

MIQ METHANE MONDAYS

7th February 2022



MiQ pioneering methane certified gas



- MiQ is an independent, not-for-profit foundation established by RMI & SYSTEMIQ with the aim of rapidly reducing methane emissions in the oil & gas sector through certified gas.
- We are a team of international experts from across the energy industry, traders, environmentalists, engineers, policymakers and researchers.
- Started in 2020, MiQ audits already cover 2.5% of global gas production (100bcm), equivalent to **23% of EU gas consumption**.



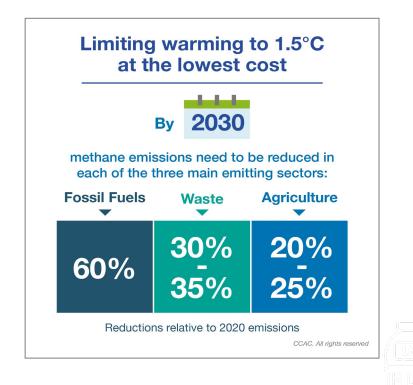
pioneering methane certified gas





WE MUST REDUCE METHANE EMISSIONS

"A 45% reduction of methane emissions by 2030 is needed to put the world on a path consistent with the Paris Agreement goal to limit warming to 1.5°C" *



Methane emitted by the Oil and Gas industry = 84 million tonnes CH₄ = 7 billion tonnes CO₂ equivalent **



8x the CO₂ emissions from the global aviation sector



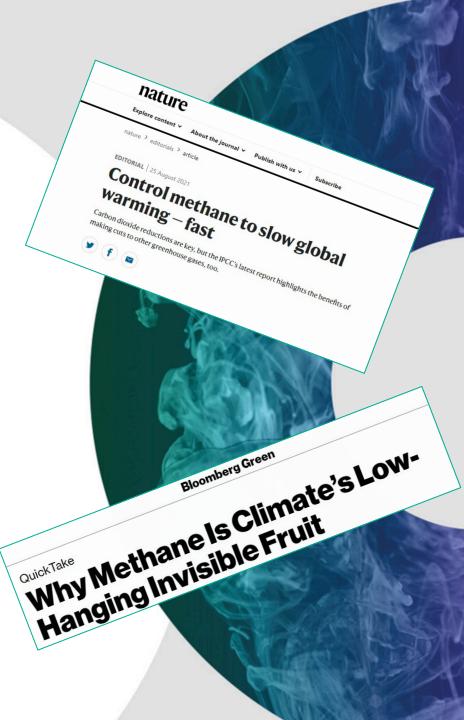
More than 1.2x the US' annual CO₂ emissions

^{*} and above table from CCAC & UNEP Global Methane Assessment 2021 Global Methane Assessment (full report) | Climate & Clean Air Coalition (ccacoalition.org)

^{**} Data 2019 (IEA) GWP20@IPCC). GWP 20 year = 84x

METHANE IS A POWERFUL GREENHOUSE GAS

- Methane (CH₄) has a shorter atmospheric lifetime than CO₂ but is a much more potent GHG*
- System-wide leakage rates range from 1-10%
 - <3.2% needed to beat GHG impact of coalfired combustion
- The good news: solutions exist to mitigate emissions cost-effectively (IEA – 75% can be abated with today's technology)
- We need the **transparency** to incentivize the action
- Aggressive methane emission reductions is the best opportunity to slow the short-term rate of global warming

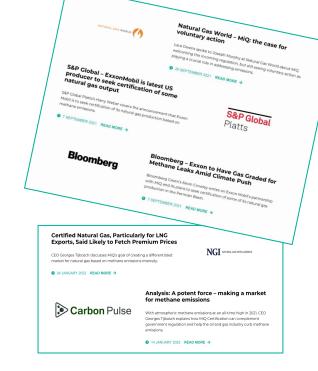


MiQ - THE JOURNEY SO FAR

- Large US gas producers have certified certain facilities: independents and majors including EQT, Chesapeake, Comstock, North East Energy, ExxonMobil and BP.
- 3rd Party Auditors: 10+ companies accredited to conduct MiQ Audits, ensuring robust validation and audit, but also to allow global hyper-scaling and competitive RFP's for operators
- Current MiQ certifications cover 100 bcm/year of natural gas production equivalent to 23% of EU27 gas consumption

MiQ Certificates were issued first time in Dec 2020 in the digital registry www.miqregistry.org

- MiQ certificates are required for transacting (trading) certified gas between sellers (producers) and buyers (Utilities, Industries). Prices are emerging for certified gas.
- Rapidly growing adoption in North America (e.g. Bloomenergy), now translating to wider adoption globally, starting with LNG in 1H22









GAS CERTIFICATION -THE THIRD WAY

- Transparency drives the change and needs to be provided at the point of decision-making
- To achieve this, timely and readily-available information must be provided in relation to every unit of gas that is produced, traded and purchased
- Independently-validated evidence of emissions intensity of the product being discussed at the time of the decision being made, whether a purchase by a trader on the screen or a threemonth negotiation over a 10year LNG supply transaction

Voluntary Action

- Setting of targets at corporate or industry level
- Increased measurement. reporting and verification (MRV)
- Progressive companies can implement better practices
- Agile adoption of new technology
- Lack of transparency and comparability

Certified Gas

- Voluntary initially, potential to be adopted by regulation (e.g. import standards)
- Audited by credible third parties
- Quantifiable, credible and transparent at asset level
- Tradeable daily between market participants (sellers, buyers) - creating direct incentives

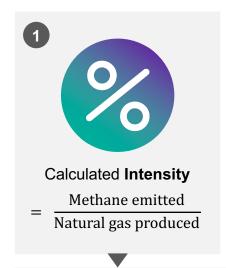
Regulatory and Policy

- Existing and future regulation
- Strengthen regulation over time or aim to alobalise
- Rules are difficult to align between jurisdictions
- Subject to political cycles and long timeline for actual implementation

Those approaches should be blended to solve methane emissions



A HOLISTIC AND INCLUSIVE APPROACH



2 Robust Monitoring **Technology Deployment** on Facility- and Source-Level



Policies and procedures for methane emissions management

- 1. Standard will evolve dynamically to encourage evolving tech market and other protocols/standards
- 2. Higher certification norms permitted
- 3. Third-party audits/validation
- 4. Settlements mechanism for emission deviations and monthly MRQ
- 5. Certificates held in global MiQ Registry

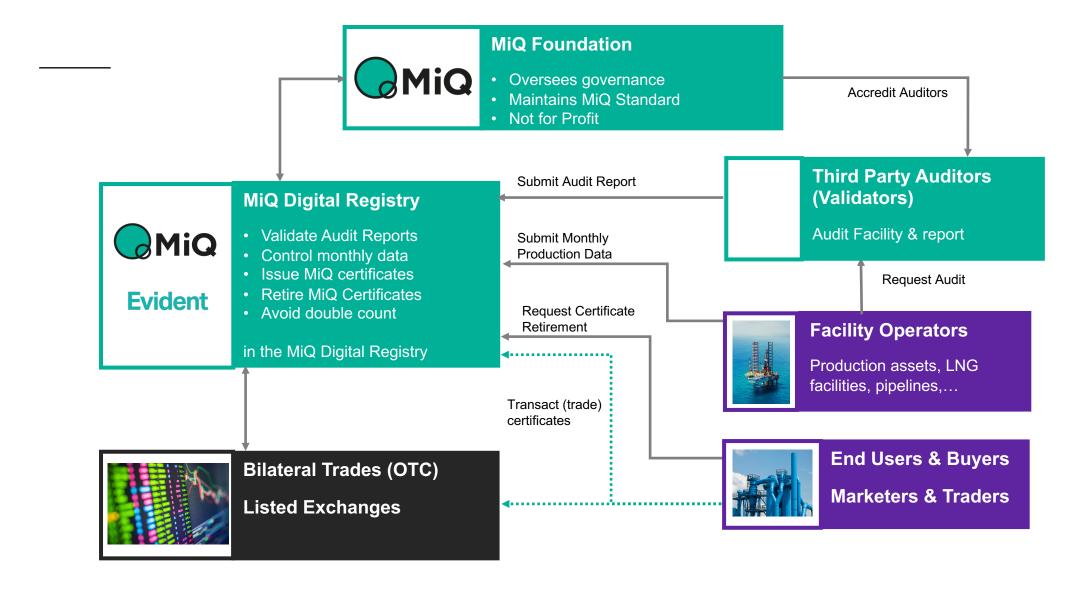
Accredited third-party Certification Bodies audit and verify



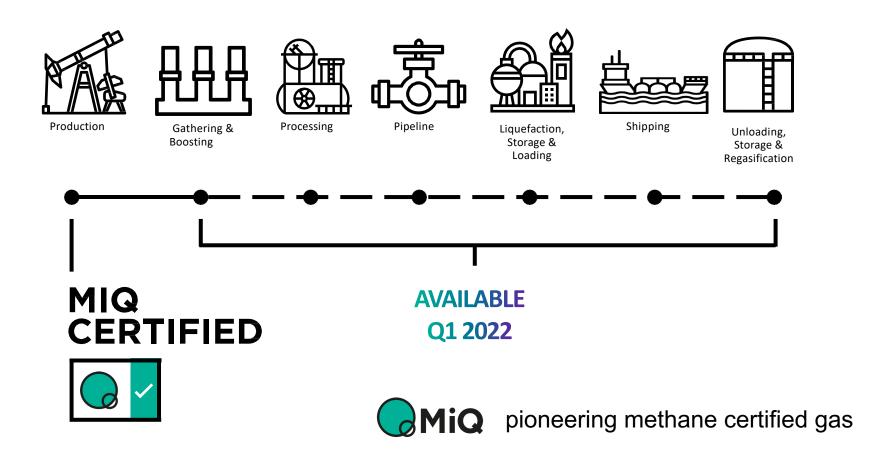


MIQ GOVERNANCE

SEGGRATION OF DUTIES TO AVOID CONFLICT AND ENABLE GLOBAL HYPER-SCALING



Certified natural gas across the whole LNG supply chain





OMIQ

Mandatory

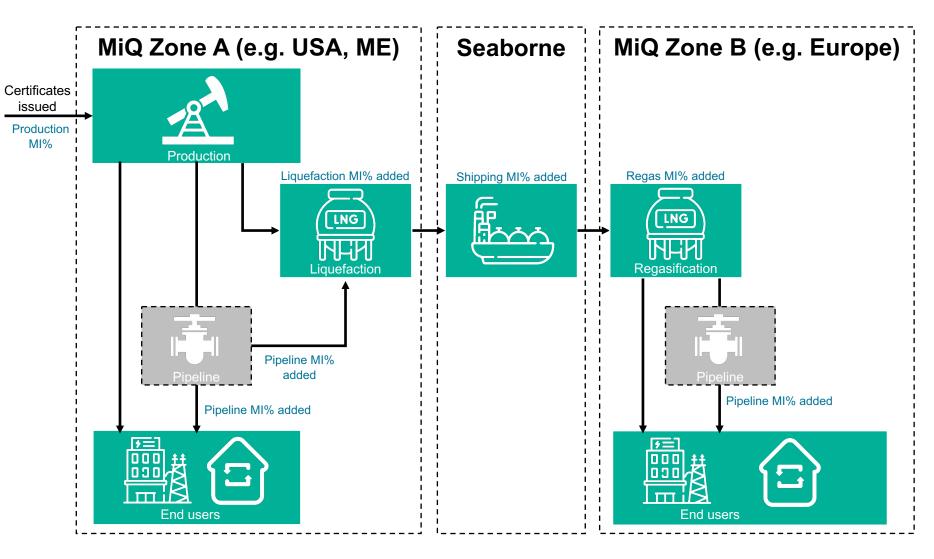
supply-

chain

segments

Optional

MIQ CERTIFIED SUPPLY CHAIN LCA



IMPORT STANDARD & MiQ

- The EU's natural gas dependency was 90% in 2019. Regulatory tools could be used to limit methane emissions, such as imposing an upper limit on imported methane emissions, incentives below certain thresholds, or link differentiated gas to other regulatory schemes.
- MiQ has developed the Certified Supply Chain to credibly assess the methane emissions along the full supply chain (LCA) up to the point of entry into the EU (or other import zones).
- The digital registry (<u>www.miqregistry.org</u>) keeps track and avoids double counting on a global basis
- With credible certification such as MiQ, EU methane emissions from imported natural gas could be reduced by 80% in 5 years using a transitional framework, allowing producers time to improve (technology is ready)
- MiQ is not for profit and designed for both voluntary and regulated markets.

| Year | Disclosure % | Methane hurdle | MiQ grade |
|--------|-------------------|----------------|-------------|
| Year 1 | 20% sales/imports | No requirement | max grade F |
| Year 2 | 50% | No requirement | max grade F |
| Year 3 | 100% | <1.0 | max grade E |
| Year 4 | 100% | <0.5% | max grade D |
| Year 5 | 100% | <0.2% | max grade C |

