

Proposed Amendments to the Greenhouse Gas Emission Standards for Crude Oil and Natural Gas Facilities

Resolution 23-18

June 22, 2023

Agenda Item No.: 23-6-2

Whereas, sections 39600 and 39601 of the Health and Safety Code authorize the California Air Resources Board (CARB or Board) to adopt standards, rules and regulations and to do such acts as may be necessary for the proper execution of the powers and duties granted to and imposed upon the Board by law;

Whereas, the Legislature, in Health and Safety Code section 39602, has designated CARB as the air pollution control agency for all purposes set forth in federal law;

Whereas, section 38510 of the Health and Safety Code designates CARB as the State agency charged with monitoring and regulating sources of greenhouse gas (GHG) emissions that cause global warming in order to reduce such emissions;

Whereas, section 38566 of the Health and Safety Code further directs that CARB shall ensure that state greenhouse gas emissions are reduced to at least 40 percent below the statewide greenhouse gas limit no later than December 31, 2030;

Whereas, section 38551 of the Health and Safety Code directs that the statewide greenhouse gas limit shall remain in place indefinitely, and that emission reductions be continued and maintained beyond 2020;

Whereas, section 38562.2 of the Health and Safety Code establishes the policy of the State to achieve carbon neutrality as soon as possible, but no later than 2045, and to maintain net negative GHG emissions thereafter; and to ensure anthropogenic GHG emissions are reduced at least 85 percent below 1990 emission levels by 2045;

Whereas, section 38560 of the Health and Safety Code directs the Board to adopt rules and regulations in an open public process to achieve the maximum technologically feasible and cost-effective GHG emissions reduction from sources or categories of sources, subject to the criteria and schedules specified in Part 4 of Division 25.5 of the Health and Safety Code;

Whereas, section 38562 of the Health and Safety Code provides the Board with continuing authority to revise regulations and adopt additional regulations to further the purposes of Division 25.5 of the Health and Safety Code;

Whereas, section 41511 of the Health and Safety Code authorizes the Board to adopt rules and regulations to require the owner or operator of any air pollution emission source to take reasonable actions for the determination of the amount of such emission from such source;

Whereas, short-lived climate pollutants, including methane, pose an especially potent threat to the stability of the global climate, are emitted in large quantities from certain sources in California, and, if controlled, offer significant opportunities to protect public health and slow the pace of climate change;

Whereas, methane is a GHG with a global warming potential at least 25 times greater than that of carbon dioxide when considered on a 100-year timeframe;

Whereas, in 2020, oil and natural gas production, processing, and storage facilities were responsible for approximately three percent of methane emissions from California, and the natural gas transmission and distribution sector was responsible for approximately eleven percent of methane emissions from California;

Whereas, section 38561 of the Health and Safety Code directs the Board to prepare a scoping plan for achieving the maximum technologically feasible and cost-effective reductions in greenhouse gas emissions at least once every five years;

Whereas, on December 15, 2022, the Board adopted, in Resolution 22-21, the 2022 Climate Change Scoping Plan for Achieving Carbon Neutrality, which discussed at pages 235 to 236 how advances in methane leak detection technologies, including satellites equipped to detect large methane sources, may help to identify and mitigate methane emissions quickly across the oil and gas sector;

Whereas, section 39730 of the Health and Safety Code directs the Board to prepare a plan identifying measures to control emissions of short-lived climate pollutants, including methane;

Whereas, reducing methane emissions from the oil and gas sector also creates opportunities to reduce emissions of volatile organic compounds (VOC) and toxic air contaminants;

Whereas, staff has worked closely and collaboratively with staff at California's local air districts throughout this process and has benefitted from the extensive experience the local air districts have developed in regulating oil and gas systems for other pollutants for many years;

Whereas, on March 23, 2017, through Resolution 17-10, the Board adopted the Greenhouse Gas Emission Standards for Crude Oil and Natural Gas Facilities (the Regulation), published at sections 95665-95677 and Appendices A-C of title 17, California Code of Regulations, which became effective October 1, 2017, and which requires equipment repair and replacement, vapor collection and control, leak detection and repair, natural gas underground storage facility monitoring, emission measurement, recordkeeping, and reporting for oil and natural gas facilities;

Whereas, under the federal Clean Air Act (CAA), the United States Environmental Protection Agency (U.S. EPA) has established National Ambient Air Quality Standards (NAAQS) for pollutants considered harmful to public health, including fine PM_{2.5} and ozone, and states that exceed the NAAQS are required by federal law to develop State Implementation Plans (SIP) describing how they will attain the standards by certain deadlines;

Whereas, section 39602 of the Health and Safety Code provides that the SIP shall include only those provisions necessary to meet the requirements of the CAA;

Whereas, CARB is responsible for the preparation of the SIP for attaining and maintaining the NAAQS, as required by the CAA (42 U.S.C. § 7401, et seq.);

Whereas, on December 11, 2018, CARB submitted the Regulation into the SIP to demonstrate the use of reasonably available control technology for oil and natural gas industry VOC emission sources covered by U.S. EPA's 2016 Control Techniques Guidelines for the Oil and Natural Gas Industry (CTG);

Whereas, U.S. EPA reviewed the current Regulation as submitted into the SIP compared with the recommendations in the CTG and finalized, on October 31, 2022, a limited approval, limited disapproval of the Regulation as submitted into the SIP, which lists the deficiencies in the Regulation that precluded full approval;

Whereas, U.S. EPA may be required to impose sanctions as described in section 179 of the CAA (42 U.S.C. § 7509) if the deficiencies identified by U.S. EPA are not addressed by CARB and the Regulation approved by U.S. EPA by April 30, 2024;

Whereas, recent remote sensing survey and detection efforts have demonstrated that a disproportionate share of total methane emissions in the oil and gas sector typically come from a relatively small fraction of equipment in the system leaking at a high rate;

Whereas, a recent study in California using airplane-mounted sensors found a substantial number of methane emission point sources from the oil and gas sector capable of being remotely detected by the imaging technology used in that study;

Whereas, CARB anticipates having access to satellite-based remote methane plume emission measurements from two satellites planned for launch in 2024 by a public-private coalition;

Whereas, the Legislature has appropriated \$100 million to supply CARB with additional high-quality and frequent methane monitoring data collected by satellite-mounted instruments;

Whereas, remote monitoring data alone may not reveal exactly what component or piece of equipment is emitting and why those emissions occurred; however, follow-up investigations by owners or operators are expected to provide that information, which is instrumental to better understand the types of equipment and activities that tend to produce large methane plumes;

Whereas, staff has gained experience implementing the Regulation since 2018 and has, along with local air districts, regulated parties, and other stakeholders, identified areas for improvement to streamline the Regulation, increase clarity, improve the uniformity of implementation, and ensure the Regulation's intended outcomes are achieved;

Whereas, staff have conducted two public workshops and numerous stakeholder meetings during the regulatory development process;

Whereas, on April 25, 2023, staff released to the public for a 45-day comment period proposed amendments to the Greenhouse Gas Emission Standards for Crude Oil and Natural Gas Facilities (Proposed Amendments), as set forth in Appendix A-1 to the Initial Statement of Reasons (ISOR);

Whereas, the Proposed Amendments are expected to contribute to methane emissions reductions in California and support the state's carbon neutrality goal;

Whereas, staff has worked closely with U.S. EPA to develop the present Proposed Amendments that address the deficiencies outlined by U.S. EPA in their limited approval, limited disapproval of the Regulation into the SIP;

Whereas, federal law, set forth in section 110(l) of the CAA (42 U.S.C. § 7410(l)) and Title 40, Code of Federal Regulations, section 51.102, require that one or more public hearings, preceded by at least 30 days' notice and opportunity for public review, must be conducted prior to the adoption and submittal to U.S. EPA of any SIP revision;

Whereas, as required by federal law, the Board made the Proposed Amendments available for public review beginning on April 25, 2023, at least 30 days prior to the hearing date;

Whereas, the current Regulation was found to be cost effective, and the Proposed Amendments add a minimal amount of additional costs relative to the current Regulation's annual costs to ensure that the emission reductions envisioned under the current Regulation are achieved in practice, and additional, though unquantified, emission reductions are expected from the Proposed Amendments;

Whereas, CARB's regulatory program that involves the adoption, approval, amendment, or repeal of standards, rules, regulations, or plans has been certified by the Secretary for Natural Resources under Public Resources Code section 21080.5 of the California Environmental Quality Act (CEQA; California Code of Regulations, title 14, section 15251(d)), and CARB conducts its CEQA review according to this certified program (California Code of Regulations, title 17, sections 60000-60007);

Whereas, in accordance with CARB's certified regulatory program, and the policy and substantive requirements of CEQA, CARB prepared an environmental analysis as part of the ISOR that serves as a substitute document equivalent to an addendum to the prior March 10, 2017, final Environmental Analysis (EA) prepared for the Regulation for Greenhouse Gas Emission Standards for Crude Oil and Natural Gas Facilities (2017 EA) that assessed the potential for significant long- or short-term adverse and beneficial environmental impacts associated with the proposed action (title 17, California Code of Regulations, section 60005(b));

Whereas, on March 23, 2017, CARB certified the 2017 EA in Resolution 17-10;

Whereas, staff determined that, for the Proposed Amendments, CARB can rely on the 2017 EA and its analysis in the ISOR, and no additional environmental review is required because the record evidence shows that the amendments will not result in new significant adverse environmental impacts or a substantial increase in severity of previously identified significant adverse impacts, as described in Chapter VI of the ISOR;

Whereas, the Board has reviewed and considered the addendum-equivalent EA in the ISOR;

Whereas, a public hearing and other administrative proceedings have been held according to the provisions of Chapter 3.5 (commencing with section 11340), part 1, division 3, title 2 of the Government Code; and

Whereas, the Board finds that:

Short-lived climate pollutants, including methane, must be reduced to meet the state's climate goals;

Methane emissions from oil and gas systems comprise a meaningful share of state methane emissions, and must be reduced expeditiously from all sources covered by the Proposed Amendments;

Adoption of the Proposed Amendments is necessary to fully utilize the investment that California is making in satellite-based methane monitoring technology and data;

Adoption of the Proposed Amendments is necessary to address deficiencies identified by U.S. EPA's limited approval, limited disapproval of the Regulation and are required to meet California's SIP obligations;

Adoption of the Proposed Amendments will provide greater clarity, uniformity of implementation, and better ensure that the Regulation's intended outcomes are achieved;

The Proposed Amendments meet the statutory requirements to utilize the most technologically feasible and cost-effective measures to reduce greenhouse gas emissions in the oil and gas sector, identified in sections 38562 and 38566 of the Health and Safety Code;

The Proposed Amendments were developed in an open public process, in consultation with affected parties, through numerous public workshops, individual meetings, and other outreach efforts, and these efforts are expected to continue;

No reasonable alternatives to the Proposed Amendments considered to date, or that have otherwise been identified and brought to the attention of CARB, would be more effective at carrying out the purpose for which the Proposed Amendments are proposed or would be as effective and less burdensome to affected entities than the Proposed Amendments;

The Proposed Amendments are consistent with CARB's environmental justice policies and do not disproportionately impact people of any race, culture, income, or national origin; and

The Proposed Amendments are covered by the prior environmental analysis prepared to comply with CEQA, and no additional environmental review, or revisions to the prior environmental analysis, are required because substantial evidence in the record shows there are no changes that will result in new significant adverse environmental impacts or a substantial increase in severity of previously identified significant adverse impacts.

Now, therefore, be it resolved that the Board hereby approves for adoption amendments to sections 95665, 95666, 95667, 95668, 95669, 95670, 95671, 95672, 95673, 95674, 95675, 95676, 95677, Appendix A, and Appendix C, of Title 17, California Code of Regulations, and new sections 95669.1, 95670.1, Appendix D, Appendix E, Appendix F, and Appendix G, of Title 17 to the California Code of Regulations, as set forth in Appendix A-1 of the Initial Statement of Reasons released to the public on April 25, 2023.

Be it further resolved that if there is a possibility that any modifications to the regulation made available for one or more 15-day public comment periods may affect the conclusion of the environmental analysis, the Executive Officer shall prepare and circulate any additional environmental analysis to the extent required by CARB's regulations at title 17, CCR, section 60004.

Be it further resolved that the Board directs the Executive Officer to determine if additional conforming modifications to the regulation are appropriate. If no additional modifications are appropriate, the Executive Officer shall take final action to adopt the regulation, as set forth in Appendix A-1 of the Initial Statement of Reasons released to the public on April 25, 2023. If the Executive Officer determines that additional conforming modifications are appropriate, the modified regulatory language shall be made available for public comment, with any additional supporting documents and information. The Executive Officer shall consider written comments submitted during the public review period and make any further modifications that are appropriate available for public comment for at least 15 days. The Executive Officer may present the regulation to the Board for further consideration if warranted, and if not, the Executive Officer shall take final action to adopt the regulation after addressing all appropriate conforming modifications.

Be it further resolved that the Board hereby adopts the Proposed Amendments as a revision to the California SIP.

Be it further resolved that the Board hereby directs the Executive Officer to submit the Proposed Amendments, together with the appropriate supporting documentation, to the U.S. EPA for approval as a revision to the California SIP, to be effective, for purposes of federal law, upon approval by U.S. EPA.

Be it further resolved that the Board directs the Executive Officer to work with the U.S. EPA and take appropriate action to resolve any completeness or approvability issues that may arise regarding the SIP submission.

Be it further resolved that the Board authorizes the Executive Officer to include in the SIP submittal any technical corrections, clarifications, or additions that may be necessary to secure U.S. EPA approval.

Be it further resolved that the Board certifies pursuant to 40 C.F.R. section 51.102 that the proposed SIP revision was adopted after notice and public hearing as required by 40 C.F.R. section 51.102.

- I hereby certify that the above is a true and correct copy of Resolution 23-18 as adopted by the California Air Resources Board.



Board Clerk