

GDF SUEZ's answer to the European Commission's consultation on "accounting methods and conditions for the 10% renewable energy in transport target – and on the need for additional types of biofuels being listed in Annex III of the Renewable Energy Directive"

(Questionnaire from the DG MOVE website)

As proposed by the EU Commission services, GDF SUEZ's answer only covers the Section C of the Consultation on the issue of biomethane in transport.

SECTION C: BIOMETHANE VIA NATURAL GAS GRID IN TRANSPORT

1.1. Biomethane sources

For the remainder of this report, GDF SUEZ reminds the following definitions:

- **'Biogas'** is the raw product of the biological process of anaerobic fermentation. Biogas is a mixture consisting basically of methane (CH_4) and carbon dioxide (CO_2).
- **'Bio-SNG'** (Bio-Synthetic Natural Gas) is the product of the physico-chemical processes: gasification of the biomass, then methanation of the synthetic gas.
- **'Biomethane'** the 'natural gas' quality gas obtained from purified biogas or bio-SNG. Biomethane is then biogas that has been purified to meet the natural gas grid specifications (heating value, composition). It can be used as a gaseous biofuel, in which case it is called biomethane vehicle fuel. To supply a vehicle, biomethane must be compressed up to 200 bar in a compression station. It can be mixed in any proportions with natural gas and can be used exactly like natural gas.

There are several ways of producing biomethane :

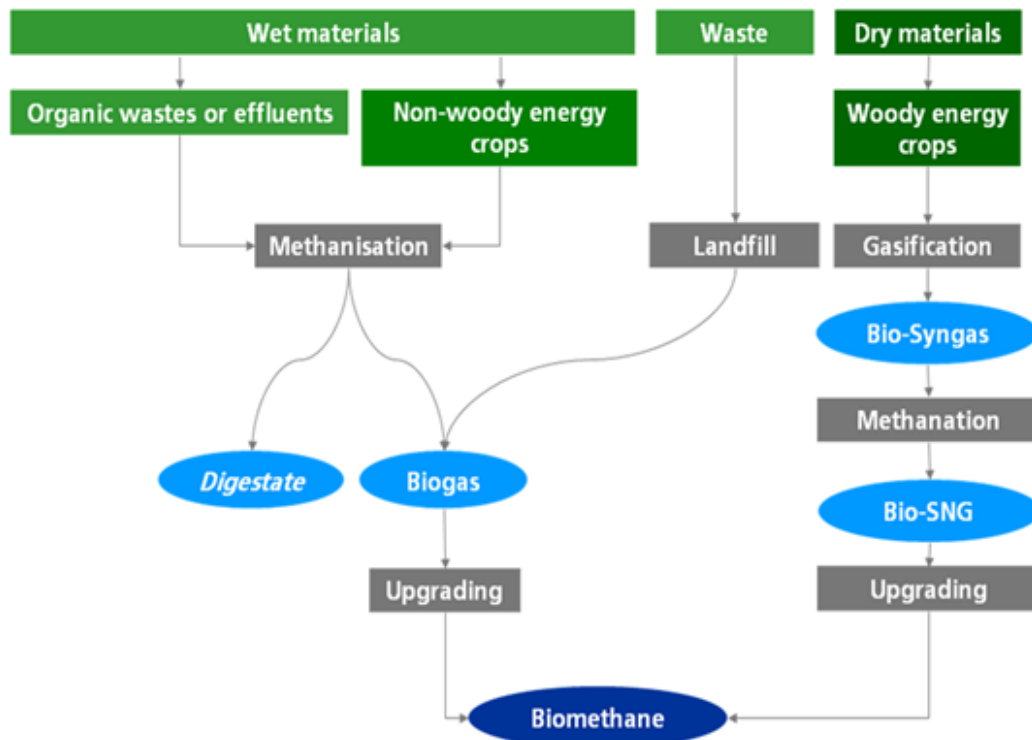


Figure 1: Production of biomethane from methanisation and from gasification (Source: GDF SUEZ/CRIGEN)

Biomethane is mainly produced by the biological way (anaerobic digestion). In the longer term (2020), the gasification and methanation of biomass derived from lignocellulosic resources is also foreseeable.

1.2. Biomethane accounting in transport

According to the National Renewable Energy Action Plans, Member States estimate that biofuels other than first and second generation bioethanol and biodiesel will by 2020 account for approximately 0.2% of energy consumed in transport, part or all of which may be biomethane.

Given that methane in the gas grid originates mostly from non-renewable sources (natural gas),

1. how do you value the impact of the 10% target for renewable energy in transport by 2020 on the development of methane vehicles fuelled by methane from the gas grid?

- Not significant
- Significant, but other policies/developments will be of more importance
- **Important, along with other policies/developments**
- A key driver

The 10% target for renewable energy in transport by 2020 is clearly of utmost importance to help spurring the development of biomethane as the latter shows excellent environmental performances when used as vehicle fuel and will hence plainly contribute to the achievement of the target (as recognized by several public authorities e.g. French ministry in charge of Ecology, Sustainable Development, Transportation and Housing). GDF SUEZ supports a global approach, including both biomethane (and natural gas as a fuel) and the electric vehicle, those technologies being complementary.

Nonetheless, other policies in different sectors will help spurring the development of methane vehicles:

- The development of methane vehicles fuelled by methane from the gas grid relies on the development of Natural Gas Vehicle (NGV) infrastructures (private or public distribution NGV stations, etc.). At the same time, the development of methane as a fuel is closely related to the development of biomethane as a fuel since biomethane and natural gas will be mixed into the grid. Hence, national policies should support the construction of the needed infrastructures. Moreover, EU policies must be vigilant not to send diverging signals, especially in the framework of the revision of the Energy Taxation Directive, and thus hinder the development of biomethane and NGV as a fuel.
- European and national policies aiming at establishing a sustainable agriculture as well as waste management policies could also promote biomethane production from anaerobic digestion and biomethane use in transport as biomethane from anaerobic digestion is a product that enhances the agricultural sector and could be one of the solutions to manage agricultural wastes, and especially livestock manures (e.g. green algae in Brittany).
- Finally, local policies should also play an important role in biomethane development as it is a local product (local substrates, local use of digestate if biomethane is produced from anaerobic digestion, local use of heat if biomethane is produced from gasification and methanation ...) that could create local jobs and promote local energy independence.

In short, the use of biomethane in transport worth to be encouraged as it provides simultaneously a triple benefit:

- Waste treatment, especially from agriculture
- Production of organic amendments with the digestate
- Renewable energy production, used for heat or as fuel.

2. under what condition do you think it would be justified to count the whole amount of methane extracted from the gas grid for the use in vehicles as renewable?

- None, until the time that all methane injected into the gas grid concerned is originating from renewable sources

- When the methane comes with a tradable certificate showing that that amount of biomethane was generated

- When there is a supply contract showing that that amount of biomethane was generated
- When there is evidence on a Member State level that the development of methane vehicles has led to that amount of additional biomethane generation
- Other (please specify):

To ensure the green aspect of the gas used in the transport sector, the methane should come with a tradable certificate proving the share of energy produced from renewable sources. In this perspective, the 2009/28/EC RES Directive already provides for a system of guarantees of origin (GO) for renewable electricity and heat that proves to the final customer the share or quantity of energy from renewable sources in the supplier's mix (Article 15 of the RES Directive).

Hence, so as to guarantee the green origin of the methane used while not multiplying accounting systems and thus avoiding confusion, the **existing GO system should be amended** so as to (1) **encompass biomethane** and (2) ensure the **GO could be "opposable" to prove the achievement of the 10% RES target** in the transport sector i.e. GO should be the statistical support for the Member States to control the achievement of the RES-T target.

Administrative bodies in charge of issuing the GO (hereafter referred to as 'issuing bodies') would also be in charge of tracing the GO i.e. to control the production process and to control in which sector the GO is used so as to **provide reliable information for accounting the amount of biomethane** used in the transport sector. Such a system would hence guarantee a transparent and reliable biomethane accounting method.

Furthermore, this amended system should be based on a unique, fully fungible GO that could ultimately be traded between Member States. This would put in place a EU-wide market, further promoting biomethane development thanks to the GO's market value.

3. *what benefits do you expect the option you selected under (2) will have:*

- **Additional biomethane generation**
- **Faster development of methane vehicles**
- Other (please specify):
- None, it only changes the accounting method

Please motivate your answer

The amended system of guarantees of origin would prove the amount of green energy used and then guarantee the accounting method of biomethane on a transparent, objective and reliable basis.

At the same time, GO will allow additional biomethane generation and faster development of methane vehicles as the market value of the GO on the green gas market will act as an incentive for operators to develop the use of biomethane in transport.

Non-Member States should be included in the GO scheme so as to benefit from outside-EU biomethane production which would be shipped through the existing international gas transport infrastructures.

4. *what costs in terms of administrative burden do you expect the implementation of the option you selected under (2) will have:*

- **Additional statistics collection in all Member States**
- Generating additional information on the basis of existing statistics
- Other (please specify):
- None

The extension of the system of guarantee of origin to biomethane requires the setting up of issuing bodies in charge of 1/ inspecting biomethane production plants to ensure the renewable origin of the gas and measuring the amount of biomethane produced, 2/ managing the GO (issuance, transfer, cancelling) and 3/ generating statistics on the basis of the GO issued.

Most of the additional administrative burden would however be shared with the existing authorities that already issue GO for electricity and heat. Hence, extending guarantees of origin to biomethane would only lead to minor adjustments and costs for Member States while providing a fully transparent, objective and reliable renewable energy accounting method.

GDF SUEZ develops its businesses around a responsible-growth model to take on today's major energy and environmental challenges: responding to energy needs, ensuring the security of supply, combating climate change and optimizing the use of resources. The Group provides high-performance, innovative energy solutions to individuals, cities and businesses through a portfolio of diversified gas-supply sources, flexible and low-emissions power generation and unique expertise in four key sectors: liquefied natural gas, energy efficiency services, independent power production and environmental services. The Group employs 215,00 people worldwide and achieved revenues of EUR 84.5 billion in 2010. GDF SUEZ is listed on the Brussels, Luxembourg and Paris stock exchanges and is represented in the main international indices: CAC 40, BEL 20, DJ Stoxx 50, DJ Euro Stoxx 50, Euronext 100, FTSE Eurotop 100, MSCI Europe, ASPI Eurozone and ECPI Ethical Index EMU.

SIÈGE SOCIAL GDF SUEZ

Tour T1 - 1 place Samuel de Champlain - Faubourg de l'Arche - 92930 Paris La Défense cedex - France

Tél : +33 (0)1 44 22 00 00

GDF SUEZ - SA AU CAPITAL de 2 250 295 757 EUROS - RCS NANTERRE 542 107 651

www.gdfsuez.com