



METHANE
GUIDING
PRINCIPLES

Methane Guiding Principles Signatory Reporting

Occidental
January 2024



Company: Occidental

Year of Joining Methane Guiding Principles: December 2017

Senior Representative: Karen Sinard, Vice President, Environmental and Sustainability

Principle One:

Continually reduce methane emissions.

- Please state what specific activities or projects your company has undertaken to reduce methane emissions. Please refer to the previous year’s annual MGP reporting where applicable to refer to intended activity. Link to sustainability report where relevant to provide further detail.
- Describe how the reduction was achieved including description of the asset type, technology type, timeframe. What was the end result?
- Provide data to support your description e.g., the actual amount of emissions reduction achieved, or the reduction in methane intensity.

2023 Completed Activity	2024 Intended Activity
<p>Oxy implemented practices and technologies designed to detect and reduce emissions and maximize the use of natural gas production in our operated assets in the U.S. and/or internationally, including:</p> <ul style="list-style-type: none"> • Expanding deployment of tankless designs for new and existing facilities in the Permian and Denver-Julesburg Basins eliminate the need for oil storage tanks near wells. • Capturing vented gas for sale or use in process equipment, such as with casing vapor recovery. • Replacing low-pressure flares with Vapor Recovery Units or Vapor Combustion Units and enhancing reliability of tank emissions control with backup units for critical facilities. • Reducing non-routine flaring through the installation of additional gas takeaway optionality and temporary gas storage wells to better manage gas during downstream plant or 	<ul style="list-style-type: none"> • Oxy will continue progress at our international operations to meet the World Bank Zero Routine Flaring Emissions Pledge. • Oxy will continue eliminating or retrofitting gas-driven pneumatic controllers across our operations. • Where feasible, Oxy will continue replacing natural gas-driven compressors with electric compressors in Texas and New Mexico. • Oxy will continue use and deployment of SensorUp’s Gas Emission Management Solution (GEMS) to enhance leak detection and repair, as well as measurement, reporting and verification of methane emissions. • Oxy will continue to support the World Bank’s Global Flaring and Methane Reduction Partnership.



pipeline outages in both Texas and New Mexico.

- Replacing natural gas-driven compressors with electric compressors.
- Expanding use of solar-powered equipment and connections to the electricity grid.
- Deploying enhanced monitoring, automation and surveillance to expedite detection and repair of methane leaks.
- Reduced methane emissions in our operated assets by approximately 58% from 2019 to 2022 and 40% from 2021 to 2022.
- Reduced routine flaring by 44% in our global oil and gas operated assets since joining the World Bank's Zero Routine Flaring initiative from 2020 through 2022, including achieving Zero Routine Flaring across U.S. operations in 2022.
- Eliminated or retrofitted all high-bleed gas-driven pneumatic controllers found in U.S. onshore operations.

Principle Two:

Advance strong performance across the gas supply chain

Please include answers to the following questions:

1. Did you participate in any methane research or plan to do so?
2. Did you conduct any outreach on methane management?
 - Describe what action you have taken to engage industry players across the value chain to better understand how to achieve robust methane emissions management. Outreach activity could include training sessions, participation in webinars, influencing of NOJV partners, or publication of guidance. Activity could also include commercial incentives or engagement with investors to drive better performance by others.
 - Provide details of any outcomes that resulted from your action.

2023 Completed Activity	2024 Intended Activity
<p>In 2023, Oxy advanced methane emissions reduction across our value chain through the following actions, among others:</p> <ul style="list-style-type: none"> • Expanded our active collaboration on emissions reduction technologies and practices with national oil companies in our international non-operated joint ventures, including Al Hosn Gas in the UAE, the Dolphin project in Qatar, and Groupement Berkine in Algeria. • Encouraged other operators and service companies to join international organizations and commitments, including the MGP, OGMP 2.0, The Environmental Partnership, and the Aiming for Zero Methane Emissions pledge, in multiple forums such as the World Economic Forum, Ipieca, CERA Week, and direct engagement. • Engaged with our key U.S. gas processors on opportunities to 	<ul style="list-style-type: none"> • Oxy will continue participation in Colorado State University’s coordinated emission measurement campaign. • Oxy will continue to engage with operators throughout the value chain. • Oxy will continue advocating for operators to join organizations making progress towards methane emission reductions.



streamline equipment and operations to eliminate or mitigate emissions sources.

- Collaborated with key vendors who supply, for example, compressors, emissions control devices, other equipment and drilling and completion services, on emissions reduction projects.
- Sponsored and actively participated in GTI Veritas methane emissions measurement protocol development.
- Continued to progress development of innovative zero-emission power from natural gas through our investment in NET Power. The plant design is ongoing for construction of its first utility-scale plant in the Permian to power Oxy's operations.
- Participated in Colorado State University's C3 campaign to study oil and gas emissions within the Denver-Julesburg basin.
- Involved in the development of SensorUp's Gas Emission Management Solution (GEMS), a data integration platform for methane leak detection and repair, measurement reconciliation, reporting, and verification of methane emissions.

Principle Three:

Improve accuracy of methane emissions data.

- Describe action taken to improve methane emissions data collection methodologies. This could be application of new technology at an operated site(s), investment and participation in R&D initiatives, development of monitoring/modelling software, or support to research that improves the accuracy of the quantification of methane emissions.
- Where new technology /software has been piloted or adopted, it is helpful to describe how it works, the reasons it was selected, and how it was deployed. Any data that can be shared to demonstrate improvements is useful.
- How these new methods/technologies have been adopted into your accounting process if at all.

2023 Completed Activity	2024 Intended Activity
<p>In 2023, Oxy took the following actions, among others, to improve the accuracy of our methane emissions data:</p> <ul style="list-style-type: none"> • Oxy’s Emissions Technology Team (ETT) has implemented remote sensing to detect potential methane leaks and other emission sources, including: <ul style="list-style-type: none"> ○ Surveillance of wellheads, facilities, and pipeline segments across U.S. operations with fixed-wing aircraft. ○ Satellite-based methane monitoring programs to provide periodic coverage for our operations in Oman. ○ Periodic aerial flyovers of all our U.S. onshore operations. ○ Deployment of over 55 drones at our oil and gas production facilities. Periodic satellite surveillance of all our operated assets in Oman. ○ Installation of over 700 ground-based sensors at key facilities in 	<ul style="list-style-type: none"> • Oxy’s ETT will continue to work on remote sensing technology. <ul style="list-style-type: none"> ○ Oxy plans to expand deployment of GEMS in 2024 in various locations in conjunction with ongoing emissions inventories. ○ SensorUp is building on Oxy’s experience with GEMS in showcasing the platform to other operators. ○ Oxy will continue deployment of Project Avoid. ○ Oxy will expand our targeted ground-based sensor program. ○ Oxy will expand our use of measured process data, leak detection surveys, and remote sensing technologies to refine emission estimates.



the United States and Oman in 2023.

- Installation of Project AVOID sensors, a novel Audio, Visual, and Olfactory Inspection device that was developed in-house and refined in 2021 and 2022. Oxy has installed dozens of these devices across nine locations worldwide.
- In 2022, Oxy collaborated with Climate Investment to develop specifications for a methane management platform.
 - This effort was used in 2023 to inform the development of SensorUp's Gas Emissions Management Solution (GEMS), a data integration platform for methane leak detection and repair, measurement reconciliation, reporting, and verification of methane emissions.
 - Oxy is deploying GEMS to accelerate leak detection and repair while moving toward more measurement-based emissions inventories.

Principle Four:

Advocate sound policy and regulations on methane emissions

Advocacy consists of active participation in legal consultation processes, external policy statements, and direct engagement with government.

- Consider providing details on the region or regulation involved, how you undertook your advocacy, others involved, and the outcome.

2023 Completed Activity	2024 Intended Activity
<p>In 2023, Oxy continued our support for responsible national and state regulations to further reduce methane and other air emissions. Oxy submitted comment letters in support of the Environmental Protection Agency's (EPA) proposed framework for regulating methane and VOC emissions, EPA's GHG Reporting Program for U.S. Oil & Gas operations, and PHMSA's Notice of Proposed Rulemaking for pipeline leak detection.</p>	<p>Oxy will continue to engage with environmental, business and labor groups, non-governmental organizations (NGOs) and other companies to advocate for climate policies aimed at achieving the goals of the Paris Agreement.</p>

Principle Five: Increase transparency

Please include answers to the following question:

1. Are you participating in OGMP 2.0, or do you intend to do so? If you are participating in OGMP 2.0 you may provide a link to the website.
 - Describe what activity you have carried out e.g., providing information in relevant external reports on methane emissions data, methodologies, and progress and challenges in methane emissions management.
 - If you have contributed towards the standardization of comparable external methane reporting describe the activity, you have taken.

2023 Completed Activity	2024 Intended Activity
<ul style="list-style-type: none"> • Oxy endorsed OGMP 2.0 in 2021, and we submitted our first implementation plan in 2023 and Oxy has been recognized by the Oil and Gas Methane Partnership 2.0 as having achieved the Gold Standard in 2023 on the basis of a credible implementation plan (see page 53 of IMEO Report). We have also encouraged third party operators of assets in which we have an equity or non-operating interest to participate in MGP, OGMP 2.0 and other leading organizations that aim to reduce methane emissions. • Oxy has reported our estimated GHG emissions to the CDP since its inception and has issued an annual Climate Report since 2018 that includes our methane emissions and intensity estimates for our operated assets in our oil and gas and chemical sectors. We report annually on our key projects to reduce methane emissions, certain of which are included in the emissions 	<ul style="list-style-type: none"> • Oxy will continue reporting to and participating in organizations to increase transparency and share leading practices with respect to methane emissions from our company and across industry. • SensorUp is building on Oxy's experience with GEMs in showcasing the platform to other operators.



reduction sustainability metric in our annual incentive compensation program. We are also evaluating how best to estimate methane emissions with respect to our equity interests in assets operated by others.

- Oxy has set 14 GHG targets, two of which specifically address methane intensity in our oil and gas and chemical operations. As noted above, Oxy collaborated with Climate Investment and SensorUp in development of the GEMS methane management platform, which Oxy is deploying to accelerate leak detection and repair while moving toward more measurement-based emissions inventories.
- Oxy is an original signatory to the Oil and Gas Decarbonization Charter that was announced at COP28, and Oxy has committed funding to the Global Flaring and Methane Reduction (GFMR) Partnership launched during COP28.
- In addition to our participation in the MGP and OGMP 2.0, Oxy is participating with the following organizations, among others, to increase transparency and share leading practices with respect to methane emissions from our company and across industry:
 - World Bank Zero Routine Flaring Initiative
 - OGCI
 - Aiming for Zero Methane Emissions Pledge
 - Climate Investment
 - Ipieca
 - The Environmental Partnership
 - World Economic Forum

Methane Emissions

<p>Do you report absolute methane emissions within your sustainability report? <i>If so, provide link.</i></p>	<p>Yes https://www.oxy.com/siteassets/documents/publications/oxy-climate-report-2023.pdf#page=46 and https://www.oxy.com/siteassets/documents/publications/2023-sustainability-report-web.pdf#page=76</p>
<p>Do you report a methane intensity within your sustainability report? <i>If so, provide link.</i></p>	<p>Yes https://www.oxy.com/siteassets/documents/publications/oxy-climate-report-2023.pdf#page=47 and https://www.oxy.com/siteassets/documents/publications/2023-sustainability-report-web.pdf#page=76</p>
<p>What is your organization's total absolute methane emissions? Provide a figure in tons. Provide latest data publicly available.</p>	<p>2022 – 45.22 thousand MT CH₄ (oil & gas) https://www.oxy.com/siteassets/documents/publications/oxy-climate-report-2023.pdf#page=51</p>
<p>State your methodology.</p>	<p>Estimated methane emissions have been converted to CO₂e by multiplying methane emissions by the U.S. EPA/IPCC AR4 GWP of 25, which has been used in the U.S. EPA's GHG Reporting Program during 2019 through 2022.</p>
<p>State your reporting boundary.</p>	<p>All Oxy Oil and Gas operations</p>
<p>What are your organization's methane intensity? Provide latest data publicly available.</p>	<p>2022 – 0.26% (oil & gas) https://www.oxy.com/siteassets/documents/publications/oxy-climate-report-2023.pdf#page=47</p>
<p>State your methodology.</p>	<p>Reported methane emissions are derived from a combination of direct measurement and calculated values using activity-based parameters and established emission factors based on industry reporting criteria, applying operational control as our</p>



	<p>organizational boundary. In addition to reporting these emissions in metric tons of methane, we convert methane emissions to CO₂e by multiplying methane emissions by the U.S. EPA/IPCC AR4 GWP of 25, which has been used in the U.S. EPA's GHG Reporting Program during 2019 through 2022. These methane emissions estimates for 2021 and 2022 underwent a limited assurance verification process.</p> <p>See About Our GHG Emissions Estimates in our 2023 Climate Report at:</p> <p>https://www.oxy.com/siteassets/documents/publications/oxy-climate-report-2023.pdf#page=4</p> <p>and our independent assurance statements at:</p> <p>https://www.oxy.com/siteassets/documents/publications/oxy-climate-report-2023.pdf#page=50.</p>
State your reporting boundary.	All Oxy Oil and Gas Operations
Do you have a methane emission target? If yes, please state what it is, including the boundaries and methodology. If no, are you developing such a target? Please state your intended timeline.	0.25% methane intensity by 2025 We use a methodology that compares the total estimated volume of our methane emissions from our operated oil and gas assets (without distinguishing between methane emissions attributable to oil production vs. gas production) to the volume of our operated wet gas production. We adopted this method for our 2022 reporting and adjusted prior years to reflect this methodology.