



MiQ Presentation: Methane Monday

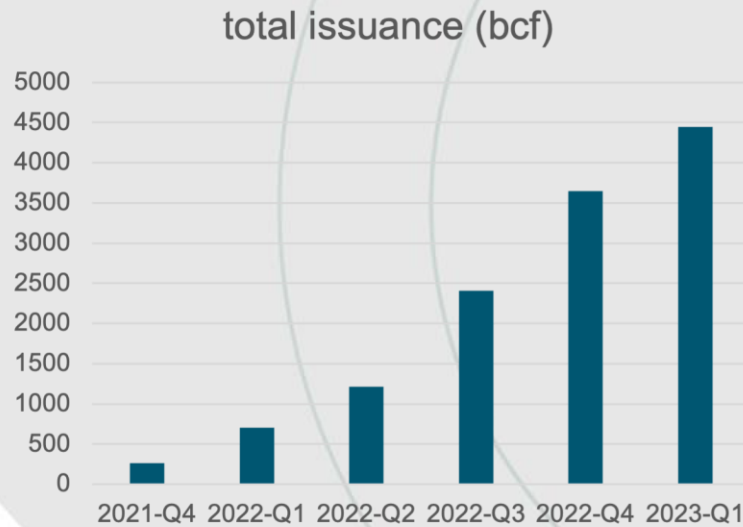
June 26, 2023

MIQ CERTIFIES ALREADY 170 BCM/YEAR OF GAS

4% OF GLOBAL GAS PRODUCTION

18% OF US GAS PRODUCTION

GROWTH OF MIQ CERTIFIED GAS



PARTICIPATING COMPANIES

SETTING THE STANDARD FOR METHANE EMISSIONS



IN 18 MONTHS, MIQ HAS BUILT AN ECOSYSTEM WITH 100+ PARTICIPANTS

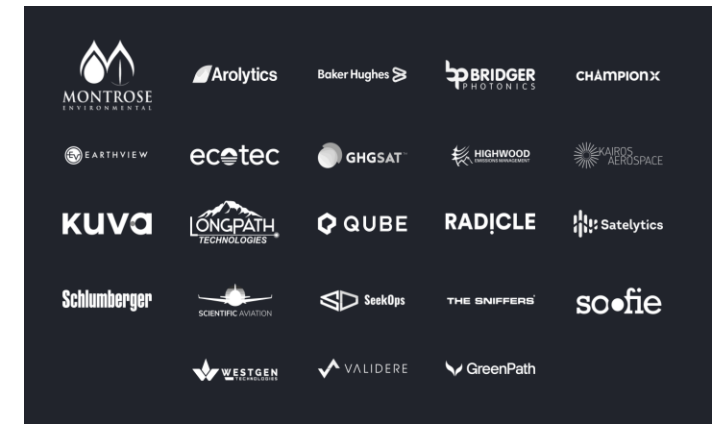
Independent Auditors



Operators



Monitoring Providers



Market participants include market access platforms such as CG Hub, buyers such as Bloom Energy, Xcel Energy, Washington Gas, CF Industries, Virginia Gas

HOW ARE CERTIFICATES GENERATED, TRADED, TRACKED, RETIRED?

STEP 2

Operator reports to **registry** each month. 1 cert per MMBtu w/ Facility grade issued to operator's account

Certs Issued

STEP 4

Gas is used. Operator claims emissions as Scope 1, or buyer claims emissions as Scope 3.

Attributes Used

Facility Graded

Certs Transacted

Certs Retired

STEP 1

Facility undergoes independent 3rd party Audit and receives a **GRADE**, which correlates to **Methane Intensity**. Audit report submitted to **registry**. Certification good for 1 year.

STEP 3

Operator transfers certs to marketer or buyer's **registry** account, based on deals or contracts

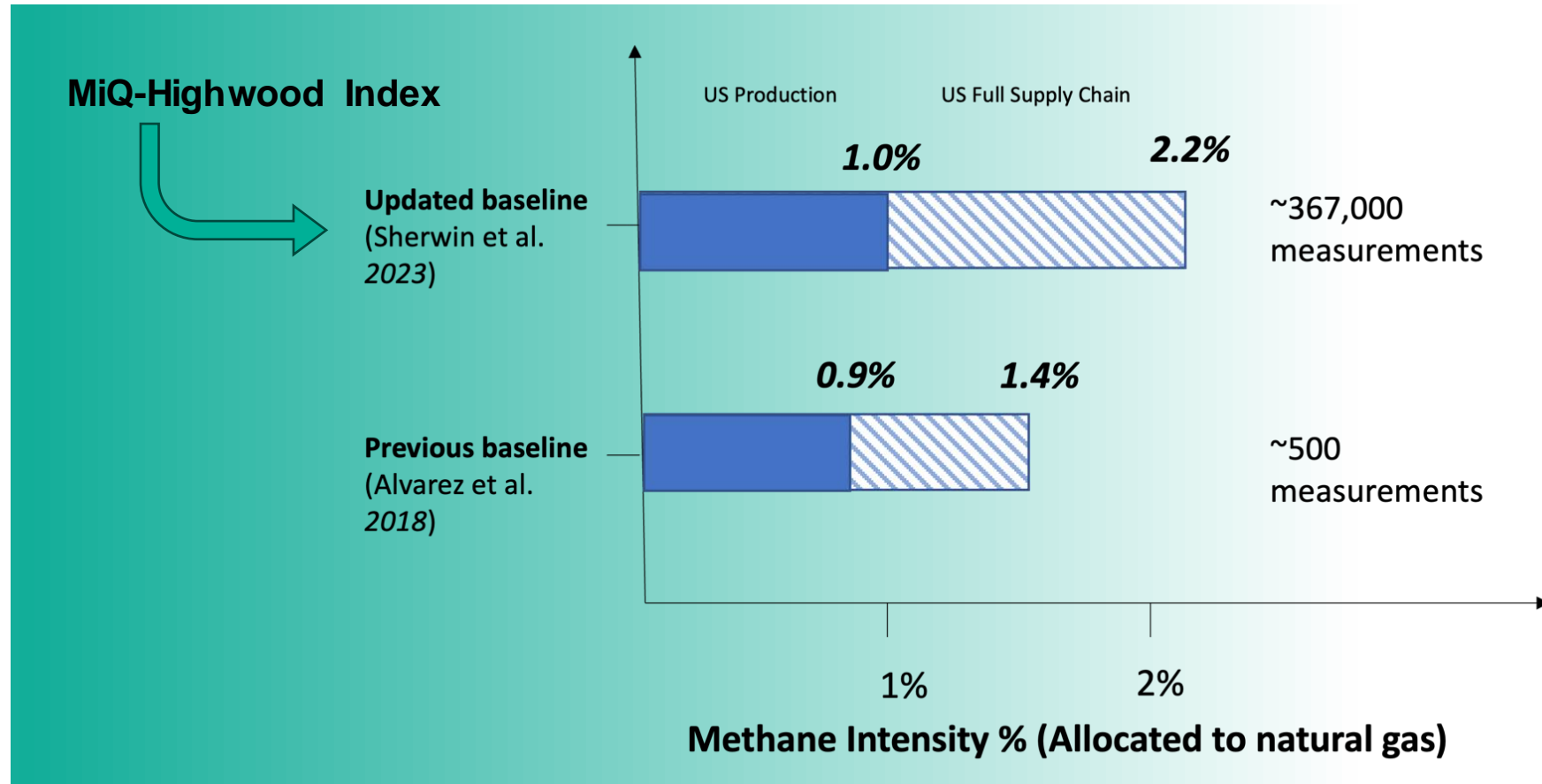
STEP 5

User of gas retires certificates inside **registry**.

Buyers sign up for free on www.MiQregistry.org

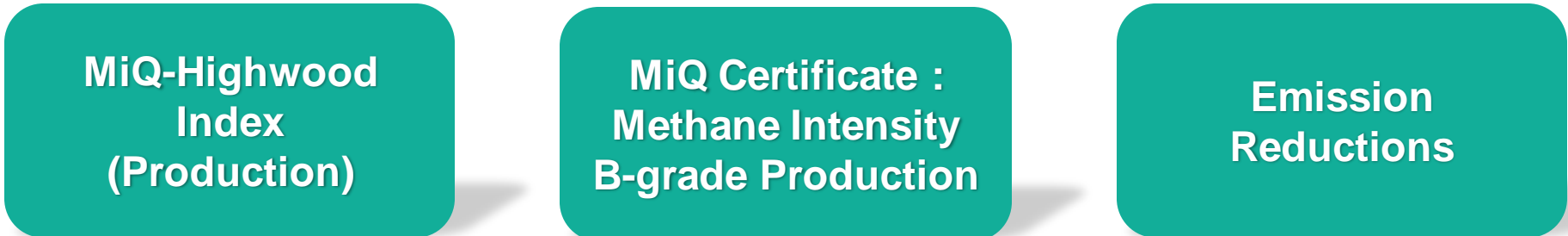
THE MIQ-HIGHWOOD INDEX - JUNE 2023

US NATIONAL AVERAGE METHANE EMISSIONS



The MiQ-Highwood Index for methane intensity is the most complete, comprehensive, measurement-informed national estimate for methane intensity currently available

HOW DO YOU DETERMINE YOUR EMISSION REDUCTIONS?



MI	1.0 %	-	0.1%	=	0.9%
g CH4/MMBtu	174	-	17	=	157
g CO2e/MMBtu	4,852	-	477	=	4,375

Assumptions: 100-yr GWP of 27.9 gCO₂e/gCH₄, HHV: 1.036 MMBtu/Mscf, CH4 Content: 92%, CH4 Density: 0.0192 t/Mscf

CERTIFIED GAS IS COST EFFECTIVE AND CREDIBLE - COMPARISON



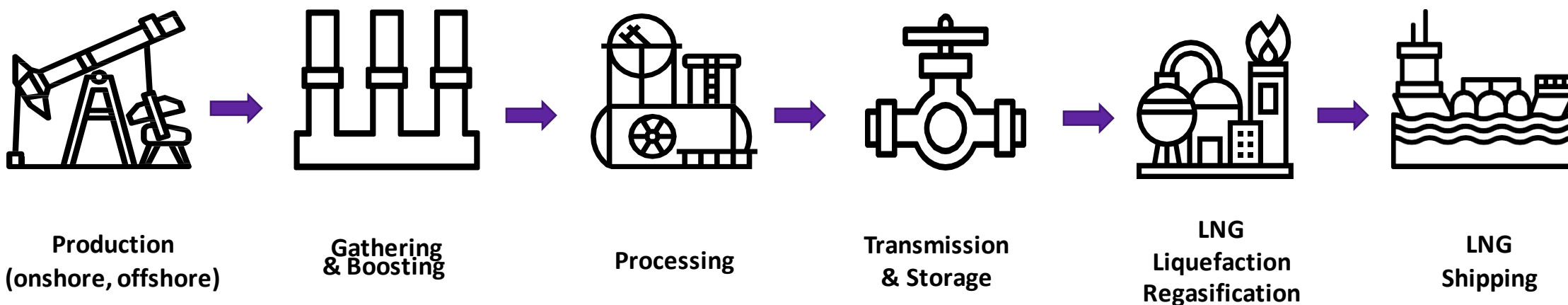
Assumptions: Certified gas premium: \$0.02/MMBtu, RNG price: \$15/MMBtu, 100-year GWP for certified gas calculation

SUPPLY CHAIN CERTIFICATION IS THE ONLY VIABLE SOLUTION FOR SCOPE 3 REPORTING, CBAM AND IMPORT STANDARDS

- When importing oil or diesel, one can measure the density or sulphur content at the border
- This is not possible for methane emissions since they have been emitted upstream from the delivered gas product
- The solution is supply chain certificates.
- Certificates contain the audited attribute of the methane/GHG emissions upstream of the delivery point [g/MMBtu]
- Unlike reporting standards or desktop LCA analysis, certificates are audited, and avoid double counting.
- Buyers can thus be assured they are the only ones making the scope 3 claim

MIQ – THE UNIVERSAL STANDARD FOR SUPPLY CHAIN EMISSIONS

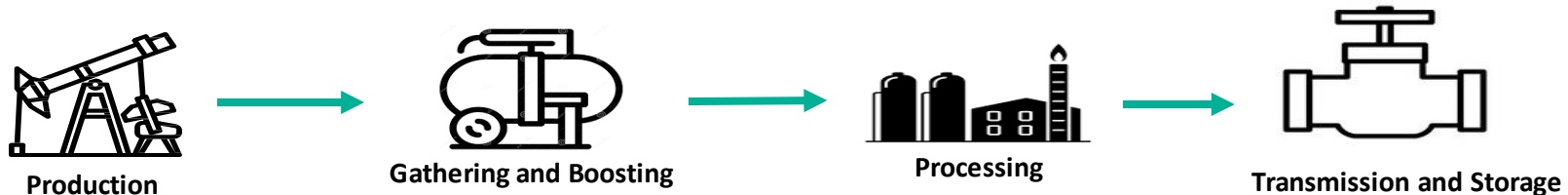
- MiQ has pioneered standards for each of the 7 stages of the natural gas value chain
 - Includes methane, CO2 and N2O
 - This enables life cycle certification, going way beyond desktop LCA
 - Methane intensity can be tracked and summed from production site to grid entry (well to grid)



MIQ = FULL SUPPLY CHAIN GHG ACCOUNTING

Case Study: Industrial H₂ producer needs certificates to cover ca. 1 bcf/d for their onshore supply chain

Segment	Grade	Methane Intensity (g/MMBtu)	# Certificates*	Scope
Onshore Production	A	10	400 million	Scope 1
Gathering & Boosting	C	30	400 million	Scope 1
Gas Processing	A	10	400 million	Scope 1
Transmission & Storage	B	20	400 million	Scope 1
LNG Liquefaction / Shipping / Regas	-	-	-	Scope 1
Onshore industrial H₂ Buyer	-	70**	400 million	Scope 3



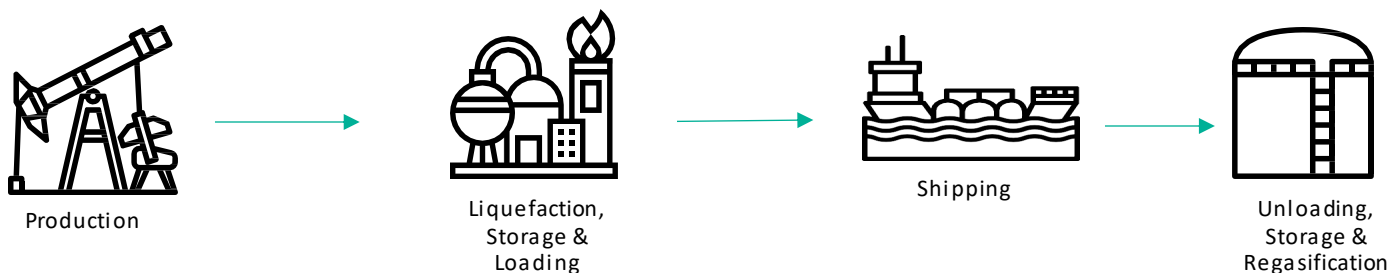
* certificates are issued for each individual segment and for supply chain purposes the methane emissions are summated to show the full supply chain emissions

** Final methane intensity is g CH₄/mmbtu gas delivered

FULL SUPPLY CHAIN GHG ACCOUNTING

TRADING, IMPORT STANDARDS AND SCOPE 3 ACCOUNTING

	North America	Waterbourne	Europe	
US Production - MiQ Cert	B (0.10)			
US LNG Liquefaction - MIQ Cert	A (0.05)			
FOB LNG US	(0.15)			<-- Buyer FOB LNG
LNG Ship Atlantic Basin		+ MiQ bespoke Model (0.03)		
DES LNG Europe			(0.18)	<-- Buyer DES LNG
Regas Europe - MiQ Cert			A (0.05)	
Gas Into Grid			(0.23)	<-- Buyer at the Hub



US POLICY DEVELOPMENTS - METHANE



U.S. FEDERAL CH₄ POLICY INITIATIVES

- Technology Regulations

- *Environmental Protection Agency*
- *Department of Interior – Bureau of Land Management*
- *Dept. Of Transportation – Pipeline and Hazardous Materials Safety Administration*

- Performance Regulations

- *Inflation Reduction Act Methane Fee (draft rule pending)*

- Reporting Measures

- *Securities and Exchange Commission*
- *Department of Energy – Office of Fossil Energy & Carbon Management*

- Funding

- *Inflation Reduction Act - \$1.5b technology assistance*

U.S. STATE CH4 POLICY INITIATIVES

Type	States	Summary
Supply Side Regulations	Colorado New Mexico	NM & Colorado: Emissions intensity; Equipment regulations Colorado: Proposed regs on Verification
Demand Side 'Passive'	Virginia Tennessee	Instructs state Public Utility Commissions (PUCs) to consider CG in rate increase cases
Demand Side 'Active'	California	Instructs state agencies to develop strategies for use of low methane gas; Instructs state PUC to develop strategy for use of low methane gas by utilities

ASSESSMENT – THE STATE OF U.S. CH₄ POLICY

The Central Question --

Wait for regulations?

THANK YOU !

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