

June 17, 2022

Vanessa A. Countryman
Secretary, Securities and Exchange Commission
100 F Street, NE
Washington, DC 20549-1090

Attn: File Number S7-10-22

Subject: Project Canary Comment Submission on the Proposed Rule on Enhancement and Standardization of Climate-Related Disclosures for Investors

Dear Ms. Countryman:

Project Canary PBC appreciates the opportunity to comment on the Securities and Exchange Commission’s (“SEC” or the “Commission”) Proposed Rule: The Enhancement and Standardization of Climate-Related Disclosures for Investors (the “Proposed Rule”).

Project Canary is a mission-driven Public Benefit Corporation (or B-Corporation) accountable to a double bottom line of profit and the social good. Our goal is to mitigate climate change by providing technology and comprehensive environmental assessments that support emission-intensive industrial companies in transitioning to a lower carbon economy.

I. Executive Summary

We agree that greenhouse gas (“GHG”) emissions disclosures from companies across all sectors are necessary for investors to understand the risks companies face until the transition to a less GHG-intensive economy is complete. Indeed, these disclosures cannot come too soon as this transition is already underway. In the energy sector, for example, market demand for “responsibly sourced gas”—natural gas produced in a way in which associated methane emissions and other environmental impacts have been quantified and minimized—has skyrocketed and is predicted to represent nearly 20 percent of the North American market by the end of this year.¹ Regulators at all levels of government also are taking steps to address climate change, and these steps will impose new compliance costs and enforcement risks for registrants. As these trends continue and accelerate, a company’s inability to reduce GHG emissions will become a liability. Without accurate—and mandated—GHG emissions disclosures upon which to evaluate companies, investors are exposed to undue investment risk. The SEC’s proposed required disclosures would thus fill a critical information gap.

¹ Coefficient, *Methane Quantification: Toward Differentiated Gas* (March 2022), <https://co2efficient.com/methane/>; Tom DiChristopher, *Market for Responsibly Sourced Gas Begins to Take Root, Stakeholders Say*, S&P Global Market Intelligence (Sept. 14, 2021), <https://www.spglobal.com/marketintelligence/en/news-insights/latest-news-headlines/market-for-responsibly-sourced-gas-begins-to-take-root-stakeholders-say-66578408>; Enverus, *Responsibly Sourced Gas (RSG): License To Operate?* (Feb. 16, 2022), <https://www.enverus.com/newsroom/responsibly-sourced-gas-rsg-license-to-operate/>.



The technology now exists to provide investors with consistent, comparable, and reliable climate-related disclosures in a cost-effective way. Specifically, continuous monitoring of GHG emissions by direct measurement at the source is the best available technology to accurately quantify GHG emissions. This technology has evolved rapidly in recent years, and is now widely available, broadly adopted, and cost-effective.

Project Canary's continuous monitoring technology measures, collects, and uploads high-fidelity emissions data to the cloud, 24 hours a day, 7 days a week. Strategically placed monitoring units measure wind speed and wind direction, detect methane and other air toxics, and transmit data in real-time to operators. These high-fidelity data provide not only extremely accurate emissions measurements, but also allow operators to detect leaks quickly and initiate prompt corrective action.

Accordingly, we recommend that the SEC first articulate a clear preference for GHG emissions disclosures derived from continuous monitoring to ensure that investors have consistent, comparable, and reliable data upon which to evaluate investment risks. Second, we recommend that the SEC require registrants to periodically re-evaluate their GHG-emission disclosure methods to ensure investors receive high quality emissions information. Moreover, we recommend that the SEC waive the third party assurance requirements for registrants that use continuous monitoring to measure their GHG emissions as these technologies have been determined to be highly accurate and reliable. Waiving this requirement would significantly reduce the cost to comply with the Proposed Rule for registrants that have invested in this best available technology.

II. The Use of Continuous Monitoring Technology Will Provide Accurate, High-Quality GHG Emissions Information for Investors.

In the preamble to the Proposed Rule, the SEC states that “the direct measurement of GHG emissions from a source by monitoring concentration and flow rate is likely to yield the most accurate calculations.” We agree that direct, continuous monitoring of GHG emissions at the source provides the most accurate, high-quality GHG emissions information. Indeed, the high-fidelity data generated by continuous monitoring systems provide an extremely high level of accuracy. University field testing of Project Canary's onsite continuous monitoring units demonstrated that the devices detect methane leaks with nearly perfect accuracy and can measure the volume of those leaks with minimal quantification error (6 percent).² Other continuous monitoring technologies have comparable detection and quantification capabilities.³ In other

² METEC Testing Results August 2021, <https://www.projectcanary.com/wp-content/uploads/2021/08/METEC-Project-Canary-Abstract9.pdf>; A Quantitative Overview to Continuous Monitoring of Methane Emissions, Project Canary (2021), <https://www.projectcanary.com/wp-content/uploads/2021/09/METEC-ProjectCanary-Sept2021-Quantification-Final.pdf>.

³ Evan D. Sherwin et al., *Single-Blind Test of Airplane-Based Hyperspectral Methane Detection Via Controlled Releases*, ELEMENTA: SCIENCE OF THE ANTHROPOCENE (Mar. 24, 2021), <https://online.ucpress.edu/elementa/article/9/1/00063/116576/Single-blind-test-of-airplane-based-hyperspectral>; Clay S. Bell et al., *Evaluation of Next Generation Emission Measurement Technologies Under Repeatable Test Protocols*, ELEMENTA: SCIENCE OF THE ANTHROPOCENE (July 13, 2020), <https://online.ucpress.edu/elementa/article/doi/10.1525/elementa.426/114470/Evaluation-of-next-generation-emission-measurement>.

words, today’s direct continuous monitoring technology enables the disclosure of consistent, comparable, and reliable information for investors.

While the limitations of emissions estimation methods are well-documented,⁴ data generated with continuous monitoring have the potential to boost the consistency, comparability, and reliability of disclosures by registrants across the economy. In the energy sector, continuous monitoring can provide high-fidelity, directly measured emissions data from upstream and midstream points on the energy value chain (e.g., well pads and compressor stations), which downstream energy users can use to more easily and accurately disclose Scope 2 and Scope 3 emissions. Outside of the energy sector, onsite continuous monitoring technology provides a cost-effective and accurate means of measuring emissions from landfills, mines, farms, and manufacturing operations.

While the SEC appropriately “encourage[s] registrants to provide as accurate a measurement of its GHG emissions as is reasonably possible,” the aims of the Proposed Rule would be best served by including an express preference for GHG emissions metrics generated by continuous monitoring technology.

III. Expressing a Preference for Widely-Available Continuous Monitoring Technology Will Not Impose Any Burden on Industry.

A. Continuous monitoring technology is already widely available and cost-effective—and becoming even more so.

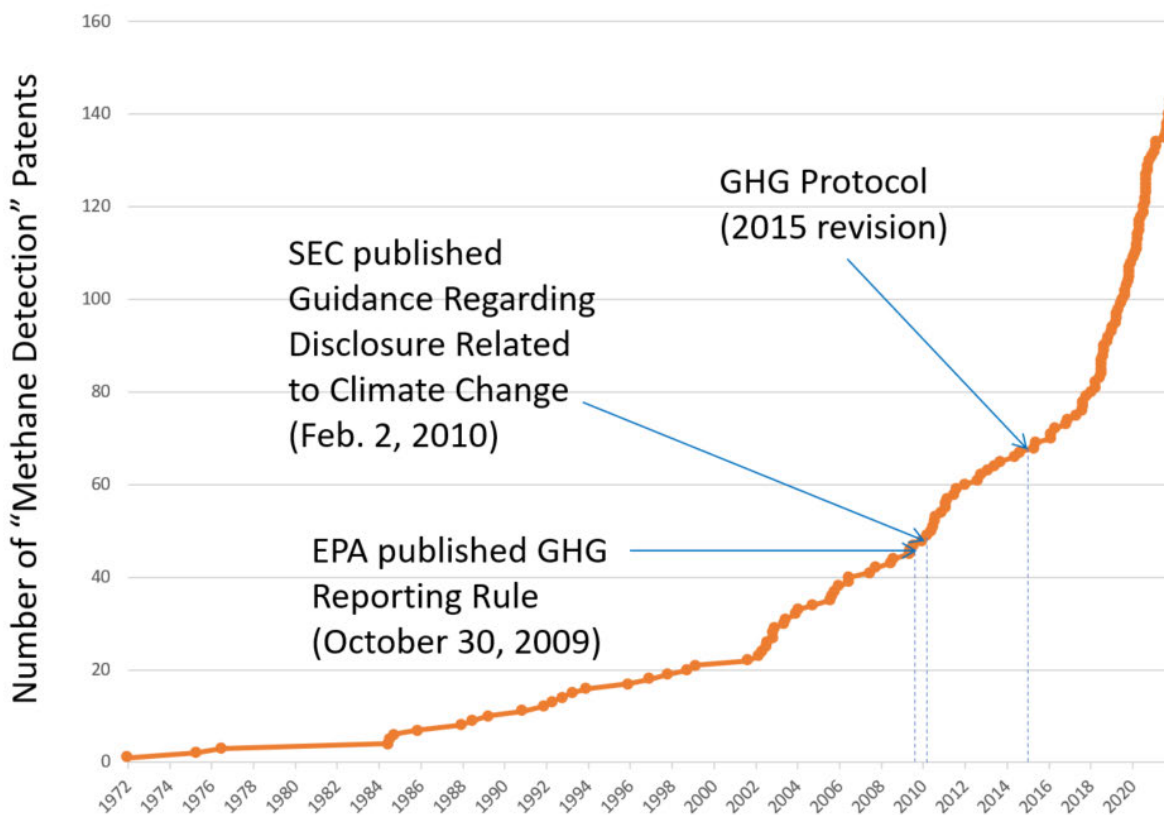
We disagree with the breadth of the SEC’s suggestion that “in many instances, direct measurement of GHG emissions at the source . . . may not be possible.” This statement reflects now outdated concerns about the wide-scale feasibility and cost-effectiveness of direct measurement. Similar statements were included in the GHG Protocol, which was last revised in 2015 when “[d]irect measurement of GHG emissions by monitoring concentration and flow rate [was] not common.” Deployment of continuous monitoring technology has accelerated rapidly since 2015 and is now widely available and cost-effective.

The proliferation of continuous monitoring technology is particularly notable in the energy sector, where there has been a pronounced convergence of regulatory and market pressures focused on GHG emissions reductions. A recent U.S. Government Accountability Office investigation found that entities in the oil and gas industry are voluntarily taking actions to reduce methane emissions from oil and gas development, including by using continuous monitoring technologies to detect methane emissions.⁵ Project Canary alone has installed over one thousand five hundred continuous monitoring units (with hundreds more under contract) across the United States, Canada, and the United Kingdom at over five dozen major oil and gas and midstream companies.

⁴ See, e.g., Yuanlei Chen et al., *Quantifying Regional Methane Emissions in the New Mexico Permian Basin with a Comprehensive Aerial Survey*, 56(7) ENVIRON. SCI. TECHNOL. 4317 (Mar. 23, 2022), <https://pubs.acs.org/doi/10.1021/acs.est.1c06458>.

⁵ U.S. Government Accountability Office, *Oil and Gas: Federal Actions Needed to Address Methane Emissions from Oil and Gas Development*, at 15–16 (Apr. 2022), <https://www.gao.gov/assets/gao-22-104759.pdf>.

Technological advancements have drastically expanded the availability and cost-effectiveness of direct, continuous monitoring of GHG emissions. In 2014, the U.S. Department of Energy’s Advanced Research Projects Agency–Energy (ARPA-E) launched a \$30 million R&D program called Methane Observation Networks with Innovative Technology to Obtain Reductions (MONITOR), to address the shortcomings of then-existing emission detection technologies that were labor-intensive, insufficiently precise, episodic, and costly. The MONITOR program facilitated transformational improvements resulting in low-cost, highly sensitive, automated technologies that can provide continuous and remote monitoring of emissions. Further evidence of this rapid technological progress can be found in the number of “methane detection” patents filed, a number which has doubled since the GHG Protocol was last revised in 2015, and tripled since the SEC published guidance regarding climate change disclosures and the U.S. Environmental Protection Agency (EPA) published its GHG Reporting Rule.



Source: U.S. Patent and Trademark Office, Patent Public Search Version 1.0.4 (2022).

The gas sensing technology in Project Canary’s systems also has developed rapidly to provide increased detection accuracy and opportunities for the miniaturization and portability of devices.⁶ In short, the industry is no longer constrained by technological limitations that drove regulators to call for indirect calculation rather than direct measurement of GHG emissions.

⁶ Shan Lin et al., *Improvement of the Detection Sensitivity for Tunable Diode Laser Absorption Spectroscopy: A Review*, *Frontiers in Physics* (Mar. 1, 2022), <https://www.frontiersin.org/articles/10.3389/fphy.2022.853966/full>.

Continuous monitoring technology is widely available and has been broadly adopted in the energy sector.

The broad adoption in the energy sector is driven in part by cost-effectiveness. For example, deployment of Project Canary's systems at well sites, requiring no labor after installation, adds a fraction of one percent to commodity pricing overall (expressed in terms of dollars per barrel of oil equivalent). In fact, investment in continuous monitoring technology generates cost savings by reducing leaks and facilitating compliance with applicable laws and regulations. In addition, by enabling companies to quantify and minimize methane emissions, continuous monitoring technology allows companies to meet the increasing market demand for "responsibly sourced gas". For many companies, this capability helps to reduce risks associated with the transition to a less GHG-intensive economy.

B. The SEC should encourage registrants to utilize GHG emissions measurement methods consistent with advancing technology.

The Proposed Rule provides flexibility and adaptability in GHG emissions disclosure methodologies which would allow registrants to embrace evolving science and provide investors with the best possible information. However, it is important for investors to understand any limitations of a given company's chosen approach. The Proposed Rule appropriately requires registrants to disclose the methodology, significant inputs, and significant assumptions used to calculate GHG emissions. This information will help investors understand whether registrants are using the best available technology and whether they are providing the highest-quality data available. In addition, registrants should be encouraged to regularly reassess their measurement methods (e.g., every five years) to ensure they are using the best available emissions measurement technology and providing accurate disclosures.

Regulatory agencies commonly set standards based on the best available technology (e.g., EPA's Clean Air Act and Clean Water Act programs). Consistent with that approach, the SEC should promote a shift away from indirect calculation of GHG emissions and towards more accurate direct measurement.

C. Continuous monitoring technology reduces compliance costs—and liabilities—associated with GHG emissions disclosures.

Continuous monitoring technology takes the guesswork out of GHG emissions disclosures, providing highly accurate and transparent quantitative information for investors. Given the superior accuracy of GHG emissions data generated by continuous monitoring technology, the SEC should exempt registrants using this technology, in accordance with an accepted measurement-based reporting framework, from the proposed attestation requirements. Eliminating the attestation burden in this way would reduce compliance costs. Even if the SEC required registrants using continuous monitoring technology to obtain an attestation report, the accuracy of the data generated with this technology makes data assembly and attestation easier and more cost-effective. Unlike a calculation approach, where numerous assumptions could require time-intensive and costly verification, the process of verifying measured emissions data is much simpler: the third-party attestation provider could confirm the validity of the continuous monitoring technology in use and that the total emissions were accurately summed.

Data generated with continuous monitoring technology also minimize disclosure-related liabilities for registrants. Registrants can avoid inquiries into the validity of calculation approaches by simply pointing to real-time emissions tracking data. Continuous monitoring technology thus benefits companies by reducing potential liability and supports the SEC's efforts to balance the needs of registrants and investors.

D. Continuous monitoring technology can help harmonize compliance across reporting regimes.

It is important that the SEC and EPA communicate to avoid unnecessary reporting burdens or duplicative or conflicting requirements. Coordination would also improve comparability between registrants and across reporting regimes. Fortunately, continuous monitoring technology can help unify the two disclosure regimes by providing a compliance alternative for EPA and a mechanism for making SEC disclosures. EPA-regulated entities in the energy sector are already using continuous monitoring technology, and many follow voluntary, industry-specific, measurement-based reporting frameworks such as the Oil and Gas Methane Partnership (OGMP) 2.0—which EPA has supported.

OGMP 2.0 is a voluntary reporting framework for the oil and gas industry launched by the U.N. Environment Programme and the Climate and Clean Air Coalition. Over 70 companies with assets on five continents representing 50 percent of the world's oil and gas production have joined the partnership. The SEC should rely on the proven superior accuracy of continuous monitoring technology and existing industry-specific frameworks, like OGMP 2.0, to ensure that GHG measurements are validated.

Continuous monitoring technology also offers a mechanism to provide harmonization within a whole-of-government approach to address climate change. There is no better foundation for comparisons between registrants or among industries than direct measurement of GHG emissions. Indeed, EPA is already considering the benefits of continuous monitoring technology in ongoing rulemakings. Just last year, EPA proposed new regulations related to the measurement and reduction of emissions, particularly methane, from the oil and natural gas sector. The agency received over 1,260 comments on its broad ranging emissions regulations, many of which provided insights into emissions detection and measurement technology that may inform the SEC's current proposal. In particular, EPA received comments from a number of regulated entities supporting the use of continuous monitoring technology to monitor leaks. The American Petroleum Institute, for instance, encouraged EPA to adopt a framework that supports the use of continuous monitoring technology: "Continuous monitoring technologies can detect large leaks in real-time. API members see great promise in continuous/near-continuous methane monitoring technologies and encourage EPA to work with stakeholders to develop a framework that allows for usage of such technologies." That message is being amplified on Capitol Hill where the U.S. House of Representatives Committee on Science, Space, and Technology recently issued a report recommending that federal agencies, like EPA, promote more widespread adoption of continuous monitoring technologies to measure and control methane

emissions.⁷ EPA has explicitly requested additional feedback on continuous monitoring technologies as it prepares to issue a supplemental proposal later this year, and recently expressed its intention to provide more flexibility for oil and gas operators to use new and emerging technologies in methane detection programs.⁸ Incorporating a preference for continuous monitoring technology in the final rule would align with EPA's related rulemakings aimed at improving the quality of GHG emissions data.

In sum, continuous monitoring technology should be used to harmonize compliance across multiple federal regulations requiring GHG emissions mitigation and disclosure and ensure that regulators and investors receive high-quality data. Once a registrant has utilized technology to achieve measurement, those continuous monitoring capabilities provide an evergreen compliance pathway for not only EPA regulations, but also the SEC's Proposed Rule and any future rulemakings in this space.

IV. Conclusion

The SEC's proposed required climate-related disclosures promise to provide investors with high-quality, decision-useful information to help them evaluate investment risk. To maximize investor benefits, the SEC should express a preference for disclosures based on continuous monitoring, which is widely recognized as the best available technology for accurately measuring GHG emissions. Continuous monitoring technology enables highly accurate disclosures that will serve the aims of the Proposed Rule and will help companies achieve their climate-related goals in a way that is responsible and not potentially misleading.

We appreciate the opportunity to submit comments on the Proposed Rule. For further discussion or questions, feel free to contact us at [REDACTED].

Sincerely,



Ray Mistry
Chief Technology Officer

⁷ *Seeing CH4 Clearly: Science-Based Approaches to Methane Monitoring in the Oil and Gas Sector*, Majority Staff Report, U.S. House of Representatives Committee on Science, Space, & Technology (June 2022), https://science.house.gov/imo/media/doc/science_committee_majority_staff_report_seeing_ch4_clearly.pdf.

⁸ U.S. Government Accountability Office, *Oil and Gas: Federal Actions Needed to Address Methane Emissions from Oil and Gas Development*, at Appendix III: Comments from the Environmental Protection Agency (Apr. 2022), <https://www.gao.gov/assets/gao-22-104759.pdf>.