

California Air Resources Board notes for OMB and EPA
on draft final rollback of EPA oil and gas NSPS
July 7, 2020

Current NSPS is cost-effective, completely feasible, and necessary.

- Requirements are minimally costly, especially as a percentage of industry profits and compared to health and environmental benefits.
- CA is implementing equally or more rigorous requirements for both new and existing sources, including quarterly LDAR surveys for low-production wells.
 - o All covered facilities (over 700) have met their requirements to report facility and equipment information, and over 300 of these facilities were additionally required to submit quarterly LDAR data.¹
 - o All 12 natural gas underground storage facilities in CA have begun implementing their additional daily or continuous wellhead LDAR monitoring and reporting, plus ambient air monitoring of methane.²
 - o Preliminary estimates of emission reductions from 2018 LDAR efforts are ~5,500 mt methane (~400,000 mt CO₂e).
- EPA's annual compliance reports show that thousands of facilities have been meeting the NSPS's LDAR requirements.³
- Costs of leak detection surveys at oil and gas facilities are declining as instruments improve.⁴
- Despite state regulations and voluntary initiatives, federal standards remain vital for level playing field, lifecycle emissions of out-of-state imports, climate impacts, reporting requirements, and enforcement and oversight.

The proposals were contrary to the evidence at the times of publication, but subsequent studies further underscore the significance of emissions from these sources and the need for effective controls:

- The prevalence of new leaks forming between surveys,⁵ fugitive leakage from wells and super-emitter wells,⁶ and the potential for extremely high emissions from gas well blowouts⁷ demonstrate the importance of retaining frequent LDAR surveys of all wells, rather than eliminating LDAR requirements for low-production wells.

¹ 17 Cal. Code Regs. §§ 95674(b)(2), 95669.

² 17 Cal. Code Regs. § 95668(h).

³ See FOIA Online, FOIA Request EPA-HQ-2018-001886 Details, <https://www.foiaonline.gov/foiaonline/action/public/submissionDetails?trackingNumber=EPA-HQ-2018-001886&type=request>.

⁴ E.G. Nisbet et al., *Methane Mitigation: Methods to Reduce Emissions, on the Path to the Paris Agreement*, 58 REVIEWS OF GEOPHYSICS. (2020), <https://doi.org/10.1029/2019RG000675>.

⁵ A.P. Ravikumar et al., *Repeated leak detection and repair surveys reduce methane emissions over scale of years*, 15 ENVTL. RES. LETT. 034029 (2020), <https://doi.org/10.1088/1748-9326/ab6ae1>.

⁶ A.R. Ingraffea et al., *Reported Methane Emissions from Active Oil and Gas Wells in Pennsylvania 2014-2018*, ENVTL. SCI. TECH. (2020), <https://pubs.acs.org/doi/full/10.1021/acs.est.0c00863>.

⁷ S. Pandey et al., *Satellite observations reveal extreme methane leakage from a natural gas well blowout*, PROC. NAT'L ACAD. SCI. 116 (52) 26376-26381 (2019), DOI: 10.1073/pnas.1908712116, <https://www.pnas.org/content/116/52/26376.short>.

- Tanks were shown to contribute 64% of emissions at well pads and processing plants,⁸ supporting monitoring of non- low-production and low-production wells at the same frequency because both have the same number of tanks, based on EPA's production well site model plants.
- The volume of emissions from underground gas storage facilities⁹ and significant health impacts from compressor station VOC emissions¹⁰ demonstrate the importance of retaining standards for the transmission and storage sector.
- Satellite observations and atmospheric inverse modeling demonstrate that emissions estimates from bottom-up inventories may be underestimated by half,¹¹ suggesting far greater impacts from finalizing the proposals than EPA estimated.

EPA's effort to avoid regulating methane from existing sources is unacknowledged but transparent and patently unlawful.

- EPA is being sued, including by CARB, for unreasonable delay in promulgating mandated existing-source regulations.¹²
 - o DOJ asserts: "If EPA finalizes the Proposed Rule as proposed, EPA would no longer have the obligation—indeed, would not even have the authority—to issue the Methane Guidelines, which would make this case moot."¹³
- The NSPS's methane requirements are not redundant to its VOC requirements.
 - o The NSPS allows, but does not require, operators to comply with both VOC and methane controls using the same practices. Operators currently generally use the same technologies and processes to comply with both requirements, but could cost-effectively comply with a VOC-only standard using existing technologies that do not control methane (e.g., activated carbon adsorbers¹⁴).
 - o EPA's rational basis for concluding in 2016 that methane from the source category merits regulation under CAA sec. 111 was based on consideration of methane emissions from the *entire* source category, including existing sources.¹⁵

⁸ Ravikumar, *supra* note 5.

⁹ A.K. Thorpe et al, *Methane emissions from underground gas storage in California*, 15 ENVTL. RES. LETT. 045005 (2020), <https://doi.org/10.1088/1748-9326/ab751d>.

¹⁰ M. Hendryx & J. Luo, *Natural gas pipeline compressor stations: VOC emissions and mortality rates*, EXTRACTIVE INDUSTRIES & SOC'Y (2020) (in press, corrected proof), <https://www.sciencedirect.com/science/article/abs/pii/S2214790X20301398>.

¹¹ Y. Zhang et al., *Quantifying methane emissions from the largest oil-producing basin in the United States from space*, 6 SCI. ADVANCES 17 (2020), DOI: 10.1126/sciadv.aaz5120, <https://advances.sciencemag.org/content/6/17/eaaz5120?ftag=YHF4eb9d17>.

¹² *New York, et al. v. Wheeler et al.*, U.S. District Court, District of Columbia, Case No. 1:18-cv-00773 (filed April 5, 2018). Once a category of stationary sources is added to the CAA sec. 111 list, EPA must promulgate regulations establishing standards of performance for new (sec. 111(b)) and existing (sec. 111(d)) sources.

¹³ EPA Motion to Stay Pending Conclusion of Rulemaking, filed Sept. 27, 2019, pp. 1-2.

¹⁴ Activated Carbon Adsorption for Treatment of VOC Emissions, available: <https://www.carbtrol.com/images/white-papers/voc.pdf>.

¹⁵ See 81 Fed. Reg. at 35,838-39, tbls. 4 & 5, 35,842.

- Rulemaking violates the APA (and similarly here, the CAA) if the agency entirely fails to consider an important aspect of the problem.¹⁶ EPA has refused to consider the potential (and undoubtedly intentional) impact of methane rescission on its obligation to regulate existing sources,¹⁷ while arguing in court that its existing source obligation disappears if the methane NSPS is repealed.
- EPA provides a long list of reasons that regulation of existing sources is unnecessary, none of which are supported, and some of which are undermined, by EPA's own data. EPA requests supporting data instead of providing it, which violates CAA sec. 307(d), and which precludes meaningful comment in violation of the APA.

EPA may not require pollutant-specific significant contribution findings for an already listed source category.

- CAA sec. 111(b) is unambiguous: EPA must include a category of stationary sources if that *source* "causes, or contributes significantly to, air pollution" and contemplates a single "list" of categories of stationary sources.¹⁸ Nothing in these requirements suggests that a source could be listed with respect to some pollutants, but not listed with respect to others.
- The proposed "alternative" new interpretation of CAA sec. 111(b) would be contrary to the statute. EPA is not required to make a pollutant-specific significant contribution finding for GHG emissions, or for methane specifically, from the oil and natural gas source category as a prerequisite to regulating those emissions.

The transmission and storage segment is not segregable from the production segment.

- Nothing in the Clean Air Act, which requires comprehensive pollution controls, justifies ignoring pollution from half of the sector's processes.
- Segments are heavily interrelated: equipment and operations and range of gas compositions all overlap extensively.

The final rule should not allow non-low-production wells to become "low-production" wells (subject to less frequent monitoring) when production changes.

- EPA proposed requiring less frequent monitoring of low-production wells based partly on lower equipment count, which would not be valid for non-low-production wells whose production drops.

¹⁶ *Motor Vehicle Mfrs. Ass'n of U.S., Inc. v. State Farm Mut. Auto. Ins. Co.*, 463 U.S. 29, 43 (1983).

¹⁷ It is not clear that repealing the methane NSPS would eliminate EPA's CAA sec. 111(d) obligation to regulate emissions from existing oil and gas sources, as EPA intends. EPA argues VOC emissions fall within the exclusion for pollutants already regulated under CAA sec. 108. VOCs are neither criteria pollutants nor on any list published under sec. 108(a); they are precursors to pollutants listed under sec. 108(a), which are not excluded from regulation under sec. 111(d).

¹⁸ 42 U.S.C. § 7411(b).

- Even low-production wells with fewer components could have “super-emitter” components leaking hundreds or thousands of times more than typical leaking components.^{19, 20, 21, 22}

EPA should maintain reporting requirements and ICR for transmission and storage sources.

- CAA sec. 114 authorizes reporting, monitoring, recordkeeping, and related requirements whether or not sources are listed under section 111.²³
- Even if EPA finalizes proposed removal of transmission and storage sources from the source category, it need not and should not repeal the reporting and recordkeeping requirements and ICR, which provide value to U.S. EPA, State, local, and Tribal regulators, and the public. California utilizes emissions inventories to estimate greenhouse gas emissions associated with imported natural gas pursuant to state law.²⁴

The proposals would dramatically increase methane, VOC, and HAPs emissions from the sector.

- The resulting air pollution increases are particularly concerning in the midst of a respiratory pandemic.²⁵

Attachments:

- CARB letter requesting OMB meeting, June 15, 2020
- CARB comment on “review” proposal, Nov. 25, 2019
- CARB comment on “reconsideration” proposal, Dec. 17, 2018

¹⁹ A.R. Brandt et al., Methane Leaks from North American Natural Gas Systems, *Science*, 343(6172), 2014, pp. 733-735, available at <http://science.sciencemag.org/content/343/6172/733.full>.

²⁰ R. Subramanian et al., Methane Emissions from Natural Gas Compressor Stations in the Transmission and Storage Sector, *Environ. Sci. Technol.*, 49, 2015, pp. 3252-3261, available at <https://pubs.acs.org/doi/abs/10.1021/es5060258>.

²¹ D. Zavala-Araiza et al., Toward a Functional Definition of Methane Super-Emitters: Application to Natural Gas Production Sites, *Environ. Sci. Technol.*, 49, 2015, pp. 8167-8174, available at <http://pubs.acs.org/doi/abs/10.1021/acs.est.5b00133>.

²² D.J. Zimmerle et al., Methane Emissions from the Natural Gas Transmission and Storage System in the U.S., *Environ. Sci. Technol.*, 49, 2015, pp. 9374-9383, available at <https://pubs.acs.org/doi/abs/10.1021/acs.est.5b01669>.

²³ 42 U.S.C. § 7414(a)(iii).

²⁴ Cal. Health and Safety Code sec. 39607 (amended by Assembly Bill 2195, Chap. 371, Stats. 2018).

²⁵ Chronic air pollution exposure appears to increase COVID-19-related premature illness and death, and COVID-19 can reduce lung function and increase susceptibility to air pollution-induced asthma. See X. Wu et al., 2020. Exposure to Air Pollution and COVID-19 Mortality in the U.S. *medRxiv* (pre-print); Fattorini D. & Regoli F. 2020 Role of the Chronic Air Pollution Levels in the Covid-19 Outbreak Risk in Italy. *Environ Pollut.* 264:114732 (pre-proof); C. Pelaia et al., Lung under Attack by COVID-19-Induced Cytokine Storm. *Ther Adv Respir Dis.* 2020, doi:10.1177/1753466620933508; Y. Wang et al., Temporal Changes of CT Findings in 90 Patients with COVID-19 Pneumonia. *Radiology.* 2020, <https://pubs.rsna.org/doi/full/10.1148/radiol.2020200843>.