICATION PROTOCOL

Work on certification protocol for different levels of H2 in natural gas, exchanges, **support** & recommendations to Technical Committees

How can we certify an appliance according to H2 rate in NG?

12% of budget

MAKE RECOMMENDATIONS

Make recommendations for manufacturers, decision makers and end-users for appliance design, manufacture & certification.

How can we increase the acceptable H2 rate?

7,5% of budget

Advisory Panel group

Challenge of the processed results and support through wide dissemination

WP2
Status of gas utilisation technologies

gwi

WP3
Experimental work

DGC

WP4
Standardisation

gas.be

WP5
Recommendation for mitigation measures

ENGIE



THyGA



**THANK YOU FOR YOUR
ATTENTION**