European Association of the Manufacturers of Gas Meters, Gas Pressure Regulators and Associated Safety Devices and Stations

FARECOGAZ Overall Objectives

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FARECOGAZ | Marienburger Straße, 15 | D-50968 Köln
Phone +49 221 37668 57 | Fax +49 221 37668 60
WEB site: https://www.farecogaz.eu/

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1   Business Framework and Role of FARECOGAZ

Overview of FARECOGAZ Business Framework ➔ [Smart] Gas Infrastructure inside the integrated [Smart] Energy System
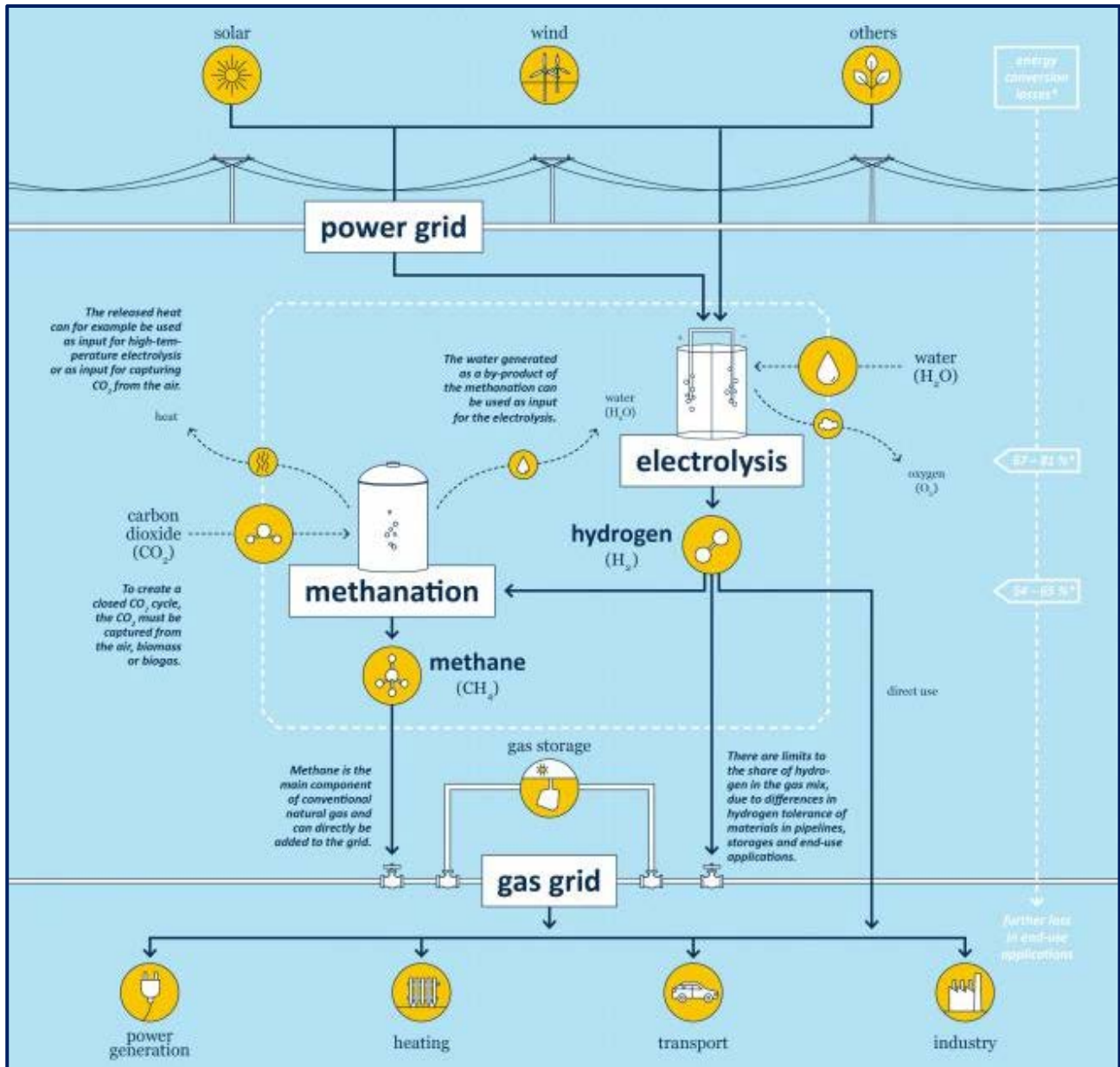
Role of FARECOGAZ:

- To be one of the key players in the European Fuel Gas Domain, together with MARCOGAZ (Technical Association of the European Gas Industry) as most important partner organization;
- To be a stakeholder of Green& Digital Transition as key opportunity and challenge in business development in the framework of European Industrial Strategy;

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- To drive the definition and to promote key functional elements in the Gas Infrastructure and high added value services;
- To be embedded and to collaborate with European Commission, CEN, ISO, Metrology, Regulatory Authorities and Market Associations;
- To serve the customer segments: Gas Transportation, Storage & Gas Distribution for Pipeline Operators (TSO/DSO), Industry, Stations Builders.

2   Framework

2.1   Background

Ref. : Relevant Commission priorities for 2019-24
https://ec.europa.eu/info/strategy/priorities-2019-2024_en

– A European Green Deal
https://ec.europa.eu/info/strategy/priorities-2019-2024/european-green-deal_en

– A Europe fit for the Digital Age
https://ec.europa.eu/info/strategy/priorities-2019-2024/europe-fit-digital-age_en

FARECOGAZ Overall Objectives are located inside the European Framework with reference to:

a. **European Industrial Strategy** for a globally competitive, Green and Digital Europe →
    — Green Transition
    — Digital Transition

Europe needs industry to become greener, more sustainable and more digital while remaining competitive on the global level. These three drivers will transform our industry, support our Small and Medium-sized Enterprises (SMEs) and keep Europe sustainable and competitive.

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b. Relevant topics in the European legislative framework
  — **Single Market**
  — **Environment**
  — **Energy**

Single Market:
A European approach to digital transformation means empowering and including every citizen, strengthening the potential of every business and meeting global challenges with our core values.
  – Shaping Europe's digital future https://ec.europa.eu/digital-single-market/en & https://digital-strategy.ec.europa.eu/en

**Environment:** https://ec.europa.eu/info/energy-climate-change-environment_en
EU policy protects the environment and seeks to minimise risks to climate, human health and biodiversity. The **European Green Deal** aims to make Europe the world's first climate-neutral continent, in part by developing cleaner sources of energy and green technologies.
– A European Green Deal: https://ec.europa.eu/info/strategy/priorities-2019-2024/european-green-deal_en
– Climate Strategies & Targets https://ec.europa.eu/clima/policies/strategies_en

Energy: https://ec.europa.eu/energy/topics_en
– Energy Strategy: https://ec.europa.eu/energy/topics/energy-strategy-and-energy-union_en
  ✓ Clean energy for all Europeans package: https://ec.europa.eu/energy/topics/energy-strategy/clean-energy-all-europeans_en
  ✓ 2050 long-term strategies: https://ec.europa.eu/info/energy-climate-change-environment/implementation-eu-countries/energy-and-climate-governance-and-reporting/national-long-term-strategies_en

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– Energy Efficiency: https://ec.europa.eu/energy/topics/energy-efficiency_en
  ✓ Energy efficiency – targets, directive and rules:
    https://ec.europa.eu/energy/topics/energy-efficiency/targets-directive-and-rules_en
– Renewable Energy: https://ec.europa.eu/energy/topics/renewable-energy_en
  ✓ Renewable energy directive: https://ec.europa.eu/energy/topics/renewable-energy/renewable-energy-directive_en
  ✓ National renewable energy action plans 2020:
    https://ec.europa.eu/energy/topics/renewable-energy/national-renewable-energy-action-plans-2020_en
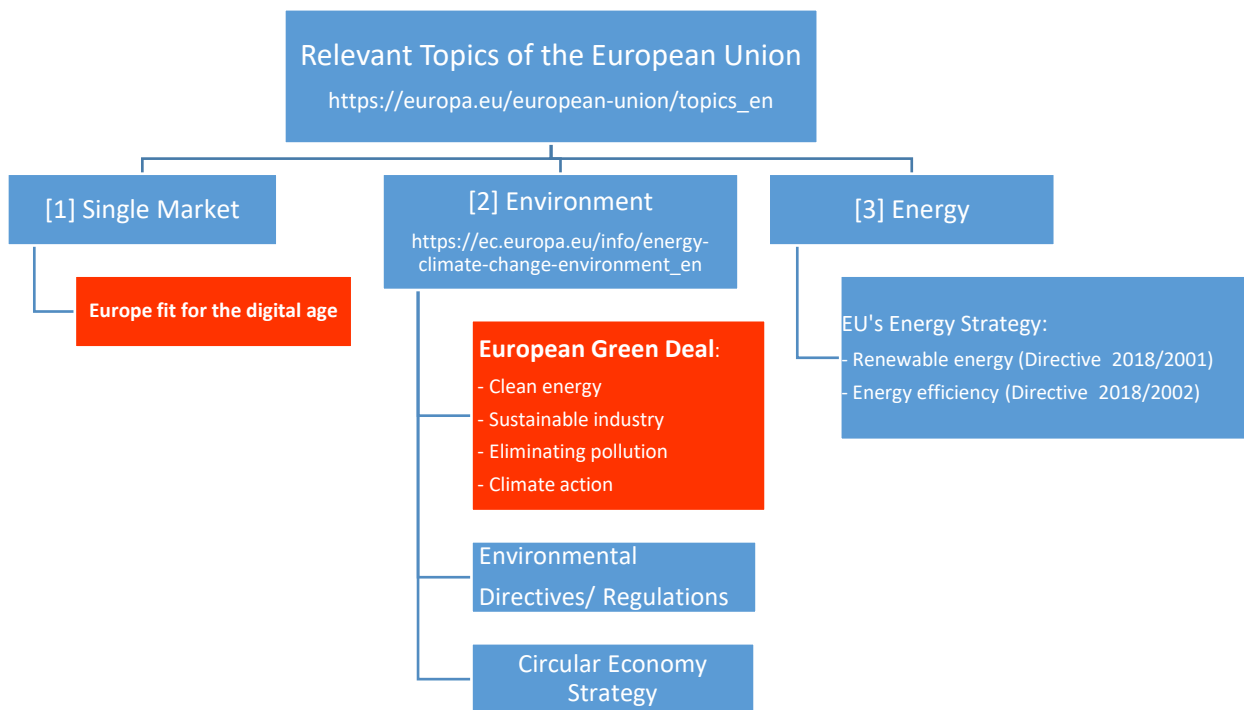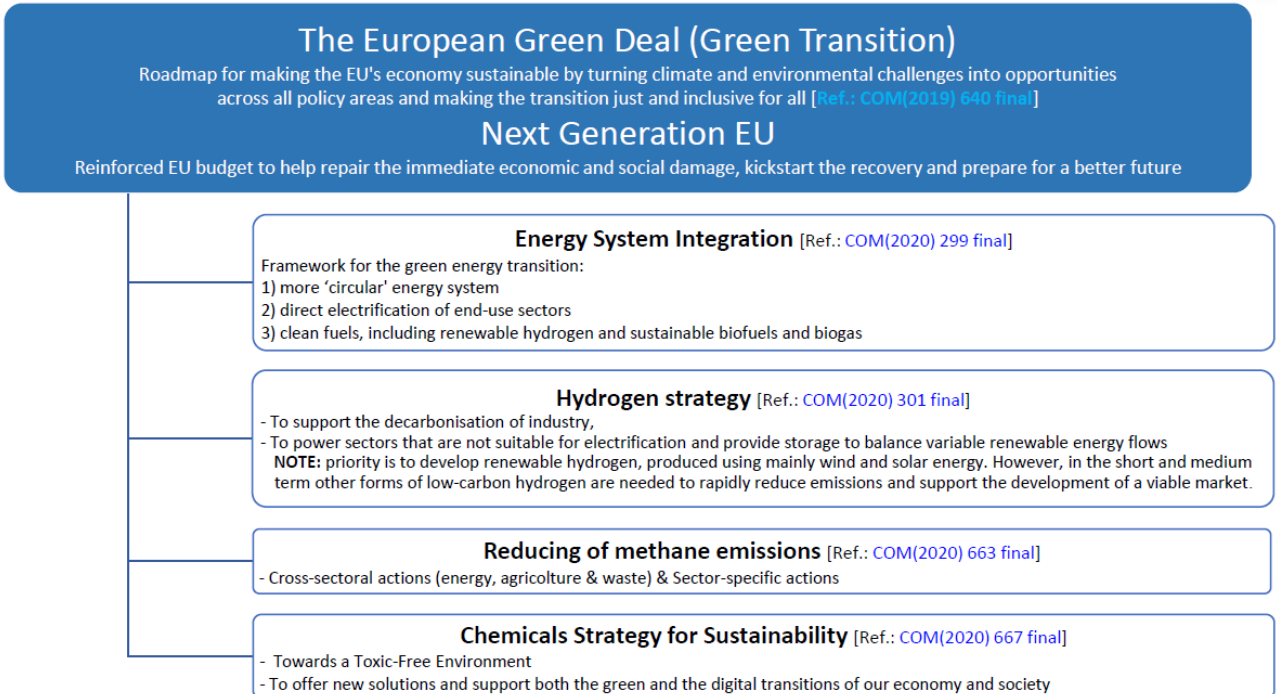

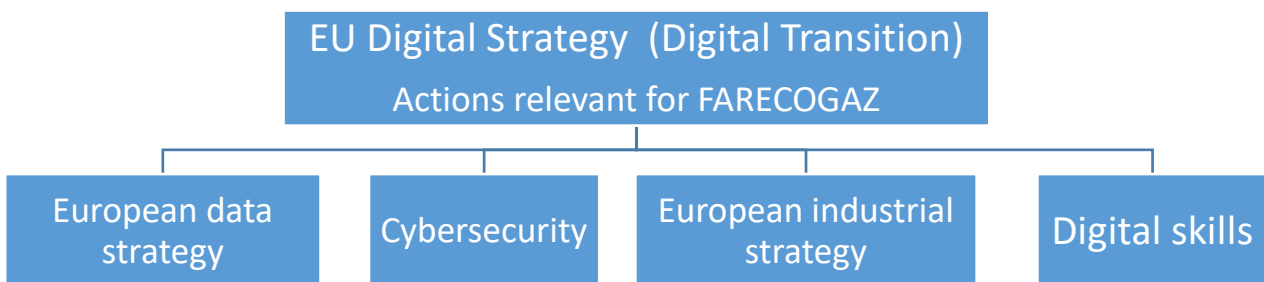European Commission **priorities** for 2019-24

1. A **European Green Deal** → Europe aims to be the first climate-neutral continent by becoming a modern, resource-efficient economy.
2. A **Europe fit for the Digital Age** → The EU's digital strategy will empower people with a new generation of technologies.

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Actions

❖ Green Transition

The European Green Deal (Green Transition)
Roadmap for making the EU's economy sustainable by turning climate and environmental challenges into opportunities across all policy areas and making the transition just and inclusive for all [Ref.: COM(2019) 640 final]

Next Generation EU
Reinforced EU budget to help repair the immediate economic and social damage, kickstart the recovery and prepare for a better future

Energy System Integration [Ref.: COM(2020) 299 final]
Framework for the green energy transition:
1) more 'circular' energy system
2) direct electrification of end-use sectors
3) clean fuels, including renewable hydrogen and sustainable biofuels and biogas

Hydrogen strategy [Ref.: COM(2020) 301 final]
- To support the decarbonisation of industry,
- To power sectors that are not suitable for electrification and provide storage to balance variable renewable energy flows
  NOTE: priority is to develop renewable hydrogen, produced using mainly wind and solar energy. However, in the short and medium term other forms of low-carbon hydrogen are needed to rapidly reduce emissions and support the development of a viable market.

Reducing of methane emissions [Ref.: COM(2020) 663 final]
- Cross-sectoral actions (energy, agricolture & waste) & Sector-specific actions

Chemicals Strategy for Sustainability [Ref.: COM(2020) 667 final]
- Towards a Toxic-Free Environment
- To offer new solutions and support both the green and the digital transitions of our economy and society

❖ Digital Transition

EU Digital Strategy (Digital Transition)
Actions relevant for FARECOGAZ

| European data strategy | Cybersecurity | European industrial strategy | Digital skills |

Key EU Mandates to CEN:

– M441 Smart Metering
– M475 Biomethane for use in transport and injection in gas pipelines
– M478 Standardization mandate in the field of greenhouse gas emissions
– M490 to support European Smart Grid deployment
– M495 to support Eco-design and Labeling
– M526 Implementation of the EU Strategy on Adaptation to Climate Change

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‒ M533 Implementation of the Directive 2014/94/EU on the deployment of alternative fuels infrastructure
‒ M543 Ecodesign requirements on material efficiency aspects for energy-related products
‒ M548 to promote the creation of a Digital Single Market for the European Union.

2.2   EU Energy & Climate Targets

The EU has set itself energy and climate targets for 2030 and 2050.
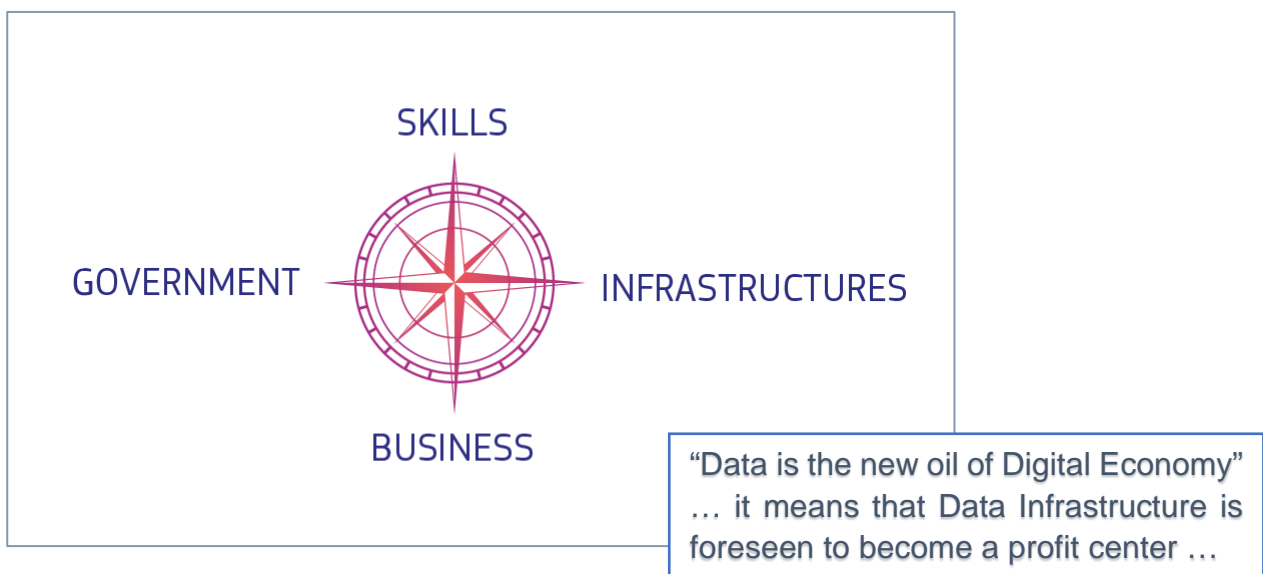
Key targets for 2030:

- ✓ At least 40% cuts in greenhouse gas emissions (from 1990 levels)
- ✓ Cut carbon emissions to 55% of 1990 levels
- ✓ At least 32% share for renewable energy
- ✓ At least 32.5% improvement in energy efficiency

2050 long-term strategy

The EU aims to be climate-neutral by 2050 – an economy with net-zero greenhouse gas emissions. This objective is at the heart of the European Green Deal and in line with the EU's commitment to global climate action under the Paris Agreement.

2.3   EU Digital Transition Targets

On 9 March 2021, the Commission presented a vision and avenues for Europe's digital transformation by 2030. This vision for the EU's digital decade evolves around four cardinal points:

"Data is the new oil of Digital Economy" … it means that Data Infrastructure is foreseen to become a profit center …

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In particular:

− **Digital transformation of businesses** → Tech up-take: 75% of EU companies using Cloud/AI/Big Data.
Innovators: grow scale ups & finance to double EU Unicorns
Late adopters: more than 90% of SMEs reach at least a basic level of digital intensity

− **Skills** → ICT Specialists: 20 millions + Gender convergence
Basic Digital Skills: min 80% of population

2.4 FARECOGAZ Mission

✓ FARECOGAZ to keep on being a key player of Gas Industry;
✓ FARECOGAZ to support transition to a smarter and cleaner energy future of fuel gases (natural gas, biomethane, substitute natural gas-SNG, hydrogen fuel gas, fuel gas mixtures, etc.);
✓ FARECOGAZ to co-operate among all Key Players & Associations to achieve EU Energy, Digital & Climate targets;
✓ FARECOGAZ to have a pro-active role in this framework to support standardization activities at National, European and Global level to have all FARECOGAZ Members coordinated & at the same page on items concerning Gas Infrastructures.

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3 Goals

3.1 Overall (long term) goal

FARECOGAZ, like key player of Gas Industry, has the overall goal to be:

Pro-active in the green & digital transitions to a smarter and cleaner energy future by technical solutions for future role of gas

- Representing the manufacturers of fiscal metering, control equipment, systems and stations for the gas industry in Europe;
- Encouraging a Global and European approach: function & role as strategy group;
- Promoting co-operation with public institutions and their services, technical bodies and other key players (EU Commission, CEN, ISO, SFG-I & U, WELMEC, MARCOGAZ, …);
- Supporting energy supply infrastructure with safe, reliable and efficient equipment as long term assets in Europe and worldwide;
- Assisting other regions with best practice from Europe supported by FARECOGAZ;
- Welcoming the gas quality innovations to create sustainable solutions for Smart Gas Grids overcoming current limitations;
- Offering expertise to achieve the clarity of gas quality for the next decades;
- Supporting our partners with assessment of corresponding technical and legal aspects.

3.2 Short term goals

"One Voice of the Gas Industry"

- Coordination and closer technical cooperation with MARCOGAZ;
- Focus FARECOGAZ on impact of fuel gas admixtures;
- FARECOGAZ guidance of market partners for smooth energy transition to a smarter and cleaner smart energy system with respect to integrity and safety of pipeline systems, equipment, and the rational use of energy in gas networks.

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4 Action Plan

4.1 Strategic Items

- To take care of long-term investments of FARECOGAZ Customers and of designing the transition process;
- To define technical guidelines for a proper management of multi-gas systems and for sector coupling applications P2G & P2H (interim energy storage capacity in parallel to electrical networks, higher flexibility of NG networks than electrical networks) → contribution to Smart Energy System through smart technologies into gas infrastructures;
- Information and updates to all FARECOGAZ Member for coordinated actions at National and European level;
- To pursue shared positions with other key players in Europe (e.g. gas appliances manufacturers - depending on networks & regions)
- Position Gas Metering as part of digital transition with technical and legal implications
- Coverage of gas distribution infrastructure for mobility (LNG, CNG, Renewable, Hydrogen) with focus on fiscal measurement [1]

4.2 Tactical Items

NOTE: preliminary requirement shall be to define & monitor available FARECOGAZ resources vs priority activities.

- Pending FARECOGAZ Position Papers to be finalized;

- FARECOGAZ commitment in **Green Transition** →
  - ✓ Hydrogen Applications (100% H2 and NG/H2 Blends) & relevant standards upgrades:
    - Liaison & membership in the key CEN & ISO TCs (ref.: CEN/TC 234, CEN/TC 235, CEN/TC 237, CEN/TC 238, CEN/TC 294, CEN-CLC SFEM WG Hydrogen and JTC 6)
    - Impacts on Wobbe-Index, energy measurement etc. on FARECOGAZ member products
    - Contribution to collaboration at NewGasMet project;

- FARECOGAZ commitment in **Digital Transition** →
  - ✓ Smart Technologies:
    - To release a Gas Industry Letter (FARECOGAZ, MARCOGAZ, WELMEC) to EU Commission requesting, in advance, an EU guideline/standardization request concerning the technical impacts of interaction between NG & E.E. infrastructures for a smart energy system;

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[1] EC to decide if a technical proposal for LNG & CNG has to be done

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- To define System Interoperability aspects (communication protocols), Authentication of Sources for Data Transaction (i.e. Blockchain), ...;
- To apply FARECOGAZ knowledge to create guidance of market partners for a smooth energy transition keeping safety and security of supply on very high level;
- To make reference and to cooperate with Sector Forum Gas – Infrastructure for Guidelines and for trigging future standards on smart technologies for fuel gas grids;

✓ BIM (Building Information Modeling) - Ref.: CEN/TC 442:
- Monitoring of evolution from Directive (EU) 2016/1148 and relevant standards for an organization implementing cybersecurity risk management and best practices (ISO/IEC 18045, ISO/IEC 27000 series, ISO/IEC 40500, ITU-T X1208, ITU-T Y3052, …);
- Proposal for a FARECOGAZ Guideline for sharing & managing digital representation of BIM objects to facilitate design, construction and operation process of Fuel Gas Infrastructures (stations);
- Attendance at CEN/TC 442/WG 6 "Infrastructure" → see in-progress WI 00442027 "BIM in infrastructure – standardization need and recommendations"

✓ Cyber Security (ref.: COM (2017) 477 final/3: http://eur-lex.europa.eu/legal-content/EN/TXT/?uri=COM:2017:0477:FIN): cyber security is the application of technologies, processes and controls to protect systems, networks, programs, devices and data from cyber attacks; technical standards of ISO/IEC 27000 family to be monitored
NOTE: Cyber security is often confused with information security.
  - Cyber security focuses on protecting computer systems from unauthorised access or being otherwise damaged or made inaccessible.
  - Information security is a broader category that looks to protect all information assets, whether in hard copy or digital form.

- FARECOGAZ technical Position Papers and shared approach to cover installed base and future needs waiting for official EU/CEN and ISO standards;

- To present Gas Industry Papers to EC and extend it for other equipment applicable also for future products and systems;

- To create scenarios for the future: different Wobbe-Indexes, keep ranges or extend, dynamic of mixture changes, followed by recommendations for interchangeability;

- Analyze documents from other players: e.g. appliances manufacturers.

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