

BRIEFING September 2022

US GAS CAN'T CERTIFY AWAY ITS CLIMATE AND ENVIRONMENTAL JUSTICE PROBLEMS: A CASE STUDY ON MIQ AND EXXON

In the first half of 2022, the United States (US) became the world's largest exporter of liquefied fossil gas, also known as "liquefied natural gas" (LNG).¹ This rapid growth comes with significant climate and environmental impacts, as Global Witness has detailed previously.² These include the huge carbon emissions that come from burning fossil gas and the climate impacts of methane – a powerful greenhouse gas that is released throughout the LNG supply chain.

Even as US regulators continue to approve and promote the expansion of gas exports, the climate problems associated with fossil gas are not entirely lost on policymakers. Most recently, Congress has included in the Inflation Reduction Act of 2022 methane fee intended to incentivize gas producers and exporters.³ While this is a step in the right direction to curb a significant source of greenhouse gas pollution, it is not enough to address the dire impacts of the continued growth of climate-wrecking US gas production and export. This growth has been premised in large part on a false narrative of gas as "clean," "natural" and a "bridge fuel."

This article examines one emerging addition to this greenwashing arsenal: the practice of certifying gas as "responsibly sourced" explaining why it is misleading and why it risks undermining environmental justice considerations in ESG – environmental, social and governance – assessments. We show how the plans one of the leading certifiers, MiQ, is at odds with the actions needed to curb global heating and how two of their customers, ExxonMobil and EQT, appear to be using certification to create a new

"responsible" image, despite having records of environmental injustices.

Responding to a Global Witness request for comment, MiQ stated that its certification standard brought transparency to the sector and that it believed in a "clean energy" future, but that this could not be achieved immediately.

The problems with certification highlighted here should make gas buyers, investors and energy policymakers wary of the claimed benefits of certified fossil gas. Instead of relying on certification, they need to promote climate solutions that truly support the needs of communities. This includes phasing out US gas production and export, and promoting fossil-free energy alternatives at home and abroad.

GAS CERTIFICATION IN A NUTSHELL

Certified gas purports to address the environmental, social, and governance – known as ESG – issues associated with the gas industry, especially methane emissions. Gas certification, also known as gas differentiation, supposedly results in "natural gas that has been produced along a specific set of sustainability criteria to minimize methane leakage and harm to the environment."⁴ The resulting gas is known as "responsibly sourced gas," which is touted as "the most rigorous and cost-effective way to achieve ESG and climate goals" by providers of such certification.⁵

Certified gas is a fairly new and increasingly popular concept. According to the Independent Energy Standards Corp, the first “premium responsible natural gas product” was sold in 2018, when New Jersey Natural Gas bought gas from Southwestern Energy with a certificate issued by IES.⁶ Over the next four years these types of sales have significantly increased. Producer-certified gas is expected to make up about 18% of the North American gas market by the end of 2022, according to one recent estimate.⁷

Evidently, the uptick in certification reflects the increased pressure on oil and gas companies to reduce their greenhouse gas emissions. Supporters of gas certification claim that the process can help companies become more competitive by signaling ethical practices to consumers and potential employees.⁸ Some certifiers believe that the market will naturally gravitate towards gas that meets certification standards, leading certified gas to become the norm in the market.⁹ Some certifiers – like Project Canary – use their own in-house testing and measurement technology,¹⁰ while others – like MiQ – use third-party auditors as part of their certification processes.¹¹ These companies use individual, proprietary grading standards that are based, in part, on a range of emissions standards developed by different governments and global bodies – such as existing standards enacted by the US Environmental Protection Agency – as well as other proprietary criteria across the entire ESG spectrum.¹² Yet, while there are differences in approach among different certification regimes, the process and its products have been leveraged by the industry as a way to rebrand gas’ image and is seen as a key to unlocking greater demand for US LNG abroad.

WHY IT’S MISLEADING

Despite the potential benefits of gas certification, it risks greenwashing and perpetuating the production and usage of fossil gas.

In addition to unlocking more demand for supposedly greener LNG exports, certification also seems to be driven by profit. The image

rebrand that certification lends to gas is one that is promoted by those in the certification business. Project Canary’s founder and chief executive officer Chris Romer reiterated that belief in a 2021 interview, “RSG [responsibly-sourced gas] is the beginning of a multi-year appropriate rebranding of natural gas.”¹³

In reality, there are several related problems with gas certification. First, not all certification is equal and none of it is regulated. Gas certification is a voluntary market; industry is not required to pursue “certified” designations, and absent a legal or regulatory requirement, many companies may not pursue it, and there is no guarantee that those that do will do so rigorously.

Further, certification frameworks or standards vary from company to company. And the lack of parity between standards and the lack of codification of those standards leaves the door open for anyone to define. Since certifying organizations each have their own metrics, there is nothing stopping the industry from simply setting its own low bar that can be met too easily.

Second, most of these frameworks are proprietary and not open to public scrutiny, which establishes a concerning lack of transparency and potential conflicts of interest.

Third, while certified gas is potentially lower methane emission than non-certified competitors – a result of plugging leaks along the supply chain – nothing has changed about the carbon content of the fossil gas by the time it’s used. When fossil gas is ultimately burned, this still emits more than half as much carbon dioxide as burning coal, regardless of any certification.¹⁴

Finally and most importantly, it is apparent that certification regimes can serve as cover for the environmental and health harms of fossil gas production and infrastructure.

MIQ – AN AIM AT ODDS WITH THE PARIS CLIMATE GOALS

In recent years, multiple gas certification models have emerged and grabbed media attention. Prominent among them is MiQ, which claims to be the fastest growing methane emissions certification standard,¹⁵ certifying over 4% of global gas supply as of 2022.¹⁶

Focused exclusively on methane emissions, MiQ was founded in 2020¹⁷ as an “independent, not-for-profit partnership between Rocky Mountain Institute and SYSTEMIQ.” Its aim is to “facilitate a rapid reduction in methane emissions from the oil and gas sector.”¹⁸ Last year, MiQ signed multiple deals to certify gas assets, including some owned by majors Exxon¹⁹ and BP,²⁰ reporting to certify over 11% of US natural gas production.²¹

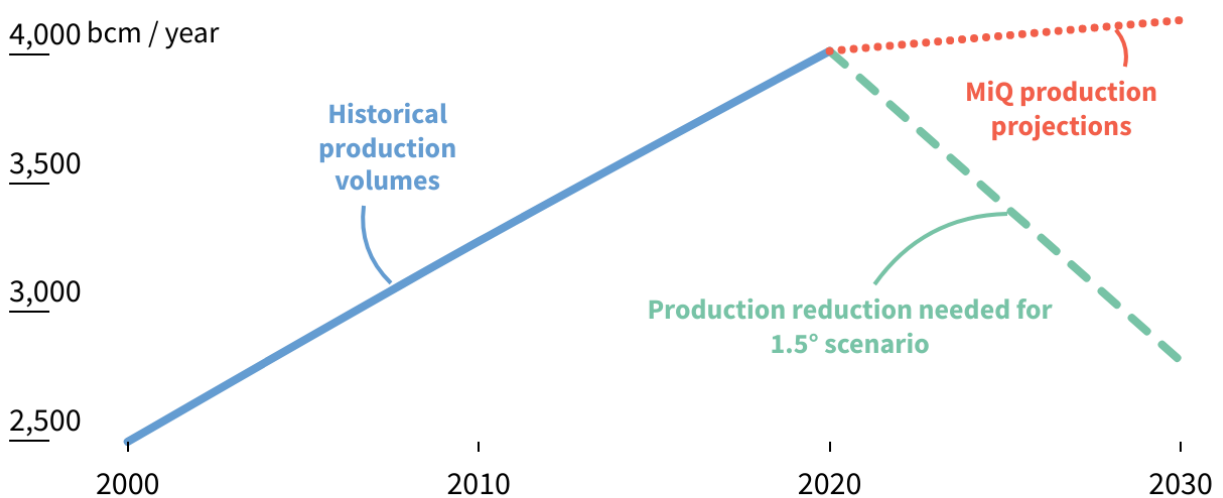
In a recent interview, MiQ explained that they certify at a facility level. Once they know the

methane emissions from a particular facility, they issue certificates that prescribe a letter grade for the gas. Their theory is that, because people will want a lower methane gas, market forces will start to intervene and arrive at pricing differentials in the markets. Then, once that is the case, the producers that are falling behind the competition in methane emissions reduction will feel pressured to improve. MiQ claims that is ultimately going to encourage everyone to raise their standards. This process is how certification is meant to lead to differentiated gas, which leads to pricing signals, then operators have an incentive to start reducing methane emissions.²²

According to MiQ, 80% of the annual 84 million tons of methane emissions that the oil and gas sector are responsible for producing could be abated by 2030. MiQ claims this would mean removing the equivalent of 6 billion tons of carbon dioxide from the equation, which is up to seven times the airline industry’s yearly emissions.²³

MiQ 2030 certification goals predicated on increased gas production

MiQ's 2030 gas production projections are 1,324 billion cubic metres (bcm) per year above the 30% gas production reduction required to meet the 1.5° threshold established in the Paris Agreement.



Source: Methane Intelligence (MiQ) tweet, IEA, IISD report (2022)

Figure 1

MiQ’s ambition is to certify 100% of the global gas market by 2030, per their tweet shown below in Figure 1. Earlier this year, MiQ [tweeted](#) that they currently certify 2.5% of the market (now 4% at the time of publication), but within the decade their aim is to certify what they quantify as 400 billion cubic feet per day – that is, the entirety of the global market. To put this in perspective, that figure converts to 4,088 billion cubic meters (bcm) of gas per year,²⁴ which is higher than current global gas production of 4,014 bcm in 2020.²⁵

This implies that MiQ’s goals are predicated on global gas production increasing to the end of the decade. This prospect is in direct conflict with the widely recognized need to reduce fossil gas production to achieve the 1.5°C threshold established in landmark 2015 Paris Agreement²⁶ to prevent catastrophic climate impacts.

Feasible scenarios to limit global warming to 1.5 °C require reductions in gas use by 30% by 2030 from 2020 levels, according to an analysis conducted by the International Institute for Sustainable Development²⁷. This equates to 2030 gas production of 2,810 bcm, way below MiQ’s projected 4,134 bcm. This difference in scenarios is shown below in Figure 2.

In August, Global Witness wrote to MiQ requesting comment. In its response, MiQ stated that it believed that the future must be powered by 100% clean energy, but also stated this could not be achieved immediately and that tackling methane emissions was a priority.

Clearly, MiQ’s plans to expand gas certification rely on an expansion in gas production that would directly inhibit the world’s potential to reduce global warming to 1.5°C - therefore showing its stated climate commitments to be hypocritical. This highlights the broader problem with gas certification: reducing some methane emissions without reducing gas production as a whole will not achieve the world’s climate goals.

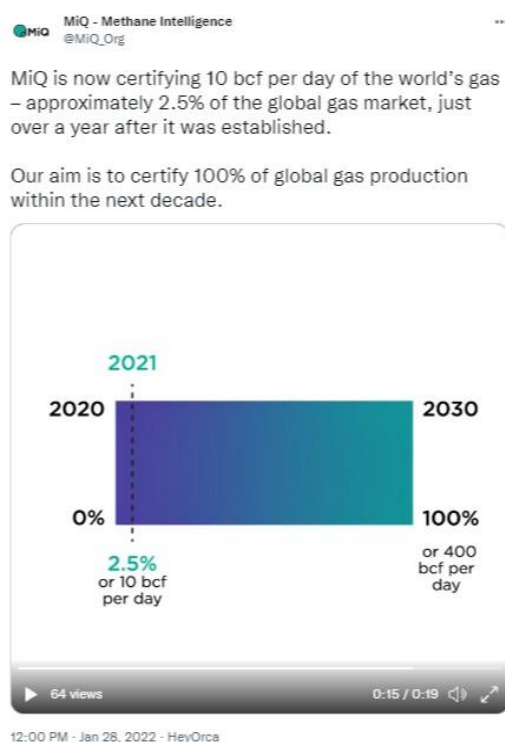


Figure 2

CLIMATE IMPACTS OF LNG

What does this significant increase in gas production and LNG exports mean in the context of the current climate crisis?

Historically, LNG has been considered a “bridge fuel” – that is, cleaner and with lower carbon dioxide emissions compared to coal or oil – and a potential tool to help address climate change. However, LNG is neither “clean” nor low in emissions. A primary constituent of gas is methane, a potent greenhouse gas more than 80 times more powerful than carbon dioxide – based on its 20-year global warming potential.²⁸ And, when gas is ultimately burned, this still emits more than half as much carbon dioxide as burning coal.²⁹

Moreover, the large investments in new infrastructure to support this industry – including pipelines, liquefaction facilities, export terminals, and tankers – leave regions locked into fossil fuel dependence; in the process making the transition to actual low-carbon, renewable energy even more difficult.

Any expansion of the LNG industry is likely to make it nearly impossible³⁰ to keep global temperatures from increasing above 1.5°C. “It’s now or never, if we want to limit global warming to 1.5 degrees,” IPCC Working Group III co-chair Jim Skea said recently in a statement.³¹

The United States, as the top LNG exporter in the world, bears the greatest responsibility for the dire climate and environmental impacts of LNG. According to a recent report from the Environmental Integrity Project, the 25 LNG construction or expansion projects in the US could emit more than 90 million tons of greenhouse gases per year, almost as much as 18 million passenger vehicles running for a year. The actual carbon impact of these projects would be several times higher, if all impacts from the extraction and use of the gas are included.³²

LNG AND ENVIRONMENTAL JUSTICE

The growth in fossil gas production and export poses particular threats to environmental justice. An emerging body of research demonstrates the environmental justice implications of gas pipelines and infrastructure throughout the United States.

A recent study found that more socially vulnerable counties in the United States – those less resourced to prepare for, handle and recover from hazards and disasters – tended to have higher gas pipeline densities. The correlation was found to be stronger for counties with the highest pipeline densities. The authors also point to how the burdens of gas pipelines – including noise, reduced property values and land use options, risk of leak or explosion, and cultural harm – are disproportionately placed on the communities least capable of handling them.³³

Existing and proposed US LNG terminals also tend to be clustered in some of the most environmentally overburdened communities in America, particularly along the Gulf Coast, in Texas and Louisiana, where refining and petrochemical complexes have disproportionately polluted communities of color for decades, causing notorious cancer clusters.³⁴

According to a 2020 analysis by the Environmental Integrity Project, about 38 percent of the people living within three miles of proposed LNG facilities are people of color and Hispanics or Latinos, and 39 percent are low-income.³⁵

GAS CERTIFICATION AND ENVIRONMENTAL JUSTICE

Given that LNG infrastructure and increased gas production are correlated to increased environmental injustices upon frontline communities located near pipelines, what are gas certifiers like MiQ, whose business models are based on increasing LNG production through 2030, doing to account for environmental justice impacts?

MiQ’s certifications are based solely on methane,³⁶ so there are no social and environmental justice considerations. As such, companies can receive a certified “A” grade if they appear to do well on methane, even if they have done nothing to address the environmental justice impacts of their LNG production.

For example, this year Exxon announced that they received an “A” grade from MiQ for its Poker Lake facilities in New Mexico. “Certification gives our customers confidence that we are responsibly producing natural gas with best-in-class emission management programs to help them meet their emissions goals,” says Tom Schuessler, senior vice president of unconventional at ExxonMobil.³⁷ Thus, the message being sent here is that after receiving an A-level certification from MiQ, Exxon should now be seen as a “responsible” producer of natural gas.

However, this “responsible” title is at odds with another rating Exxon received recently. In a report published in 2022, Exxon came in dead last in a ranking of the Russell 1000 companies on their actions on racial equity and environmental racism.³⁸ The scorecard was compiled by the shareholder advocacy group, As You Sow, whose racial justice initiative aims to hold large corporations responsible for their contributions

to systemic racism. Energy companies ranked, on average, worse than those in any other sector, with ExxonMobil at the very bottom.³⁹

According to Olivia Knight, manager of As You Sow's Racial Justice Initiative, the energy companies' low scores were associated with the sector's ongoing practices of polluting low-income, communities of Color. Across environmental justice criteria, a third of the Russell 1000's energy companies received scores of zero or below.⁴⁰ ExxonMobil, for example, was penalized for its activities in Beaumont, Texas, where one of its crude oil refineries has regularly been in noncompliance with the Clean Air Act, spewing carcinogens into a majority-Black neighborhood for over 20 years.⁴¹ "They have allowed all of these environmental violations to become just business as usual, says Knight"⁴² According to As You Sow, the company has developed an "environmentally racist track record."⁴³

In response to the report, ExxonMobil – which was given a negative-23 percent score by As You Sow – told Grist it had a "rich history of support for equality, minority involvement in our business, and for minority education and minority-led business development." According to Grist, the company also cited "contributions it made to an industry handbook for sustainable reporting guidelines."⁴⁴

Major US fracking company EQT Corporation has also benefitted from a rebranding courtesy of an MiQ gas certification. As of 2022, EQT is not only the nation's largest gas producer, but also claims to be the nation's largest producer of certified gas.⁴⁵

EQT received certifications from MiQ and Equitable Origin – another major US gas certifier – in late 2021, which was described by both MiQ and EQT in terms of high ESG standards and commitments. "The certifications provide a transparent, verified method for tracking EQT's ESG commitments," says EQT.⁴⁶ Additionally, Toby Z. Rice, EQT President and CEO claims, "These independent, objective third-party certifications validate that our natural gas is produced with high environmental, social and governance standards and help position US

natural gas to lead the largest green initiative in the world, which is replacing foreign coal."⁴⁷

This is at odds with EQT's history of polluting or otherwise harming communities. EQT was subject to a \$1.1 million fine in Pennsylvania for violating environmental laws when a wastewater holding pond polluted streams and groundwater in 2012.⁴⁸ Additionally, in 2019, the West Virginia Supreme Court ruled against EQT in favor of two Doddridge County residents, who had successfully sued the gas company over trespassing on their property to drill.⁴⁹

Responding to Global Witness, MiQ stated that certification programs provided "transparency, differentiating producers based on methane emissions to incentivize improvements across the board, driving near-term action on climate change."

In sum, EQT and Exxon are using their MiQ certifications to assert that they are responsible producers of gas, upholding high standards of ESG, despite a record of harming environmental justice communities.⁵⁰

ONLY PHASING OUT FOSSIL GAS PRODUCTION AND EXPORTS CAN TACKLE ITS CLIMATE AND ENVIRONMENTAL JUSTICE HARMS

Certifying fossil gas can help to tackle methane emissions which are driving the climate crisis, but certification alone cannot solve the fundamental problems of the carbon emissions from fossil gas, nor its impact on environmental justice communities. Instead, certification can act as a greenwash for the fossil gas industry – rebranding its image as a low carbon, responsible source of energy.

RECOMMENDATIONS

In line with achieving the 1.5°C goal of the Paris Climate agreement:

- > US policymakers should prioritize phasing out fossil gas extraction and export, ensuring a just transition for workers and communities.
- > Investors concerned about the ESG performance of the fossil gas industry should also be wary of the supposed benefits of certification and should instead be divesting from their investments in fossil fuels
- > Gas buyers who are looking to gas certification to address the climate impacts of fossil gas should ensure they have credible plans for phasing out fossil gas, including shifting to fossil-free alternatives such as energy savings, energy efficiency and renewable energy sources.

ENDNOTES

- ¹ “The United States Became the World’s Largest LNG Exporter in the First Half of 2022.” US Energy Information Administration, 25 Jul. 2022, retrieved from: [https://www.eia.gov/todayinenergy/detail.php?id=53159#:~:text=The%20United%20States%20became%20the%20world's%20largest%20liquefied%20natural%20gas,day%20\(Bcf%2Fd\).](https://www.eia.gov/todayinenergy/detail.php?id=53159#:~:text=The%20United%20States%20became%20the%20world's%20largest%20liquefied%20natural%20gas,day%20(Bcf%2Fd).)
- ² “US Set to Become World’s Top Exporter of Liquefied Natural Gas under Biden.” *Global Witness*, 21 Oct. 2021, retrieved from: <https://www.globalwitness.org/bidensgasproblem/>.
- ³ “Inflation Reduction Act Methane Emissions Charge: In Brief.” Congressional Research Service, 29 Aug. 2022, retrieved from: <https://crsreports.congress.gov/product/pdf/R/R47206#:~:text=The%20charge%20would%20start%20at,or%20tax%20on%20GHG%20emissions.&text=that%20would%20be%20subject%20to%20the%20methane%20charge.>
- ⁴ Lamm, Stephen. “What Certified, Responsibly Sourced Gas Does for the Environment and the Industry.” Bloom Energy, 27 Apr. 2022, retrieved from: <https://www.bloomenergy.com/blog/what-certified-responsibly-sourced-gas-does-for-the-environment-and-the-industry/#:~:text=Certified%2C%20responsibly%20sourced%20gas%20is,and%20harm%20to%20the%20environment.>
- ⁵ Caulkins, Jory. “Responsibly Sourced Gas (RSG) What Is It and Why Does It Matter?” 9 Nov. 2020, retrieved from: https://onefuture.us/wp-content/uploads/2020/12/What-Are-The-Markets-Saying_Jory-Caulkins.pdf.
- ⁶ “IES Makes History in Oil & Gas Industry and Establishes Market for Differentiated Gas by Completing First TrustWell Responsible Gas Transaction.” *Globe News Wire*, 6 Sep. 2018, retrieved from: <https://www.globenewswire.com/news-release/2018/09/06/1566697/0/en/IES-Makes-History-in-Oil-Gas-Industry-and-Establishes-Market-for-Differentiated-Gas-by-Completing-First-TrustWell-Responsible-Gas-Transaction.html>.
- ⁷ Enverus, “Responsibly sourced gas: License to operate?” 16 Feb. 2022, retrieved from: <https://www.enverus.com/newsroom/responsibly-sourced-gas-rsg-license-to-operate/>.
- ⁸ “How EO100 Helps Companies Verify their ESG Performance.” Bridger Photonics, retrieved from: <https://www.bridgerphotonics.com/blog/how-eo100tm-helps-companies-verify-their-esg-performance.>
- ⁹ “Understanding Certified Gas - A Q&A with Georges Tijbosch of MiQ.” Bridger Photonics, retrieved from: <https://www.bridgerphotonics.com/blog/certified-gas-georges-tijbosch-miq.>
- ¹⁰ “Project Canary Announces Acquisition of Aeris Technologies Expanding Services Beyond Oil and Gas” 24 Mar. 2022, Project Canary, retrieved from: <https://www.projectcanary.com/press/project-canary-announces-acquisition-of-aeris-technologies-expanding-services-beyond-oil-and-gas/>.
- ¹¹ “Independent third-party auditors.” MiQ, retrieved from: <https://miq.org/what-is-the-miq-standard2/for-third-party-auditors/>.
- ¹² “MiQ Standard for Methane Emissions Performance” 2021, MiQ, retrieved from: <https://miq.org/document/miq-standard-onshore/>; “Certified or responsibly sourced gas (RSG)” Project Canary, retrieved from: <https://www.projectcanary.com/services/responsibly-sourced-gas/>.
- ¹³ “Project Canary CEO Chris Romer Interviewed in Rigzone.” Project Canary, retrieved from: <https://www.projectcanary.com/media/project-canary-ceo-chris-romer-interviewed-in-rigzone/>.
- ¹⁴ “Carbon Dioxide Emissions Coefficients” EIA, US Energy Information Administration, 18 Nov. 2022, retrieved from: https://www.eia.gov/environment/emissions/co2_vol_mass.php
- ¹⁵ “MiQ,” MiQ, retrieved from: <https://miq.org/>.
- ¹⁶ “The Methane Mission” MiQ, retrieved from: <https://miq.org/the-methane-mission/>.
- ¹⁷ “Rocky Mountain Institute (RMI) and SYSTEMIQ launch MiQ to tackle methane emissions from the oil and gas sector.” Rocky Mountain Institute, 2 Dec. 2020, retrieved from: <https://rmi.org/press-release/rocky-mountain-institute-rmi-and-systemiq-launch-miq-to-tackle-methane-emissions-from-the-oil-and-gas-sector/>.
- ¹⁸ “MiQ,” MiQ, retrieved from: <https://miq.org/>.
- ¹⁹ “ExxonMobil to certify natural gas, help customers meet environmental goals” ExxonMobil, 7 Sep. 2021, retrieved from: https://corporate.exxonmobil.com/News/Newsroom/News-releases/2021/0907_ExxonMobil-to-certify-natural-gas-help-customers-meet-environmental-goals.
- ²⁰ “MiQ certifies bp’s South Haynesville natural gas with A grade.” MiQ, 8 Dec. 2021, retrieved from: <https://miq.org/miq-certifies-bps-south-haynesville-natural-gas-with-a-grade/>.
- ²¹ “Understanding Certified Gas - A Q&A with Georges Tijbosch of MiQ.” Bridger Photonics, retrieved from: <https://www.bridgerphotonics.com/blog/certified-gas-georges-tijbosch-miq.>
- ²² “Understanding Certified Gas - A Q&A with Georges Tijbosch of MiQ.” Bridger Photonics, retrieved from: <https://www.bridgerphotonics.com/blog/certified-gas-georges-tijbosch-miq.>
- ²³ “Understanding Certified Gas - A Q&A with Georges Tijbosch of MiQ.” Bridger Photonics, retrieved from: <https://www.bridgerphotonics.com/blog/certified-gas-georges-tijbosch-miq.>
- ²⁴ 4000 BCF/Day = 4088 BCM/Year (4000 BCF times 365 days times 0.028 BCF for 1 BCM). Conversion data comes from “Approximate conversion factors.” BP, retrieved from <https://www.bp.com/content/dam/bp/business-sites/en/global/corporate/pdfs/meetings/the-paris-agreement/the-paris-agreement/the-paris-agreement/key-aspects-of-the-paris-agreement.pdf>.
- ²⁵ “Key World Energy Statistics 2021,” IEA, Sept. 2021, retrieved from: <https://www.iea.org/reports/key-world-energy-statistics-2021/supply#natural-gas.>
- ²⁶ “Key aspects of the Paris Agreement” UNFCCC, retrieved from: <https://unfccc.int/process-and-meetings/the-paris-agreement/the-paris-agreement/key-aspects-of-the-paris-agreement.>
- ²⁷ “Lighting the Path.” International Institute for Sustainable Development, Jun. 2022, p. 4, retrieved from <https://www.iisd.org/system/files/2022-06/ipcc-pathways-paris-aligned-policies.pdf>.
- ²⁸ “Understanding Global Warming Potentials” US EPA, 5 May 2022, retrieved from:

<https://www.epa.gov/ghgemissions/understanding-global-warming-potentials>.

²⁹ "Carbon Dioxide Emissions Coefficients" US Energy Information Administration, 18 Nov. 2022, retrieved from: https://www.eia.gov/environment/emissions/co2_vol_mass.php

³⁰ "Sailing to nowhere: Liquefied natural gas is not an effective climate strategy." Natural Resource Defense Council, Dec. 2020, retrieved from: <https://www.nrdc.org/sites/default/files/sailing-nowhere-liquefied-natural-gas-report.pdf>.

³¹ "The evidence is clear: the time for action is now. We can halve emissions by 2030." Intergovernmental Panel on Climate Change, 4 Apr. 2022, retrieved from: <https://www.ipcc.ch/2022/04/04/ipcc-ar6-wgiii-pressrelease/>.

³² "Playing with Fire: The Climate Impact of the Rapid Growth of LNG," Environmental Integrity, 9 Jun. 2022, retrieved from: <https://environmentalintegrity.org/wp-content/uploads/2022/06/LNG-report-6.9.22.pdf>.

³³ Emanuel, R. E., Caretta, M. A., Rivers, L., & Vasudevan, P. "Natural gas gathering and transmission pipelines and social vulnerability in the United States," GeoHealth, 2021, retrieved from <https://doi.org/10.1029/2021GH000442>.

³⁴ "The Most Detailed Map of Cancer-Causing Industrial Air Pollution in the US." ProPublica, 2 Nov. 2021, retrieved from: <https://projects.propublica.org/toxmap>.

³⁵ "Troubled Waters for LNG," Environmental Integrity, 5 Oct. 2022, retrieved from: <https://environmentalintegrity.org/wp-content/uploads/2020/10/LNG-REPORT-10.5.20.pdf>.

³⁶ "MiQ standard for Methane Emissions Performance," MiQ, 2021, retrieved from https://miq.org/wp-content/uploads/2021/09/MiQ_Standard_Onshore_v0.9_COMBI_NED.pdf.

³⁷ "ExxonMobil receives top certification for methane emissions management for natural gas from Permian Basin," ExxonMobil, 26 Apr. 2022, retrieved from: https://corporate.exxonmobil.com/News/Newsroom/News-releases/2022/0426_ExxonMobil-receives-top-certification-for-methane-emissions-for-natural-gas-in-Permian.

³⁸ "Racial Justice," As You Sow, 2021, retrieved from: <https://www.asyousow.org/our-work/social-justice/racial-justice>.

³⁹ "Data Visualization," As You Sow, 2021, retrieved from: <https://www.asyousow.org/our-work/social-justice/racial-justice/data-visualization>.

⁴⁰ "A new scorecard ranked companies on environmental racism. Guess who came in last?" Grist, 23 Aug. 2021, retrieved from: <https://grist.org/climate/as-you-sow-racial-justice-scorecard-exxonmobil/>.

⁴¹ "A Legacy of Environmental Racism," The Intercept, 13 Aug. 2017, retrieved from: [https://theintercept.com/2017/08/13/exxon-mobil-is-still-](https://theintercept.com/2017/08/13/exxon-mobil-is-still-pumping-toxins-into-black-community-in-texas-17-years-after-civil-rights-complaint/)

[pumping-toxins-into-black-community-in-texas-17-years-after-civil-rights-complaint/](https://theintercept.com/2017/08/13/exxon-mobil-is-still-pumping-toxins-into-black-community-in-texas-17-years-after-civil-rights-complaint/).

⁴² "A new scorecard ranked companies on environmental racism. Guess who came in last?" Grist, 23 Aug. 2021, Retrieved from: <https://grist.org/climate/as-you-sow-racial-justice-scorecard-exxonmobil/>.

⁴³ "Environmental Racism Metrics Added to As You Sow Racial Justice S&P500 Scorecard," As You Sow, 11 Aug. 2021, retrieved from: <https://www.asyousow.org/press-releases/2021/8/11/environmental-racism-metrics-as-you-sow-racial-justice-scor>.

⁴⁴ "A new scorecard ranked companies on environmental racism. Guess who came in last?" Grist, 23 Aug. 2021, retrieved from: <https://grist.org/climate/as-you-sow-racial-justice-scorecard-exxonmobil/>.

⁴⁵ "Bloom Energy Partners with EQT to Bring Certified Responsibly Sourced Natural Gas to Current and Future Customers." Bloom Energy, 21 Apr 2022, retrieved from: <https://investor.bloomenergy.com/press-releases/press-release-details/2022/Bloom-Energy-Partners-with-EQT-to-Bring-Certified-Responsibly-Sourced-Natural-Gas-to-Current-and-Future-Customers/default.aspx>.

⁴⁶ "EQT Obtains Equitable Origin and MiQ Certifications of a Majority of its Natural Gas," Cision PR News Wire, 14 Jan 2022, retrieved from: <https://www.prnewswire.com/news-releases/eqt-obtains-equitable-origin-and-miq-certifications-of-a-majority-of-its-natural-gas-301461189.html>.

⁴⁷ "EQT Obtains Equitable Origin and MiQ Certifications of a Majority of its Natural Gas." EQT, 14 Jan. 2022, retrieved from: <https://media.eqt.com/investor-relations/news/news-release-details/2022/EQT-Obtains-Equitable-Origin-and-MiQ-Certifications-of-a-Majority-of-its-Natural-Gas/default.aspx>.

⁴⁸ "Case Number: 2014140" The Pennsylvania Environmental Hearing Board," retrieved from: https://ehb.courtapps.com/public/document_shower_pub.php?csNameID=4948.

⁴⁹ "EQT Production Company v. Margot Beth Crowder et al.," West Virginia Supreme Court, 5 Jun. 2019, retrieved from: <http://www.courtswv.gov/supreme-court/docs/spring2019/17-0968.pdf>.

⁵⁰ "A legacy of environmental racism." The Intercept, 13 Aug. 2017, retrieved from: <https://theintercept.com/2017/08/13/exxon-mobil-is-still-pumping-toxins-into-black-community-in-texas-17-years-after-civil-rights-complaint/>; "Exxon Mobil must face environmental allegations, court rules" ABC News, 24 May 2022, retrieved from: <https://abcnews.go.com/US/exxon-mobil-face-environmental-allegations-court-rules/story?id=84946565>; EQT must inform and provide residents with alternative water while pollution incident is investigated." Center for Coal Field Justice, 18 Jul. 2022, retrieved from: <https://centerforcoalfieldjustice.org/2022/07/eqt-must-inform-and-provide-residents-with-alternative-water-while-pollution-incident-is-investigated/>.