Methane Guiding Principles Signatory Reporting

Shell

June 15th 2021

COMPANY: **Shell**

DATE: **June 15th 2021**

YEAR OF JOINING METHANE GUIDING PRINCIPLES: **2017**

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WORKING LEVEL REPRESENTATIVES: **Myriam Hammami and Tom Baird**

Principle One:
Continually reduce methane emissions

Historical completed activity	2021 intended activity
Shell implemented programmes to detect and quantify methane emissions, including deployment of infrared cameras and drones to scan for methane emissions and replacing emission emitting equipment with lower or non-emitting equipment, such as changing high-bleed pneumatically-operated controllers with low-emission alternatives.	Shell continues to identify and track implementation of methane improvement opportunities across our assets as part of a company-wide GHG abatement programme. A continued focus on reducing unplanned flare events is expected to realise further methane reductions in 2021.
Example: In 2020, in the Permian Basin, USA, where we have more than 400 sites, Shell deployed drones with specialised cameras and laser detection technology to detect methane emissions. This enabled us to repair leaks and reduce emissions faster and more efficiently by reducing the time inspection teams need to spend at sited. Read more about this project at www.shell.us/media/2020-media-releases/expanding-use-of-drones-for-methane-detection	We will implement updated guidance for our projects which outlines how to reduce methane emissions from future facilities, especially through the use of best available technologies to minimise methane emissions.
In addition, we worked on reducing flaring associated with well flow back activities and replaced methane-emitting pneumatic instruments with lower emissions alternatives. This resulted in 7ktpa CO2e reductions in 2020 and a further 4ktpa planned reduction for 2021.	We will utilise the MGP reducing methane emissions best practices training materials to train our staff as needed.
Example: In Shell Malaysia (SMEP), we reduced emissions through operational improvements and the implementation of low-pressure vent reduction project which resulted in approx. 19ktpa CO2e reductions	We will continue to test and deploy new and existing technologies for detecting and quantifying methane emissions.
Example: In the Netherlands (NAM), we reduced fugitive emissions through our Leak Detection and Repair (LDAR) programme, and reduced venting through operational improvements and facility design modifications.	
Example: Through the LDAR programme at Pearl GTL in Qatar we scanned 33 thousand components and detected 48 leaks, most could be repaired almost immediately.	
Example: At Shell's ONEGas facilities in the North Sea, we have reduced methane emissions by 55% (around 2,000 tonnes) since 2017 through a series of improvements to reduce gas venting, including minimising valve leakage.	

What are your organisation's total methane emissions?

Historical completed activity	2021 intended activity
In 2020, total methane emissions from Shell's operated assets were 67 thousand tonnes compared with 91 thousand tonnes in 2019, in part driven by divestments (for example, in Canada and the USA) and decreased flaring. Methane emissions were less than 5% of Shell's greenhouse gas emissions on a CO_2-equivalent basis.

More than 60% of our reported methane emissions in 2020 came from flaring and venting in our upstream and midstream operations (for example storage and processing). | We have further site level drone and satellite methane surveys planned in 2021.

Shell will continue to implement OGMP 2.0, which requires a step change in source and site level quantification of emissions to further improve the accuracy of reported emissions. As part of this implementation, Shell plans to conduct pilot studies on technologies in 2021 that, if proven, would ultimately verify and perhaps improve the accuracy of reported emissions by 2023 |

Does your organisation report methane intensity?
If so, please specify the intensity.

Historical completed activity	2021 intended activity
Yes. In 2020, Shell's methane intensity was 0.06% for assets with marketed gas and 0.01% for assets without marketed gas. methane emissions intensity in 2020 at individual facilities ranged from below 0.01% to 0.6%.

Currently, methane emissions are calculated using a combination of standard emission factors (established emissions rates per throughput or per piece of equipment) and actual measurement. | |

Do you have a methane emission target?

Historical completed activity	2021 intended activity
Yes. Shell has a target to maintain methane emissions intensity below 0.2% by 2025. This target covers all oil and gas assets for which Shell is the operator.	
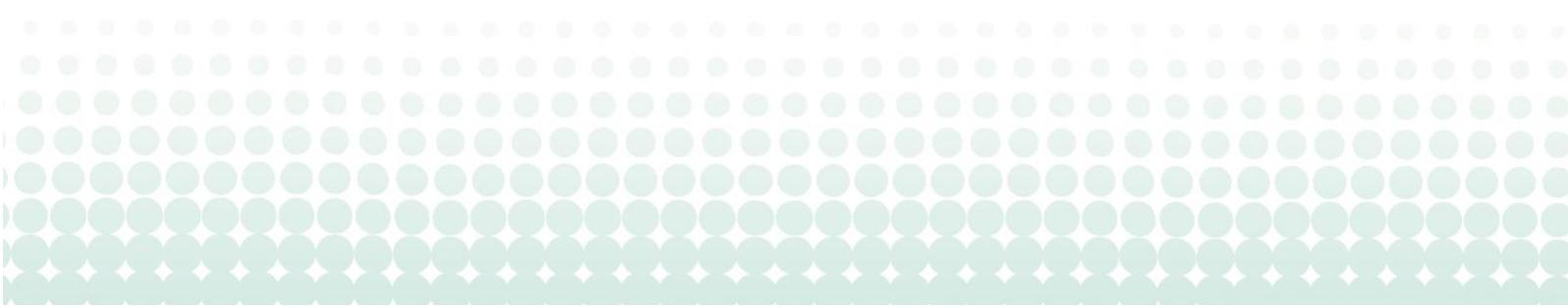
Principle Two:

Advance strong performance across the gas supply chain

Historical completed activity	2021 intended activity
Example: Shell worked with Petronas, ExxonMobil and Repsol to share best practices on methane emissions reduction to reduce emissions in Malaysia. Example: In 2020, an engagement was held between Shell and Tokyo Gas to establish a common understanding of GHG emissions from shared supply chains and how to manage them.	

Principle Three:

Improve accuracy of methane emissions data

Historical completed activity	2021 intended activity
Example: Shell, together with EDF and ExxonMobil, funded the further development of the International Energy Agency's Methane Tracker and regulatory roadmap. Example: Through its membership of Oil and Gas Climate Initiative, Shell has been participating to the Climate and Clean Air Coalition (CCAC) global Methane Science studies where CCAC, Environmental Defense Fund, OGCI and European Commission are working together on a series of peer-reviewed scientific studies to measure methane emissions in the oil and gas sector. Example: In 2020, GHGSat, an Oil & Gas Climate Initiative (OGCI) Climate investment portfolio company, monitored four of Shell's facilities following an agreement signed with Shell in 2019.	We will continue to improve the accuracy of our fugitive emissions reporting by moving more assets to LDAR programmes using component-based leak/no-leak emission factors. This does not reduce emissions but improves the accuracy of reporting. For example, this resulted in a ~90% reduction of reported fugitive emissions across these facilities because of the improved accuracy of the emission estimation factors used. Shell is a founding signatory of the Oil and Gas Methane Partnership 2.0 Framework. Work in 2021 will focus on defining and delivering on an internal methane improvement roadmap aiming for OGMP 'Gold Standard'. Example: Shell is participating in the MGP NOJV working group leading one initiative focused on collaborating with venture partners to improve their source-level methane reporting And participating to three other intiatives: Partner collaboration campaigns (led by bp), shaping deal terms (led by EDF) and MGP operator hotline (led by Repsol). Example: Through its membership of Oil and Gas Climate Initiative, Shell is participating to the following methane emission data accuracy improvement activities: the calibration of the VIIRS satellite for global flaring data monitoring and the development of the IOGP/IPIECA/OGCI methane emissions detection and quantification technologies recommended practices (This activity was kicked off in 2020).

Principle Four:

Advocate sound policy and regulations on methane emissions

Historical completed activity	2021 intended activity
Example: Shell worked with BP, Environmental Defense Fund, Eni, Equinor, Florence School of Regulation, Repsol, the Rocky Mountain Institute, Total and WintershallDea to share recommendations with the European Commission, proposing policies to reduce emissions of methane from the oil and gas sector. Example: Shell advocated with the Trump Administration, Congress and industry peers to maintain both direct regulation of methane and frequent leak, detection and repair. Shell differentiated itself from industry peers in our public support of litigation by key eNGOs and most U.S. states to defend continued regulation of methane under the Clean Air Act. Example: In September 2020, Shell and BP recommended the Railroad Commission of Texas to consider eliminating routine flaring in Texas. Example: Shell supported UNEP at a consultation workshop in Iraq about integrating methane in Iraq's Nationally Determined Contributions.	Shell, along with EDF, will continue to lead the EU methane policy working group, which will focus on developing a set of policy recommendations covering the full scope of EU legislative activity as outlined in the EU methane strategy and confirmed in a meeting with the EU Commission in December 2020. Four sub-groups composed of relevant volunteers to carry out this work. The EPWG aims to submit the policy recommendations in mid-February as part of the European Commission's Impact Assessment process.

Principle Five:

Increase transparency

Historical completed activity	2021 intended activity
In 2020, Shell contributed to the development of the OGMP2.0 reporting framework, signed up to it as a founding member and began its implementation.	Shell will continue implementation of programs to increase data accuracy, with OGMP2.0 conformance playing a central role in them. Shell will continue to work within the OGMP on the development of technical guidance and with joint venture partners encouraging improved methane reporting and reductions.