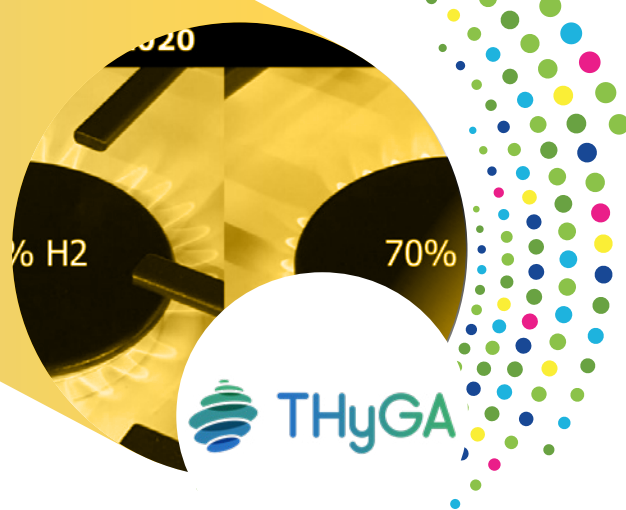


THyGA

TESTING HYDROGEN ADMIXTURE FOR GAS APPLICATIONS



Project ID:	874983
PRD 2023:	Panel 5 – cross-cutting
Call topic:	FCH-04-3-2019: Hydrogen admixtures in natural gas domestic and commercial end uses
Project total costs:	EUR 2 468 826.25
Clean H₂ JU max. contribution:	EUR 2 468 826.25
Project period:	1.1.2020–31.3.2023
Coordinator:	Engie, France
Beneficiaries:	BDR Thermea Group BV, Commissariat à l'énergie atomique et aux énergies alternatives, Dansk Gasteknisk Center AS, DVGW Deutscher Verein des Gas- und Wasserfaches – Technisch-Wissenschaftlicher Verein EV, Electrolux Italia SpA, gas.be, Gaswärme-Institut Essen EV, Gerg – le Groupe Européen de Recherches Gazières

<https://thyga-project.eu/>

PROJECT AND OBJECTIVES

The THyGA project is investigating the amount of hydrogen that can be injected without compromising the safety, emissions and efficiency of existing and new applications. It focuses on the end-user perspective, specifically domestic and commercial gas appliances (space heating, hot water, cooking and catering), which account for > 40 % of the EU's gas consumption. The objectives are to close knowledge gaps on the impact of H₂NG blends, support standardisation activities and identify potential mitigation opportunities.

NON-QUANTITATIVE OBJECTIVES

- THyGA aims to involve external partners in the project. Some laboratories and manufacturers expressed their wish to use the THyGA protocol to create their own tests and contribute to the analysis.
- The project aims to have an international reach. THyGA's test protocol has been

requested for use as a test reference by international partners (in Canada, Chile and the United States).

PROGRESS AND MAIN ACHIEVEMENTS

- THyGA tested around 100 appliances, including as part of the preparation of reports for work packages 4 (standardisation) and 5 (mitigation).
- Thirteen public deliverables/newsletters were created and distributed, and five public workshops were organised.

FUTURE STEPS AND PLANS

Results were expected to be disclosed during the final workshop on 24 March 2023. All results will be published on the THyGA website. In addition, the results will be disseminated to the European Committee for Standardization technical committees, with the opportunity for experts to request dedicated meetings and discussions.

QUANTITATIVE TARGETS AND STATUS

Target source	Target	Achieved to date by the project	Target achieved?
Project's own objectives	Understanding the actual theoretical and experimental information on the impact of H ₂ NG blends on combustion	12 public deliverables and 7 additional deliverables to be published by April 2023	
	Understanding the actual theoretical and experimental information on the impact of H ₂ NG blends on materials	Theoretical and practical reviews released	✓
	Segmentation of the types of appliances	Segmentation validated with stakeholders (advisory panel group)	✓
	Tests of up to 100 appliances	95 % of tests done	
	Establishing how the existing certification can be modified to allow higher concentrations, including the related additional costs and the required changes to common gas burners	State-of-the-art reports	
	Recommendations for revision of EN for ISO standards, or drafting of new standards based on PNR results and a review of the existing testing methods	Ongoing	