METHANE MITIGATION AMERICA

Setting the Standard: How Northeast Natural Energy Achieved an "A" Grading from MiQ

In conversation with ***B.J. Carney,***
Vice President Geoscience & Innovation, Northeast Natural Energy

For LNG buyers and traders, the ever-evolving regulatory landscape presents both challenges and opportunities. Emissions reduction and management need to be key considerations, as the cost of non-compliance can be substantial, with potential penalties and damage to reputation. The EPA’s final rule demands greater transparency and accountability for methane pollution from oil and natural gas facilities by improving the accuracy of annual emissions reporting from these operations.

Additionally, new regulations from the European Union (EU) have set a timeline for US natural gas producers to comply with new standards for the measurement-based quantification, reporting, and verification (MRV) of methane emissions if they wish to continue accessing the EU market.

So, what can producers do to comply?

A global leader in emissions certification, **MiQ**, offers a market-based approach to rapidly reduce methane emissions across the natural gas sector. To create this benchmark, the organization has developed the **MiQ Standard**, a quantitative certification system that evaluates methane intensity, corporate practices, and detection of methane leaks.

Seeking to achieve independent certification of natural gas production, **Northeast Natural Energy** is the first U.S. natural gas producer to receive the EO100™ certification and the first company in the Appalachian region to achieve an "A" rating from **MiQ** for almost its entire production. An "A" rating signifies a methane intensity of 0.05% or less, along with the highest scores in company practices and the use of monitoring technology.

To better understand the effectiveness and challenges of acquiring the MiQ certification, we caught with **B.J. Carney, Vice President Geoscience & Innovation** at **Northeast Natural Energy.** Read as he shares how reporting requirements for **MiQ** align with the US’s newly proposed methane regulation and offers best practice advice for other operators facing challenges similar to NNE in emissions data management and compliance.

Moreover, B.J. will be participating in an expert dialogue alongside other operators on *‘Constructing Measurement-Informed Emissions Inventories’* at our upcoming **Methane Mitigation America Summit** in **Houston**. Join us from **December 3-5, 2024** to learn more about enhancing efficiency and compliance from some of the leading minds in the industry.

Maryam Irfan, Industrial Decarbonization Network: To start, can you tell us about Northeast Natural Energy and the role you play as Vice President Geoscience & Innovation?

B.J. Carney: Northeast Natural Energy is a privately held upstream operator operating in the eastern United States, specifically in the Appalachian Basin. We are currently the fifth-largest producer in West Virginia, with most of our production coming from the Marcellus Shale formation.

We're a small company, with just over 50 permanent employees. Despite our size, we produce 700 million cubic feet of gas per day, which means we all must wear multiple hats in our day-to-day. My role as Vice President Geoscience & Innovation includes overseeing all subsurface science, understanding the rock and reservoirs we produce from, and exploring new technologies in our industry. I evaluate these new technologies, and if they show promise, integrate them into our daily operations to improve company performance.

Maryam Irfan, Industrial Decarbonization Network: Northeast Natural Energy is the first U.S. based natural gas producer to earn an EO100™ certification and the first Appalachian producer to earn an “A” grading from MiQ. Can you share the efforts and challenges faced in achieving these certifications?

B.J. Carney: We're the first producer in the world to achieve 'A' grades in both the MIQ and EO certification processes. This journey began about five years ago when we embarked on our methane mitigation efforts. At the time, we were early movers in the certification space, alongside the certification bodies themselves. We learnt and understood the landscape together, and as we gained more knowledge and experience, we adapted our processes and systems accordingly.

Through this process, we became intimately familiar with the certification procedures, and the key is to understand where your methane emissions are coming from. Initially, you need to monitor your equipment and devices to identify potential leaks using the various technologies available for this purpose. Once you identify the sources, the next step is to measure the emissions accurately. For instance, imaging technology might indicate high emissions from a specific device, but precise measurement techniques might reveal that the actual methane levels are minimal. So, it is a thorough process of monitoring, measuring, and then mitigating emissions once you have a clear understanding of the situation

Maryam Irfan, Industrial Decarbonization Network: How have these certifications helped Northeast Natural Energy address methane emissions?

B.J. Carney: What they've helped us do is create processes and strategies to effectively identify and mitigate our emissions. Through the certification process, it became evident that we needed buy-in from all levels of our organization to make this work effectively. One of the ways the certification bodies have helped is by requiring us to develop a comprehensive strategy, timeline, and process management solution. This ensures that nothing slips through the cracks and that we are fully engaged in mitigating our emissions on a corporate level.

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Maryam Irfan, Industrial Decarbonization Network: How do you ensure the continuous need for transparency and accountability that is required for these certifications?

B.J. Carney: That is an everyday priority for us! We consistently hold operational group meetings to discuss the latest updates, whether it's from flyovers, Optical Gas Imaging (OGI) inspections, or other monitoring activities. Our emissions task force focuses on identifying and addressing leaks in our systems and devices. This could involve re-engineering a process or replacing a specific device that isn't functioning as expected. Maintaining this focus is a constant effort for our company.

Maryam Irfan, Industrial Decarbonization Network: One of the specific requirements in pursuing RSG certification from EO and MiQ is the need for direct, high-frequency measurements of fugitive and venting methane emissions across NNE sites. How do these requirements effect the way Northeast Natural Energy invests in methane technologies?

B.J. Carney: We aim to ensure that the emissions technologies we choose provide the 'biggest bang for our buck'. This means identifying the devices or processes that contribute the most to our emissions and then actively searching for technologies that make the most sense for our operational setup. Not every company is the same; and as I mentioned, we're on the smaller side, with fewer facilities than many other companies. Therefore, the technologies that work best for us may not be suitable for other operators, and it is crucial to understand your goals and select the appropriate technologies to achieve them.

As part of the certification process, one requirement is to conduct quarterly OGI inspections. We've been doing that for several years, typically using either internal teams or third-party consultants equipped with OGI cameras to inspect every site and piece of equipment for potential leaks.

In addition to these inspections, we go above and beyond by conducting quarterly flyovers using Bridger Photonics' LiDAR technology. This means we have a total of eight inspection events each year. Moreover, we equip our lease operators with handheld methane detection units to inspect every site at least once a week. This allows us to identify even smaller issues, such as minor leaks from valves or fittings, that can be quickly and easily repaired on the spot. It may not involve a significant amount of methane, but it's something we can fix immediately. This comprehensive approach gives us confidence that we're doing everything possible to keep our emissions near zero.

Maryam Irfan, Industrial Decarbonization Network: How do reporting requirement efforts for MiQ align with newly proposed US methane regulation?

B.J. Carney: There's been a lot of concern among operators about the new EPA regulations, but not at Northeast Natural Energy. This is solely because we've already undertaken these certifications and the accompanying audits. The MIQ certification, in particular, has more stringent requirements than most of the new EPA rules. As a result, we were already complying with 99.9% of these new EPA requirements as part of our MIQ certification process.

It was incredibly beneficial to get ahead of the curve 2-3 years ago and start implementing the necessary measures to reduce our emissions. Now, these practices are part of our best practices and day-to-day operations, putting us ahead of the new EPA regulations.

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Maryam Irfan, Industrial Decarbonization Network: Can you share some best practices for other operators facing challenges similar to Northeast Natural Energy in emissions data management and compliance?

B.J. Carney: The first thing I would suggest is to develop a plan and strategy tailored to your company's specific assets and operations. Whether that involves OGI camera inspections, flyovers, satellite monitoring, or permanent monitoring at each site, these are all questions operators need to answer to establish their best practices.

Additionally, it's important for operators to not only monitor and measure their emissions but also find effective ways to manage the data collected. It's one thing to know where emissions are coming from, but it's another to set up a process to address the problem. Managing this data is critical. You can do this in-house or through various third-party vendors that offer software solutions.

For instance, we use a third-party provider, Validere, to manage our emissions data. Their software helps us understand our emissions, report them in appropriate formats, and develop plans to further reduce them, and this partnership is proving to be very beneficial for us.

Maryam Irfan, Industrial Decarbonization Network: Finally, we're looking forward to hearing further insights from you at the Methane Mitigation America Summit, but what are you most looking forward to at the event this December?

B.J. Carney: I enjoy the summits because they allow me to learn about emerging technologies. This helps me start the vetting process for these technologies, sometimes even before they're commercialized, and evaluate whether they align with our company's operational strategies. It's a great opportunity to assess if these technologies could be beneficial for us.

Secondly, I look forward to meeting other industry professionals, particularly other operators. It's valuable to exchange ideas and learn different approaches to managing challenges, potentially finding better or alternative methods than what we're currently using. I'm excited about both aspects of the summit.