

An aerial photograph of an offshore oil rig is visible in the background, partially obscured by a dark blue gradient overlay. The rig's complex structure, including platforms and cranes, is visible against the teal background.

Eurogas Webinar Automotive Life Cycle Assessment A-LCA

16 June 2026





Focus on (bio)methane

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11:05 – 11:15

Introduction to Eurogas Technical activities

- › Participation to **UNECE GRPE** (Working group on Pollution and Energy) and **GRSG** (Working Group on General Safety) in Geneva. Report of the discussion, definition of amendments to main gas regulations, participation to the A-LCA working group.
- › Definition of technical positions on main EU topics (such as **Euro 7, CO₂ Emission Standards Regulations**) and related delegated acts. Participation to technical group lead by the Commission (such as **AGVES** and **WGMV**) when dealing gas topics.
- › Participation to the Working Group on Monitoring Methodologies (**WGMM**) to develop the new VEEF category (vehicles running exclusively on eligible fuels), the definition of eligible fuels and the methodologies to monitor those vehicles.



The Working Group
on Monitoring
Methodologies

Introduction to Eurogas Technical activities

- › Participation to several **ISO** and **CEN** working groups, such as ISO TC22 SC41 (Road vehicles - Specific aspects for gaseous fuels) and CEN 326 (Gas supply for Natural Gas Vehicles - NGV)
- › Discussion on demonstration initiatives, test campaigns, and on-field measurements.
- › Participation to the Network for Sustainable Mobility (**NSM**), an informal group promoting renewable and sustainable fuels in mobility. Coordination of the technical task force of that group.



Network for
Sustainable Mobility

Introduction to Eurogas Technical activities

- › Starting cooperation with Clever Group, defining GHG emission factors for CountEmissions EU.
- › Statistics and internal data elaboration on natural gas mobility, such as
 - Number of stations
 - Price of biomethane and natural gas
 - Fleet of light and heavy-duty vehicles
 - Share of renewable fuels in EU.
- › The Technical Working Group is also a forum to initiate technical feedback for consideration against other key policy files, such as Weights & Dimensions, Greening Corporate Fleets etc.



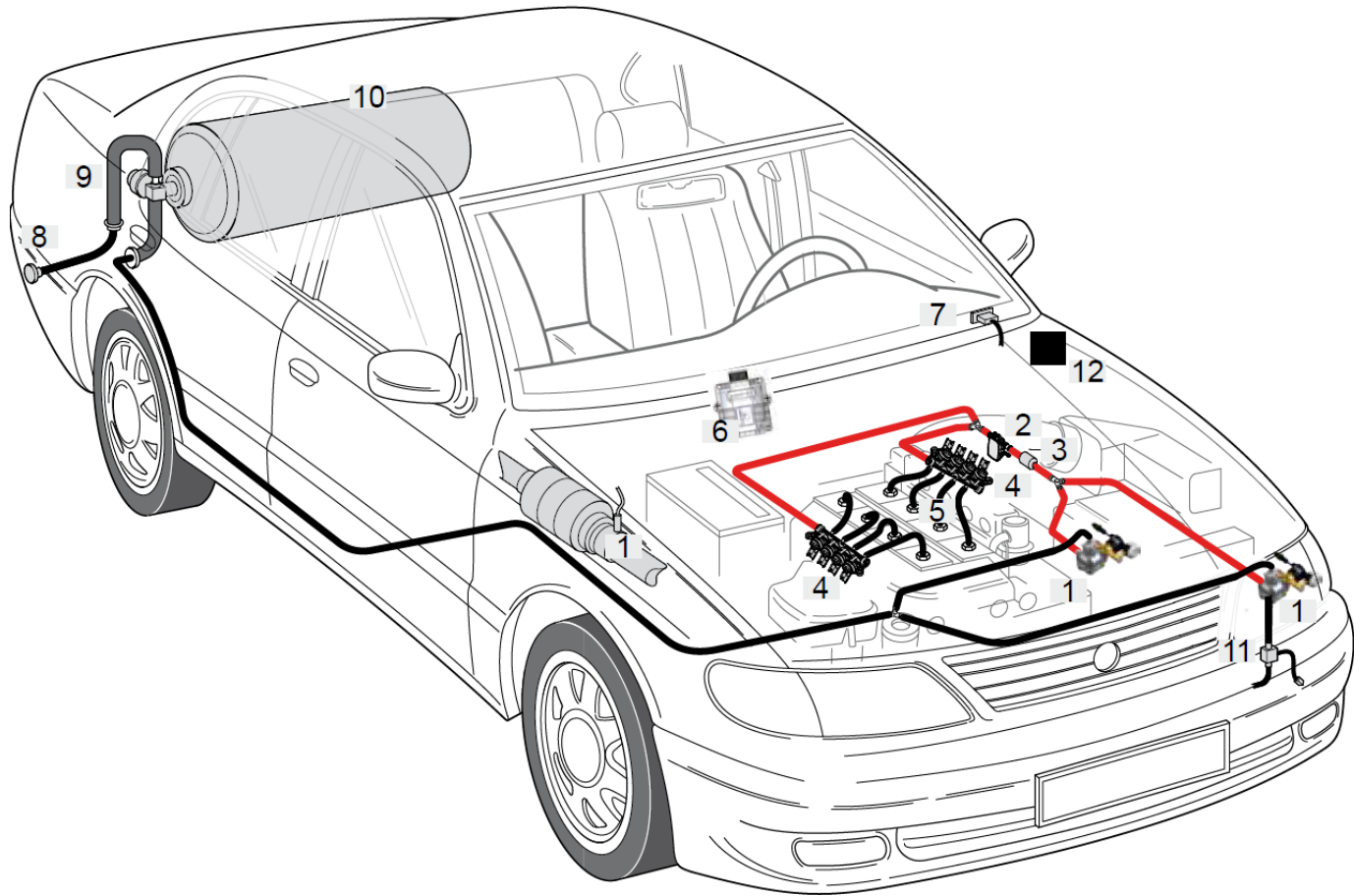
Focus on (bio)methane

General rules

- › Biomethane vehicle follow the general A-LCA rules.
 - › Current mutual resolution applies to light duty vehicles, which are exclusively powered with gaseuous fuel (CNG-biomethane). Liquid fuel (LNG- LBM Liquid biomethane) is out of the scope of this first edition because liquid fuel technology is applied **only** to heavy duty vehicles.
 - › This mutual resolution will be potentially applicable worldwide, in the contracting parties of UNECE GRPE. As an example: Europe, Japan, Korea, UK, USA.
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- › There are some special provisions for biomethane vehicles:
 - **Methane leakage from storage**
 - **Methane emission in the use phase**
 - **Need of certain chain of custodies**

Focus on (bio)methane

Methane leakage from storage



Current text specifies that LC Analysis shall calculate the methane leakage from vehicle storage system.

Since current mutual resolution is limited to light duty vehicles (cars and vans), **this aspect is not relevant.**

All gas systems are gas-tight and no leakage occurs from gas systems.

Failures or incidents are not under the scope of this analysis.

Focus on (bio)methane

Methane emission in the use phase

- › Current text include a paragraph for the methane emissions in the use phase. Methane shall be converted into CO₂ equivalent emissions using latest GWP₁₀₀ factor taken from IPCC AR6 report.
 - 27 for non-fossil CH₄
 - 29.8 for fossil CH₄

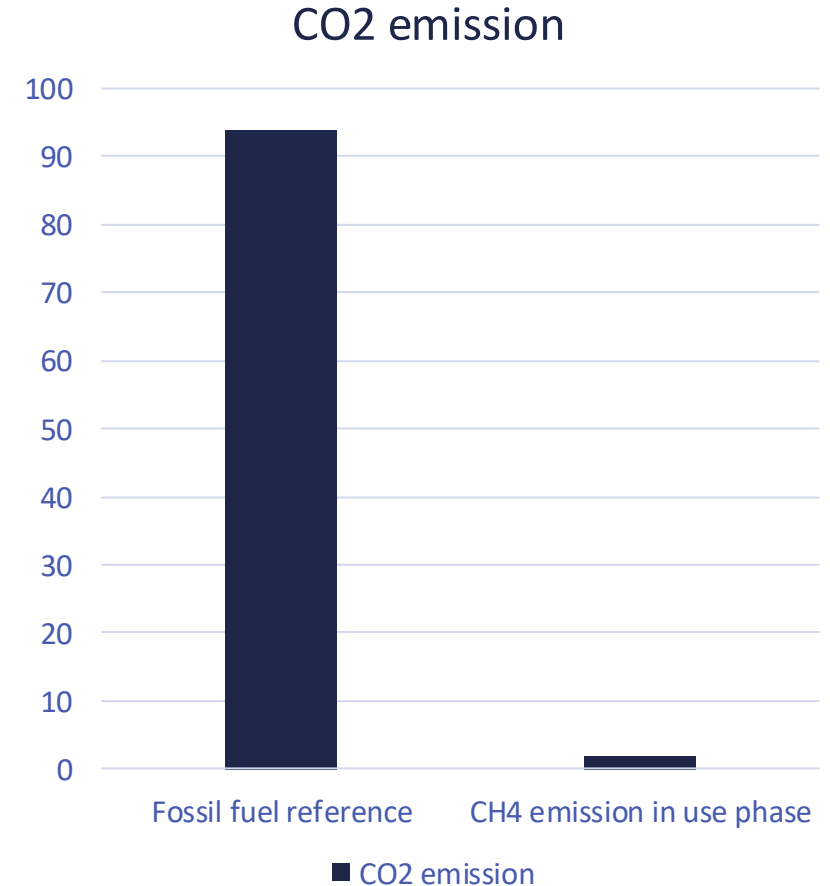
| Common chemical name or industrial designation | Chemical formula | Sixth Assessment Report (AR6) GWP ₁₀₀ |
|--|-----------------------|--|
| Carbon dioxide | CO ₂ | 1 |
| Methane – non fossil | CH₄ | 27 |
| Methane – fossil | CH₄ | 29.8 |
| Nitrous oxide | N ₂ O | 273 |
| Nitrogen trifluoride | NF ₃ | 17400 |
| Sulfur hexafluoride | SF ₆ | 24300 |

Focus on (bio)methane

Methane emission in the use phase

› Estimation of order of magnitude

- › Almost all worldwide countries monitor CH₄ emissions, either separately or combined with non-methanic elements (NMHC) in total hydrocarbons (THC)
- › In EU the limit of THC is **0.1g/km** in Euro 6 and Euro 7 regulations. CH₄ is only one part of the elements included in THC.
- › The contribution of this factor is very limited because, using the above GWP₁₀₀ factors for methane and an average value of **0.06g_{CH4}/km**, we obtain **1.8g_{CO2eq}/km**



Focus on (bio)methane

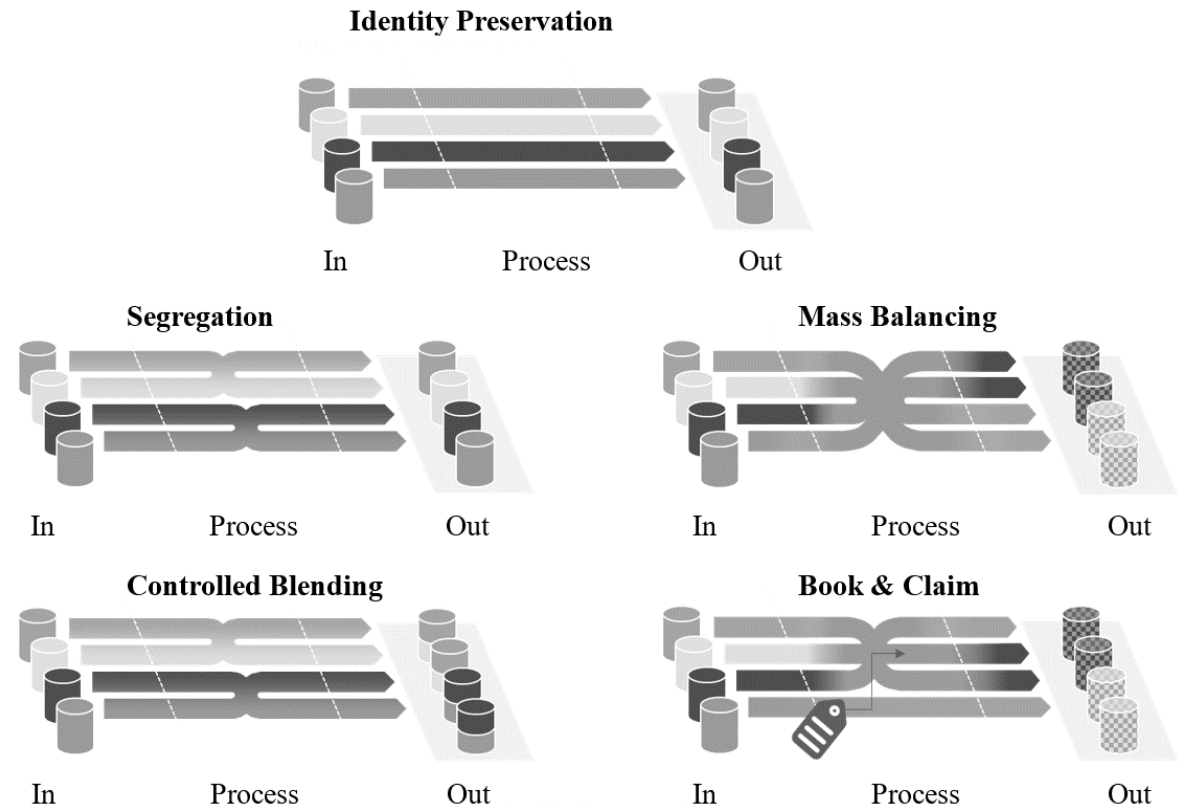
Chain of custodies (text under discussion)

“Mass Balance Model

Allows mixing materials without knowing precise characteristics percentages beforehand. Attribution of inputs with specified characteristics is guided by implementation methods, i.e. rolling average, proportional and non-proportional credit methods. Specific mandatory requirements must be applied.

Book and Claim Model

Negotiates input and output flows associated with claims, though physical presence in the final product is not ensured. Controversial due to transparency issues.”





Eurogas Webinar Automotive Life Cycle Assessment Thank you!

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