Attributes™

Trace and monetize your ESG data

LNG qualities tracking solutions

July 2025

About us

A trusted partner to **transition to differentiated natural gas markets.**

A **blockchain-based registry solution** that allows a secure tracking of ESG energy-related data from producers to end-users.

Expert guidance and **open framework web platform** for new gas supply solutions.

Backed by 2 strategic/commercial partners and 2 financial investors
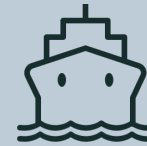
Specialized in ESG traceability solutions

A flexible approach with a wide range of solutions

Natural Gas

LNG

Green power

Hydrogen

~70 TWh

Track record of ~70 TWh of differentiated energy volumes across EU and US markets managed on our live solutions.

An Open Framework web platform suitable for different LNG trading business cases

Track and Verify alignment with your internal sustainability commitments

Support regulatory compliance and reduce risk in your long-term LNG contracts

Differentiate your energy offering with verifiable low-carbon value and unlock premium pricing opportunities

Registry Key Principles for LNG ESG data tracking

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Upload/Issue > **Transfer** > **Share / Retire**

Origin and/or ESG-related data from any auditable source

Securely via blockchain technology

Concrete proof to facilitate voluntary or regulatory claim related ESG attributes
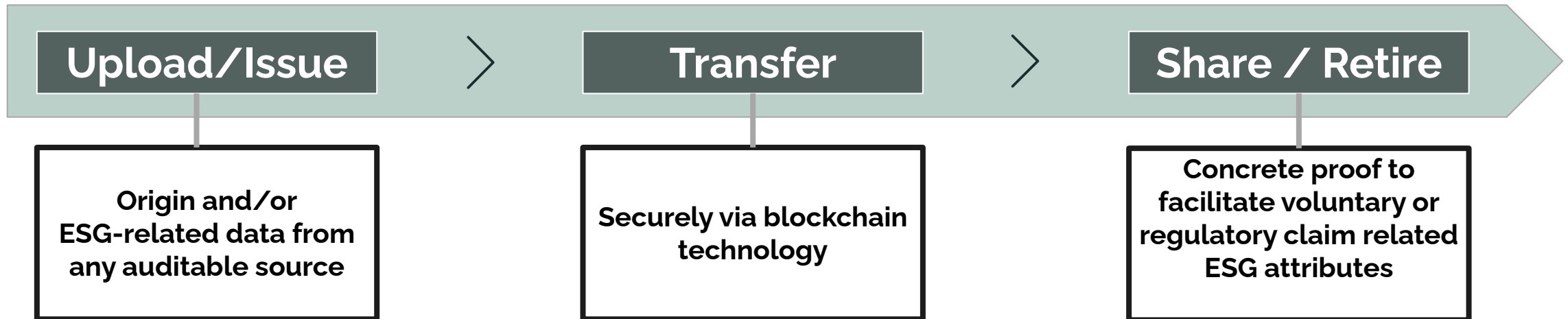
Source agnostic data at every stage

Selected framework (eg. GIIGNL)
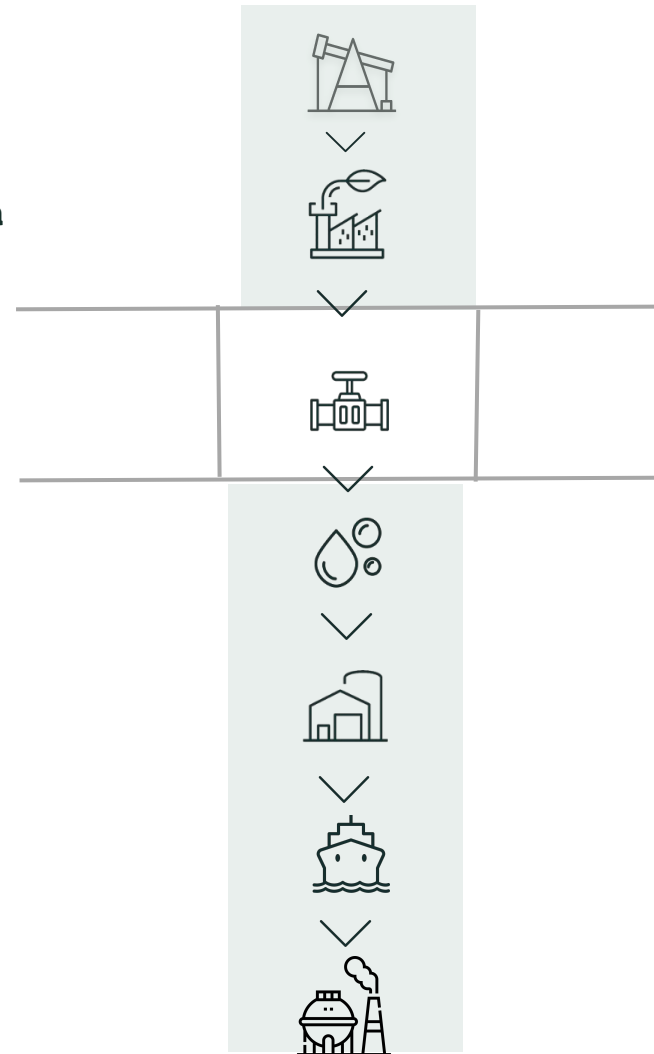
Operator proprietary data

Manual or automated upload of data and evidence documents

Typical proprietary data sources:
- ❏ OGMP 2.0 Emissions Reports
- ❏ ESG certificates (Trustwell…)
- ❏ Audit & verification reports
- ❏ Bill of lading
- ❏ Discharge report

Default data

Default values acquisition system from available data sources*:

Typical public / commercial data sources
- ❏ Government agencies (eg EPA, Thetis MRV..)
- ❏ Research publications
- ❏ Databases (eg EcoInvent)
- ❏ Public sources

*List of accepted sources to be validated with GIIGNL upon discussion

ATTRIBUTES™ LNG value chain dashboard

All info available in one space
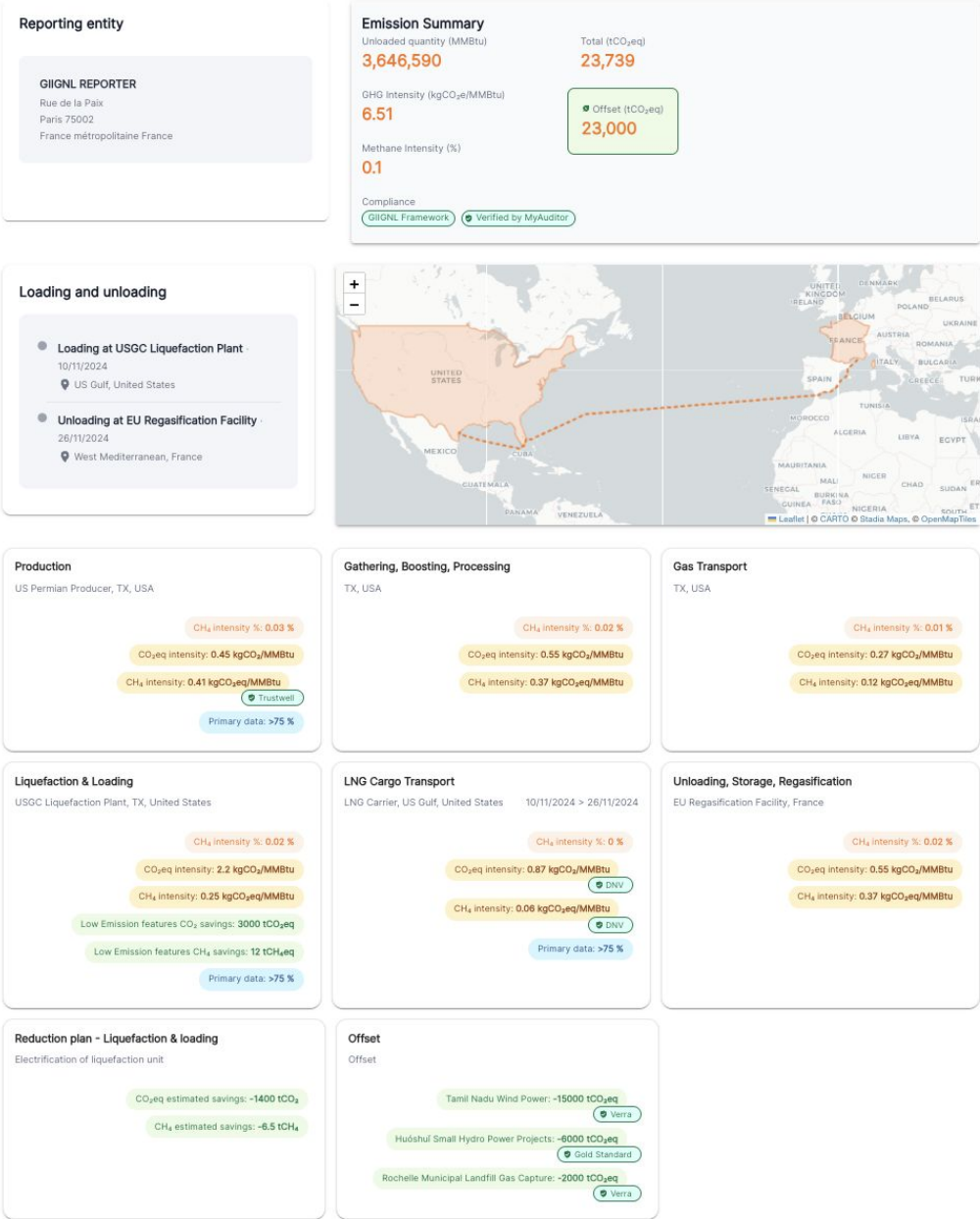
Emission Summary

Unloaded quantity (MMBtu)
3,646,590

Total (tCO$_2$eq)
23,739

GHG Intensity (kgCO$_2$e/MMBtu)
13.5

🌿 Offset (tCO$_2$eq)
23,000

Methane Intensity (%)
0.34

Compliance

(GIIGNL Framework) (✅ Verified by MyAuditor)

Aggregated
emissions view

Detailed emissions view :
from **various data sources** and **validation schemes**

Production

MyProducer, Permian Basin, TX, USA

CH$_4$ intensity %: **0.03 %**

CO$_2$eq intensity: **0.45 kgCO$_2$/MMBtu**

✅ Trustwell

CH$_4$ intensity: **0.41 kgCO$_2$eq/MMBtu**

✅ Trustwell

Primary data: **>75 %**

ATTRIBUTES™ generic Workflow

ISSUANCE
of certificates for each cargo delivered and equal to the volumes regasified. Each cargo is fungible
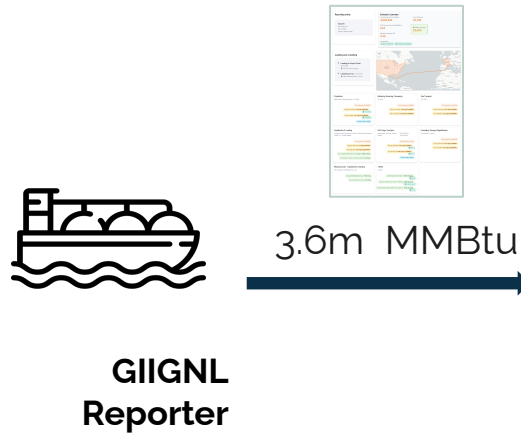
TRANSFER
certificates along the chain based on commercial agreements

RETIRE
certificates to claim associated data.

GIIGNL Reporter

3.6m MMBtu

LNG Buyer

Regulator

2m MMBtu

1m MMBtu

Distributor

Distributor

Consumer

1.5m MMBtu

Consumer

0.5m MMBtu

Consumer

1m MMBtu

LOW CARBON LNG CERTIFICATE

TRANSACTION ID:
0xd894fd91c6b623723db520e39011c2f
b9c8baa8cc19c8fcaa1b428ce18eb8d6b

CARGO ID:
CC-ADA-2024-11

RETIREMENT DATE:
23-07-2025 14:51

This document certifies that the beneficiary has acquired the origin and sustainability attributes associated with this gas and is entitled to use them for carbon accounting, compliance and public disclosure purposes.

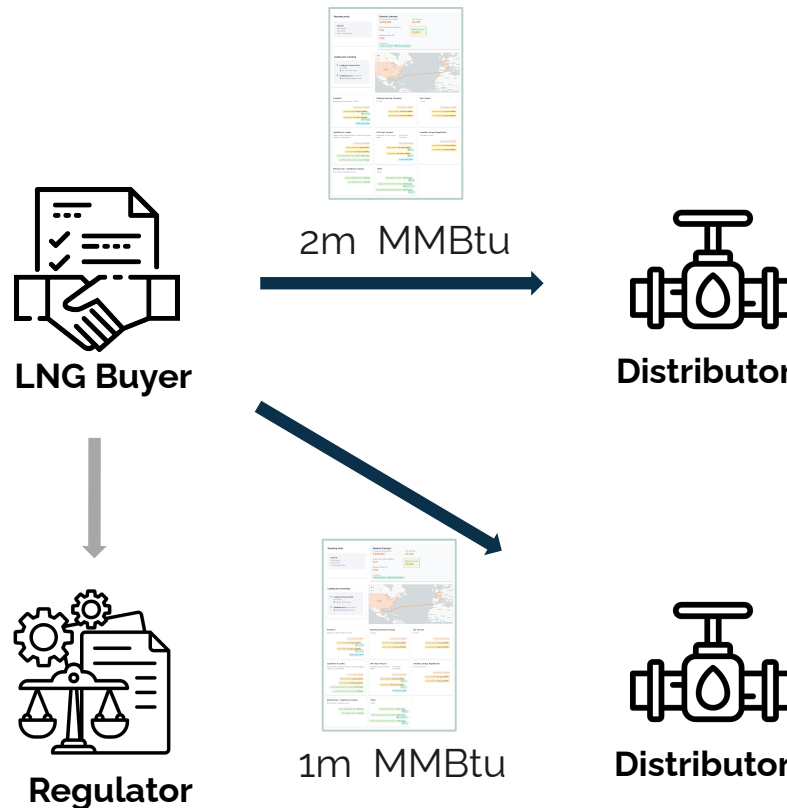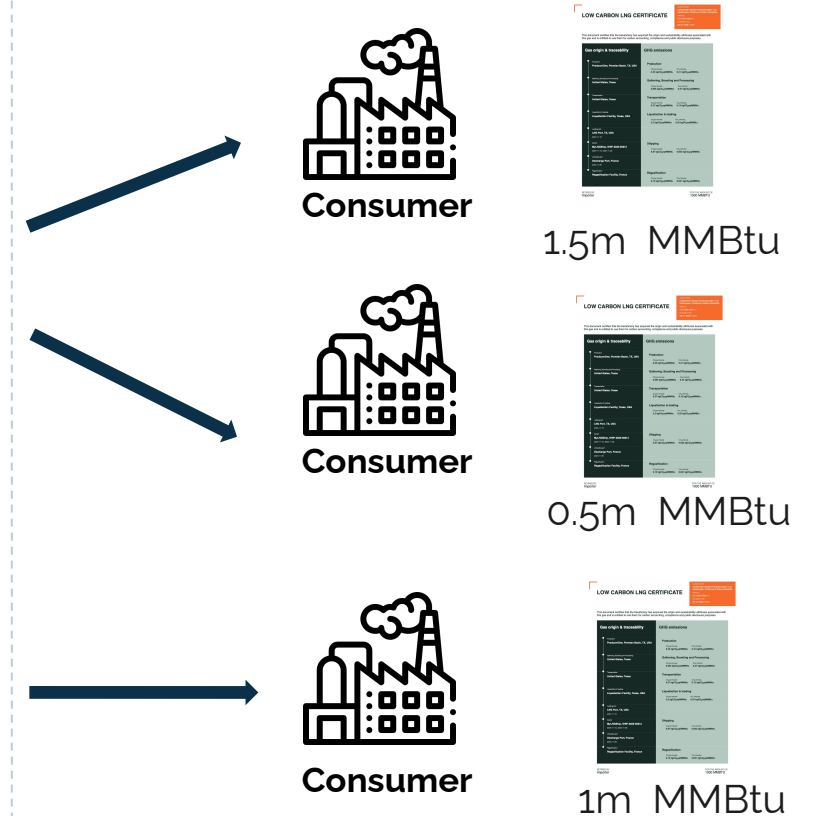| Gas origin & traceability	GHG emissions	
Production ProducerOne, Permian Basin, TX, USA	**Production**	
	CO$_2$eq intensity 0.45 kgCO$_2$eq/MMBtu	CH$_4$ intensity 0.41 kgCO$_2$eq/MMBtu
Gathering, Boosting and Processing United States, Texas	**Gathering, Boosting and Processing**	
	CO$_2$eq intensity 0.055 kgCO$_2$eq/MMBtu	CH$_4$ intensity 0.37 kgCO$_2$eq/MMBtu
Transportation United States, Texas	**Transportation**	
	CO$_2$eq intensity 0.27 kgCO$_2$eq/MMBtu	CH$_4$ intensity 0.12 kgCO$_2$eq/MMBtu
Liquefaction & loading Liquefaction Facility, Texas, USA	**Liquefaction & loading**	
	CO$_2$eq intensity 2.2 kgCO$_2$eq/MMBtu	CH$_4$ intensity 0.25 kgCO$_2$eq/MMBtu
Loading port LNG Port, TX, USA 2024-11-10		
Carrier MyLNGShip, SHIP-2025-00012 2024-11-10, 2024-11-26	**Shipping**	
	CO$_2$eq intensity 0.87 kgCO$_2$eq/MMBtu	CH$_4$ intensity 0.062 kgCO$_2$eq/MMBtu
Unloading port Discharge Port, France 2024-11-26		
Regasification Regasification Facility, France	**Regasification**	
	CO$_2$eq intensity 0.15 kgCO$_2$eq/MMBtu	CH$_4$ intensity 0.021 kgCO$_2$eq/MMBtu

RETIRED BY:
Importer

FOR THE AMOUNT OF:
1000 MMBTU

A tailor-made retirement certificate

TRANSACTION ID:
0xd894fd91c6b623723db520e39011c2f
b9c8baa8cc19c8fcaa1b428ce18eb8d6b

CARGO ID:
CC-ADA-2024-11

RETIREMENT DATE:
23-07-2025 14:51

Production ProducerOne, Permian Basin, TX, USA	**Production**	
	CO$_2$eq intensity 0.45 kgCO$_2$eq/MMBtu	CH$_4$ intensity 0.41 kgCO$_2$eq/MMBtu

- ⊘ User-friendly aggregated value chain view for final consumer
- ⊘ Blockchain ID proof
- ⊘ Full audit trail
- ⊘ No double counting

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Demo

A one stop shop solution

Flexible	• No imposed standards, methodologies, or specific verifiers • Custom products aggregating ESG data from various sources
Trust and Security	• Blockchain technology ensures data integrity throughout the chain • Strong guidelines boost customer trust in environmental claim
Easy, Quick deployment	• Easy to deploy and fully interoperable • New products structured and launched in days

ATTRIBUTES™ LNG Solution

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Supporting EU Methane Regulation compliance

Physical value chain									

Commercial value chain	Producer	Gathering, Boosting & Transmission operators	Liquefier	Cargo operator	Importer/ Distributor	Consumer

ESG Proof & Verification

- Emissions data report
- Independent verification
- ESG data (primary or secondary)
- ESG data (primary or secondary)
- Bill of Lading
- ESG data (primary or secondary)

COMPLIANCE ✓
- Emissions & Verification reports
- Discharge report

Upload your documents

ATTRIBUTES™ solution

- Issuance of Compliance proof in origin country
- Transfer compliance proof in origin country
- Retire and download compliance proof in origin country and re-issue in destination country with import proof

Meet us at ATTRIBUTES™ GASTECH Milan events!

Tue Sep 9th
SpaceJam Fuori Salone Art Cocktail

Wed Sep 10th
BCG x ATTRIBUTES™ Methane (Milanese!) Breakfast

Please write to contact@attributes.digital to request your invitation

To learn more about us:

contact@attributes.digital

ATTRIBUTES™

Paris | Bruxelles|(Singapore)

Attributes™

ATTRIBUTES™ Solution - Key risks and how we address them

ATTRIBUTES™ Enabled mitigations

Green Washing

Geographical: Use USA production EUMR certificate without physical shipping to EU
→ Bundle verified production emission report and import documentation (bill of lading)

Temporal : Use certificates from 2017 to cover consumption in 2023
→ Certificates expire after 12 months

Double selling

Malicious actor on the chain sells more certificates than they own
→ Blockchain technology ensures that volumes cannot be double-counted.

False claims

Producer or malicious actor states methane report is compliant with EUMR Art.12 or OGMP 2.0 L5 when it is not the case
→ ATTRIBUTES™ checks appropriate documentation is indeed validated by 3rd party independent verifier.

→ Blockchain technology ensures that documentation and data remain tamper-proof throughout.

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ATTRIBUTES™ Engagement Model Example:
From Proof to Platform - A Scalable Commercial Journey

3-6 months			Ongoing subscription
Identify and Scope	**Map**	**Co-develop**	**Platform Access**

Identify and Scope
- Jointly define relevant use cases
- Align on data sources, user needs, and key stakeholders
- Deliver clear scope, success criteria, and roadmap

Map
- Assess existing data, infrastructure and traceability gaps
- Map flows and potential data integration points
- Produce a visual registry blueprint

Co-develop
- Build and test registry features in a sandbox environment
- Validate with selected LNG batches and mockup transactions
- Generate learnings for scale-up readiness

Platform Access
- Full-featured platform access based on tested LNG registry model
- Commercial terms (e.g., subscription, volume-based, enterprise license) to be co-defined
- Flexibility to adapt pricing based on usage, scope, and strategic value

Project-based pricing
(based on scope, e.g. man-hour for mapping, co-development and testing)

Platform-based pricing

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