

**1st Multi-EMN Brainstorming Meeting
in preparation of the Green Deal Call 2024
Agenda**



Version 22nd November 2023
Online meeting via MS Teams

Time Monday 4th December 2023 9:30 to 13:30 CET

Time	Item
9:30	Plenary: Opening & welcome
	Green Deal Call Scope & key information
	Stakeholder needs and SRA priorities identified by the EMNs
10:10	Breakout in parallel sessions A, B, C, D; part 1
	Room A: Electricity and Gas Grids and Storage
	Room B: Life cycle of renewable energies etc.
	Room C: Environmental observations and monitoring
	Room D: CCU and greenhouse gas emissions
11:10	Break
11:20	Breakout in parallel sessions A, B, C, D; part 2
	Room A: Electricity and Gas Grids and Storage
	Room B: Life cycle of renewable energies etc.
	Room C: Environmental observations and monitoring
	Room D: CCU and greenhouse gas emissions
12:20	Break
12:35	Plenary: Outcome of the sessions and plans for follow up
	Summary of moderators A, B, C, D
	Follow up and closing
13:30	End of the meeting

Further details about the brainstorming sessions:

A. Electricity and Gas Grids and Storage

This session covers the buildup of interconnected energy systems and better integrated grids to support renewable energy sources.

This parallel session will discuss the measurement and metrological needs including:

- Tools and models to support integration of the grids: grid monitoring (sensor networks), data analysis and modeling for both electricity and gas grids
- Quality infrastructure, safety and security of the electricity grids
- Quality infrastructure, safety and security of the gas grids (mixed energy gases, hydrogen and carbon dioxide)
- Batteries: LCA, safety, state of health, impact on grid stability, ancillary services /frequency stability
- Storage in form of potential energy (e.g. flywheels)
- Energy gas storage: quantity and contaminants, leakage, emissions, physical properties and interaction with the gas grid
- CCS: quantity and contaminants, leakage, emissions and physical properties
- Heat storage and use

B. Life cycle of renewable energies including generation, carriers, efficiency of use and zero pollution

This parallel session will discuss the measurement and metrological needs including:

- Conversion efficiency P2X technologies from generation to emission; e.g., ammonia and methanol
- PV Energy label / consumer protection from manufacturer to consumer / Systems metrology for PV power plants
- Wind power efficiency
- Quality infrastructure for renewable fuel generation, conversion, transport, trade and use (quality & quantity at each life cycle step): H₂-Electrolyzers and fuel cells, gas power plants/turbines/heat pumps and buildings
- Leakage rate detection (safety aspects, explosion protection)
- Emission monitoring and standards to estimate reductions by use of alternative fuels (environmental impact)
- Emission models and predictive models using AI/ML approaches
- Certificate of origin by isotopic composition measurements
- LCA case studies (e.g. methanol as feedstock/fuel cell or ammonia as fuel for combustion engines)

C. Environmental observations and monitoring

This parallel session will discuss the measurement and metrological needs including:

- Sensor networks – low cost and reference
- soil moisture and irrigation
- Water cycle
- Ocean carbon uptake and acidification & X08 – ocean gas flux
- Environmental DNA
- Microplastics
- PFAS
- Metrology related to regulated pollutants (EURO 7, Air Quality Directive, Industrial Emission Directive)

D. CCU and greenhouse gas emissions

This parallel session will discuss the measurement and metrological needs including:

- DAC - Direct Air Capture & other capture methods
- Monitoring of the various stages of CCUS technologies, considering both GHGs and emissions of associated species
- Tracing of the origin of CO₂ using isotopic measurements
- Isotope metrology for GHGs and satellite GHG measurements and big data analysis
- Support to EU Emission Trading Scheme