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Technical Association of the European Gas Industry

SESSION FILE

EXECUTIVE BOARD MEETING

DUBLIN, 13 MARCH 2024

Rue Belliard 40
1040 Brussels | Belgium
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marcogaz@marcogaz.org | marcogaz.org

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MARCOGAZ EVENT PROGRAM
EXECUTIVE BOARD MEETING
12TH & 13TH MARCH 2024

TUESDAY 12TH MARCH

DINNER

Location: The Green Hen Restaurant - The Green Hen
33 Exchequer Street
Dublin 2

TIME: FROM 19h00

WEDNESDAY 13TH MARCH

MEETING

Location: Radisson Blu Hotel
Golden Lane
Dublin City Centre

TIME: 09h00 to 12h45

HOTELS IN THE VICINITY OF THE VENUE OF THE MEETING OF 13/03/2024

- Radisson Blu Royal Hotel Dublin - Golden Lane, Dublin City Centre
- The Chancery Hotel Dublin - Golden Ln Dublin 8 D08 VRR7 County Dublin
- Drury Court Hotel - 28-30 Stephen Street Lower Dublin City D2 Dublin
- Arthaus Hotel St Stephens Green - Mercer Street Dublin D02 TW61
- Marlin Hotel Dublin - 11 Bow Lane East, St Stephens Green Dublin City Dublin
- Brooks Hotel Dublin - 59-63 Drury Street Dublin City D2 Dublin
- Fitzwilliam Hotel Dublin - Saint Stephen's Green Dublin City D2 Dublin

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AGENDA OF THE EXECUTIVE BOARD MEETING
13 MARCH 2024

Start & end of the meeting: 9h00 – 12h45

Venue: Radisson Blu Hotel - Golden Lane - Dublin City Centre

09h00 – 11h00

Item	Subject	Presenter
I.	Opening of the Session	Liam Nolan
1.	Quorum and approval of the agenda	
2.	Welcome to new attendants	
3.	Approval of the minutes of the meeting of 13/12/2023	
II.	Implementation of the decisions from the last Executive Board meeting	
III.	Organization of EGATEC 2024	Alexander Schwanzer Gerald Linke
IV	Elections of President and Vice-President – 17 June 2024	Liam Nolan
V.	Presentations on Renewable Gases Development: • Gas Networks Ireland • Francegaz	Liam Nolan Madeleine Lafon
VI.	Presentations of the Standing Committees	José Tudela
1.	Standing Committee Sustainability (SCS) • Activities of Working Groups and Projects	

COFFEE BREAK (11h00 – 11h20)

11h20 – 12h45

Item	Subject	Presenter
2.	Standing Committee Gas Infrastructure (SCGI) • Activities of Working Groups	Anne-Sophie Decaux Kris De Wit Frank Graf
3.	Standing Committee Gas Utilisation and New Gases (SCGU&H2+) • Activities of Working Groups and Projects	
VII	MARCOSTAT Calls	Manuel Coxe
VIII.	Administration and Secretariat • Administration • Status of membership and budget for 2024	
IX.	Communications & Liaisons Energy Regulation & Policy	
X.	Dates of the next meetings	Liam Nolan
XI.	AOB	

I. Approval of the minutes of the last Executive Board meeting 13/12/2023

Minutes of the Executive Board meeting

13th of December 2023

Start & end of the meeting: 09h-00 – 12h30
Meeting at the SVGW offices - Grütlistrasse 44, 8002 Zurich

Attendants: Liam Nolan (President), Alexander Schwanzer (Vice-President), Manuel Coxe (Secretary General), Stefano Cagnoli, Benoit Charlot (replacing Madeleine Lafon), Daniel Czeto (replacing Rastislav Nukovic), Anne-Sophie Decaux, Marijn Dresden, Abel Enriquez, Sylwia Gladysz , Frank Graf, Stanislav Kazda, Dimitrios Kourkouraidis, Alvaro Laranjo, Thea Larsen, Naiara Ortiz de Mendibil, Diego Modolell, Signe Sonne, Pawel Stanczak, Jose Miguel Tudela Olivares, Steven Vallender, Steven Van Caekenberghe, Uwe Wetzel, and Kris de Wit.

Apologized: Mattias Hanson, Arto Korpela, Josef Kotrba, Ion Manescu, Agnieszka Ozga and Ioannis Tsiblakis.

1. Opening of the Session

The President welcomed the Members and opened the meeting.

1.1. Quorum and approval of the agenda

The quorum was reached as 19 Executive Board Members out of 21 were present or represented. The proposed agenda was approved without modification.

1.2. Welcome to new attendants

The President welcomed all attendees and invited the following members to address few words:

- Benoit Charlot (Francegaz), Marijn Dresden (Gasunie), Dimitrios Kourkouraidis (DESFA), and Steven Vallender (National Gas) for attending physically the Executive Board meeting for the first time, and
- Abel Enriquez (ENAGAS) as his last participation to the Board.

1.3. Approval of the Minutes of 13/09/2023

The Minutes of the Executive Board Meeting of 13/09/2023 were approved without modification.

2. Implementation of the decisions from the last Executive Board meeting

The President informed the Members that the Executive Board had approved the nine documents on *"Best Available Technologies (BATs)"* and had recommended its publication last September. Meanwhile, the publication is pending on the approval of BAT0 (introduction document). Likewise, the President informed that the Executive Board had approved the documents "*Overview of available test results and regulatory limits for hydrogen admission into existing natural gas infrastructure and end use. Infographic Version 2023"* and *"Methodology description for the cost estimation of hydrogen admission into existing natural gas infrastructure and end use",* which were published accordingly in October 2023.

The President also informed the Members that the Executive Board had approved by email the study on *"Cost Estimation of Hydrogen Admission into Existing Natural Gas Infrastructure and End Use"*, which, after editing and designing work, was published accordingly in November 2023.

3. Brief report from the Citizen's Forum

The President informed the Members of the Executive Board that MARCOGAZ participated in the 15th edition of European Commission Citizens Forum which took place on 9th November 2023 in Dublin – Ireland, which discussed the energy crisis, citizens and the solutions that they can access or put in place.

The President informed that sessions related to protecting consumers this winter, empowering consumers to help manage their energy bills and sustainable energy system of the future were held during the Forum, together with breakout sessions about unlocking citizen power, disentangling different models of energy sharing and improving energy performance of European homes.

The President informed the Executive Board Members about the findings of this year's Citizen's Forum. There was a general agreement on investments and subsidies to fight energy poverty, the need for regulatory framework for innovative green solutions and the renovation of the building stock and subsequently creating financial incentive. Finally, the President reported to the Members of the Executive Board that there were multiple interventions by MARCOGAZ on green gas solutions, based on our recent publications and participations to EC public consultations, to ensure that these are on the agenda.

4. Organisation of EGATEC 2024

The Vice-President updated the Members of the Executive Board on the advancements made by the two EGATEC Programme Committees regarding the preparation of the event agenda and confirmation of speakers.

The Vice-President encouraged all Members to contribute to the organization of EGATEC 2024 by disseminating the information within respective countries and considering to attend.

5. Presentation of SVGW

The Executive Board representative from SVGW (Swiss Gas and Water Association) reported about the current status of efforts of the association in decarbonising the gas grid, the gas supply and demand in Switzerland, the role of municipalities and local distributions gas systems, the context of Swiss high pressure gas grid with relation to connecting to the European hydrogen backbone, the ongoing hydrogen projects and the expectations of the industry to cope with the carbon dioxide capture, transport and storage.
SVWG suggested to unite forces and create synergies around the technical assessments on CO2 and MARCOGAZ could play a role in this respect.

6. Presentations from Standing Committees

6.1. Standing Committee Gas Infrastructure (SCGI)

The Chair of the Standing Committee Gas Infrastructure reported on the activities of the five respective working groups. The last meeting of the Standing Committee Gas Infrastructure was held on the 23rd of November 2023, while the next one is planned for 13th of February 2024. The Chair reported about the two documents from the Working Group Odorisation entitled "*Odorization of natural gas hydrogen*

mixtures and pure hydrogen" and *"Natural gas odorization practices in Europe"* and requested approval from the Members for publication. The Chair also referred to the successful MARCOGAZ Tech Form of 23rd of November 2023 with around 200 participants that signaled the culmination of the work of the Task Force Hydrogen.

The Chair of the SCGI informed that a discussion took place during the last SCGI meeting regarding the future of the Task Force H2 and it was a common understanding that with the Task Force has successfully accomplished its task and therefore could be wind up upon the approval of the Executive Board.

The **Working Group Transmission Pipelines (WG TP)** will assess the CO2 topic with reference to transport via pipelines, and therefore, a dedicated session for brainstorming is expected soon. Moreover, the WG TP will address work at national level on H2 safety.

It was mentioned that a call for Co-Chair of the **Working Group Odorisation** is currently open to ensure a proper handover with the current Chair who will retire in November 2024.

It was mentioned that a report on measurement of non-conventional gases is expected for the next meeting of **Working Group Gas Metering**.

Regarding the **Working Group LNG**, a document on requirement for competence of drivers is expected for the next meeting of the working group and a questionnaire to list project on new molecules (CO2, NH3, methanol, H2) in LNG terminals was shared through the MARCOSTAT platform.

6.2. Standing Committee Sustainability (SCS)

The Chair of Standing Committee Sustainability (SCS) reported to the Executive Board members that on Scope 3 emissions project, the 1st phase has finished with 11 companies sharing their strategies whilst the 2nd phase consisting of data capture was circulated on the through MARCOSTAT.

Due to the current unavailability of the Chair, the **Working Group Health & Labor Safety** has been in hibernation during the last months. A Call for an interim Chair was sent among SCS and WG HLS members at the end of October 2023, and no candidates has been identified yet. A proposal for the next steps has been sent by the Polish member of the WG HLS, consisting of an online meeting in February 2024 to manage the key topics that are currently in progress and receive feedback from the members about a face-to-face meeting to be organized in Poland (end of April/May).

The Chair reported that the BATs will be published with a short introduction. The introduction text for the BATs was presented to the Executive Board members for approval. The **Working Group Methane Emissions +** will continue its work on related topics aiming for another distinct publication. On the topic of H2 emissions, a first draft of a white paper *"differences between CH4 and H2 emissions"* has been shared with the group. Regarding Standardization, the Chair reported about the existing liaison with CEN (TC234/WG 14 and TC264/WG38) and the follow-up of ISO activities (TC/197/SC1/WG1). The Chair reported that the Methane Emissions Regulation is in the final stages with a first draft expected soon. On the Industrial Emissions Directive, the WG produced a position paper to influence the Trilogue, with GIE and ENTSOG as co-signatories. Concerning the project on correlation factors (from ppm to mass per hour), data from 10 companies from different segments of the value chain has been received so far and the deadline was extended to mid-December to gather more data. The GERG project for top-down reconciliation was reported to be finalized by the end of 2023; at the time, it was already shared that there were no differences found between source and site level measurements, even though other studies suggested the opposite.

6.3. Standing Committee Gas Utilisation and New Gases (SCGU&H2+)

The co-Chairs of the SCGU&H2+ informed the Executive Board that a meeting with ACER was held on 27th of November 2023 with the participation of MARCOGAZ President regarding gas quality and hydrogen infrastructure. The Chair also reported the proposal to have an official MARCOGAZ liaison with Working Group Heating of Eurogas.

The **Working Group H2, BioCH4 SNG** had country-specific presentations of new gases and will shortly circulate a questionnaire in the group to collect information such as existing injection capacities, strategy on production, import and utilization, and infrastructure aspects. Also, a factsheet will be circulated to collect information on technologies and gas quality aspects.

The **Working Group Gas Quality (WG GQ)** is following up on CEN/TC234 WG 11 and CEN/TC408, related to harmonization of Gas quality H-gas (EN16726:2015). The Chair of the WG GQ has sent out a template to members of the working group asking for information regarding the LNG quality database in Europe. Depending on the answers to be received, the WG will decide whether to continue or not with the respective assessment. The WG GQ is updating the document "*Quality values required by legislation in some countries in Europe for biomethane injection into the natural gas network*", with the aim of publishing an updated version. The WG started to collect information on CO2 quality standard/specification from its members.

The co-Chairs informed that the **Working Group Energy Efficiency** (WG EE) is participating in the informal coalition organized by Eurogas (represented by its Chair) and continues to follow the developments on eco-design, EPBD recast, and EED recast. A new topic related to PEF of biogas in Annex B in ISO standard 52 000-1 on the energy performance of the building will be addressed.

The co-Chairs reported that the **Working Group Gas Installations** (WG GI) is collecting data on EGAS C through MARCOSTAT with 8 countries having answered so far and encouraged those who have not provided data to do so within the coming weeks. The WG GI is also investigating the topic of fair competition between different kinds of energy, asking for data concerning electricity and biomass accidentology.

DECISION 2023/16: The Executive Board approved the introduction document on BATs (BAT0) and recommended the publication of the merged document of the nine BATs and BAT0 as the earliest convenience.

DECISION 2023/17: The Executive Board approved the documents "*Odorization of natural gas hydrogen mixtures and pure hydrogen*" and *"Natural gas odorization practices in Europe"* and recommended their publication.

DECISION 2023/18: The Executive Board approved the wind up of the Task Force Hydrogen.

DECISION 2023/19: Upon the request of some Members, the Executive Board agreed that the WG ME+ with the support of the Secretariat, shall organize an internal Technical Session to inform and discuss on the matters related to Methane Emissions Regulation and impact to TSOs and DSOs.

7. MARCOSTAT Calls

The Secretary General reported to the Members of the Executive Board about the closing of past MARCOSTAT Calls and reported on the status of the currently open Calls, including those recently opened. He emphasised that data is the basis for most of the technical work in MARCOGAZ and effective data collection is crucial for the Association to deliver.

The Secretary General encouraged the Executive Board Members to ensure that the Single Point of Contact in their respective countries are responding to the MARCOSTAT Calls.

8. Administration and Secretariat

8.1. Human Resources

The Secretary General updated the Members of the Executive Board about outboarding and onboarding of personnel in the Secretariat. Friso Resink will end his secondment of 8 months traineeship on 31/12/2023 and he will be replaced by Eleonora Diakoumi, MSc in Chemical Engineering (Aristotle University of Thessaloniki), from 8th January 2024 after the recruitment process launched in November 2023. The Secretary General also reported on the profile of Alma Maria Puente Moreno, whose traineeship since September 2023 in MARCOGAZ is expected to transit to a full-time permanent contract.

8.2. Status of budget for 2023

The Secretary General reported on the state of budget of 2023 as depicted in the table below:

	Approved Budget (15/12/2022)	Received / Paid (as of 30/11/2023)	Expected (by 31/12/2023)	TOTAL Projection
INCOME	€ 594 (000)	€ 616 (000)	€ 18 (000) Membership € 5 (000) Bank Interest	€ 639 (000)
EXPENSES	€ - 668 (000)	€ - 537 (000)	€ - 118 (000)	€ - 655 (000)
TOTAL PROFIT/LOSS	€ - 74 (000)	€ 79 (000)	€ - 95 (000)	€ - 16 (000)
AMOUNT AVAILABLE AT BANK (€ 1 477 000):		€ 76 (000) AT CURRENT ACCOUNTS € 101 (000) AT FLEXIBLE DEPOSIT € 1 300 (000) AT FIXED TERM DEPOSIT (3M & 11M)		

8.3. Situation with Financial Auditors

The Secretary General informed the Members of the Executive Board that Deloitte, after auditing MARCOGAZ financial accounts for more than 10 years, informed MARCOGAZ about their difficulty in continuing with MARCOGAZ due to shortage of their resources. Exceptionally, they can still do the financial audit of the accounts of 2023 for a payment of fee of 13.000 € instead of 3.500 € paid last years. KPMG and PwC were contacted to make offers, but both denied due to shortage of their resources. Ernst & Young (www.ey.com/en_be) was contacted and provided an offer at 5.000 € and BST (www.bst.net) was contacted and provided an offer at 4.200 €. The Executive Board was invited to decide on the financial auditor (Deloitte, E&Y or BST).

DECISION 2023/20: Following a short discussion, the Executive Board agreed grant the financial audition services to BST, starting with the financial accounts of the year 2023. The Executive Board agreed that the decision is to be communicated to the General Assembly Members as well.

9. Communications & Liaisons

9.1. Communications

The Secretary General informed the Members of the Executive Board that the MARCOGAZ Tech Forum on *'Cost Estimation of Hydrogen Admission into Existing Natural Gas Infrastructure and End-Use'*, took place last 23rd November 2023, with a record of 203 participants attending the event.

The Secretary General also informed that the Annual Report 2022-2023 is being finalised and it is aimed to be published by February 2024. Finally, the Secretary General reported to the Executive Board Members that partnership agreements with relevant energy-related events in 2024 will continue as for 2023.

9.2. Liaisons

The Secretary General informed the Members of the Executive Board that there were two expressions of interest of prospective Members in MARCOGAZ, including Ukrtransgaz (NAFTOGAZ), the Underground Gas Storage of Ukraine, and from REN, the Portuguese gas TSO. However, official requests have not been received yet. Furthermore, MARCOGAZ Secretariat held a meeting on 1st December 2023 with the Bulgarian Gas Association regarding potential future Membership.

The Secretary General informed the Executive Board members that MARCOGAZ had participated in the meetings of EURAMET, WELMEC, GIIGNL and OIML, among others, strengthening its partnership and liaison with these key stakeholders, and that the association also participated to the European Commission's Citizen's Forum in Dublin and the CCUS Forum in late 2023.

10. Dates of the next meetings

The following dates summarize MARCOGAZ's next meetings:

- 13/03/2023: Executive Board Meeting – Dublin, Ireland.
  Welcome dinner the night before (12 Mar. 2023).
- 17/06/2024: Executive Board Meeting in Hamburg
- 17/06/2024: General Assembly in Hamburg.
  Welcome dinner (jointly with EGATEC 2024)
- 18-19/06/2024: EGATEC 2024 in Hamburg

11. Any other business

Nothing relevant to report.

II. Implementation of the decisions from the last Executive Board meeting

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Technical Association of the European Gas Industry

Implementation of the decisions from the last Executive Board meeting

Liam NOLAN, President

MARCOGAZ Executive Board Meeting - 13 March 2024

Update on decisions of the last Executive Board meeting

- The Executive Board approved the introduction document on BATs (BAT0) and recommended the publication of the merged document of the nine BATs and BAT0.
  - The document was published accordingly.
- The Executive Board approved the documents *"Odorization of natural gas hydrogen mixtures and pure hydrogen"* and *"Natural gas odorization practices in Europe"* and recommended their publication.
  - The documents were published accordingly.
- The Executive Board approved the wind up of the Task Force Hydrogen after the conclusion of its tasks.
  - The TF H2 was closed, and the co-chairs of the TF were invited to participate in future SCGI meetings.

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Update on decisions of the last Executive Board meeting

- Upon the request of some Members, the Executive Board agreed that the WG ME+ with the support of the Secretariat, shall organize an internal Technical Session to inform and discuss on the matters related to Methane Emissions Regulation and impact to TSOs and DSOs.
  - The organization of the technical session is postponed to a future date since the WG ME+ has started working on a technical summary of Methane Regulation that will be the basis for presentation.
- The Executive Board agreed to grant the financial audition services to BST, starting with the financial accounts of the year 2023. The Executive Board agreed that the decision is to be communicated to the General Assembly Members as well.
  - The General Assembly was informed via email about the recommendation of the Board.
  - BST planned to perform the audit during March 2024.

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Technical Association of the European Gas Industry

Thank you!

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marcogaz.org | be.linkedin.com/company/marcogaz

III. Organization of EGATECH 2024

EGATEC 2024

Connecting the North Sea Powerhouse

KEY FACTS

AN EVENT BY: MARCOGAZ and GERG

HOSTS: DGC, DVGW and Gasunie

DATE: 18 - 19 June 2024

VENUE: Hotel Atlantic Hamburg, Germany

GOALS:

- Renowned scientific conference and established meeting point für the European gas community
- International exchange of expertise and strengthening of the sector

SIDE EVENTS:

- Scientific Poster Exhibition,
- GERG - Young Researchers'Award,
- Evening event

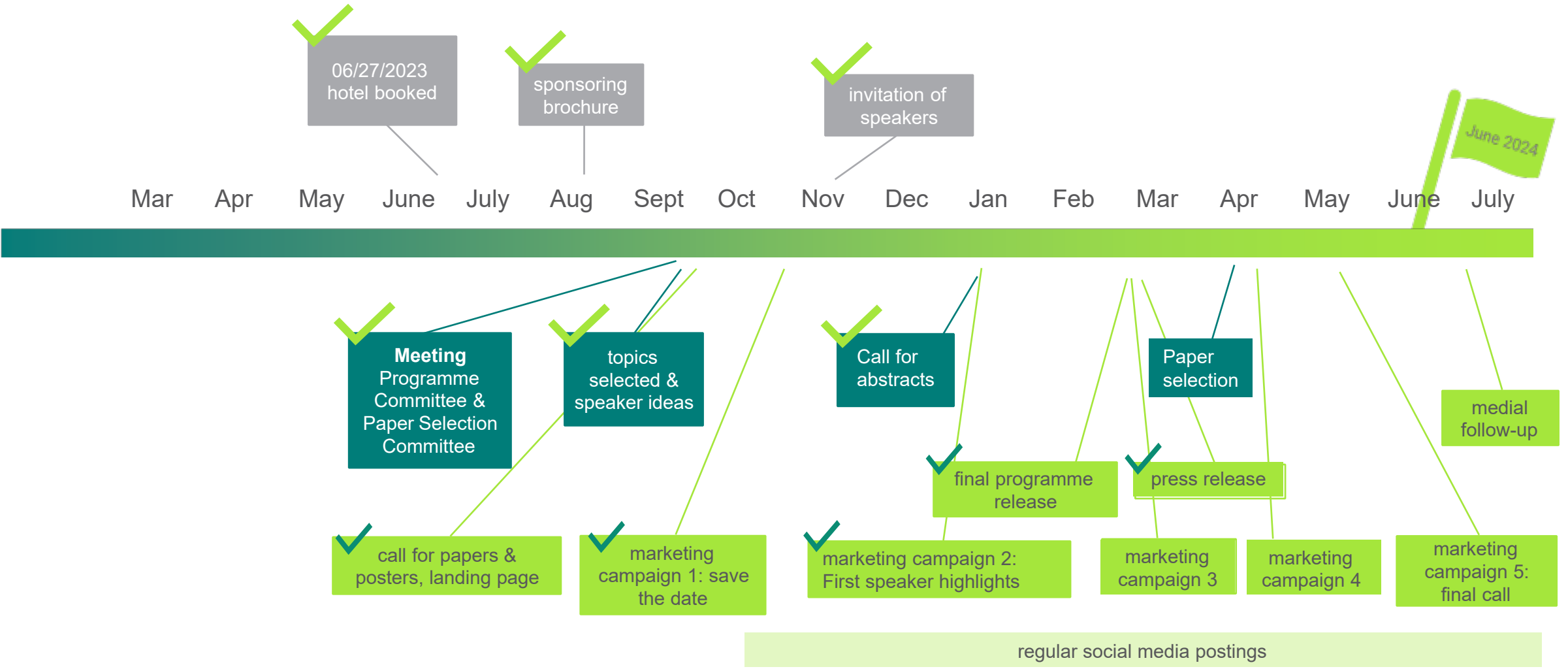
EGATEC2024
The 6th European Gas Technology Conference

CONFERENCE TOPICS

DAY 1	DAY 2
HYDROGEN SUPPLY IN EUROPE	BIOMETHANE AND SYNTHETIC GASES
THE HYDROGEN REVOLUTION	INDUSTRY DECARBONIZATION AND CO2 VALUE CHAIN
HYDROGEN READINESS OF GAS INFRASTRUCTURE AND END USE	EU POLICY AND REGULATORY PERSPECTIVES
SOCIAL, ENVIRONMENTAL AND SAFETY RESPONSIBILITY	

EGATEC2024
The 6th European Gas Technology Conference

MILESTONES


06/27/2023
hotel booked
sponsoring
brochure
invitation of
speakers
June 2024
Mar
Apr
May
June
July
Aug
Sept
Oct
Nov
Dec
Jan
Feb
Mar
Apr
May
June
July
Meeting
Programme
Committee &
Paper Selection
Committee
topics
selected &
speaker ideas
Call for
abstracts
Paper
selection
medial
follow-up
final programme
release
press release
call for papers &
posters, landing page
marketing
campaign 1: save
the date
marketing campaign 2:
First speaker highlights
marketing
campaign 3
marketing
campaign 4
marketing
campaign 5:
final call
regular social media postings

PARTNER 2024

Connecting the North Sea Powerhouse

Hosts

Danish Gas Technology Centre

DVGW

gasunie

Organisers

marcogaz

GERG
THE EUROPEAN GAS RESEARCH GROUP

Supporters

ERIG
European Research Institute for Gas and Energy Innovation

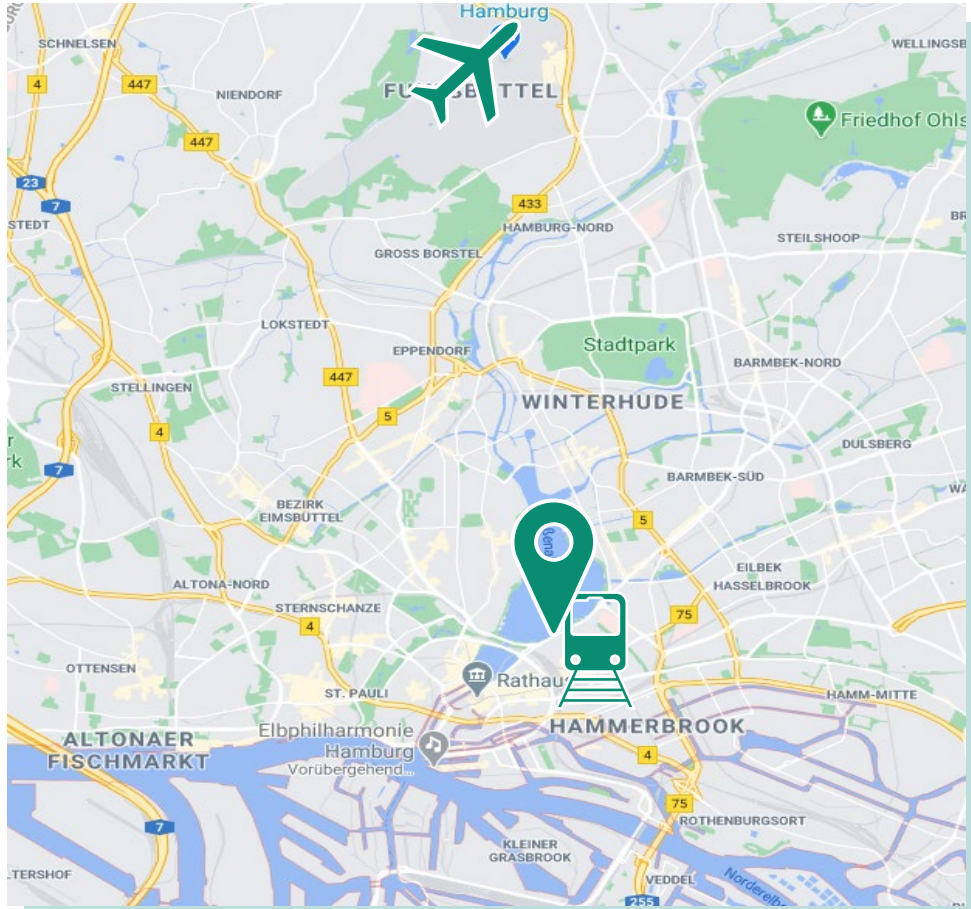
Media Partners

H2 international
E-JOURNAL ON HYDROGEN AND FUEL CELLS

EBA
European Biogas Association

more to come...

THE LOCATION: CITY OF HAMBURG

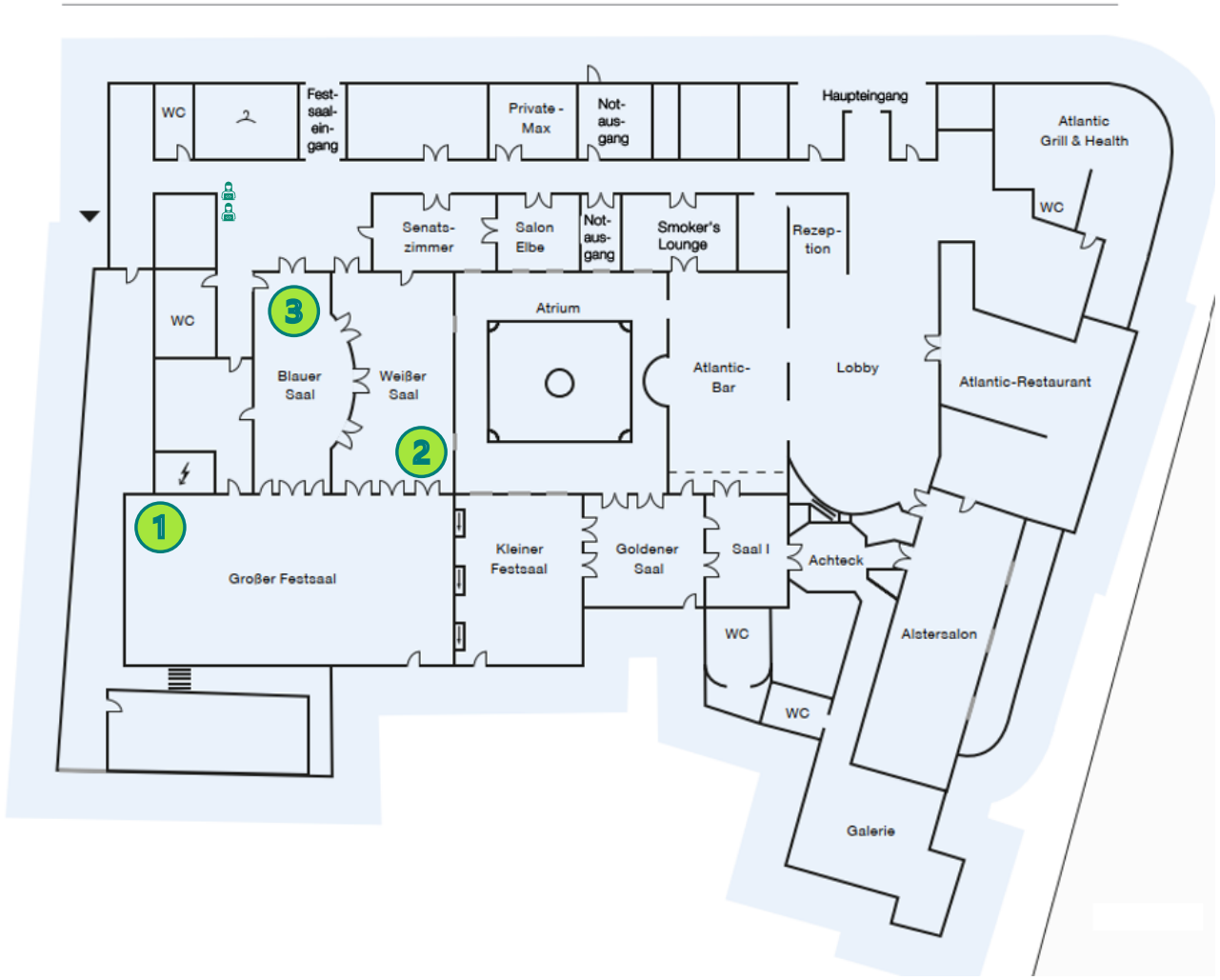


HAMBURG:
The Gate to the World!

Venue: Antlantic Hotel
Plenary hall 380 m² | foyer and lunch area 272 m² | accomodation available

Location: near city center
City center: 0,5 km
Main station: 0,5 km
Airport: 10 km

IMPRESSIONS: ATLANTIC HOTEL



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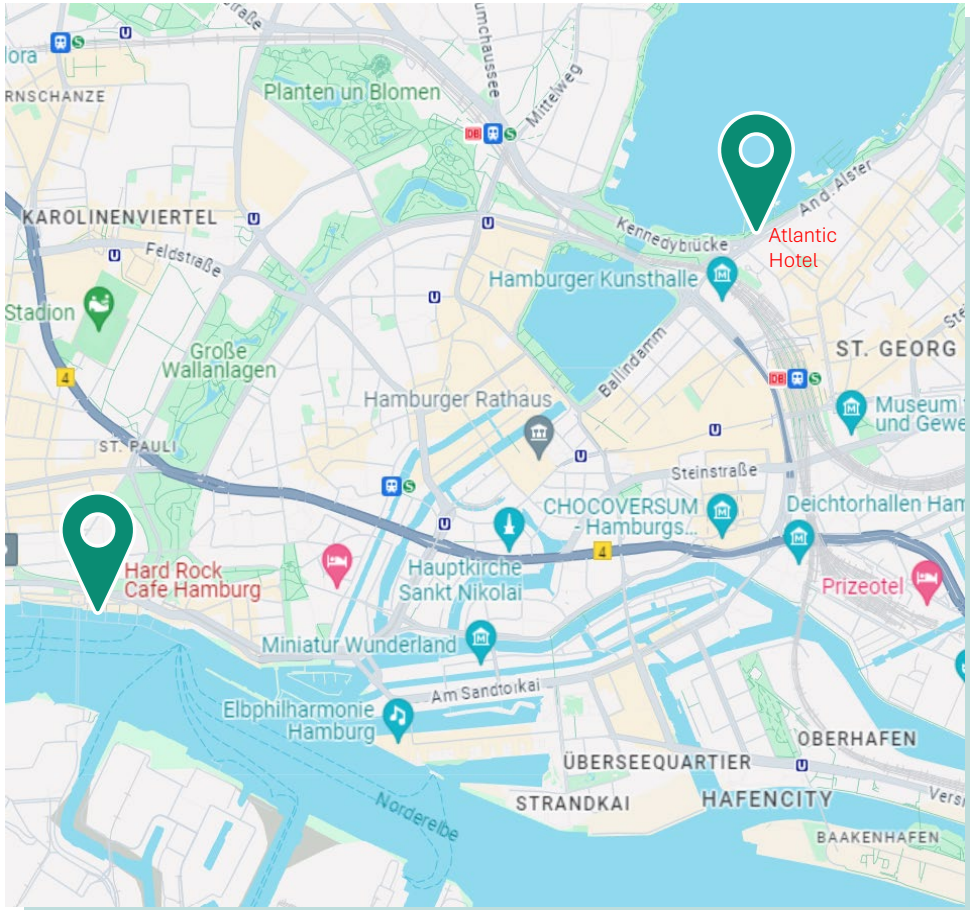
3

THE EVENTING EVENT: PORT OF HAMBURG

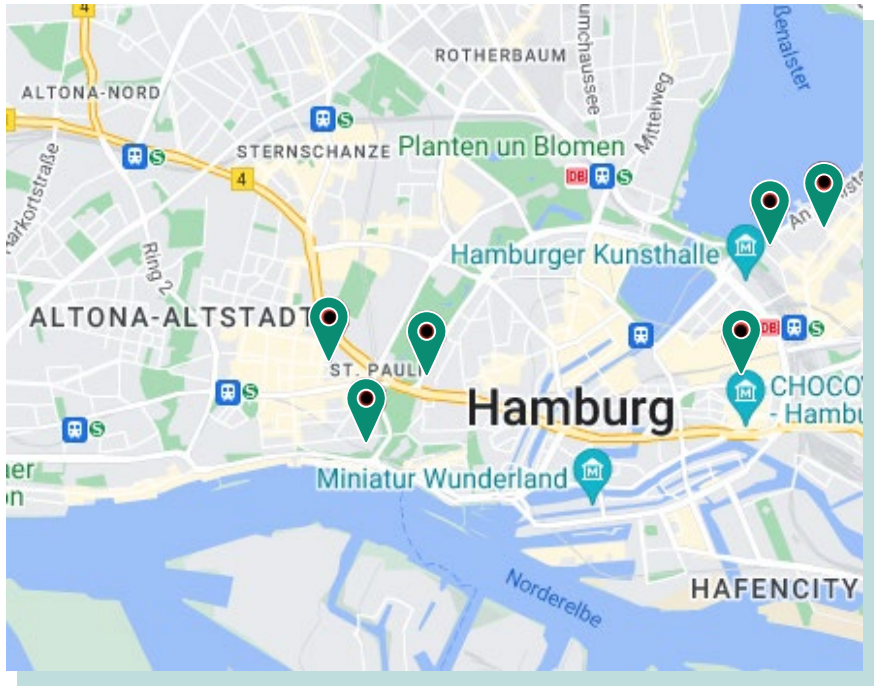


HAMBURG:
The Gate to the World!

Venue: Hard Rock Café
With a barbecue and beautiful weather on the roof terrace with a view of the harbor and the Elbphilharmonie.

Location: Port of Hamburg
Atlantic Hotel: 3 km

ACCOMODATION OVERVIEW



Hamburg Atlantic Hotel
An der Alster 72-79
20099 Hamburg

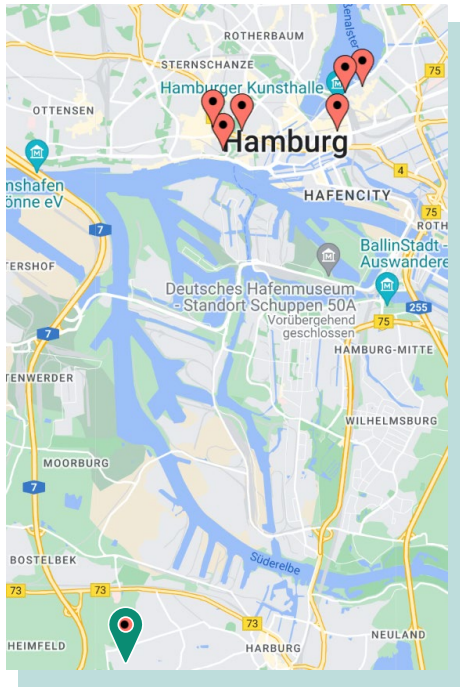
Novum Hotel Holstenwall
Holstenwall 19
20355 Hamburg

EAST Hotel Hamburg
Simon-von-Utrecht-Straße 31
20359 Hamburg

Henri Hotel Hamburg Downtown
Bugenhagenstraße 21
20095 Hamburg

Hotel Wedina
Gurlittstraße 23
20099 Hamburg

Hotel Hafen Hamburg
Seewartenstraße 9
20459 Hamburg



Privathotel Lindtner
Heimfelder Str. 123
21075 Hamburg

SIDE EVENTS – GERG YOUNG RESEARCHS‘ AWARD

GERG Young Researchers’ Awards

in association with EGATEC 2024, European Gas Technology Conference

The European Gas Research Group (GERG) offers together with the European Research Institute for Gas and Energy Innovation (ERIG) Young Researchers’ Awards to early career European researchers who have displayed a commitment to excellence in scientific research and in creating solutions for the future of energy. The Young Researchers’ event promotes interaction between European Universities and Research Centers, on R&D topics related to Gas in the Energy system. The key objectives are encouraging a dialogue between industry practitioners and academia, raise awareness, and enhance cooperation between our different communities.

ORGANIZER:	GERG
DATE:	at the conference, June 18th 2024
SUBMISSIONS:	one-page abstract & short video (finalists’ videos will be displayed on the GERG website)
SELECTION:	10 finalists will be selected beforehand
WINNERS:	after the presentations, the jury members will select three winners (each 1.000€ prize)

SIDE EVENTS - Scientific Poster Exhibition

The Scientific Poster Exhibition enables young scientifics to present their newest research projects. A larger amount of projects, which cannot be included into the main programme, could be converted into posters. Poster presenters will receive reduced ticket prices to attract international research institutes to the conference.

INVITATION: via Call for Abstracts

SELECTION: timeline, number of posters and criteria of selection to be defined by the Papers & Posters Selection Committee

DATE: at the conference, June 19th 2024

POSTPROCESSING: creation of digital PDF booklet with all posters

TEAM DVGW Kongress GmbH

Looking forward to a great event in 2024!

Contact person for committee members & speakers

Philipp Neveling
Project Manager Conception
philipp.neveling@dvgw-kongress.de

Contact person for sponsors & partners

Marie Huwaldt
Project Manager Marketing
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Contact person for participants

KERSTIN GEISSLER
Project Manager Organisation
kerstin.geissler@dvgw-kongress.de

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Technical Association of the European Gas Industry

Thank you!

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IV.Elections of President and Vice-President
17 June 2024

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Technical Association of the European Gas Industry

IV. Elections of President and Vice-President

Call for Candidates

Liam Nolan - President

Executive Board Meeting of 13 March 2023

Elections – Eligibility

- In the next General Assembly of 17/June/2024, the Members will elect the new President and the new Vice-President of MARCOGAZ.
- The candidates for the positions for President and Vice-President are proposed by Charter Members.
- It has been a custom that the Vice-President is the candidate for the Position of President.
  - Currently, the Vice-President and candidate for the position of President is Alexander Schwanzer (OVGW, Austria).
- Charter Members interested in proposing a candidate for the position of Vice-President, need to express their interest to President Liam Nolan and Vice-President Alexander Schwanzer.

List of Charter Members

1. CIG (Italy)
2. CGOA (Czech Republic)
3. DGC (Denmark)
4. DESFA (Greece)
5. Distrigaz Sud Retele (Romania)
6. DVGW (Germany)
7. FranceGaz (France)
8. GNI (Ireland)
9. Synergrid/Gas.be (Belgium)
10. Gasunie (The Netherlands)
11. National Gas Transmission (UK)
12. OVGW (Austria)
13. RGC (Ukraine)
14. SEDIGAS (Spain)
15. SVGW(Switzerland)

Chronology of Previous Presidents and Vice-Presidents

Start of mandate	End of mandate	President	Charter Member	Country	Vice-President	Charter Member	Country
2022	2024	L. Nolan	GNI	Ireland	A. Schwanzer	OVGW	Austria
2020	2022	T. Larsen	DGC	Denmark	L. Nolan	GNI	Ireland
2018	2020	G. Linke	DVGW	Germany	T. Larsen	DGC	Denmark
2016	2018	B.L. Mollink	Gasunie	The Netherlands	G. Linke	DVGW	Germany
2014	2016	JC. Weber	SVGW	Switzerland	B.L. Mollink	Gasunie	The Netherlands
2012	2014	M. Florette	FranceGaz	France	C. Villalonga	Sedigas	Spain
2010	2012	C. Villalonga	Sedigas	Spain	M. Florette	FranceGaz	France
2008	2010	M. Kebrdle	CGOA	Czech Republic	C. Villalonga	Sedigas	Spain
2006	2008	L. Scopesi	CIG	Italy	G. de Hemptinne	Fluxys	Belgium

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V. Presentations on Renewable Gases Development

Gas Networks Ireland

Delivering Ireland's sustainable energy future

MARCOGAZ Board Meeting

13th March 2024

Public

The Gas Network plays a critical role in Ireland's Energy System today

+720,000
Customers connected

Future proofed
One of most modern networks in Europe

Flexible
A secure, instantly available energy source which has made renewable deployment possible

14,664km
of gas pipeline could wrap around Ireland's coastline 4 times

Resilient network
Proven ability to meet demand in harshest weather conditions, ensuring security of supply

Diversity
Supplying energy for power generation, heat and transport

Gas is the reliable cornerstone of Ireland's energy mix

powering over

30%

primary energy needs

powering over

40%

of heating

powering approximately

50%

of electricity generation

The future – decarbonising our gas network and key sectors

Gas Networks Ireland

Sectors

Electricity | **Industry** | **Agriculture** | **Intensive Heat Users** | **Transport**

Technology

Biomethane | **Hydrogen** | **BioCNG for Transport**

Biomethane Energy Report

Key facts and figures from the responses received to the RFI:

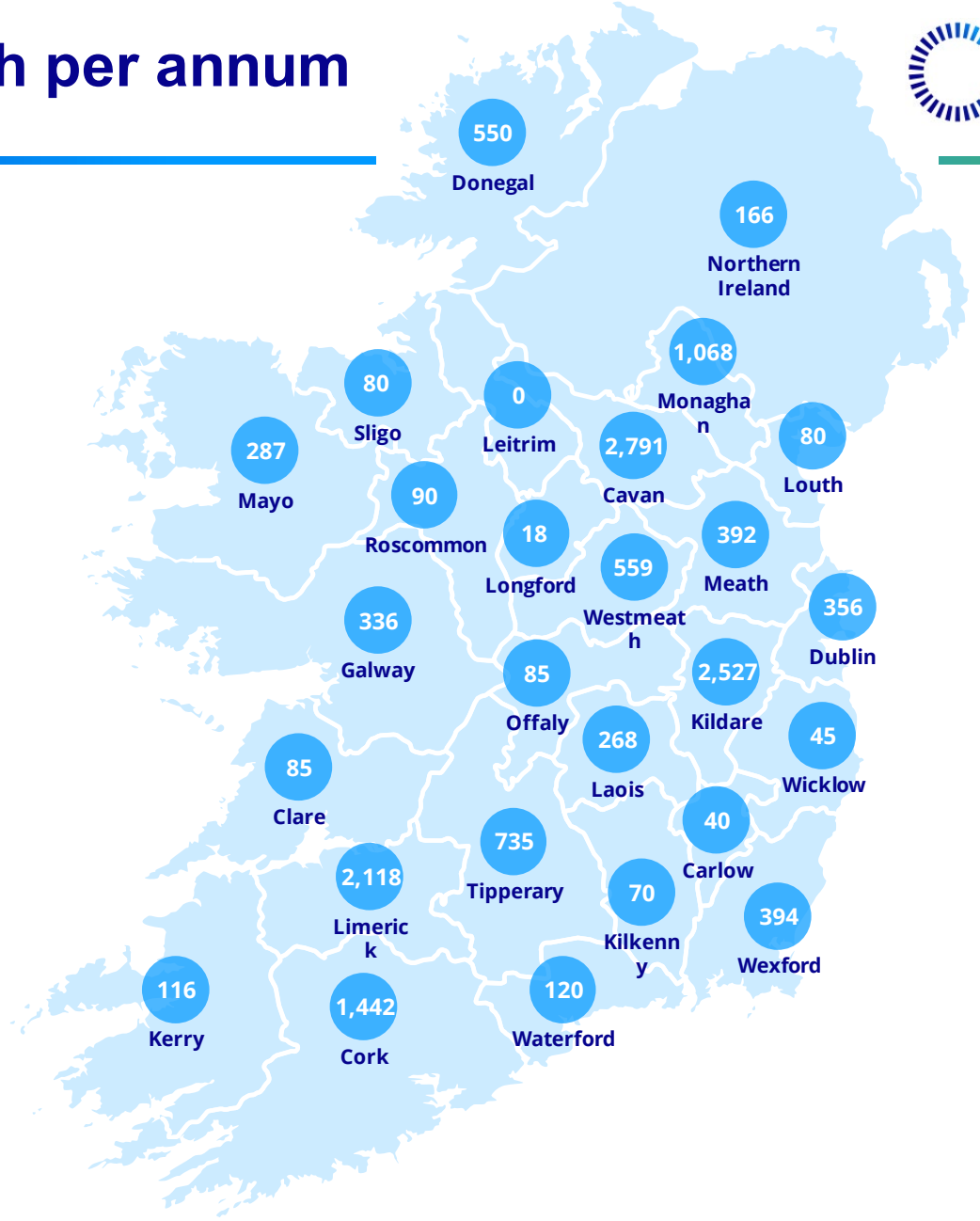
- 176 prospective producer responses received.
- In volume terms, responses total to 14.8 TWh annual production.
- Median plant production capacity is 40 GWh per annum.
- Median distance from producers to the gas network is 5km.
- Annual emissions reductions from 14.8 TWh of biomethane production would total to 3.94 Mt CO_2eq per annum by 2030.

https://www.gasnetworks.ie/business/renewable-gas/biomethane/report/

Biomethane Production Potential GWh per annum

County	GWh	County	GWh
Carlow	40	Louth	80
Cavan	2,791	Mayo	287
Clare	85	Meath	392
Cork	1,442	Monaghan	1,068
Donegal	550	Northern Ireland	166
Dublin	356	Offaly	85
Galway	336	Roscommon	90
Kerry	116	Sligo	80
Kildare	2,527	Tipperary	735
Kilkenny	70	Waterford	120
Laois	268	Westmeath	559
Leitrim	0	Wexford	394
Limerick	2,118	Wicklow	45
Longford	18		
Grand total			**14,818**

Annual Production in GWh per annum



We are ready for Biomethane

2018 Connection Policy

2019 Modified code of operations

2020 Green Cert System

2020 First renewable gas entry point in Kildare

2022 RFI issued to biomethane producers

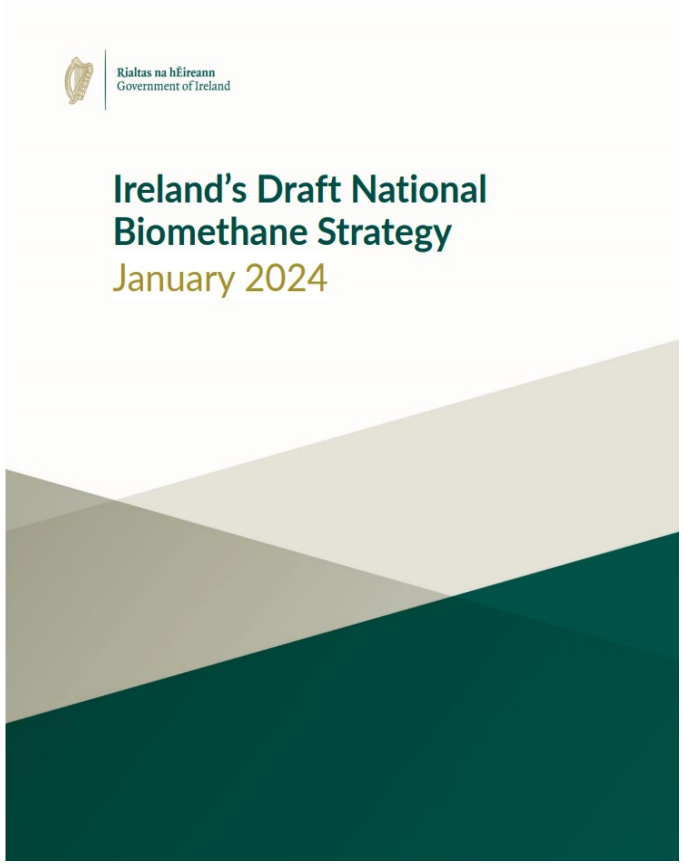
2023 First direct connected plant contracted

2023 Biomethane Energy Report published

2023 1st Green Certs imported into Ireland

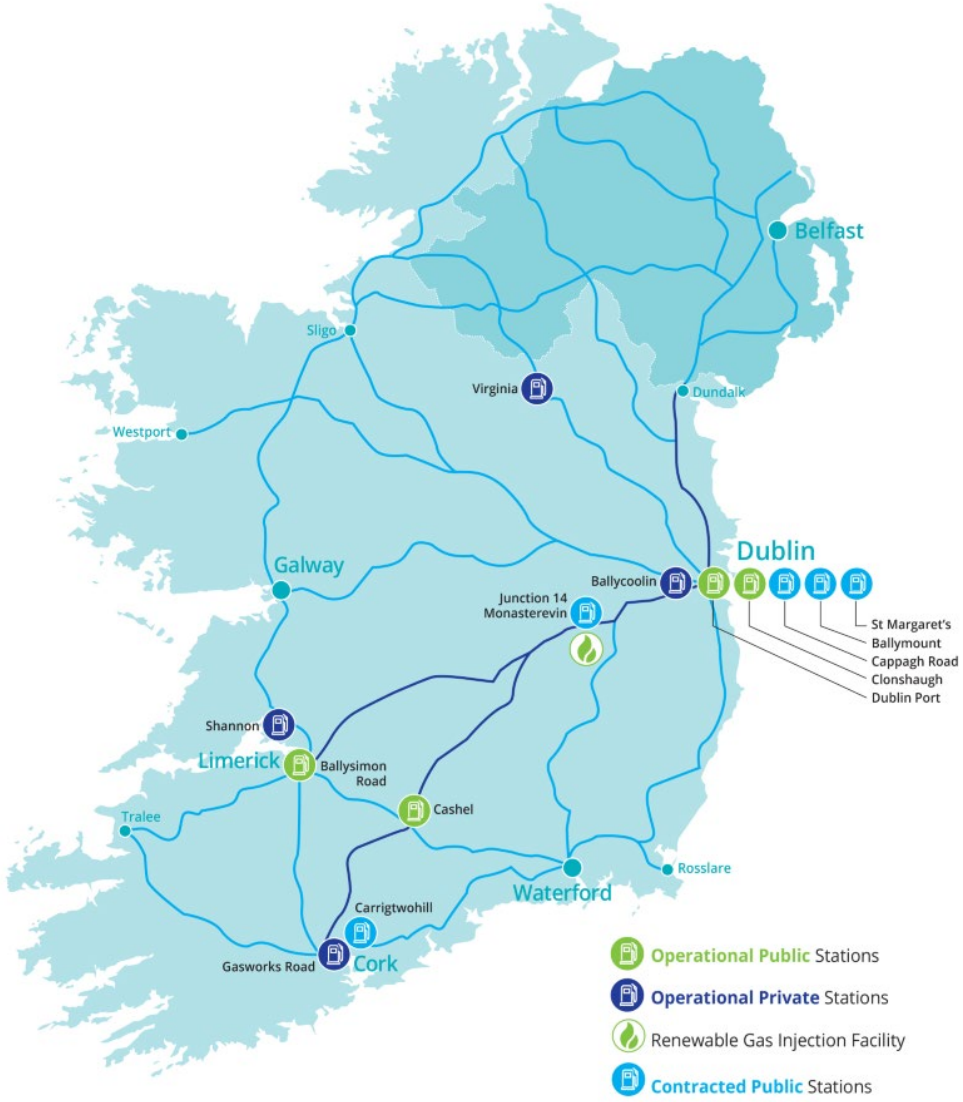
2024 Standard design for direct connections

Ireland’s Draft Biomethane Strategy



- Public consultation on Draft Biomethane strategy
- Gas network a key enabler of this new biomethane economy important for Irish farmers, reduce agricultural emissions.
- Biomethane provides a source of income for farming families.
- Biomethane’s important to address hard-to-decarbonise sectors of the economy
- Domestically produced biomethane will play a critical role in Ireland’s security of energy supply.

Bio-Compressed Natural Gas (BioCNG)



Ireland's commercial transport fleet makes up just 3% of vehicles on the road yet is responsible for approximately a fifth of the transport sector's carbon emissions.

BioCNG is carbon neutral biomethane gas that is compressed to fit into a heavy goods vehicle's (HGV) tank. HGVs operating on 100% BioCNG can achieve zero carbon emissions.

There are currently eight CNG stations operational in Ireland and there is a pipeline of public and private stations currently moving through various stages of design, planning and construction.

The current eight stations, are strategically located in Cavan, Dublin, Limerick and Tipperary; and are providing new cleaner transport corridors for Irish freight operators.

With increasing demand from customers for decarbonised supply chain solutions. BioCNG is a strong differentiator for Irish businesses tendering for new business.

Network Innovation Centre

- Research and testing
- Hydrogen compatibility, functionality and operational procedures
- Partnerships, collaborations and academic input
- On-network related innovation
- Evidence base for Hydrogen Safety Case
- Training, skills and knowledge

Network Innovation Centre, Citywest, Dublin.

Network Innovation Centre research projects

- End Users Considerations Study
- Off-grid distribution network testing
- Industrial / Commercial boilers

- Materials hydrogen compatibility project
- Research and testing of network materials for the transportation of hydrogen blends
- Trinity College Dublin (AMBER)

- Hydrogen blend safety research project
- Preventive and mitigation strategies
- Ulster University HySAFER centre

Network Innovation Centre where collaborations with research partners are helping to build the evidence base for a hydrogen safety case.

Network Evolution

Preparing for Blends: 2023-2030

- Getting the existing gas network ready to accept blends of hydrogen/natural gas at the Moffat Interconnection Point in Scotland and **accept green hydrogen injection** at certain points on the gas network.

Cluster Development: 2023-2030

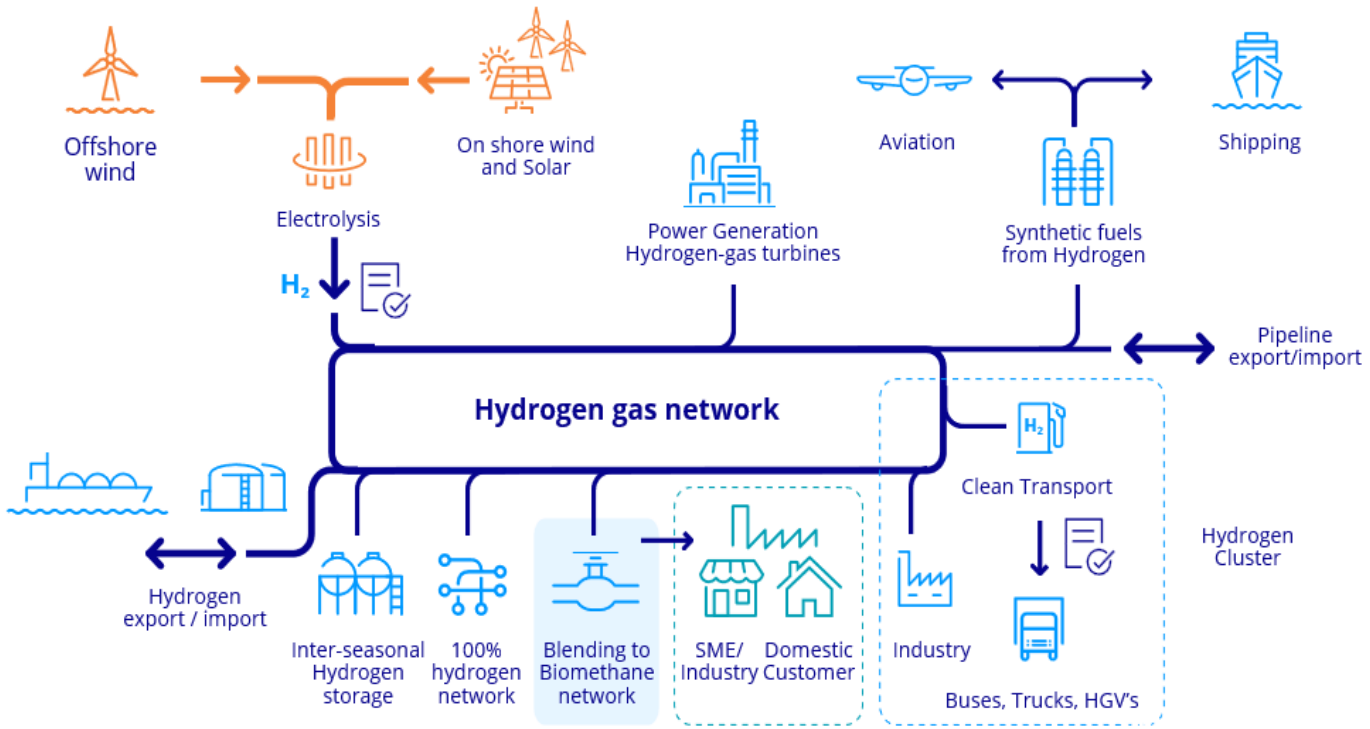
- Support the development of hydrogen clusters through **repurposing gas infrastructure**, including the production, storage, transport and end-use of green hydrogen at key locations.

Network Conversion: 2030-2040

- Hydrogen networks are developed to link these clusters by repurposing existing pipelines, **providing access to decarbonisation** for gas dependant customers not in proximity to the clusters.

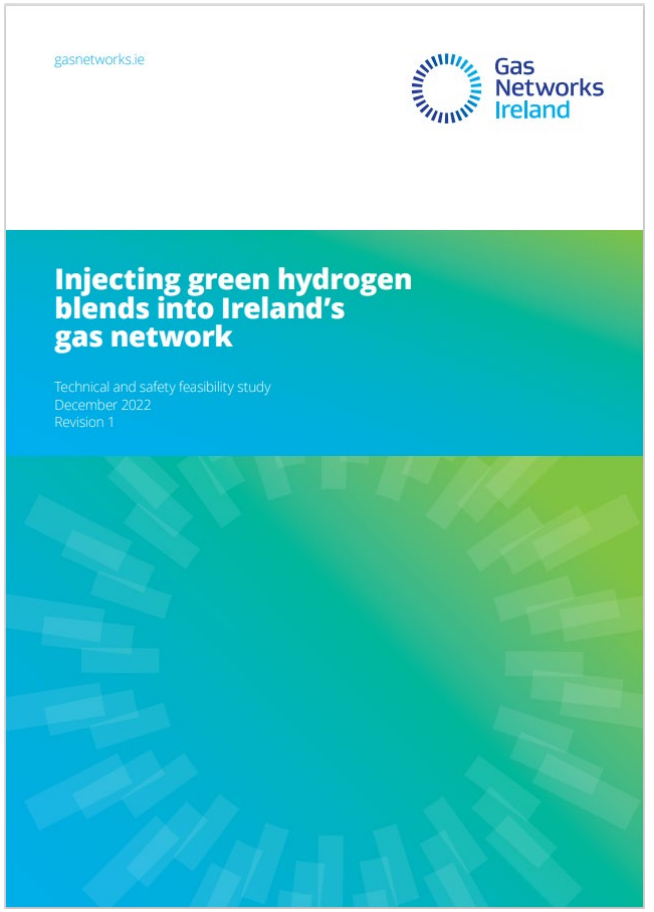
European Backbone: 2040-2045

- Repurposing one of the existing gas interconnectors to enable green hydrogen export/import, providing energy system **resilience and access** to the UK and European hydrogen networks.



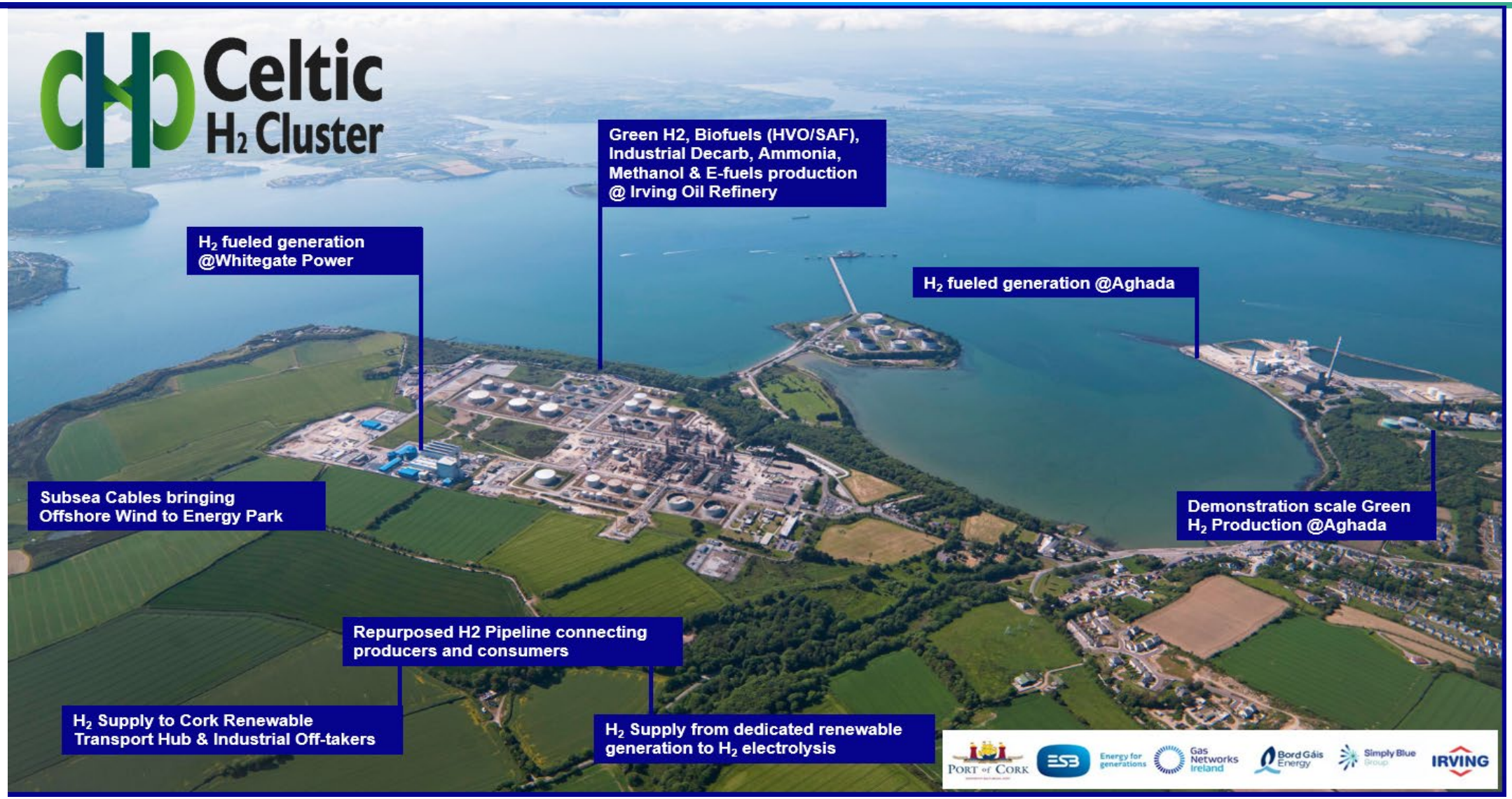
Hydrogen technical and safety feasibility study

- Technical and safety feasibility study on **'Injecting green hydrogen blends into Ireland's gas network'**
- Findings were positive and indicate that it will be both safe and feasible to utilise the existing gas network to transport blends of hydrogen with natural gas.
- Ireland's gas distribution network is compatible with hydrogen blends of up to 20% and even 100% hydrogen with only some modifications required.
- Ireland's gas transmission network is also compatible with hydrogen blends.
- Gas Networks Ireland will undertake a programme of materials testing for around 50% of Transmission pipelines in order to maintain the current operating pressures when operating with hydrogen blends above 10%.
- Gas Networks Ireland will also undertake some targeted research on certain equipment contained within transmission gas installations and compressor stations.
- Further detailed research will be required to support the adaptation of large industrial, commercial and power generation users.
- The study outlines a proposed Safety and Technical Roadmap and recommends the commencement of a pilot hydrogen project.



https://www.gasnetworks.ie/renewable/hydrogen/study/

Celtic Hydrogen Cluster



Thank you

Gas Networks Ireland

Marcogaz – Board meeting

- 13 March 2024

Francegaz

Agenda

- France gaz
- Update on the French gas market
- Energy policy context
- France gaz’s vision

France gaz

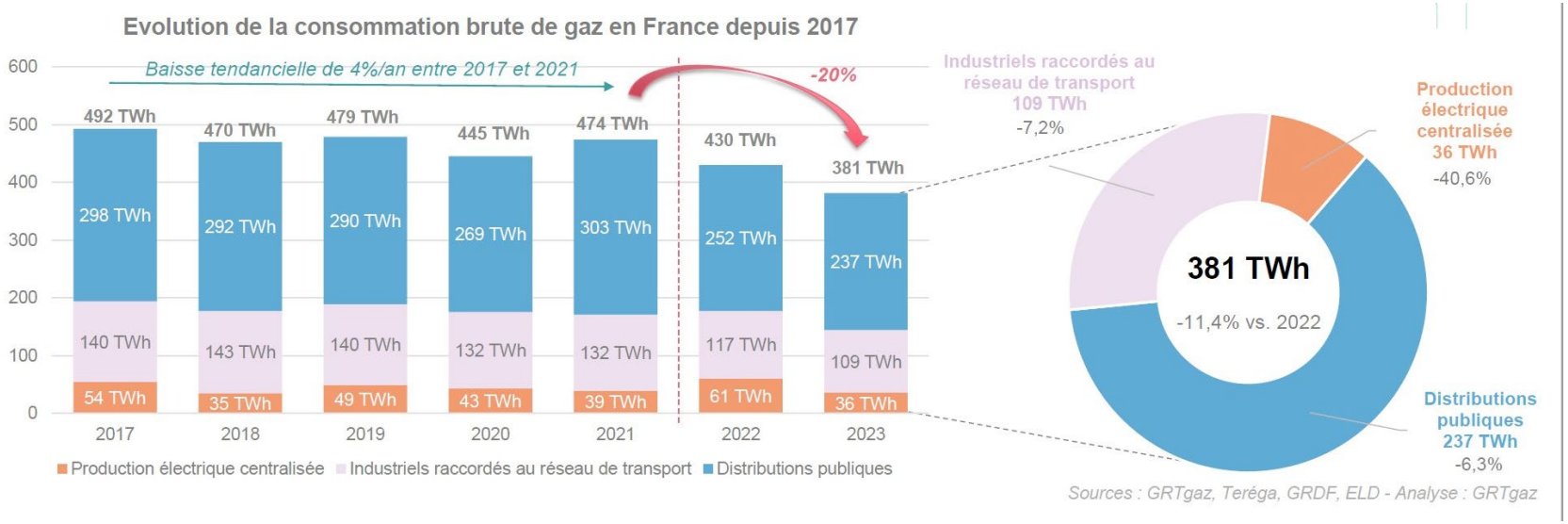
- **Members** (see chart)
- **Governance**
  - Chairman : Jean-Marc Leroy
- **Scope**
  - Natural gas, biogas, LPG, BioLPG, H2, CO2
- **Missions**
  - Acceleration of the green gases development
  - Role of gas in the energy mix
  - Market design
  - Infrastructures (regulation, tariffs access, future)
  - Normalisation and certification

Membres titulaires

Membres partenaires et associations

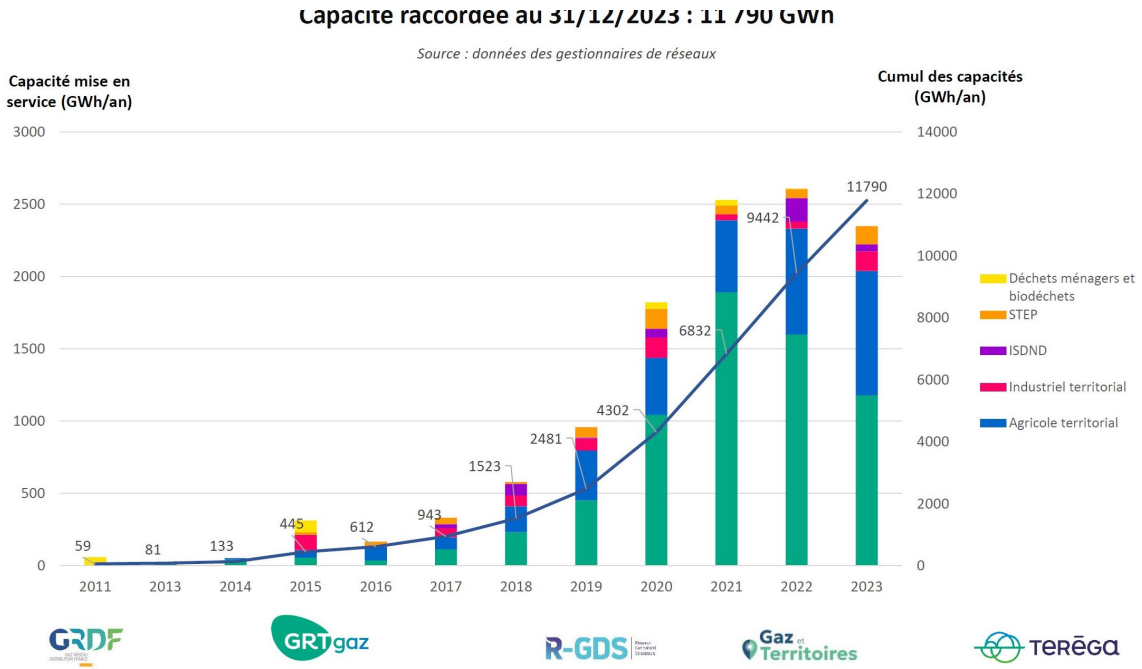
Gas market in France (1/2)

- Historical decrease of the consumption in 2023 by **11,4%**. Consumption under 400 Twh for the first time since 1990 (381 TWh)
  - Less demand for electricity production than in 2022
  - Effects of the efforts on the reduction of demand
  - Industry (reduction, switch, efficiency)



Gas market in France (2/2)

- France is still a key entry point for the European market : 22 % of LNG imports
- Inversion of the flow from West to East is confirmed
- Important progress in green gases production
  - **12 TWh of injection capacity of biogas at the end of 2023** (mainly from agricultural waste)
  - 653 plants inject on the network



French energy policy context in 2024

- Changes in the Governement
  - Ministry of finance and economy in charge of Energy issues since early 2024
- Vision of the French Governement
  - Strong exercice of planification to reach carbon neutrality by 2050
  - Electrification of the usages (mobility, heating, acces to low carbon electricity for the industry)
  - Increase of the production of low carbon electricity : nuclear (6 EPR + 8 EPR) + renewables (offshore wind + PV)
  - CCUS for the most difficult industrial sites to decarbonise (dedicated roadmap of the 50 sites with the strongest emissions) – partnerships with NO and DK
  - H2 national strategy : H2 mainly for industrial needs, setting up of 7 hubs, need of infrastructures to connect futures hubs and storages, potential importations
  - Attribution of the biomass: difficult issue
  - 44 TWh of biomethane in the networks in 2030 (not translated into law so far)
- Pluriannual programmation of energy policy not yet transalated in French law. No agenda so far
- Ongoing discussions on support mechanism for the renewable and low carbon gases

France gaz's vision

- Ambitious objectives for green gases in 2030
  - 50 TWh of biogas from methanisation to be injected in the grid
  - 10 TWh of biomethane innovative sectors (pyrogaseification, hydrothermal gaseification)
  - France gaz asks for more visibility for the sector (supporting mechanisms)
- Gas competitiveness (new regulated tariffs, tax issues, decreasing consumptions …)
- Promotion of all the usages (heating (hybrid solutions), industry, mobility)
- More synergies with H2
  - France gaz 's demand: consideration of other sources of production than electrolysers
  - Many projects of common interests in French territories (7 projects selected including H2Med)
  - Joint study GRTgaz/RTE showing synergies of the infrastructures
  - Regulation optional schemes to be published in June by CRE
- CO2 :
  - Transport and liquefaction : synergies with gas operators
  - CCUS : need for an economic scheme (CFD)
  - important to introduce biogenic CO2 in the national strategy
- Support of innovative solutions developped by start-ups along the value chain

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VI. Presentations of the Standing Committees

VI. 1 Standing Committee Sustainability (SCS)

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Standing Committee Sustainability Report to the Executive Board

13th of March 2024

José TUDELA, SCS Chairman

Executive Board meeting – 13/03/2024

WG Health & Labour Safety Activity

Activity

Outputs

- Finalization of technical note on “Black Powder, Mine Dust” ✓
- “Health effects of hydrogen and natural gas” (concept ready)
- “Optical and Electronical Radiation - Phase 2”
- “Benchmark report on safety” (report on safety statistical indicators, 2022 data) (*)

Current Situation

- WG Chairman Paul Hogewoning from Gasunie has returned.
- A “catch-up” welcome meeting was held on the 29th of January.
- Resume meeting with the H&LS team was held on the 16th of February.
- The following meeting will be on the 30th of April.

(*) **Call #3 in MARCOSTAT**

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WG Methane Emissions+ Activity

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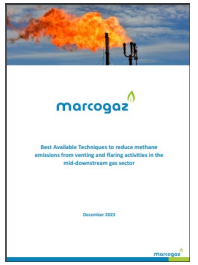
Methane Emissions+

- **BAT ON VENTING AND FLARING**
  - **New Publication in Marcogaz Knowledge Hub**: "Best Available Techniques to reduce methane emissions from venting and flaring activities in the mid-downstream gas sector"
    - Link to Publication
    - An introductory document for the BATs (BAT0) will be added when finished and approved.



- **SCOPE 3 EMISSIONS**
  - **1ST PHASE - FINISHED:** 11 Companies have shared their scope 3 strategy in four qualitative benchmark meetings.
  - **2ND PHASE – DATA CAPTURE & ANALYSIS:**
    - Data received through MARCOSTAT Call #8: 13 countries answered, with 9 providing data.
    - Next Meeting on March 20th: Data will be analyzed and next steps will be discussed.

- **HYDROGEN EMISSIONS**
  - First draft of the White paper structure on "**Differences between NG & H2**" has been shared in the group.
  - The next step would be to discuss in more detail the final focus of the paper.

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Methane Emissions+

- EUROPEAN INSTITUTIONS

Methane Emissions Regulation

- **Technical Sessions in order to prepare an interpretation of the Regulation** are being organized by the group:
  - An invitation to join a group of experts has been sent to the WG Methane Emissions+, WG Distribution and WG Transmission members.
  - The intended final output would be a **Technical Guiding Document** which could also serve as a basis for a **MARCOGAZ internal forum** on the topic.
  - Deadline for receiving candidatures: 12 March.

Industrial Emissions Directive (IED)

- Finalization of IED revision is expected by early 2024.
- The position paper has been cosigned by ENSTO-G and GIE and is now available on the website of MARCOGAZ link.

- METHANE EMISSIONS ASSESSMENT

New MARCOGAZ analysis of the emissions data (years 2021-2022)

- The status of the work is presented by an Excel file to introduce the data collection of the project.
- This shows how LDAR and quantification are different between the TSOs and how the emissions are related to the operational parameters.

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Methane Emissions+

- **CEN STANDARDISATION**

CEN/TC 234/WG 14 Gas Infrastructure - Assessment of ME for gas transmission and distribution systems

- EC having the possibility to produce a delegated act on Methane
- CEN TC 234 is preparing three standards (assessment, LDAR, venting and flaring)
- The timeline is approximately 3 years for having the standards finalized, yet the first drafts can be available within several months.

CEN/TC 264/WG 38 Determination of fugitive VOC emissions

- Two texts are still in the drafting phase.

- **ISO STANDARDISATION**

ISO/TC 197/ SC 1/ WG 1 "Hydrogen Technologies"

- A short presentation on the reorganization of ISO/TC197 on Hydrogen technologies is shared in the group although it is remarked that it is still at proposal stage WG-ME-990.

  WG1 - WD 19870 GHG Hydrogen. Work on monitoring and reporting of Hydrogen as a Green House Gas (GHG)

  - The work is nearly finished and the main open points are on the annexes. WG-ME-955
  - The explanatory note for CIB Annes Consultation can be found here: WG-ME-986

GHG Supply Chain Emissions Measurement, Monitoring, Reporting and Verification (MMRV) – Initiative WG-ME-985

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Methane Emissions+

- CORRELATION FACTORS
  - Data from 10 companies in different segments of the value chain are received.
  - A reminder to submit more data was sent. Next steps will be defined.

- GERG PROJECT

“Top-Down Challenge”

  - It was already shared that there were no differences found between source and site level measurements, although other studies suggested so.
  - Final report will be available soon.

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Other SCS Projects

Other SCS Projects

- EU TAXONOMY FOR SUSTAINABLE ACTIVITIES

	% ELIGIBILITY			% ALIGNMENT		
	CAPEX	OPEX	REVENUES	CAPEX	OPEX	REVENUES
Autostrade	100,0%	97,0%	0,0%	100,0%	97,0%	0,0%
Terna	99,0%	94,0%	89,0%	99,0%	94,0%	87,0%
Italgas	87,1%	86,8%	33,5%	87,0%	83,2%	33,5%
RWE	88,0%	31,0%	42,0%	83,0%	19,0%	12,0%
ENEL	88,2%	79,7%	29,3%	81,9%	66,9%	21,4%
E.ON	82,0%	73,0%	13,0%	80,0%	71,0%	13,0%
ACEA Group	82,0%	85,0%	37,0%	76,0%	73,0%	33,0%
Engie	65,0%	50,0%	25,0%	58,0%	39,0%	15,0%
A2A	76,9%	55,4%	27,7%	57,5%	41,8%	6,3%
HERA	60,0%	63,0%	25,0%	54,0%	45,0%	22,0%
Snam	62,9%	74,7%	21,2%	38,8%	37,1%	19,9%
Repsol	30,0%	19,0%	8,0%	21,0%	2,0%	0,4%
GRT GAZ	18,0%	7,0%	2,0%	18,0%	7,0%	2,0%
Totalenergies	17,4%	15,8%	7,5%	14,5%	8,6%	1,3%
ENI	17,5%	12,1%	7,5%	14,1%	1,8%	0,6%
Gasunie	12,9%	4,3%	0,2%	12,8%	1,2%	0,1%
Enagas	52,9%	41,2%	68,8%	10,1%	0,1%	0,0%
Shell	21,0%	16,0%	3,0%	9,5%	1,0%	0%
Saipem	18,0%	25,2%	11,2%	7,7%	24,2%	10,2%
Uniper	19,6%	11,4%	2,2%	7,5%	5,7%	0,6%
Terega	7,0%	3,0%	2,0%	7,0%	3,0%	-
Fluxys	5,9%	15,1%	0,0%	5,9%	15,1%	0,0%
DESFA	*Not published*			*Not published*		
2i Rete Gas	*Not published*			*Not published*		

- **Benchmarking with 2022 data** was elaborated end of 2023 with GIE. Some ideas mentioned:
  - The 23 peers analyzed showed a **great volatility of all 3 KPIs of alignment/eligibility (capex, opex and revenue), with opposite interpretations** that lead to a range that goes from nearly 0% to 100% alignment.
  - In particular, in the analysis of Capex aligned some companies seemed to have an approach oriented to only focus on the readiness of their infrastructure to allow low-carbon emissions rather than on the molecule/cars that today use those infrastructures. (% of Alignment of CAPEX/OPEX over 80 %)
  - On the other hand, a bunch of companies seemed to have the opposite approach and having a far more prudential view.
- A meeting to debate on next steps will take place on the 8th of March.

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COFFEE BREAK

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VI. 2 Standing Committee Gas Infrastructure (SCGI)

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Technical Association of the European Gas Industry

SCGI report to the Executive Board

13/03/2024

Anne-Sophie DECAUX, SCGI Chairwoman

Executive Board meeting – 13/03/2024

SCGI update

- Last meetings 13th February (Teams) with 24 participants from 9 countries
  - WG Transmission Pipelines and WG Distribution agreed to participate with WG Methane Emissions+ in technical sessions on methane emissions to address selected topics (call for participants until 12th March) because discussions with regulators will start soon
  - The limit at 10 ppm for oxygen in EN 16726 on H gas quality was mentioned as a barrier to the development of biomethane
- Next meetings in May (Teams) and after summer (face-to-face)

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Update on WGs

- WG Transmission Pipelines
  - Engagement session for C02 experts on 20th March (to be forwarded in each company to relevant CO2 expert): brainstorm for work topics
  - Document expected on final conclusions of 12th EGIG report
  - Work on adaptation to climate change (flooding risk areas…)

- WG Distribution
  - Methane emissions in distribution
  - Report EGAS-B: analysis of increasing number of incidents

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Update on WGs

- WG Odorization
  - Discussion on Tech Forum on last 2 documents published (practices in Europe and odorization of hydrogen)
  - Question if odorization of CO2 is needed as it will not go to domestic customers / collection of information outside Europe
- WG Gas Metering
  - Still working on renewable gases, smart meters and meter life service

Update on WGs

- WG LNG
  - Document on legal obligations for truck drivers should be finalized in March
  - Few answers were received on the call regarding new molecules

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Work programme: planned in 2024

Document title	Expected delivery time	Standing Committee Gas Infrastructure (SCGI)	WG Odorisation (WG ODO)	WG LNG (WG LNG)	WG Distribution (WG DIS)	WG Transmission Pipelines (WG TP)	WG Gas Metering (WG GM)	WG Gas Storage (WG STO)	TF Hydrogen (TF H2)
Information on standardization works and their impact	ongoing	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Best practices on methane emissions to answer new regulation (BAT in WG methane emissons+)	WG ME+				Yes	Yes		Yes	
Policy on leakages in hydrogen infrastructure (new or converted)	WG ME+	Yes			Yes	Yes		Yes	
[Update] "Natural Gas odorisation practices in Europe" with pure hydrogen	Approved		Yes						
Odorisation of natural gas and hydrogen mixtures including hydrogen	Approved		Yes						
Experiences in different countries with the measurement of non-conventional gases	2024						Yes		
List all the initiatives and research projects on impact of metering non-convential gases (national, EU, intl.)	no deliverable						Yes		
CO2 transport	2024+	Yes				Yes			
CO2 measurement (gaseous? liquid?)	2024+	Yes					Yes		
Experiences in different countries with the measurement of non-conventional gases	2024						Yes		
List all the initiatives and research projects on impact of metering non-convential gases (national, EU, intl.)	no deliverable						Yes		
Monitor Large Combustion Plants (LCP) Best Available Techniques (BAT) related to last Reference Document revision (BREF) and last BAT	no deliverable					Yes		Yes	
Monitoring the decreasing level of turbine emissions for existing turbines (WG methane emissions+?)	WG ME+					Yes			
LNG contractors / operators / drivers qualification	2024			Yes					
Report on safety of distribution grid	2024				Yes				

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VI. 3 Standing Committee Gas Utilisation and New Gases (SCGU&H2+)

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Technical Association of the European Gas Industry

Executive Board

Reporting on activities

Frank Graf and Kris De Wit, Co-chairs of the SCGU/NG

EB – 13th of Mar 2024

Gas Utilization & New Gases : WG H_2, BioCH_4 & SNG

STATUS

- Questionnaire on new gases ➔ circulating
  - existing injection capacities
  - strategies on production, import and utilization
  - infrastructure aspects

- Fact sheets of new gases processes ➔ Q1/24
  - fundamental information on technologies
  - gas quality aspects
  - TRL, plant sizes

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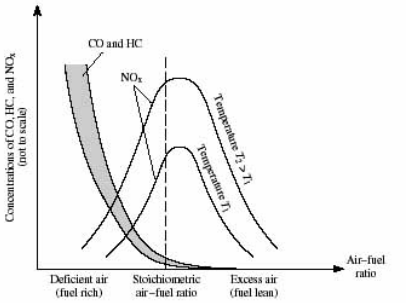
Gas Utilization & New Gases : WG Gas Quality

STATUS (1)



- *Last meeting on 23/01/2024, next one on 22/05/2024*
- *CEN-MARCOGAZ liaison*
  - J. Lana participating in CEN/TC234 WG11 & CEN/TC408 meetings
- *Harmonization of gas quality*
  - standard EN16726:2015: Gas quality H-gas *on public consultation by NSB*
    - comment period: 21st December 2023 – 14th March 2024
    - *proposals for all the quality parameters*, although some open issues remain
      - It is expected to use comments process to close issues
      - Publication foreseen by April 2025
    - *agreed by WG members to send comments to the draft only is these cannot be sent through National Standardization Bodies*
- *Hydrogen*
  - approved to update *hydrogen regulation/standards survey (WG GQ-405)*
    - information from different countries received
    - document modified with changes
    - approved by WG ⇒ *publication proposed*.

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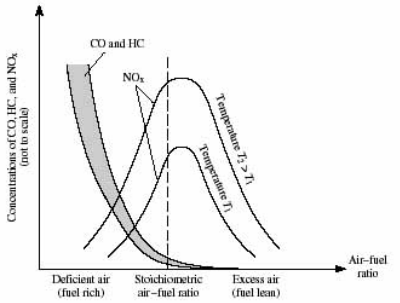
Gas Utilization & New Gases : WG Gas Quality

STATUS (2)

- *MARCOGAZ LNG quality in Europe data base (WG_GQ-477)*
  - scope of work
    - the data will be the *LNG composition of each individual LNG cargo downloaded in an LNG regasification terminal an* the quality of the gas injected into the grid from the LNG terminal.
    - *the results of the work do not show the LNG quality arriving to a particular LNG terminal*, *only the range of LNG qu origin*, grouped for all the LNG terminals participating in the work.
  - *information received from several members*
    - processing information
  - results to be discussed in next WG meeting



- *Biomethane*
  - update of *Quality values required by legislation in some countries in Europe for biomethane injection into natural gas network (WG_GQ-437)*
    - information from different countries received → document with changes sent
    - planned to be approved in next WG meeting
    - *approved by WG ⇒ publication proposed*

- *CO_2 quality standard/specification*
  - to start *identification of quality standards applied to CO2 quality for transmission*
    - *requested by SCGI* in meeting on 25th of Sept
    - information received from WG members → processing information gathered

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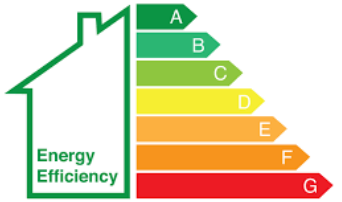
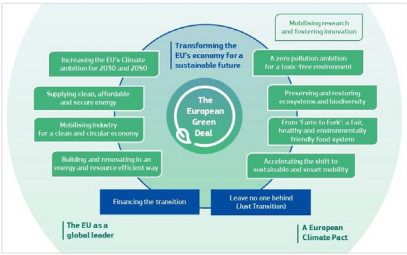
Gas Utilization & New Gases : WG Energy Efficiency

STATUS (1)



- Last WG EE meetings since the last SCGU on January 29, 2024



- 3 main topics were discussed :
  1. **Boiler Ban** : the latest news updates and a reminder about the boiler ban
  2. **EPBD Recast** : information related to the revision of the Energy Performance of Buildings Directive (EPBD) and the future guidelines
  3. **PEF value for Biogas in International Standardization**: the Primary Energy Factor (PEF) sets at 1.4 for biogas in international standardization and the risk for gas energy

  All these topics are also discussed with Eurogas.

- *EPBD recast*
  - text has been approved by the ITRE Committee of the European Parliament
  - EC is currently in process of establishing a timeline for publication of guidelines on the definition of fossil fuel boilers
  - next step will be to work on guidelines of the EPBD especially on the fossil fuel boiler definition to propose to the EC

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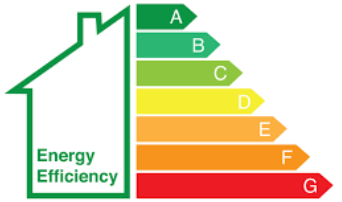
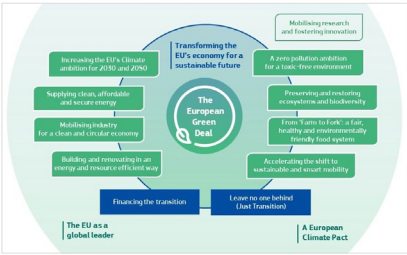
Gas Utilization & New Gases : WG Energy Efficiency

STATUS (2)





- *Informative value 1.4 for PEF of biogas in Annex B in 52000-1 standard on the energy performance of buildings*
  - primary energy factor (PEF) for gas currently at 1.1
  - if it increases to 1.4 for biogas and likely even higher for biomethane (around 1.6), it would automatically undermine the competitiveness of biogas solutions compared to electricity, of which PEF is continually decreasing (currently at 1.9)
  - the WG discussed about working on a document to explain why the current table values are not suitable, to describe the method and calculation with the values per country with an evaluation of the risk

- *Ecodesign recast*
  - update on Commission Regulation will be adopted soon → as Council and Parliament have no objection, the Commission is also expected to approve it
  - Commission has agreed on a Commission Regulation implementing Directive 2009/125/EC of the European Parliament and of the Council as regards Ecodesign requirements for local space heaters and separate related controls

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Gas Utilization & New Gases : WG Gas Installations

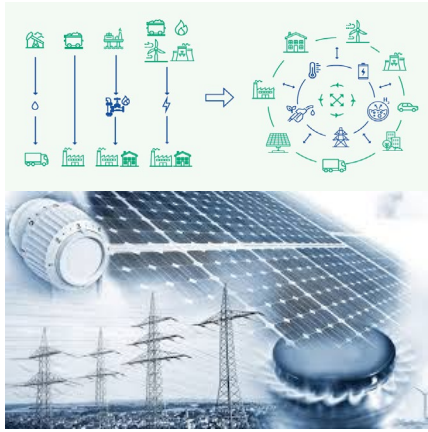
STATUS

- last meeting on 5/10/2023, next one on 08/03/2024
- no updates since last Board meeting

Gas Utilization & New Gases : WG Sector Integration

STATUS

- no updates since last Board meeting



Gas Utilization & New Gases: Standing Committee

STATUS

- last meeting on 22nd of Jan, next meeting on 22nd of Apr
- reactivate industrial gas use in SCGU scope
  - elaborate document giving overview of different industrial gas uses
  - workshop Q2 2024 → to be confirmed
- workplan 2024 (see next slide)

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Gas Utilization & New Gases: workplan 2024

WHO	WHAT	EXPECTED DELIVERY PERIOD	STATUS	COMMENT
SCGU&NG	Elaborate an overview different industrial segments with the status & challenges regarding gas use	Q2	running	*KDW to check with J. Leicher (GWI) & Ph. Buchet (Engie)*
SCGU&NG	Organize workshop on industrial gas use	Q2	to start	
SCGU&NG	Elaborate information table on H2(NG) projects	Q1	to start	*To be transferred to project H2, (bio)CH4 and SNG or WG Gas Quality? To be aligned with WG Gas Installations' initiative!*
WG Gas Quality	LNG Quality Data Base	Q3	running	*Aim is to published a report on LNG database*
WG Gas Quality	Following up revision EN16726:2015	Q2-2025	running	
WG Gas Quality	Updating table of quality of biomethane for injecting by countries	Q2	running	*Updating already public document*
WG Gas Quality	Updating table of specification for injecting H2 in the network by countries	Q2	running	*Updating already public document*
WG Gas Quality	To compile a table of CO2 quality in specification for transmission	Q3	running	*To produce a table with CO2 quality for transmission requested by SCGI*
WG Sector Integration	Organize physical workshop on definition, projects and challenges of sector integration	Q2-Q3	to start	*Meeting foreseen to start preparation*
WG Sector Integration	Write white paper on sector integration, as proposed in last meeting	Q3	to start	*Depends on the possibility to convene a second meeting of the WG*
WG Gas Installations	EGAS C Report	Q3	running	
WG Gas Installations	Overview of GN/H2 projects	Q2	to start	*First step - meeting March 8th*
WG Gas Installations	Methane Emissions data	Q3	running	*Data collection in progres*

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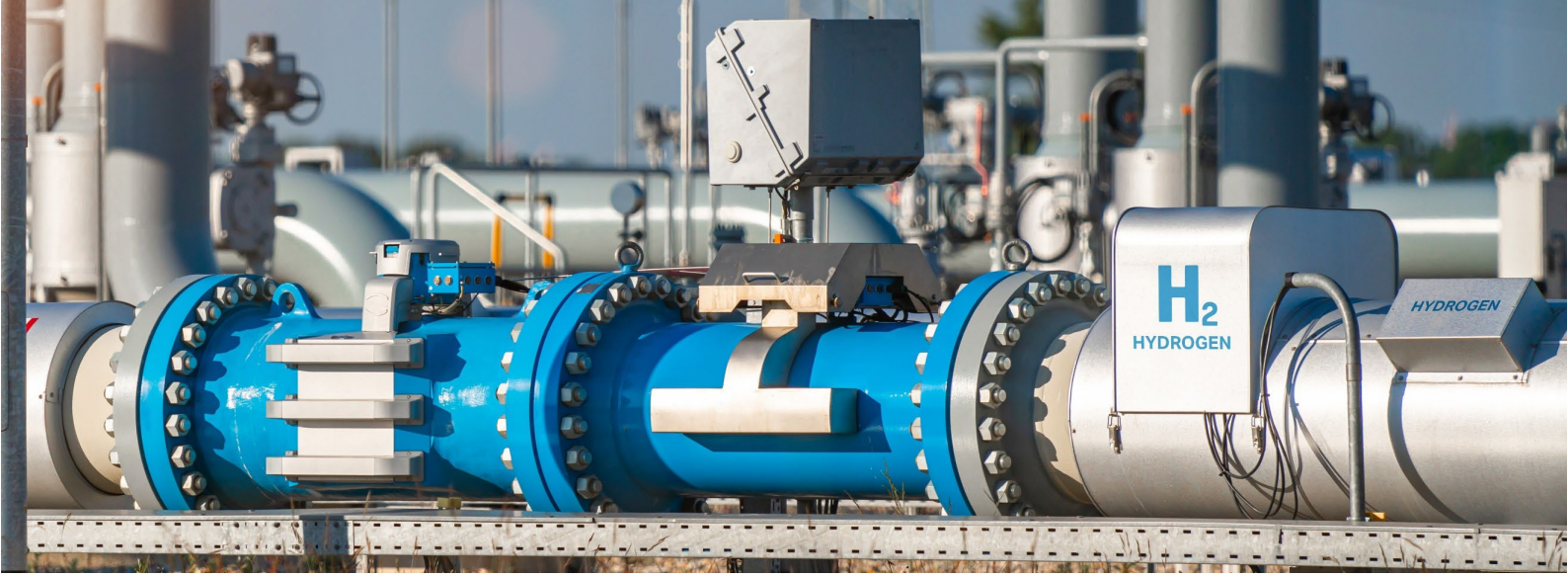

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Hydrogen regulation/standard in European countries for injecting hydrogen into natural gas grid

Update

March 2024

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ABOUT MARCOGAZ

Founded in 1968, MARCOGAZ represents 28 member organisations from 20 countries. Its mission encompasses monitoring and policy advisory activities related to the European technical regulation, standardisation and certification with respect to safety and integrity of gas systems and equipment, rational use of energy as well as environment, health and safety issues. It is registered in Brussels under number BE0877 785 464.

DISCLAIMER

1. Background

Hydrogen will be one a main actors in the transition to a decarbonised energy system.

As a first step, one of the option is to inject limited amounts of hydrogen into the natural gas networks, blending.

Up to now, this is not a generalised practices and there are only some minor demonstration project in operation.

To inject hydrogen in natural gas has an impact in the parameters defining the quality of this. On the other hand, to set natural gas quality parameters is a right of each Europen country and each one has a different approach:

- National regulation
- Standards
- Gas company requirements with specifc contracts with the gas producer
- Other

MARCOGAZ started some years ago to collect information about the requirement for injecting hydrogen into natural gas networks in different European countries, in order to monitor how this practice is carried out in Europe,

This document is the third update of initial document published in 2016 and updated in 2020, both available on MARCOGAZ website[1]. Main changes are:

- Collect information for 12 European countries, 2 more than in the previous version.
- Changes in the quality parameter requirements in some countries.

[1] 2016 version: https://www.marcogaz.org/wp-content/uploads/2021/04/UTIL-GQ-15-18.pdf
2020 version: https://www.marcogaz.org/wp-content/uploads/2021/02/WG_GQ-405-H2RegulationSurvey.pdf

Questions		Spain	Germany	France	The Netherlands	Czech Republic	Italy	Belgium	Denmark	Slovakia	Sweden	Portugal	Ireland
Q1. - Is it allowed to inject **pure hydrogen** into:													
Distribution natural gas network?	Yes / No	NO	YES	NO	NO	YES	NO	Not excluded but not foreseen	YES [7]	NO	NO	NO	NO, Gas Quality specification in Code limits H2 < 0.1% mol
Transmission natural gas network?	Yes / No	NO	YES	NO	NO [1]	YES	NO	YES	YES [7]	NO	NO	NO	NO, Gas Quality specification in Code limits H2 < 0.1% mol
If the answer to Q1. is **YES**:													
Name of regulation / standard / rule / specification (including publication date) for:													
Distribution			DVGW G262 (technical rule on gas quality G260 refers to "renewable gas technical rule" G262)			The new definition of type of gases based on Energy act No.458/2000Sb since December 2024. Enabling H2 in content to 100% for TSO, DSO and SSO			[5], §27-29				
Transmission								According to Standard Transmission Contract Fluxys Belgium Authorized under Gas Law	[8], Does not specify H_2 limits specifically, but refers to Gasloven for additional restrictions (see [5])				
Final hydrogen concentration the natural gas network after injection:													
Distribution	%mol / %vol / other					This is not specified yet in any technical or general standards		-					
Transmission	%mol / %vol / other							2 %mol					
If the answer to Q1. is **NO:**													

Questions		Spain	Germany	France	The Netherlands	Czech Republic	Italy	Belgium	Denmark	Slovakia	Sweden	Portugal	Ireland
Is it forecast to review the current regulation to consider hydrogen injection into natural gas network?	Yes / No / Not known	Yes Possibly in 2024		NO	YES, via a so called "Order in council" (Algemene Maatregel van Bestuur) the injection of pure hydrogen in the TSO network for blending purposes		NOT KNOWN.	-		NOT KNOWN.	NO	YES. Umbrella law was already published. Several subsidiary regulation documents have now to be adjusted. The government drive to H_2 and renewables injection is large, so the adjustment process should start soon.	UNKNOWN: No planned changes yet, but EU Gas Regulation and revision of EN 16726 may prompt change to the Code to allow upto to 2% H2
Comments/remarks to the injection of pure hydrogen into natural gas network:													
		There exits the possibility of an interpretation of current regulation that could allow to inject pure hydrogen if the resulting blend in the pipeline does not excess the % for an injected mixture (see below).	DVGW G 262 to be included into DVGW G 260 in 2021		[1] In legislation (gas law) the definition of gas contains a requirement that the main constituent is methane and therefore the injection of pure hydrogen is excluded	It is not currently incorporated into the standards. We are still waiting for regulation process too. For now, by the end of 2024, we are implementing selected projects with the aim of examining the possibilities of both blends (up to 20% of H2) and pure hydrogen in the future into existing grids.	The actual regulation would allow the possibility to inject pure hydrogen if the final mixture is maximum 2% of hydrogen.	On Transmission network, injection of 100% H2 requires the subscription of a blending service in association with the entry service. The blending service is not offered everywhere on the network (not when there is not sufficient gas available for blending, not when gas can reach an interconnection point).	[6] The regulation [5] stipulates that "the % Volume of H_2 in the distribution grid shall be approved by the safety authorities". There is no value mentioned in the regulation.		In Sweden, there is no current legislation or regulation for handling hydrogen.	See note [9] below	

Questions		Spain	Germany	France	The Netherlands	Czech Republic	Italy	Belgium	Denmark	Slovakia	Sweden	Portugal	Ireland
Q2. - Is it allowed to inject **hydrogen/natural gas mixtures** into:													
Distribution natural gas network?	Yes / No	YES	YES	YES	YES	YES, the new definition of type of Gases make this possible (with out any further regulation/description)	YES	YES	YES [7]	NO	NO	Not defined [10]	NO, Gas Quality specification in Code limits H2 < 0.1% mol
Transmission natural gas network?	Yes / No	YES	YES	YES	YES		YES	YES	YES [7]	NO	NO	Not defined	NO, Gas Quality specification in Code limits H2 < 0.1% mol
If the answer to Q2. is **YES:**													
Name of regulation / standard / rule / specification (including date) for:													
Distribution		Norma de Gestión Técnica del Sistema. Protocolo de Detalle 1, NGTS PD-01 (Technical Management of the Gas System Regulations. Detail Protocol 1). 8th October 2018	DVGW G262 (technical rule on gas quality G260 refers to "renewable gas technical rule" G262)	French gas operators technical prescriptions	Regeling van de Minister van Economische Zaken van 11 juli 2014, nr. WJZ/13196684, tot vaststelling van regels voor de gaskwaliteit (Regeling gaskwaliteit)	See above/Q.2		Technical requirement Synergrid G8/01	[5], §27-29				
Transmission								Technical requirement Synergrid G8/01 + Standard Transmission Agreement Fluxys Belgium	[8], Does not specify H_2 limits specifically, but refers to Gasloven for additional restrictions (see [5])				
Maximum hydrogen concentration in the mixture for injection into the natural gas network:													
Distribution	%mol / %vol / other	5 %mol	See below	Currently 6 %mol An evolution of the "Prescriptions Techniques" towards 2% H2 max is foreseen	0.5 %mol	See above/Q.2	≤ 2 %mol	2 %mol	The regulation referred below stipulates that "the % Volume of H_2 in the distribution grid shall be approved by the safety authorities". There is no value mentioned in the regulation.				
Transmission	%mol / %vol / other			Currently 6% mol (probable evolution to 2%mol)	0.02 %mol [2]	See above/Q.2		100 %mol					
Final hydrogen concentration in the natural gas network after injection:													

Questions		Spain	Germany	France	The Netherlands	Czech Republic	Italy	Belgium	Denmark	Slovakia	Sweden	Portugal	Ireland
Distribution	%mol / %vol / other	5 %mol		Currently 6 %mol An evolution of the "Prescriptions Techniques" towards 2% H2 max is foreseen	0.5 %mol	See above/Q.2	≤ 2 %mol	2 %mol				Not defined [11]	
Transmission	%mol / %vol / other			Currently 6% mol (probable evolution to 2%mol)	0.02 %mol (High pressure L_HRL 0.5 %mol (Regional L_HRL [3]	See above/Q.2	≤ 2 %mol	2 %mol					
Is it compulsory/required to monitor hydrogen concentration mixture prior to injection point?													
Yes / No		YES	NO, but for billing purposes it is required that hydrogen is either measured or less than 0.2% (technical PTB G14)	YES, to verify that the H_2 concentration is below the authorized maximum value (6%) and to determine the GCV of the mixture.	Although not legally required, it will be part of the grid connection agreement between producer and TSO/DSO	NO		YES				YES	NO [12]
If the answer to Q2. is **NO:**													
Is it forecast to review the current regulation to consider hydrogen/natural gas mixture injection?													

Questions	Spain	Germany	France	The Netherlands	Czech Republic	Italy	Belgium	Denmark	Slovakia	Sweden	Portugal	Ireland
Yes / No / Not known	-	YES. New draft DVGW-G 260 published in September 2020.	Access to the grid is granted for all renewable & low-carbon gases (including gases containing some hydrogen) through the "Loi d'accélération des énergies renouvelables" published March 10th 2023; a support mechanism "contrat d'expérimentation" is to be launched in September 2023 to support biomethane produced by pyrogasification of biomass or hydrothermal gasification (and later synthetic methane produced through "power-to-methane" process if it is low-carbon gas).	YES [4], there is an initiative to extend the maximum hydrogen content for both transmission as well as distribution grid to 2 mol-% hydrogen.	Additional regulations addressing injection of Hydrogen into the distribution and transmission systems must be developed			This is a possibility that is under consideration within the gas industry and several investigations are presently on-going	NOT KNOWN	NO	YES [11]	UNKNOWN: No planned changes yet, but EU Gas Regulation and revision of EN 16726 may prompt change to the Code to allow upto to 2% H2
Comments/remarks to the hydrogen/natural gas mixture injection into natural gas network:												

Questions	Spain	Germany	France	The Netherlands	Czech Republic	Italy	Belgium	Denmark	Slovakia	Sweden	Portugal	Ireland
	Hydrogen mixtures are considered as non-conventional gases in the regulation. It is foreseen an early updated of the regulation where H_2 concentration allowed will be linked to European regulation or standards	There is not a clear limit value as such. An examination on a case-by-case basis is required. If the grid and the entire infrastructure and applications downstream proof suitable, up to 20% hydrogen will be permitted	In France there are some working groups dedicated to H_2 injection: stakeholders work on the definition and the framing of H_2 injection from a technical and contractual point of view and share a common vision on H_2 roadmaps.	See notes below	We observe European projects outputs focused on Hydrogen injection. We believe the regulation for Hydrogen blending, based on DVGW H2-20 project will be issued soon. We assume that a mixture of up to 20% hydrogen will not have a negative effect on the safety of all gas grids system, including end consumers appliances	-	On Transmission network, injection of any blend between 2 and 100% H2 requires the subscription of a blending service in association with the entry service. The blending service is not offered everywhere on the network (not when there is not sufficient gas available for blending, not when gas can reach an interconnection point).	[6] The regulation stipulates that “the % Volume of H_2 in the distribution grid shall be approved by the safety authorities”. There is no value mentioned in the regulation		In Sweden, there is no current legislation or regulation for handling hydrogen.	See Notes below	

NOTES	
Germany	Up to now the maximum H_2 content is limited by DVGW-code of practice G 262 to below 10 %. However, the new draft DVGW G 260 (which incorporates G 262) will allow up to 20 % hydrogen in the gas, given that the respective grid and all its downstream infrastructure and application are checked and deemed suitable. However, the following limitations remain: • The hydrogen content needs to considered in the Calorific Value measurement; otherwise, its addition is limited to 0,2 % (see PtB code G 14) • In the infrastructure, in particular gas turbines and underground storages are regarded as limiting factors • As CNG stations will dispense the fuel to any vehicle, including those with steel tanks coming under the 2 % limit of UN ECE R 110, CNG stations are a limiting factor.
The Netherlands	**[1]**: In legislation (gas law) the definition of gas contains a requirement that the main constituent is methane and therefore the injection of pure hydrogen is excluded. **[2]**: The TSO is allowed to accept gas with a hydrogen content of < 50 mol-% if it is possible to bring to required exit specification (0,02 mol-%) by blending. Gas with a hydrogen content of ≤ 0,02 mol-% needs to be accepted by the TSO **[3]**: In a closed transmission network conveying refinery gas a hydrogen content of 40 mol-% is allowed **[4]**: Seems to be relevant information although strictly the answer should be No since injection of hydrogen is already allowed
Denmark	**[5]**: BEK nr 230 - Bekendtgørelse om gaskvalitet (21st March 2018): https://www.retsinformation.dk/eli/lta/2018/230 **[6]**: Requirements on H_2 for injection in the natural gas net: H_2 > 98 %vol; C_nH_m < 0,5 %vol (CH_4 equivalent); DP -50 °C at P_{atm}; O_2 < 0,1 %vol; CO_2 < 0,2 %vol; **[7]**: Subject to individual authority approval on case-by-case evaluation (max 2 %vol expected). CH_4 shall be minimum 80 %vol. **[8]**: Rules for Gas Transport, Version 19.0, 1st Oct. 2019: https://en.energinet.dk/-/media/4FD6C9840E694FC9A9BD9251F75A9C01.pdf?la=en&hash=CB49CB8B0D3A0183C583B59BE0D48CC74CE583DD
Portugal	**[9]**: New legislation came out last August (Decreto-Lei n.º 62/2020 of August the 28th) concerning the organization of the gas system (distribution, transport, storage, LNG terminal and renewable, or low carbon content gas producers). It introduces the concept of gas production and gas producer (not existing in previous legislation) and defines general conditions under which DSO/TSO has to accept/receive, inject and distribute/transport produced gas. The document does not focus on technical aspects such as H_2 percentage, effects on the user's appliances, or billing issues. Percentage of H_2 in the distributed/transported gas is to be defined in subsequent regulations. Rising percentage targets are forecasted in the Portuguese Plan for Hydrogen published by the Government at about the same time. **[10]**: Portuguese legislation and subsidiary regulations have no reference to H_2 content. It is up to the TSO to guarantee the quality of the gas, since up to now no gas injection was allowed in the DSO side. The new legislation will change this situation. As far as we know, discussion about technical regulations has not yet stated. Historically no H_2 was ever reported by the TSO as part of Natural Gas composition. More than 80% of the consumption comes from LNG, which will not have any H_2 anyway. **[11]**: The new legislation, Plan for Hydrogen and other documents or positions from the Portuguese Government points to establishing objectives of H_2 percentage in the distributed gas. Objectives will increase along time. No technical details or concerns are discussed in these documents, or positions, but DSOs are aware of the issues the injection of H_2 will bring along. DSO are ready to participate in the preparation of the regulations that will support operations and practices in the future.
Ireland	**[12]:** Most installed gas chromatographs use TCD technology and cannot measure H2, is monitored through monthly sample taken at system Entry Points.

Quality of biomethane required in European countries for injecting into natural gas grid

Update

February 2024

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ABOUT MARCOGAZ

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DISCLAIMER

1. Background

Biomethane plays a key role in the decarbonisation of the natural gas chain, nevertheless with the exception of some countries its share of the natural gas market is still moderate, although growing.

Biomethane is, in principle, a gas interchangeable with natural gas.

MARCOGAZ started some years ago to collect information about the quality required for bio-methane to be injected into natural gas networks in different European countries, in order to allow a comparison of the different National approaches.

To set natural gas quality parameters is a right of each Europen country and each one has a different approach:

- National regulation
- Standards
- Gas company requirements with specific contracts with the biomethane producer
- Other

This document is an update of the document published in 2019 and available on MARCOGAZ website[1]. Main changes are:

- Collect information for 14 European countries, 2 more than in the previous version.
- Changes in the quality parameter requirements in some countries.

[1] https://www.marcogaz.org/wp-content/uploads/2021/04/WG_GQ-187.pdf

	FR	NL[4]	ES	SE	DE	CH	AT	IT	DK	GB[2]	BE[17]	CZ	PL	IE
GCV (kWh/m³)	9.5 – 10.5 (L) 10.7 – 12.8 (H)		10.23 - 13.23		8.4-13.1	10.7 – 13.1	9.9-12.8	9.71-12.58			10.8 – 12.77	Value ± 1% of average GCV in gas network for last month at the place of injection (general range for gas network is 9.4-11.8)	> 10.55	10.25 - 11.75[7]
WI (kWh/m³)	12.5 – 13.06 (L) 13.64 – 15.70 (H)	43.46 - 44.41 MJ/m³	13.368-16.016		11.0 – 13.0 (L) 13.6 – 15.7 (H)	13.3 – 15.7	13.5 - 15.5	13.14 - 14.54	14.1 - 15.5	13.82 - 15.05	14.49 – 15.05		12.5 – 15.8	13.11 - 14.28[7]
Relative density	0.555 - 0.70		0.555 - 0.70	0.555 - 0.70	0.55 - 0.75	0.55 – 0.70		0.555 - 0.7	0.555 - 0.7		-		0.555 - 0.7	N/A[8]

	FR	NL[4]	ES	SE	DE	CH	AT	IT	DK	GB[2]	BE[17]	CZ	PL	IE
Reference conditions: Combustion / volume	0ºC / 0°C, 101.325 kPa	25ºC / 0 ºC, 101.325 kPa	0ºC / 0 ºC, 101.325 kPa	15ºC / 15 ºC, 103.25 kPa	25ºC / 0 ºC, 101.325 kPa	?	?	15ºC / 15 ºC, 101.325 kPa	25ºC / 0 ºC, 101.325 kPa	15ºC / 15 ºC, 101.325 kPa	25ºC / 0 ºC, 101.325 kPa	15ºC / 15 ºC, 101,325 kPa	25ºC / 0 ºC, 101.325 kPa	15ºC / 15 ºC, 101,325 kPa
GCV[5] (MJ/m3, 15/15)	32.4 – 35.9 (L) 36.5 – 43.7 (H)		34.8 – 45.1		28.7 – 44.7	38.5 – 47.2[6]	32.4 – 46.1[6]	35.0 – 45.3				33.8 – 42.5		36.90 - 42.30
IW[5] (MJ/m3, 15/15	42.7 – 44.6 (L) 46.6 – 53.6 (H)	41.23 – 42.13	45.5 – 54.5		37.6 – 44.4 (L) 46.4 – 53.6 (H)	47.9 – 56.5[6]	48.6 – 55.8[6]	47.3 – 52.3	48.2 – 52.9	49.8 – 54.18				47.20 - 51.41[9]
Water dew point (°C at 70 bar abs)	< -5 At MOP	≤ -8 (High pressure L - HTL) ≤ -8 (Regional L – RTL) ≤ -10 at 8 bar abs (Distribution L – RNB)	< 2	≤ -8			< -8	≤ -5	-8	<-10 for MOP < 7 barg < -10 at MOP	-8	≤ -7 (40 bar)	1 April – 30 Sep <+3.7°C; 1 Oct – 31 March < -5.0°C; at 5.5 MPa	N/A

	FR	NL[4]	ES	SE	DE	CH	AT	IT	DK	GB[2]	BE[17]	CZ	PL	IE
Water (mg/m^3)				< 32	< 50 (MOP > 10bar) < 200 (MOP <10 bar)	< 60					-			≤ 50.0
HC dew point (°C at 1-70 bar abs)	< -2	≤ 80 (mg/m3(n) at 3ºC	<5	≤ -2	< -2		<0	≤0	-2	<-2	-2	<0		≤ -2.0

Total Sulfur (mgS/m^3)	< 30	≤ 5.5 (≤ 20) (High pressure L – HTL) (before odorization) ≤ 5.5 (≤ 20) (Regional L – RTL) (before odorization) ≤ 5.5 (≤ 20) (Distribution L – RNB) (before odorization) ≤15.5 (<31) (Regional L – RTL) (after odorization) ≤15.5 (<31) (Distribut	< 50	≤ 20 (without odorant) ≤ 30 (with odorant)	< 6 < 8 (after odorization)	< 30	<1 20	≤ 20 (without odorization)	< 30	< 50	When the gas can reach an Interconnection Point: < 20, without odorant When the gas cannot reach an Interconnection Point: < 20, without odorant < 30, with odorant	< 30	< 40	≤ 50.0

	FR	NL[4]	ES	SE	DE	CH	AT	IT	DK	GB[2]	BE[17]	CZ	PL	IE
		ion L – RNB) (after odorization)												
Mercaptan sulfur (mgS/m^3)	< 6	≤ 6		≤ 6 (without odorant)	< 6			< 6			< 6		< 16	
Mercaptanes (mgS/m^3)			< 17				< 16.9		< 6					
H2S + COS (mgS/m^3)	< 5	≤ 5	< 15		< 5		< 6.8		< 5		< 5			
H_2S (mgS/m^3)				≤ 5		< 5		≤ 5		≤ 5		≤ 5	< 7	≤ 5.0
CO_2 (% Mol)	< 2.5 (Exemptions exist for the DSO system: up to 3,5% (H gas) / up to 11,7% (L gas))	≤3 (High pressure L - HTL) ≤10.3 (Regional L – RTL) ≤10.3 (Distribution L – RNB)	< 2.5	≤ 4	< 10 L-gas* < 5 H-gas*	< 4	<2	≤ 2.5	<2.5 transmission <3 distribution	<2.5	2.5	≤ 3 Transmission ≤ 5 distribution	< 3	≤ 2.5[10, 11]
N2+CO2 (% Mol)											-			

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	FR	NL[4]	ES	SE	DE	CH	AT	IT	DK	GB[2]	BE[17]	CZ	PL	IE
O_2 (% Mol)	0.01 (exemption: up to 0.7% in the transmission grid / up to 0,75% in the distribution grid/ exemption up to 0,4% in the distribution grid for new projects > 2023)	≤0.0005 (High pressure L - HTL) ≤0.5 (Regional L – RTL) ≤0.5 (Distribution L – RNB)	<0,3 in transmission grid < 1 in distribution grid[1]	≤ 1	< 0.001 (MOP > 16bar) < 3 (MOP <16 bar)	< 0.5	< 0.02	≤ 0.6	< 0.5	< 0.2 < 1 for MOP< 38 bar	When the gas can reach an Interconnection Point: 0.001, 0.01, 0.1 depending on location When the gas cannot reach an Interconnection Point: 0.5	≤ 0.02 Transmission ≤ 0.5 distribution	< 0.5	<0.2 on transmission grid < 1.0 on distribution grid[12]
Hg (µg/m³)	< 1		< 1								1		< 30	N/A
Cl (mg/m³)	< 1	≤ 5	< 1	Acc. to CEN/TR (WI 00408007)				< 1		≤ 1.5[3]	1		<1	N/A[13]

	FR	NL[4]	ES	SE	DE	CH	AT	IT	DK	GB[2]	BE[17]	CZ	PL	IE
F (mg/m^3)	< 10	≤ 5	< 10	Acc. to CEN/TR (WI 00408007)		< 1		< 3		≤ 5^3	10		< 10	N/A[13]
Halogenures (mg/m^3)										< 1.5		≤ 1.5		N/A[13]
H_2 (% Mol)	< 6	≤0.02 (High pressure L - HTL) ≤0.5 (Regional L – RTL) ≤0.5 (Distribution L – RNB)	< 5	≤ 2	< 2**	< 5		≤ 1		< 0.1	When the gas can reach an Interconnection Point: 0 When the gas cannot reach an Interconnection Point: 2	≤ 0.01 Transmission ≤ 0.1 distribution	< 2	≤ 0.1
NH_3 (mg/m^3)	< 3		<3	≤ 10	Technically free*			≤ 10	< 3	≤ 20^3	10		< 2	≤ 10.0[14]
Amines				≤ 10 (mg/m3)	Technically free*			≤ 10			10			≤ 10.0[14]

	FR	NL[4]	ES	SE	DE	CH	AT	IT	DK	GB[2]	BE[17]	CZ	PL	IE
CO (% Mol)	< 2	≤2900 mg/m3	< 2	≤ 0.1				≤ 0.1			0.1		< 0.1	≤ 0.1[14]
Cyanides (HCN) ppm														N/A
BTX (mg/m³)			< 500							≤ 100[3] (Xilene)	500 ppm	≤ 10		N/A
Siloxanes (mg/m³)		<0.1 as Si		≤ 0.3 as Si	< 5*		< 10	≤ 1	< 1	≤ 0.5 as Si	1	≤ 5	< 0.3 as Si	≤ 0.3[14]
Impurities (mg/m³)	Gas that can be transported, stored and marketed without undergoing further treatment		Technically free	Technically free	Technically free	Technically free					-			N/A[15]

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	FR	NL[4]	ES	SE	DE	CH	AT	IT	DK	GB[2]	BE[17]	CZ	PL	IE
Dust (mg/m3)		≤ 100 Size > 5µm	Technically free	Technically free	Technically free			Technically free			5 µm	≤ 3 µm Transmission ≤ 5 µm distribution	< 1 Size > 10 µm	N/A[15]
Methane			≥ 90		>90 Mol-% (L)* >95 Mol-% (H)*							≥ 95		N/A
Propane											3	≤ 3		N/A
Methane number				≥ 65										N/A
Injection temperature	5 – 35 ºC	5-30 ºC (High pressure L - HTL) 5-30 ºC (Regional L – RTL) 5-20 ºC (DistributioN L – RNB)									2 – 38 ºC	0-40 ºC (High pressure) 0-20 ºC (low pressure <0,4MPa)		1 – 38 ºC

Standard / Reference	GRTgaz Contrat relatif au raccordement d'une installation de production de biométhane et d'injection de biométhane dans le réseau de transport de gaz naturel, conditions générales, version du 13 janvier 2022 GRDF, Prescriptions techniqu	ISO 6326 ISO 6327 ISO 6570 ISO 6974 ISO 6976 ISO 15970 Richtigne n R-16-46, 18/08/20 16	Protocol o de Detalle PD-01 “Medició n, Calidad y Odorizaci ón de Gas”	EN 16726 EN 16723-1 EN 16723-2	DVGW G260 *DVGW G262 ** DIN 51624			UNI TR 11537		Gas Safety (Manage ment) Regulatio n, 1996 Network Entry Agreeme nts	EN16726 EN16723 -1	459/201 2 Sb. (national law) TPG 902 02 Technical rules for gas industry	Regulatio n of the Minister (national law)[18]	Code of operatio n CSA + EN16726 -1[16]

	FR	NL[4]	ES	SE	DE	CH	AT	IT	DK	GB[2]	BE[17]	CZ	PL	IE
	es du distributeur GRDF, April 2017													
Update at	January 2024	March 2018	January 2024	January 2019	March 2018			January 2024	March 2018	March 2018	January 2024	April 2018	January 2024	January 2024

Footnotes:

[1] < whenever that: CO_2 < 2% mol, water dew point < -8ºC, biomethane flow in transmission pipelines< 5.000 m^3/h.

[2] additional requirements for other parameters not included in the table.

[3] for biomethane derived from waste, biomethane has to comply with the UK Environment Agency's End-of-Waste Quality Protocol.

[4] at date of emission of this table, biomethane has been injected only in L gas network, although there is regulation for doing it on H gas network.

[5] properties calculated at reference condition 15ºC/ 15 ºC, 103.25 kPa, using ISO 13443:2006 Annex A conversion factors. Rounded to 1 decimal.

[6] Due to lack of information on reference condition, direct transformation from kWh to MJ done.

[7] Derived by dividing the equivalent MJ/m^3 value (at standard reference conditions) by 3.6.

[8] Currently no Relative Density (RD) limit, but there is a Code Modification proposal to introduce a RD ≤ 0.7.

[9] There is currently a Code Modification proposal to reduce the lower WI limit from 47.2 to 46.5 MJ/m^3.

[10] The CO_2 limit of 2.5% mol may be exceeded provided total inert gases (including CO2) < 8% mol.

[11] There may be additional CO_2 limits set on biomethane production plants in their Connected System Agreement (CSA) for that site.

[12] There is currently a Code Modification proposal to increase the O_2 limit on the TX system from 0.2 to 0.5% mol.

[13] There are no specific limits for Cl and F, but there is an overall limit for Organo-Halides < 1.50 mg/m^3.

[14] Additional requirements for biomethane producers in their Connected System Agreements (CSA) based on EN 16723-1.

[15] No specific limit for dust and impurities, but requirement to be technically free of dust and impurities per BS 3156 11.0 (1998).

[16] The gas quality specification is appended to the Code of Operations - which sets out the terms and conditions for the use of the GNI TX and DX system, plus additional requirements for biomethane producers in their Connected System Agreement (CSA) based on EN-16723-1.

[17] Quality values required by contracts in some in Belgium for decentralized injection of new gases (biomethane, synthetic methane, industrial rest gas, …) into natural gas network.

[18] Polish Regulation of the Minister:

1. Regulation of the Minister of Economy of July 2, 2010 on detailed conditions for the operation of the gas system – consolidated text issue (published: Journal of Laws of 2018, item 1158); Quality requirements are set-up in Paragraph 38, page 10.
2. Regulation of the Minister of Energy of September 21, 2018 amending the regulation on detailed conditions for the operation of the gas system (published: Journal of Laws of 2018 item 1814); This document does not change requirements regarding gas quality.
3. Regulation of the Minister of Climate and Evironment of August 6, 2022 amending the regulation on detailed conditions for the operation of the gas system (published: Journal of Laws of 2022 item 1899); Updated quality requirements are given in Paragraph 2, Subsection 18), page 4.

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VII. MARCOSTAT Calls

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MARCOSTAT Calls status overview

Manuel Coxe – Secretary General

MARCOGAZ – Executive Board meeting – 13 March 2023

MARCOSTAT Calls for data overview (1/4)

- CALL#2: Natural Gas Odorization Practices in Europe – **Closed** – Report is available here

Countries/members that provided data	Countries/members that did not contribute
AT, BE, CZ, DK, FR, DE, IT, IE, NL, PL, PT, SK, ES, SE, UK	FI, GR, RO, CH, UA

- CALL#3: Occupational Health and Safety Performance of the European Gas Industry – **Closed**

Countries/members that provided data	Countries/members that have not contributed yet
BE, FR, PT, SK, ES, IT, NL, CH (no data), AT (no data), PL, UK, DE(no data)	CZ, DK, FI, GR, IE, RO, SE, UA

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MARCOSTAT Calls for data overview (2/4)

- CALL#4: EGAS B new report on Gas Distribution Safety (2020 to 2022) – **Closed**

Countries/members that provided data	Countries/members that did not contribute
AT, BE, CZ, IE, FR, DE, GR, IT, NL, PL, PT, RO, SK, ES, SE (no data available)	DK, FI, CH, UA, UK

- CALL#5: EGAS C report on Gas Installations Safety (2020 to 2022) – **Closed**

Countries/members that provided data	Countries/members that have not contributed yet
IT, NL, PL, DE, DK, CZ, BE (no data available), ES, AT, CH, SE, SK	IE, GR, FR, PT, RO, FI, UA, UK

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MARCOSTAT Calls for data overview (3/4)

- CALL#6: Customer Experience Metrics (2022) – **Closed**

Countries/members that answered	Countries/members that have not contributed yet
DK, NL, SE, IE, IT (no data), PT (no data), CZ, FR, ES, PL, DE, BE (no data), AT, CH, SK (EUSTREAM, Distributocia, Nafta)	GR, RO, FI, UA, UK

- CALL#7: Data collection on new molecules in LNG terminals – **Closed**

Countries/members that answered	Countries/members that have not contributed yet
FR, SK (no data), CH(no data), IT(no data), NL (no data), CZ (no data), DK (no data), AT (no data), BE, DE	GR, PT, RO, FI, UA, UK, ES, PL, SE, IE

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MARCOSTAT Calls for data overview (4/4)

- CALL#8: SCOPE 3 project for DSOs and TSOs – **Closed**

Countries/members that answered	Countries/members that have not contributed yet
IE, NL, UK, DE, FR, CZ, DK (Evida, Energinet), ES (Nedgia, Redexis, Madrilena Red de Gas, Enagas), PL, IT (Snam),	GR, AT, RO, SK, FI, CH, UA, BE, SE, PT

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VIII. Administration and Secretariat

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Administration

Manuel Coxe - Secretary General

Executive Board Meeting of 13 March 2023

I – State of Budget of 2024 as of 01/03/2024

	Approved Budget (15/12/2022)	Received / Paid (as of 01/03/2024)	Expected (by 31/12/2024)	TOTAL Projection
INCOME	€ 648 (000)	€ 121 (000) Membership € 19 (000) Bank Interest	€ 507 (000) Membership € 10 (000) Bank Interest	€ 657 (000)
EXPENSES	€ - 683 (000)	€ - 79 (000)	€ - 604 (000)	€ - 683 (000)
PROFIT/LOSS	€ - 35 (000)	€ 61 (000)	€ - 87 (000)	€ - 26 (000)

AMOUNT AVAILABLE AT BANK (€ 1 420 000):

€ 174 (000) AT CURRENT ACCOUNTS
€ 126 (000) AT FLEXIBLE DEPOSIT
€ 1 120 (000) AT FIXED TERM DEPOSIT (3M & 12M)

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II – Situation of Accounts 2023

- BST was appointed as new auditor. Audit of the accounts is planned for March 2024.
- We received € 6 (000) in 2023 and € 19 (000) in 2024 on bank interests as result of the fixed deposits that were performed in the course of 2023.
- DISTRIGAZ SUD RETELE (Romania) paid 50% of the annual fee of 2023 and has an outstanding payment of another 50%, not paid until the end of 2023 despite several reminders send by the Secretariat.
  - The invoice for 2024 was issued and sent (it was not settled by the deadline).
  - **NOTE:** in 2021, MARCOGAZ General Assembly agreed to disregard non-paid membership fees of two years for DISTRIGAZ SUD RETELE (€35700), that had remained as unpaid for several years in the hope that with that gesture it would be committed to comply with its obligations from there on and the situation seem to be repeating.

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IX. Communications & Liaisons

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Technical Association of the European Gas Industry

EU Affairs

Manuel COXE, Secretary General

Executive Board Meeting - 13 March 2024

Report from the European Commission on gas storage Regulation 2017/1938

REPORT FROM THE COMMISSION on certain aspects concerning gas storage based on Regulation (EU) 2017/1938

- Overview of time needed for certification procedure. From 59 total storage operators (135 sites): 22 draft notifications (52 sites) have been notified and 37 (from 38 sites) are pending.
- Based on ENTSOG outlook analysis, the EU should reach 45% gas storage in May 2024 to facilitate storage refilling. Not reaching the target could risk not meeting the 90% storage target for 1 November 2024.
- Conclusions: In 2023 all the objectives of the Storage Regulation have been met and it has strengthened security of supply in winter 2023/24. Storage target was met mid-August (90%) and on November 1st, storage levels were over 99%. The average level was over 85%.

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Commission Proposal on gas demand-reduction measures

Commission Proposal for a COUNCIL RECOMMENDATION on continuing coordinated demand-reduction measures for gas

COMMISSION REPORT review on the functioning of Regulation (EU) 2022/1369 on coordinated gas demand

- The European Commission proposal is supported by a report that presents possible scenarios. The conclusion of the report is that even if security of supply (reduction of 15% in demand) has increased, the situation is still fragile due to tight global gas markets (probably until 2026) until LNG capacity comes online and other possible supply disruptions.
- Demand reduction has contributed to close out 65bcm of Russian gas in 2023.
- The European Commission proposes to the Council to keep including measures that will reduce MSs demand to ensure storage filling for 2024/25 in the case of disruptions.
- The proposal also mentions that MSs (with exceptions) are recommended to monitor implementation of demand reduction, inform the Commission (Regulation (EU) 2022/1369) and their gas demand should be 15% lower compared to its reference gas consumption.

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Communications & Strategy

Manuel COXE, Secretary General

Executive Board Meeting - 13 March 2024

Review of the Organization Structure

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Why?

- Over the last years, we have received feedback from members about the areas of interest that we need to focus on: renewable and low carbon gases, methane emissions, carbon capture and storage and efficient and safe use of gases.
- Although most of working groups have delivered great work, we have noticed few working groups straggling to find the right people for leadership and to identify relevant topics that need to be addressed to create impact.
- Shortage of experts with high understanding of hydrogen, biomethane, synthetic gases and carbon capture and storage technical specificities.

What?

- The members of Coordination Group (President, Vice-President, Secretary general and the Chairs of the Standing Committees) have discussed the need and understood that to efficiently serve the interests of the members of MARCOGAZ, we do need to rethink on how we do organize ourselves.
- The Secretary General is starting to collect relevant information and will make a proposal to the Coordination group for early-stage discussion and if recommended, the proposal will be presented to the Executive Board.
- There is no urgency on this matter, however the quicker we do it the better.

Stakeholders Engagement

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Liaisons (1/2)

- The Secretariat held a meeting with the European Biogas Association (EBA), Gas Infrastructure Europe (GIE) and European Heating Industry (EHI) and exchanged views with Eurogas on how to strengthen our collaboration:
  - Eurogas and MARCOGAZ will continue to participate reciprocally in relevant working groups of the two associations – representation preferably with personnel from secretariats.
  - EBA and MARCOGAZ will start to participate reciprocally in relevant working groups of the two associations – representation preferably with personnel from secretariats. MARCOGAZ will as well be joining the Biomethane Industrial Partnership.
  - GIE and EHI have shown preference that the collaboration between the two associations should be on ad hoc basis, whenever a topic of common interest for both associations is identified.

Liaisons (2/2)

- The Secretariat will hold a meeting with Energy Community's Secretariat to discuss on the next steps following the decline in the organization of joint MARCOGAZ-GIE-Energy Community Methane Mondays. MARCOGAZ will explore extending the scope of cooperation with Energy Community.
- The Secretariat is creating a database of Single Point of Contact relevant to MARCOGAZ for communications and liaisons, in order to facilitate the work of the association when liaising with other associations, partners and stakeholders, and in particular the communication officers of the Members.
- The next Madrid Forum will take place on 25-26 April 2024 in Madrid.

Communications

Communications (1/2)

- The Annual Report 2022-2023 was published on 1st March 2024, and it will be disseminated during the following 2 years.
- The representatives of the WG Odorisation and SC Gas Infrastructure have defined the topics for the next Tech Forum based on the latest publications on odorisation, inviting speakers to discuss standardisation, measurement of odorisation as well as odorant supplies. The event will take place either on 16 May or on 30 May, depending on the availability of the speakers being contacted. The timetable will be from 11:00AM to 12:30PM.
- The registrations for the participation to EGATEC are open and the event is looking for sponsors among the Members of the organisers, hosts and supporters.

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Communications (2/2)

- MARCOGAZ website is being checked, updated and in the process of improvement.

  MARCOGAZ Chairs of Standing Committees and Working Groups were involved in giving feedback on their respective SC/WG page on the website.

- The following are relevant events where MARCOGAZ participates as speaker:
  - World Electrolysis Congress (Dusseldorf)
  - United Nations Economic Commission for Europe event on methane emissions and hydrogen (Geneva)
  - Sustainable Aviation Futures (Amsterdam)
- MARCOGAZ is willing to enhance its engagement and participation in its Members' events.

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X. Dates of the next meetings

Dates of Next Meetings/Events

17 June 2024:	Executive Board Meeting in Hamburg
17 June 2024:	General Assembly in Hamburg
	Welcome dinner (jointly with EGATEC 2024)
18-19 June 2024:	EGATEC 2024 in Hamburg

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XI. AOB

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