

2ND HYBRID WORKSHOP ON UNION DATABASE CONCEPT INTRODUCTION AND WELCOME

AGENDA

09:30 - 10:00	Registration and opening of the webinar		
10:00 - 10:20	Introduction and welcome - Claude Mangin, Director, Market, ENTSOG		
	Session 1 - Bio-LNG: Opportunities and challenges from the compliance systems perspective		
	 Presentation by Laurent Hamou (Elengy) on behalf of GLE + Q&A 		
	• Presentation and panel discussion by Energy Traders Europe	12:15	
	with.		
10:20 – 12:15	 Ismaël Charbagi, Energy Director, Air Liquide Biogas Solutions 		
	 Cosmo Dwelle, Head of Business Development and Operations, Landwärme 		
	 Carlos Martín Iglesias, New Uses and Green Gases unit, Repsol 	13:30 -	
	 Davide Rubini, Head of Regulatory Affairs - Gas, Power & Environmental Products, Vitol 		
	Peter Blomberg, Business Development Manager, STX Group		
	 Mariana Liakopoulou, Markets and Policy Associate, Energy Traders Europe 		
	• EC intervention	14:30 -	
	 Q&A session 	15:45	

AIM AND AGENDA

12:15 - 13:30	Lunch	
13:30 - 14:30	 Session 2 - EU imports of renewable gaseous fuels: Opportunities and challenges from the compliance systems perspective Presentation by Victor Bernabeu, Director, Eurogas Reaction by DG ENER Panel discussion moderated by Eurogas with: Jay Morrod, Team Lead Renewable Gas Analysis, Environmental Commodities, STX Group Iryna Skliar, Director of Ukraine Representative Office in Brussels, Naftogaz Hahn Nguyen, VP Global Sustainability, OCI Nic Crowe, Development and Government Affairs Director, Grissan 	
14:30 - 15:45	Q&A session on other detailed/technical topics Tim Hamers, Secretary General, ERGAR	
15: <mark>4</mark> 5 - 16:00	Conclusions - Claude Mangin, Director, Market, ENTSOG	

METHOD TO REACH OUR AIM

<u>Content</u> discussion on the UDB <u>concept</u>

- \rightarrow Too detailed discussion will be stopped
- This workshop is under <u>CHATHAM HOUSE</u> rule to have a proper content discussion on the few questions we put in the agenda
- → You can <u>ask your questions in TEAMS' Q&A</u> and the moderator may give you the floor (camera + sound) to explain further your question
- \rightarrow Conclusions of today will be published on the event page

Let's start with the UDB timeline...

UDB TIMELINE

The UDB needs to be operational by November 2024 according to RED III • 1 year after the entry into force

Member States need to ensure UDB – GO registry integration by May 2025 • 18 Months after entry into force

June/July 2024: UDB should start functioning	November 2024: UDB should be operational	May 2025: UDB – GO registry integration
tor gaseous tuels		should function



SESSION 1 - BIO-LNG: OPPORTUNITIES AND CHALLENGES FROM THE COMPLIANCE SYSTEMS PERSPECTIVE

3 July 2024

GLE & ENERGY TRADERS EUROPE PRESENTATIONS + PANEL DISCUSSION



Common GLE position on the subject of liquefaction by equivalence

Coordination among GLE members ahead of the Prime Movers Group scheduled on July 3, 2024 For discussion and approval





BioLNG - different complementary pathways

- On-site liquefaction (direct delivery by tanker trucks to fueling stations or to ships) : no interaction with the interconnected infrastructure
- Biomethane injected in the grid, liquefier connected to the grid : initial mass balance between the injection point and the grid exit point to the liquefier
- Biomethane injected in the grid, liquefier within the terminal : initial mass balance between the injection point to the grid exit point to the terminal
- Biomethane injected in the grid, equivalence liquefaction : Mass balance between the injection point and the loading bay or the charging arms of the terminal

All these pathways needed to ensure maximum volumes and seamless service to end customers Optimisation of existing infrastructure depending on local context



BioLNG - required principles in all cases

- No double counting \rightarrow ensured by UDB
- Full auditing all along the chain, according to voluntary or national schemes detailed rules
- Proper carbon accounting all along the chain





BioLNG - local specificities

- Existence of national scheme / reliance exclusively on voluntary schemes
- Existence of virtual tanks (Spain) / isolated terminals approach
- Existence of a national Guarantee Of Origin registry, or not
- Definition by the national regulator of a nomination from the grid to the terminal, or not

 → nomination from the grid to the terminal may or may not be required locally, not key for enabling bioLNG certification as such

All these specificities are not in the remit of suppliers or terminal operators Need to define rules that can be adapted to these national specificities





BioLNG - Elengy experience in France

- Equivalence liquefaction:
- We understand "processing unit" PoS can be endorsed either by the terminal or by owner of the molecules
- We apply a carbon content of 1,4 gCO2eq/MJ (default value from ISCC 205 * average French electricity content) We are also working on a carbon content based on a study for a 200 kt liquefier in Fos
- In France, cancellation of the GoO can legally happen either at the terminal, or where the end users are consuming the BioLNG. EEX is already allowing terminal address as a cancellation point.



BioLNG – Liquid or gaseous in UDB ?

- We need solution to report in the UDB the whole chain of custody :
 - ↓ Production
 - ↓ Injection in the grid
 - Mass balance through the interconnected infrastructure to the "processing unit"

 - ↓ Delivery to the tanker truck / the bunker vessel
 - ↓ Transport by tanker truck / by bunker vessel
 - ↓ Final usage
- Whatever the solution (every step gaseous, partly gaseous and liquid, every step liquid), we need an operational solution



AOB and Closing



Gas LNG Europe **THANK YOU** For your attention

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03 July 2024

Opening LNG infrastructure to renewable and lowcarbon gases

The trader perspective on bioLNG traceability via the Union database

Ismaël Charbagi, Energy Director, Air Liquide Biogas Solutions John Cosmo Dwelle, Head of Business Development and Operations, Landwärme Carlos Martín Iglesias, New Uses and Green Gases unit, Repsol Peter Blomberg, Business Development Manager, STX Group Davide Rubini, Head of Regulatory Affairs - Gas, Power & Environmental Products, Vitol Mariana Liakopoulou, Markets and Policy Associate, Gas Committee, Energy Traders Europe

PMG GoO Union database workshop, ENTSOG, Avenue de Cortenbergh 100, Brussels



- 01 Introduction
- **02 BioLNG complementary pathways**
- 2.1 Traders' possible uses of bioLNG terminal services
- 2.2 Physical liquefaction
- 2.3 Biomethane injection in the grid with liquefaction in the terminal
- 2.4 Equivalence liquefaction
- **03 Open issues for traders**
- **3.1** Mass balancing facility and carbon intensity calculation
- **3.2** Consideration of LNG supply chain logistics in traceability





1. Introduction

- > Existing and prospective LNG infrastructure can facilitate:
- Imports of bioLNG and synLNG, as well as reloading and transfers between EU countries
- Use of liquefaction and bunkering/ fuelling infrastructure for bioLNG and synLNG, incl. truck loading services and loading for the delivery of LNG to other small-scale facilities, industrial consumers or satellite distribution plants
- LNG facilities, including tanks, truck loading and bunkering services should be open to third party access and connected to national gas networks
- Saving costs and improving the environmental impact of terminals by considering mass balancebased liquefaction of biomethane increases flexibility and broadens the availability of bioLNG at very low carbon intensity

Provision of renewable and low-carbon gases (R&LCG) services and sales through LNG terminals connected to R&LCG producers adds to the supply of R&LCG



- 1. On-site liquefaction (*management of tanker trucks, no link with interconnected infrastructure*)
- 2. Biomethane injected into the grid with liquefier connected to the grid
- 3. Biomethane injected into the grid with liquefaction in the terminal
- 4. Direct mass balance between grid injection and loading bay or charging arms of terminal (*equivalence liquefaction*)

Consumers must be able to chose the decarbonisation solution they prefer and potentially have access to the cheapest and most efficient decarbonisation solution (point 4)



2.1 Traders' possible uses of bioLNG terminal services

- 1. Swap of bioCH4 in the grid for LNG in the tank (re-assignment of the PoS without a nomination)
- 2. Swap trade from one terminal user to another terminal user (VS warehouse certification needed)
- 3. Sale of biomethane at the flange, i.e., to the tanker truck, as last operation (pre-trade of molecule on hub and subsequent cancellation of PoS for subsequent equivalence liquefaction)

<u>Complexity for all terminal services:</u> It is not known to the Economic Operator until off-take, if they offtake gas or liquid, nor whether if it is 'bio' or not. Therefore, all services must accommodate all possibilities.



2.2 Physical liquefaction – pathways 1 & 2

- Physical bioLNG plants → liquefier directly connected to anaerobic digestion plant, alternatively liquefier connected to the grid
- > This pathway must have its associated mass balance equally traceable in the UDB
- They may prove economically viable in certain network configurations e.g., when the biomethane production site is distant from the gas network
- Specifically, local biomethane production is needed when abundant feedstock is available in areas lacking a Natural Gas grid, to avoid transporting feedstocks over long distances

Clarity is needed on the Economic Operators' obligations to generate and register PoS in the UDB vs NDBs during the time gap between the go-live of the liquids vs gaseous UDB module, for bio-LNG produced from a central liquefaction plant fed with biomethane from separate plants (transport by containers)



2.3 Biomethane injected into the grid with liquefaction in the terminal – Pathway 3

- Paper (PoS) conversion with physical process
- The amount of bioLNG that can be made available is limited by the level of the terminal activity
- Emissions are related to an actual process for the creation of bio-LNG

Nomination from terminal to network might be needed to guarantee that an Economic Operator has LNG volumes for further operations in the terminal (same process than for LNG and operations). This nomination is not required for certification purposes.



2.4 Equivalence liquefaction – Pathway 4

Direct application of mass balancing principle across the whole interconnected infrastructure –incl. gas network system and LNG terminals

> Main benefits:

- the amount of bioLNG which can be made available is only limited by the amount of LNG reaching the EU and the amount of biomethane entering the single mass balancing facility
- the carbon savings are large

This pathway doesn't entail a liquefaction operation and is therefore more efficient.



3.1 Mass balancing facility and carbon intensity calculation

Liquefaction articles of Reg. 2022/996

Art. 2 (18): Interconnected gas system definition including LNG infrastructure

Art. 18 (3): Separate mass balances for the bioLNG chain (*e.g.,* storage other than in terminal, onward transportation by truck, consumption in re-gasified form)

Art. 19 (2) (c) and (d): (Physical) mixture of fuels in the interconnected infrastructure

ISCC EU – Traceability and Chain of Custody

"If the LNG terminal is connected to the gas grid it can be considered as being part of the interconnected infrastructure and thus as being part of one mass balancing system"

"Sustainability characteristics can only be assigned to consignments of gas that have been registered in the UDB, once the database is fully operational covering gaseous value chains. The mass balance of the interconnected infrastructure carrying the gas has to be in its entirety covered by the Union database. Traceability of biomethane energy units withdrawn from an integrated infrastructure shall be ensured by the Union database once fully operational."

- 1. Could the Commission confirm the viability of the alternative pathways through which bioLNG can be made available to the market relying on EU LNG Terminals when biomethane is available in the single mass-balancing facility?
- 2. Could the Commission land on an (agreed with the market) methodology for Economic Operators to calculate the carbon intensity of bio-LNG that is produced / converted whatever the pathway used?
- 3. For biomethane mass balancing purposes economic operators no longer need to demonstrate capacity bookings at IPs. Could you confirm that this is also the case about interconnection points between terminals and the grid?



3.2 Consideration of LNG supply chain logistics in traceability

- LNG plants and operations are an intrinsic part of the gas market and system. Will the bio-LNG logistics model be covered under the gaseous or the liquid module of the UDB for the purpose of mass-balancing?
- Open issues around (virtual) liquefaction and physical logistics:
 - Conversion of biomethane PoS into bio-LNG PoS for liquefied grid-withdrawn biomethane, as well as for LNG reloading of ships -> Does it happen in the LNG storage tank (part of the "interconnected infrastructure") or in the truck loading point (the withdrawal point of the "interconnected infrastructure"?)
 - \blacktriangleright GoOs are issued optionally <u>only for gases at production level</u> \rightarrow
 - If considered a liquid fuel, can GoOs for gases be paired with bioLNG? Or must the GoOs of biomethane converted into bio-LNG (whatever the pathway) be cancelled?
 - If cancelled, how do we tackle when that bio-LNG is then re-converted to biomethane e.g., in a DSO grid?



3.2 Consideration of LNG supply chain logistics in traceability

• The example of Spain:

- Spain has 7 LNG terminals. LNG end-customer deliveries & exports reached 35 TWh in 2023.
- LNG trucks fed 1090 LNG satellite plants (24 located out of Spain) for a total 11.6 TWh
 - Most for **industrial customers** (mono-client)
 - ~193 municipalities with isolated local distributions grids (161,000 customers ~2% of gas customers in Spain, with a demand >1 TWh/y).
 - **LNG stations** for heavy duty vehicles, representing 36% of the gas demand in road transport sector
- > LNG facilities also used to supply gas for the **maritime sector** (directly from the terminal or by LNG truck/ship)
- Biomethane potential estimated in 163 TWh/year (~45% of the national demand)
- Spanish GoO system doesn't differentiate between biomethane and bioLNG, but grid and off-grid operations separately. **BioLNG volumes** paired with GoOs until regasification and consumption
- RED-recognised voluntary schemes aim to a mass balancing applied per LNG terminal, auditing LNG terminals individually based on stored bioLNG → In the absence of a commercial stock in a given terminal, withdrawal from that terminal will not be possible
- This goes against the virtual storage tank regime applicable in Spain, whereby shippers can choose to book capacity at x terminals but contract primary LNG storage and regasification capacity via a platform encompassing capacities of all terminals → BioLNG trade at plants would be hampered vis-à-vis LNG



3.2 Consideration of LNG supply chain logistics in traceability

• The example of Spain:





PANEL DISCUSSION + EC INTERVENTION + Q&A SESSION



LUNCH BREAK



SESSION 2 - EU IMPORTS OF RENEWABLE GASEOUS FUELS: OPPORTUNITIES AND CHALLENGES FROM THE COMPLIANCE SYSTEMS PERSPECTIVE

3 July 2024

EUROGAS PRESENTATION + PANEL DISCUSSION

Union Database PMG GO – Workshop #2 Introduction extra-EU imports panel



EC's interpretation of extra-EU imports of gaseous fuels Starting point

- > Certification of gas through the mass-balancing of integrated gas grids can only be possible if those grids are covered for mass-balancing purposes by the Union Database, since the individual certification by the voluntary schemes of the economic operators cannot cover the certification of the whole grid. Ability from the EC to regulate extra-EU → only possible to request equivalence
- > At this stage **only the EU integrated grid can be considered as one mass-balancing facility,** where the transfer of sustainability certificates of energy units can be carried out through the Union database, this way avoiding any risk of double counting or double disclosure
- > Other integrated grids of third countries cannot at this stage be covered by the Union database hence gas withdrawn cannot be certified as biomethane. But: exception for "direct connection"

Consequently, a vast majority of the biomethane and biomethane-based fuels (biomethanol) will not be able to participate to EU compliance market

Intention of the European Commission

Different approaches for the same issue?

> Based on Commissioner Simson May letter, 3 steps process :

1) Cover the whole EU-integrated infrastructure. *Ready at UDB gaseous fuels launch (21 Nov. 2024)*

2) Upon request, cover EU's neighbouring countries pipe-connected to the EU integrated infrastructure e.g. UK, Ukraine, Norway, Switzerland, a work ongoing. *Range from being ready at launch (already being discussed for some countries) to being ready shortly after launch*

3) For countries not-connected to the EU integrated infrastructure e.g. US, Canada, Japan and with which there is no cooperation framework, only possible if "direct connection". *Timeline:* **?**

> <u>Technically</u> same challenges for all third countries: renewable molecules transported in integrated natural gas grids, even if transported by ships at some point

For third countries, what are the challenges to get fully integrated to the UDB?

- > Underlined by the EC: need to ensure traceability of the molecules to avoid any risk of <u>fraud/irregularities</u> (i.e. incorrect volumes/claims) or <u>double counting</u> (e.g. at national & EU level), in particular when they are mixed with natural gas in the same infrastructure, especially if it is done in third countries with domestic compliance mechanisms
- > To do that multiple requirements discussed by the EC:
 - 1. Need to have a "cooperation agreement"
 - 2. Need to have certification/annual audits of the production plants and chain of custody by EU-recognised Voluntary Schemes
 - 3. Need to ensure no double counting at domestic level
 - 4. Need to verify at injection, consumption (?) and entry point to the EU (?)

Critical to build a common "to-do list" for third countries, even if case-by-case approval by the EC

Potential solutions – 1/3

Cooperation agreement and plants certification/audit

1. Need to have a "cooperation agreement"

- → Rely on general political/trade agreement: MoU with Ukraine appears to be considered as sufficient for the EC. For other countries, what could be the basis and in general, how specific should the agreement be and who should be the counterparty in the exporting country?
- 2. Need to have certification/annual audits of the production plants and chain of custody by EU-recognised Voluntary Schemes
- → Already done annually for all consignments imported to the EU for compliance purposes
- → Implementing Act 2022/996 required that VSs ensure that EOs correctly enter all the relevant info in the UDB. Impact of signing cooperation agreement?

Potential solutions – 2/3

No double counting

3. Need to ensure no double counting at domestic level

<u>Currently:</u> already checked by Voluntary Schemes: e.g. ISCC with EOs signing a "*Statement of single claim of environmental credits*" + with checks in the audit, incl. in the case of participation in more than one scheme, auditor to verify that the total amounts claimed under all programs do not exceed sustainable production. Applicability to other VSs?

Additional requirements:

- → Would it be sufficient to complement with a letter from the third country national administration regarding accounting of renewables/GHG emissions toward UNFCCC?
- → Or is it necessary to crosscheck with the third countries registries in case the country has centralized registries (e.g. US, Canada) for each consignment?

How to provide confirmation to the UDB:

- \rightarrow Direct interaction with third countries registries
- \rightarrow VSs oversee verifiers providing necessary confirmation to the UDB using the verified input of the EO



Potential solutions – 3/3

Data verification

4. Need to verify at injection, consumption (?) and entry point to the EU (?)

<u>Missing:</u> First, need to clarify (TSOs/DSOs') obligations at EU level \rightarrow Review of the Implementing Act 2022/996? Interaction with UDB launch for gaseous fuels?

<u>Data availability:</u> Data potentially already available e.g. TSOs providing to EOs, EOs providing VS

How to provide confirmation to the UDB:

- \rightarrow Direct interaction with third country infrastructure operators
- → VSs oversee verifiers providing necessary confirmation to the UDB using the verified input of the EO





DG ENER REACTION, PANEL DISCUSSION AND Q&A SESSION



Q&A SESSION ON OTHER DETAILED/TECHNICAL TOPICS

- 1. In some Member States there is some confusion regarding accounting of production or consumption of biomethane. Will this be the country of production or country of consumption? Could you please explain this against the provisions of Art. 3 and 7 of RED? Will the UDB provide more clarity on the situation? And what will be the main process?
- 2. What is the progress on connecting national mass balance registries such as Nabisy? If they are not connected by 21 November 2024, what are the implications for the economic operators? Which database will be used for compliance verification and RES SHARES accounting in this case?
- 3. Article 31a allows for the development of a delegated act related to the UDB. Is the European Commission planning to publish such delegated act? If yes, is there an indication of the timeline? What will exactly the DA cover?
- 4. Is the UDB expected to work with harmonized feedstock codes for all voluntary schemes/national mass balance registries such as Nabisy?
- 5. Will all traders be allowed to trade on the UDB or only certified traders?
- 6. If the feedstock traders are already onboarded to UDB in the liquid fuels value chain, can they use UDB to issue sustainability declaration to biomethane producers?



CONCLUSIONS